



# Product publications 2024





Be sure. **testo**



# Made to make it easy.

Our compact HVAC measuring instruments deliver precise results wherever you need them – fast, flexible, user-friendly and connected to your smartphone. Measuring couldn't be easier.

[www.testo.com](http://www.testo.com)



# The new ones from Testo:

**11** measuring  
instruments.

**9** measurement  
parameters.

**1** App.

**Endless  
possibilities.**

Switch on, measure and know more immediately: Our new digital HVAC measuring instruments give you precise readings - easily and quickly. That is our promise to you.

Because we know that things have to move fast in your job and that you need reliable measurement results immediately in order to be able to carry on.

But we also know that good measurement technology must also be smart - which is why our compact newcomers and your smartphone are true partners thanks to the testo Smart App.

**What are you waiting for? Make it easy for yourself.**





Vane anemometer  
**testo 417**  
m/s, m<sup>3</sup>/h, °C

Vane anemometer  
**testo 416**  
m/s, m<sup>3</sup>/h

Hot wire anemometer  
**testo 425**  
m/s, m<sup>3</sup>/h, °C

CO<sub>2</sub> measuring instrument  
**testo 535**  
CO<sub>2</sub>

Lux meter  
**testo 545**  
Lux

Digital thermohygrometer  
**testo 625**  
°C, %RH, °Cwb, °Ctp

Pressure measurement

Temperature



Differential pressure measuring instrument  
**testo 512-1**  
hPa/mbar, m/s, m<sup>3</sup>/h

Differential pressure measuring instrument  
**testo 512-2**  
hPa/mbar

Differential temperature measuring instrument  
**testo 922**  
°C

Temperature measuring instrument  
**testo 925**  
°C

NTC+ PT100 Temperature measuring instrument  
**testo 110**  
°C



## Compact precision for your jobs.

Testo's new digital HVAC measuring instruments are always there when you need accurate readings fast.

Little time, endless to-do lists and complex tasks: These are the moments when the new compact measuring instruments from Testo are reliably at your side.

**The right instrument for every relevant measurement parameter:** Simply turn it on and right away you have exactly the reading you need to make the right decisions. In all important applications - **fast, simple and precise.**

And with the **testo Smart App**, you not only have the most important measurement menus with you at all times - documentation and measured value storage are possible at any time with your smart assistant (see App info from p. 12).



# Easy

- Compact design: **Quickly to hand, quickly stowed away.**
- Robust workmanship: **When the going gets tough.**
- Intuitive operation: **High-tech reduced to the essentials.**
- Print reports on site: **Everything in black on white.**
- **testo Smart App:** **Configure, save, document measurements and much more (see p. 12).**



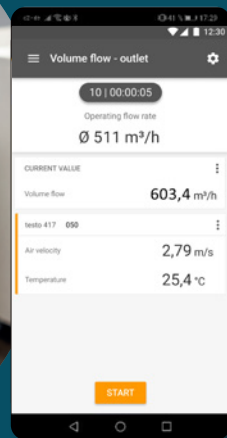
Each instrument comes in a practical, compact and robust **testo Smart Case**





# Fast

- Measurement results immediately: **With one look, everything is clear.**
- Configuration with the testo Smart App: **Make settings with just a few clicks.**
- Automatic volume flow calculation: **The duct diameter is enough.**
- Two displays show more than one: **Show your customers measurement curves on a smartphone. In real time.**



# Precise

- Digital probes proven in practice: **For long-term stable, reproducible and accurate measurement results.**
- Helpful measurement menus: **Single-point and time curve measurement in every instrument.**
- Complex measurements, compactly simplified: **For example, very easy measurement, adjustment and documentation of living space ventilation.**
- Documentation with the testo Smart App: **Completely without paperwork.**







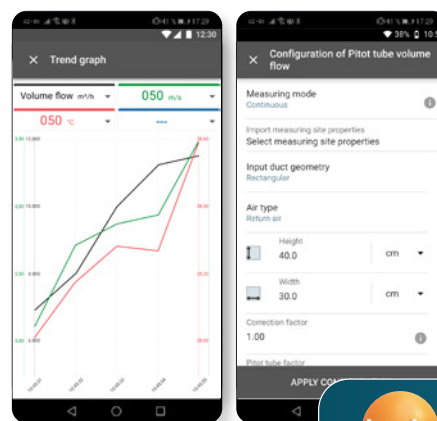
## Air conditioning and ventilation systems easily under control.

Compact flow velocity and volume flow measurement.

To ensure that people enjoy spending time indoors, air conditioning and ventilation systems are a crucial factor for modern buildings.

Accordingly, it is important to ensure with the appropriate measurement technology that sufficient fresh air is supplied to the rooms and that stale air is discharged. And this with the best possible efficiency, for all VAC units.

With the new flow velocity measuring instruments from Testo, you can perform these tasks quickly, easily, precisely and with smart App support: **In the duct, at the outlet** and when **adjusting the balanced residential ventilation**.



### This is how the testo Smart App supports you

- Configure your measuring instrument
- Display graphical measured value curve
- Save measurement data
- Customer and measuring location management
- Documentation of your work
- E-mail dispatch of the report





**Digital 100 mm vane anemometer testo 417**

- Simple, fast and precise measurement of flow, volume flow and temperature at air inlets and outlets
- Efficient regulation of balanced residential ventilation and fast documentation with the testo Smart App
- Fast in-app configuration, graph history, second screen and measurement data memory in the testo Smart App
- Timed and multi-point mean calculation
- Durability through compact design with robust housing

Order no. 0563 0417

**testo 417 kit 1**

Incl. funnel kit for plate outlets and ventilation grilles.

Order no. 0563 1417



**testo 417 kit 2**

As kit 1, plus flow straightener for swirl vents.

Order no. 0563 2417

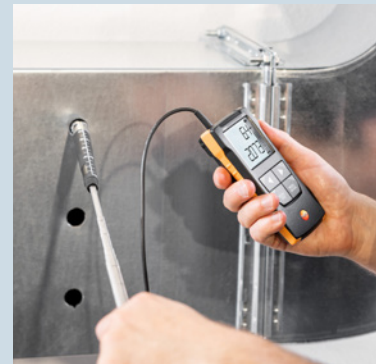


**Digital 16 mm vane anemometer testo 416**

Simple, fast and precise flow measurement & volume flow calculation in the ventilation duct

- More flexibility for duct measurements with the cable-connected telescopic probe (maximum length 850 mm)
- Fast in-app configuration, graph history, second screen and measurement data memory in the testo Smart App
- Timed and multi-point mean calculation
- Durability through compact design with robust housing

Order no. 0563 0416



**Digital hot wire anemometer testo 425**

Simple, fast and precise flow and temperature measurement plus volume flow calculation in the ventilation duct

- More flexibility for duct measurements with the cable-connected telescopic probe (maximum length 820 mm)
- Fast in-app configuration, graph history, second screen and measurement data memory in the testo Smart App
- Timed and multi-point mean calculation
- Durability through compact design with robust housing

Order no. 0563 0425







## Comfort **easily under control.**

For a more comfortable indoor climate.

Living, working or leisure: We spend almost 90% of our time indoors every day!

The topics of **indoor air quality and comfort** could therefore hardly be more important for well-being and health.

With the new compact measuring instruments from Testo, you have CO<sub>2</sub>, illuminance, temperature and air humidity quickly, easily and precisely in view - and thus ensure comfort and a healthy climate indoors.



### Digital CO<sub>2</sub> measuring instrument testo 535

- Simple, fast and precise measurement of CO<sub>2</sub> concentration
- Audible alarm sounds if a limit value is exceeded
- Fast in-app configuration, graph history, second screen and measurement data memory in the testo Smart App
- High reproducibility of measurement results due to long-term stable infrared sensor technology
- Timed and multi-point mean calculation

Order no. 0563 0535



### This is how the testo Smart App supports you

- Configure your measuring instrument
- Display graphical measured value curve
- Save measurement data
- Customer and measuring location management
- Documentation of your work
- E-mail dispatch of the report



### Digital lux meter testo 545

Simple, fast and precise measurement of illuminance (lux) according to the V-lambda curve for all common light sources

- Wide range of applications due to LED compatibility (except single-colour blue LED)
- Fast in-app configuration, graph history, second screen and measurement data memory in the testo Smart App
- Audible alarm sounds if a limit value is exceeded
- Timed and multi-point mean calculation

Order no. 0563 1545



### Digital thermohygrometer testo 625

Simple, fast and precise measurement of air temperature and relative humidity

- Calculation of dewpoint and wet bulb temperature
- Fast in-app configuration, graph history, second screen and measurement data memory in the testo Smart App
- Audible alarm sounds if a limit value is exceeded
- Timed and multi-point mean calculation

Order no. 0563 1625



# Pressure measurement **easily under control.**

## Compact pressure measurement.

The new compact measuring instruments from Testo are also reliably at your side for two of the most important measurements on heating systems. For fast measurement results when it counts.

With the differential pressure measuring instrument testo 512, you can check the gas pressure on burners quickly and precisely by measuring gas flow pressure and static gas pressure - indispensable for maintenance work on **heating systems.**

testo 512 is also your reliable partner for **general pressure measurement, checking filters** and **Pitot tube measurement**.

And with the differential temperature measuring instrument testo 922, (p. 11), you have the supply/return temperature on heating circuit distributors under control.



**Pro tip:**  
Ideal for measuring gas flow/static gas pressure.

### Digital differential pressure measuring instrument testo 512-1

- Simple, fast and precise differential pressure measurement (0 to 200 hPa) for checking filters and for Pitot tube measurement in the air duct
- Reliable measurement results due to position-independent differential pressure sensor with high accuracy
- Fast in-app configuration, graph history, second screen and measurement data memory in the testo Smart App
- Volume flow calculation in measuring instrument and App
- Audible alarm sounds if a limit value is exceeded

Order no. 0563 1512



**Pro tip:**  
Ideal for measuring high pressures.

### Digital differential pressure measuring instrument testo 512-2

- Simple, fast and precise differential pressure measurement (0 to 2,000 hPa)
- Fast in-app configuration, graph history, second screen and measurement data memory in the testo Smart App
- Audible alarm sounds if a limit value is exceeded
- Timed and multi-point mean calculation
- Durability through compact design with robust housing

Order no. 0563 2512

#### This is how the testo Smart App supports you

- Configure your measuring instrument
- Display graphical measured value curve
- Save measurement data
- Customer and measuring location management
- Documentation of your work
- E-mail dispatch of the report







**Pro tip:**  
Ideal for measuring flow/  
return temperature.

## Temperatures **easily under control.**

Measure the most important measurement value compactly.

### Digital differential temperature measuring instrument **testo 922**

Easy, fast and precise differential temperature measurement with dual thermocouple Type K probe (2 TC Type K probes included)

- Fast in-app configuration, graph history, second screen and measurement data memory in the testo Smart App
- Wide range of applications due to large measuring range from -50 °C to 1000 °C
- Large sensor selection optional and compatible with commercially available TC Type K sensors
- Audible alarm sounds if a limit value is exceeded

Order no. 0563 0922



### Digital temperature measuring instrument **testo 925**

Easy, fast and precise temperature measurement with thermocouple Type K probe (1 TC Type K probe included)

- Fast in-app configuration, graph history, second screen and measurement data memory in the testo Smart App
- Wide range of applications due to large measuring range from -50 °C to 1000 °C
- Large sensor selection optional and compatible with commercially available TC Type K sensors
- Audible alarm sounds if a limit value is exceeded

Order no. 0563 0925



## Temperature measurement in laboratory and food environment

## Temperatures in the laboratory and food environment **easily under control.**

Particularly precise, even at low temperatures.

### Digital temperature measuring instrument **testo 110**

Simple, fast and particularly precise temperature measurement with NTC or Pt100 sensor (optionally available)

- Fast in-app configuration, graph history, second screen and measurement data memory in the testo Smart App
- HACCP-compliant, certified according to EN 13485 for use in the food sector
- High-precision measurement results and high system accuracy with digital Pt100 sensors (calibration without measuring instrument)
- Audible alarm sounds if a limit value is exceeded

Order no. 0563 0110



# One App for everything: **That's smart!**

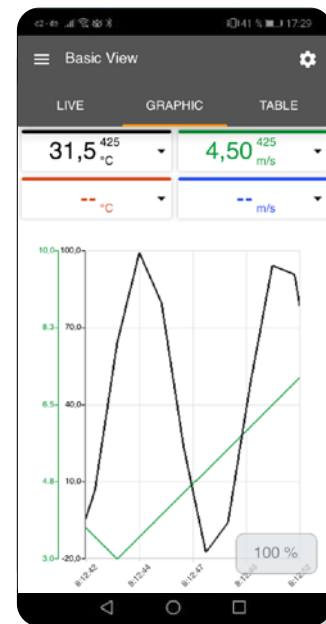
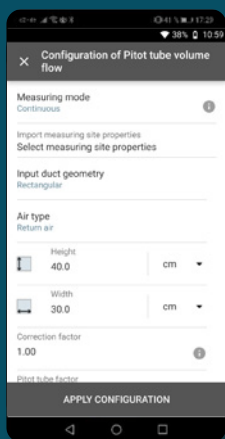
The testo Smart App will become your indispensable companion.

What's special about the new ones from Testo: You can configure and use them according to your needs. Just measure and nothing more? Not an issue at all. But you have other settings in mind, you would like to save the measured values, and documentation is also important?

Easy to use - with the testo Smart App. Get the most out of your new measuring instrument with the free App. And of course, the App and the measuring instrument simply connect automatically.

# Easy

- Intuitive measurement menus
- Quick configuration
- Uncomplicated documentation

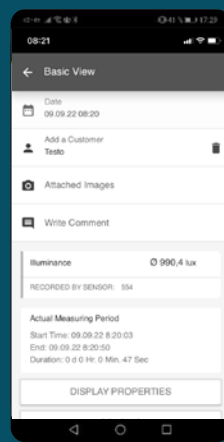
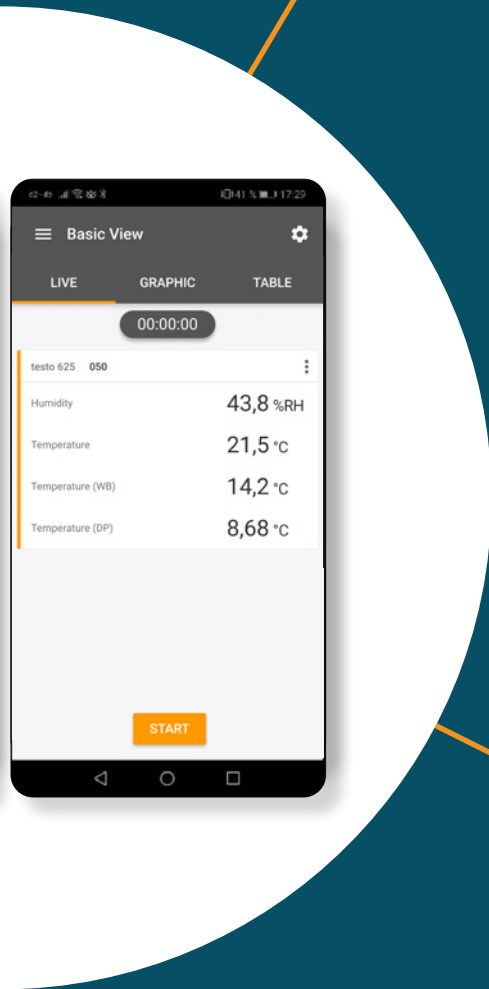


# Fast

- To the measurement in just a few clicks
- All measurement values at a glance
- Graphic or tabular curve display

# Efficient

- Storage of measurement and customer data
- Easy report generation and dispatch by e-mail
- Second display



# Clever






- Data exchange with PC software testo DataControl
- Continuous updates and extensions
- Free download, free use










# Do you want to be absolutely sure? **Good.**

All technical data at a glance.

Air conditioning and ventilation systems					
Product	testo 416	testo 417	testo 417 kit 1	testo 417 kit 2	testo 425
Description	16 mm vane anemometer with App connection, fixed telescope (max. 850 mm), incl. transport bag and calibration protocol	100 mm vane anemometer with App connection, incl. transport bag and calibration protocol	100 mm vane anemometer with App connection, incl. measuring funnel for plate outlets, measuring funnel for ventilation grilles, transport bag and calibration protocol	100 mm vane anemometer with App connection incl. measuring funnel for plate outlets, measuring funnel for ventilation grilles, flow straightener, transport bag and calibration protocol	Thermal hot wire anemometer with App connection, fixed telescope (max. 820 mm), incl. transport bag and calibration protocol
Measurement parameter	m/s, fpm, m <sup>3</sup> /h, cfm, l/s	m/s, fpm, °C, °F, m <sup>3</sup> /h, cfm, l/s			m/s, fpm, °C, °F, m <sup>3</sup> /h, cfm, l/s
Measuring range	0.6 to 40 m/s	0.3 to 20 m/s 0 to +50 °C			0 to 30 m/s -20 to +70 °C
Accuracy	±(0.2 m/s + 1% of reading)	±(0.1 m/s + 1.5% of m.v.) ±0.5 °C			±(0.03 m/s + 4% of m.v.) (0 to 20 m/s) ±(0.5 m/s + 5% of m.v.) (20.01 to 30 m/s) ±0.5 °C
Solution	0.1 m/s	0.01 m/s 0.1 m <sup>3</sup> /h (0 to +99.9 m <sup>3</sup> /h) 1 °C /h (rem. measuring range) 0.1 °C			0.01 m/s 0.1 °C
Classification	IP40 (probe: IP20)	IP40 (probe: IP20)			IP40 (probe: IP20)
Battery (incl.)	3 x AA	3 x AA			3 x AA
Battery life (h)	60	50			35
Connection testo Smart App	✔	✔			✔
Order no.	0563 0416	0563 0417	0563 1417	0563 2417	0563 0425

Pressure measurement		
Product	testo 512-1	testo 512-2
Description	Differential pressure measuring instrument with App connection, measuring range 0 to 200 hPa, audible alarm, incl. transport bag, silicone connection hose and calibration protocol	Differential pressure measuring instrument with App connection, measuring range 0 to 2,000 hPa, audible alarm, incl. transport bag, silicone connection hose and calibration protocol
Measurement parameter	Pa, hPa/mbar, kPa, psi, in <sup>2</sup> Hg, in <sup>2</sup> H <sub>2</sub> O, mm <sup>2</sup> H <sub>2</sub> O, mm <sup>2</sup> Hg, m/s, fpm, m <sup>3</sup> /h, cfm, l/s	Pa, hPa/mbar, kPa, psi, in <sup>2</sup> Hg, in <sup>2</sup> H <sub>2</sub> O, mm <sup>2</sup> H <sub>2</sub> O, mm <sup>2</sup> Hg
Measuring range	0 to +200 hPa	0 to +2,000 hPa
Accuracy	±(0.3 Pa + 1% of m.v.) ±1 digit (0 to 25 hPa) ±(0.1 hPa + 1.5% of m.v.) ±1 digit (25.001 to 200 hPa)	0.5 %fs
Solution	0.001 hPa	1 hPa
Classification	IP 40	IP40
Battery (incl.)	3 x AA	3 x AA
Battery life (h)	120	120
Connection testo Smart App	✔	✔
Order no.	0563 1512	0563 2512


Comfort level			
Product	<b>testo 535</b>	<b>testo 545</b>	<b>testo 625</b>
Description	CO <sub>2</sub> measuring instrument with App connection, audible alarm, incl. transport bag and calibration protocol	Lux meter with App connection, audible alarm, incl. transport bag and calibration protocol	Humidity and temperature measuring instrument with App connection, audible alarm, incl. transport bag and calibration protocol
Measurement parameter	ppm, %	lux, fc	%RH, °C, °F, °C td, °C dp
Measuring range	0 to 10,000 ppm	0 to 100,000 lux	0 to 100 %RH -20 to +60 °C
Accuracy	±100 ppm +5 % of mv	Class C, corresponding to DIN 5032-7 / EN 13032-1, Appendix B f1 = 6% = V(Lambda) adjustment f2 = 5% = cos-true evaluation Total ≤15% ±3% of m.v. ±1 digit	2.5 %RH (5 to 95 %RH) ±0.5 °C
Solution	1 ppm	0.1 lux (<10,000 lux) 1 lux (≥10,000 lux)	0.1 %RH 0.1 °C
Classification	IP40 (probe: IP20)	IP40 (probe: IP20)	IP40 (probe: IP20)
Battery	3 x AA	3 x AA	3 x AA
Battery life	30	70	100
Connection testo Smart App	✓	✓	✓
Order no.	0563 0535	0563 1545	0563 1625


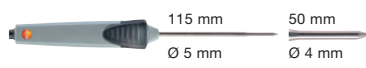
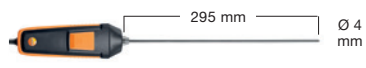
Temperature			
Product	<b>testo 922</b>	<b>testo 925</b>	<b>testo 110</b>
Description	2-channel temperature measuring instrument TC Type K with App connection, audible alarm, incl. transport bag, 2 x TC Type K probes and calibration protocol	1-channel temperature measuring instrument TC Type K with App connection, audible alarm, incl. transport bag, 1 x TC Type K probes and calibration protocol	1-channel temperature measuring instrument NTC / Pt100 with App connection, TUC probe socket, audible alarm, incl. transport bag and calibration protocol
Measurement parameter	°C, °F	°C, °F	°C, °F
Measuring range	-50 to +1000°C	-50 to +1000°C	NTC: -50 to +150°C Pt100: -200 to +800 °C
Accuracy	±(0.5 °C + 0.3% of m.v.) (-50 to +1000 °C)	±(0.5 °C + 0.3% of m.v.) (-50 to +1000 °C)	NTC: ±0.2 °C (-20 to +80 °C) ±0.3 °C (remaining meas. range) Pt100: according to the probe accuracy
Solution	0.1 °C (-50 to +499.9 °C) 1 °C (remaining measuring range)	0.1 °C (-50 to +499.9 °C) 1 °C (remaining measuring range)	NTC: 0.1 °C Pt100: according to the probe accuracy
Classification	IP40 (optional TopSafe IP65)	IP40 (optional TopSafe IP65)	IP40 (optional TopSafe IP65)
Battery	3 x AA	3 x AA	3 x AA
Battery life	120	150	100
Connection testo Smart App	✓	✓	✓
Order no.	0563 0922	0563 0925	0563 0110

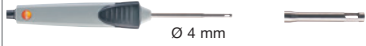
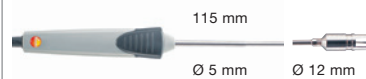



# Accessories & probes

More probes at [www.testo.com](http://www.testo.com)

Accessories	Order no.
<b>TopSafe</b> protective silicone cover for testo 922/925/110 for IP65	0516 0224
<b>Bluetooth®/IRDA printer</b> incl. battery and mains unit 	0554 0621
<b>Spare thermal paper for printer</b> (6 rolls), measurement data documentation can be read for up to 10 years	0554 0568

Probe type NTC/PT100 for testo 110	Probe shaft/probe shaft tip dimensions	Measuring range	Accuracy	Response time	Order no.
Pipe wrap probe (NTC) for pipe diameters of 5 to 65 mm, fixed cable 1.2 m		-50 to +120 °C	±0.2 °C (-25 to +80 °C)	-	0615 5605
Waterproof NTC immersion/penetration probe, fixed cable 1.2 m	 115 mm 50 mm Ø 5 mm    Ø 4 mm	-50 to +150 °C	±0.5% of m.v. (+100 to +150 °C) ±0.2 °C (-25 to +74.9 °C) ±0.4 °C (remaining meas. range)	10 s	0615 1212
<b>High-precision digital Pt100 penetration probe</b> for measurements in liquids and pastes with an accuracy of up to ±0.05°C	 295 mm    Ø 4 mm	-80 to +300 °C	±0.3 °C (-80 to -40.001 °C) ±(0.1 °C + 0.05 % of m.v.) (-40 to -0.001 °C) ±0.05 °C (0 to +100 °C) ±(0.05 °C + 0.05 % of m.v.) (+100.001 to +300 °C)	t <sub>90</sub> < 45 sec	0618 0275

Probe type Type K For testo 922/925	Dimensions Probe shaft/probe shaft tip	Measuring range	Accuracy	Response time	Order no.
Robust air probe, TC Type K, fixed cable	 Ø 4 mm	-60 to +400 °C	Class 2 <sup>1)</sup>	200 sec	0602 1793
Very fast-reaction surface probe with sprung thermocouple strip, also suitable for uneven surfaces, measuring range briefly up to +500°C, TC Type K, fixed cable	 115 mm Ø 5 mm    Ø 12 mm	-60 to +300 °C	Class 2 <sup>1)</sup>	3 sec	0602 0393
Immersion measuring tip, flexible, for measurements in air/flue gases (not suitable for measurements in smelters), TC Type K	 Ø 3 mm    1000 mm	-40 to +1000 °C	Class 1 <sup>1)</sup>	4 sec	0602 5693

<sup>1)</sup> According to standard EN 60584-1, the accuracy of Class 2 refers to -40 to +1200 °C.





# Folding thermometer

**testo 103 – The smallest folding  
thermometer in its class**

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Ideally suited for applications in the food sector

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Easy to operate

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Handy and small – fits in any trouser or jacket pocket

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Robust probe with narrow measurement tip

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Hygienic and easy-to-clean measurement tip

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Splash-proof according to IP55

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Certified according to EN 13485

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At a length of 11 cm, the testo 103 is the smallest folding thermometer in its class. It hardly takes up any space, so you can simply stow it in your breast or trouser pocket. That way, it is always quickly available and close to hand. The small folding thermometer is immediately ready to measure after folding out to an angle of greater than 30°, and is therefore flexible in its application. After measurement, the probe can simply be folded away and stored safely until the next measurement.

The folding thermometer testo 103 is conform to HACCP and EN 13485. Its narrow measurement tip leaves only small punctures in the foodstuffs, making it optimally suitable for spot checks – for example in production, storage and processing, in gastronomy, in supermarket chains, in food retail or in industry

## Technical data

### testo 103

The testo 103 the smallest folding thermometer of its class!  
It offers handy, practical and strong support when carrying out monitoring measurements.

Part no. 0560 0103



#### Sensor type NTC

Measuring range	-30 to +220 °C
Accuracy ±1 digit	±0.5 °C (-30 to +99.9 °C) ±1 % of m.v. (+100 to +220 °C)
Resolution	0.1 °C / °F

#### General technical data

Storage temperature	-30 to +70 °C
Operating temperature	-20 to +60 °C
Battery type	2 lithium batteries (CR2032)
Battery life	300 h (at +25 °C)
Dimensions	189 x 35 x 19 mm (probe folded out) 118 x 35 x 19 mm (probe folded away)
Probe length/ diameter	75 mm / Ø 3 mm
Probe tip diameter	22 mm / Ø 2.3 mm
Display	LCD, 1 line, non-illuminated
Reaction time	10 s (in moving liquid)
Switch on/off	With folding mechanism (approx. 30°) / Auto off after 60 mins.
Housing material	ABS
Weight	49 g
Protection class	IP55
Standard	EN 13485
Measuring cycle	0.5 s

# Folding thermometer

testo 104 – The first waterproof  
folding thermometer

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Ideal for applications in the food sector

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Handy, fits in any jacket pocket

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Robust metal folding joint with long measurement tip

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Rubber-coated surface for non-slip handling

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Coloured strips for differentiating individual instruments

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Automatic final value recognition (Auto-Hold)  
and min./max. store

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Certified according to EN 13485

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The testo 104 is the first ever waterproof folding thermometer! Its protection class IP65 allows the instrument to be cleaned under running water, and use under any conditions. The instrument has a robust metal joint and a very rigid, long temperature probe. The surface is covered with non-slip rubber, guaranteeing especially comfortable, safe handling and measurement. With the help of coloured strips, the instrument can be easily allocated and personalized.

The folding thermometer testo 104 is conform to HACCP and EN 13485. Its narrow measurement tip leaves only small punctures in the foodstuffs, making it ideal for spot check measurements – for example in production, storage and processing, in gastronomy, in supermarket chains, in food retail or in industry.



## Technical data

### testo 104

The testo 104 is the first waterproof folding thermometer!  
It offers handy, practical and strong support when carrying out monitoring measurements.

Part no. 0563 0104



#### Sensor type NTC

Measuring range	-50 to +250 °C
Accuracy ±1 digit	±1.0 °C (-50 to -30.1 °C) ±0.5 °C (-30 to +99.9 °C) ±1 % of m.v. (+100 to +250 °C)
Resolution	0.1 °C / °F / °R

#### General technical data

Operating temperature	-20 to +60 °C
Storage temperature	-30 to +70 °C
Battery type	2 AAA micro batteries
Battery life	100 h (typically at +25 °C without display illumination)
Dimensions	265 x 48 x 19 mm (probe folded out) 163 x 48 x 19 mm (probe folded away)
Probe length / diameter	106 mm / Ø 3 mm
Probe tip diameter	32 mm / Ø 2.3 mm
Display	LCD, 1 line, illuminated
Reaction time	10 s (in moving liquid)
Further functions	Auto hold, hold, min./max.
Switch on/off	With folding mechanism (approx. 30°) / Auto off after 60 mins
Housing material	ABS / TPE / PC, diecast zinc, stainless steel
Weight	165 g
Protection class	IP65
Standard	EN 13485

# Multi-purpose infrared and penetration thermometer

## testo 104-IR – Multi-scanning with penetration control

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Ideal for applications in the food sector

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One product, two purposes: Infrared and penetration thermometer

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Fits into any pocket thanks to folding mechanism

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High-quality, robust folding joint for tough working use

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Precise 2-point laser with 10:1 optics shows the exact measurement area, allowing error-free measurements

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Emissivity freely selectable

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Watertight (IP65) and HACCP-compliant

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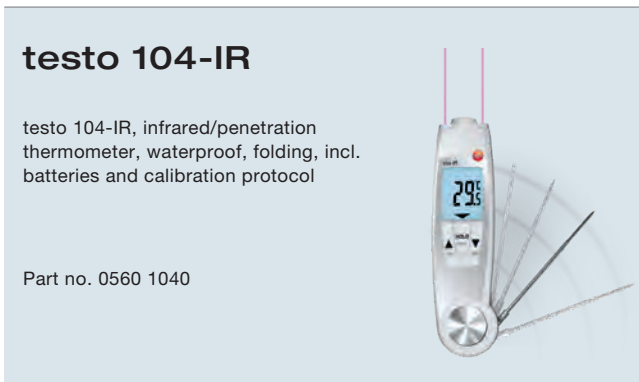
The testo 104-IR is a waterproof (IP65) penetration thermometer combined with an infrared sensor for non-contact temperature measurement. It can be used for all sorts of applications in the food sector. The testo 104-IR scans the surface temperature of individual foods or entire goods pallets without contact, particularly in the Incoming Goods department. If a limit value is exceeded or undershot, the hinged penetration probe is also able to measure the core temperature.

The multi-purpose instrument is handy and practical, because it fits into any jacket pocket. The penetration probe

is always securely stowed on the instrument itself. As soon as the probe is opened up, the display is activated. And the IR measurement starts at the touch of a button. Thanks to the large display, it is really easy to read the measurement result.

The few buttons are self-explanatory and any user will find it easy to operate them. No time-consuming measurements, no complicated handling, no compromises. Supply consumers with exclusively flawless goods using the testo 104-IR.

## Technical data



## Accessories

	Part no.	
ISO calibration certificate/temperature for air/immersion probes, calibration point -18°C	0520 0061	
ISO calibration certificate/temperature for air/immersion probes, calibration point 0°C	0520 0062	
ISO calibration certificate/temperature For air/immersion probes, calibration points -18°C; +60°C	0520 0043	
ISO calibration certificate/temperature for air/immersion probes, calibration points -18°C; 0°C; +60°C	0520 0001	
ISO calibration certificate/temperature infrared thermometers, calibration points -18°C, 0°C, +60°C	0520 0401	
ISO calibration certificate temperature Infrared thermometers, calibration points 0°C, +60°C	0520 0452	

Sensor type	NTC
Measuring range	-50 to +250 °C
Accuracy ±1 digit	±1 °C (-50.0 to -30.1 °C) ±0.5 °C (-30.0 to +99.9 °C) ±1% of m.v. (+100 to +250 °C)
Resolution	0.1 °C/°F/°R
Response time	t <sub>99</sub> = 10 s (measured in moving liquid)

Sensor type	Infrared
Measuring range	-30 to +250 °C
Accuracy ±1 digit	±2.5 °C (-30.0 to -20.1 °C) ±2.0 °C (-20.0 to -0.1 °C) ±1.5 °C or ±1.5% of m.v. (remaining range)
Resolution	0.1 °C
Measurement rate	0.5 s
Optics	10:1 + opening diameter of the sensor (12 mm)
Meas. spot marking	2 point laser
Spectral range	8 to 14 µm
Emissivity	0.10 to 1.00 (0.01 steps)
Laser marking	on / off

### General technical data

Measurement value	temperature °C/°F/°R
Measurement mode	Hold or auto hold (immersion probe)
Operating temperature	-20 to +50 °C
Storage temperature	-30 to +70 °C
Battery type	2 AAA micro batteries
Battery life	10 h (at +25 °C)
Display	LCD, single line, illuminated, with status line (°C, °F, °R, battery, hold/auto hold, min, max, laser, measurement, emissivity)
Protection class	IP65
Dimensions	281 x 48 x 21 mm (probe folded out) 178 x 48 x 21 mm (probe not folded out)
Probe length/diameter	106 mm / Ø 3 mm
Probe tip diameter	32 mm / Ø 2.3 mm
Housing material	ABS / TPE / PC, diecast zinc, stainless steel
Weight	197 g (incl. batteries)
Standard	EN 13485



# One-hand temperature measuring instrument

testo 105



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Ideally suited to applications in the food sector

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Exchangeable measurement tips

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2 freely adjustable limit values

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Audible and optical alarm

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One-line display, illuminated

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Especially robust, can be cleaned under running water  
(according to protection class IP65)

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Certified according to EN 13485

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The testo 105 is a robust food thermometer with exchangeable measurement tips for temperature measurement on semi-solid media. It has an additional measurement tip for frozen goods. Depending on the probe used, it is particularly suited to applications in the areas of gastronomy, refrigerated rooms, large kitchens, supermarkets and the checking of Incoming Goods.

Since it can be cleaned under running water according to IP65, it is especially hygienic, and applicable everywhere, thanks to its robustness. An audible and an optical alarm reliably warn when individually adjustable upper and lower limit values are violated.

## Technical data / Accessories

### testo 105

One-hand thermometer with standard measurement tip, backlit display, protection class IP65, incl. belt/wall holder and batteries

Part no. 0563 1051



#### Sensor type NTC

Measuring range	-50 to +275 °C
Accuracy ±1 digit	±0.5 °C (-20 to +100 °C) ±1 °C (-50 to -20.1 °C) ±1 % of m.v. (+100.1 to +275 °C)
Resolution	0.1 °C

#### General technical data

Operating temperature	-20 to +50 °C
Storage temperature	-40 to +70 °C
Response time	t <sub>99</sub> = probe short / long: 10 s, frozen goods probe: 15 s (in frozen meat approx. 60 s)
Measuring cycle	0.5 s
Battery type	Button cell LR44 (4 off)
Battery life	80 h
Auto Off	10 min
Dimensions	145 x 38 x 195 mm (without probes)
Housing	ABS
Display	LCD, 1 line
Weight	139 g
Protection class	IP65
Standard	EN 13485

0981 9484/msp/1/01.2018

Subject to change without notice.

#### Set

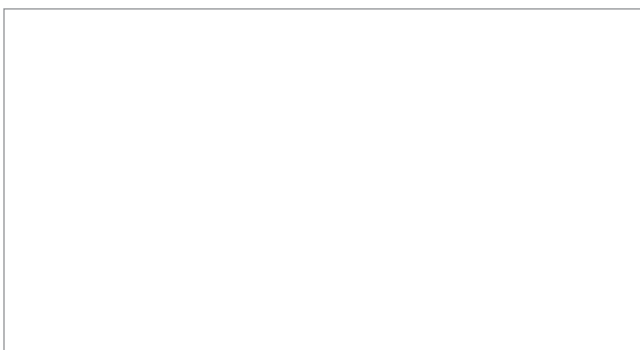
#### Part no.

Set testo 105, one-hand thermometer with standard measurement tip, frozen food tip, long measurement tip and belt/wall holder and aluminium case	0563 1052	
testo 105, one-hand thermometer with frozen food measurement tip, belt/wall holder and batteries	0563 1054	

#### Accessories for measuring instrument

#### Part no.

Standard measurement tip, 100 mm long	0613 1051	
Frozen food tip, 90 mm long	0613 1052	
Long measurement tip, 200 mm long	0613 1053	
ISO calibration certificate/temperature; for air/immersion probes, calibration points -18°C; 0°C	0520 0041	
Button cell batteries, Type LR 44, 1.5 Volt (4 off)	0515 0032	



# Core temperature thermometer

testo 106 – The compact food thermometer

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Ideal for use in the food sector

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TopSafe: dishwasher-safe protective cover (IP67), protects from dirt and impact

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Small, handy and always ready to hand

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Audible and optical alarm

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Automatic final value recognition (Auto-hold)

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Hardly visible punctures

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Certified according to EN 13485 (only in combination with TopSafe)

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The core thermometer testo 106 is especially fast and robust. Its small handy shape means it is always close to hand and ready for use. Thanks to its very thin and robust measurement tip, it is excellently suited to core temperature checks in gastronomy, hotels, large kitchens, supermarkets etc. The dishwasher-safe TopSafe protects the instrument from dirt, water and impact.

The testo 106 is conform to HACCP as well as EN 13485. If required, upper and lower limit values can be stored in the instrument; as soon as these values are violated, audible and optical warning signals are given. This alarm function and the automatic final value recognition facilitate measurement and support you in recognizing and interpreting measurement values quickly and correctly.



## Technical data / Accessories

### testo 106

testo 106, food core thermometer incl. probe protecting cap, battery and calibration protocol

Part no. 0560 1063



### Set testo 106

Set testo 106, food core thermometer incl. TopSafe (waterproof protection case, IP67, attachment clip, probe protection cap, battery and calibration protocol

Part no. 0563 1063

#### Sensor type NTC

Measuring range	-50 to +275 °C
Accuracy ±1 digit	±1 % of m.v. (+100 to +275 °C) ±0.5 °C (-30 to +99.9 °C) ±1 °C (-50 to -30.1 °C)
Resolution	0.1 °C

#### General technical data

Storage temperature	-40 to +70 °C
Operating temperature	-20 to +50 °C
Response time	t <sub>99</sub> = 10 s (in moving liquid)
Measuring cycle	0.5 s
Battery type	3V button cell (CR 2032)
Battery life	350 h
Weight	80 g
Dimensions	220 x 35 x 20 mm
Length Probe shaft / Probe shaft tip	55 mm / 15 mm
Diameter Probe shaft / Probe shaft tip	Ø 3 mm / Ø 2.2 mm
Display	LCD, 1 line
Housing material	ABS
Protection class	IP 67 with TopSafe
Standard	EN 13485

0981 9494/msp/1/01.2020

Subject to change without notice.

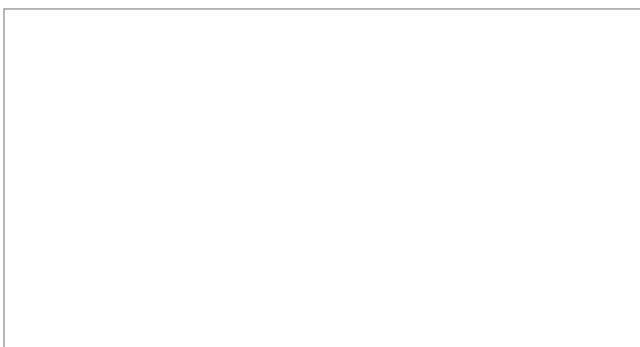
#### Accessories for measuring instrument

#### Part no.

TopSafe (indestructible protection case); waterproof and dishwasher-safe protection case (IP67)	0516 8265	
Holding clip with probe protection cap	0554 0825	
Lithium battery CR 2032 button cell	0515 5028	

#### Calibration Certificates

ISO calibration certificate/temperature ; for air/immersion probes, calibration point +60°C	0520 0063	
ISO calibration certificate/temperature ; for air/immersion probes, calibration point -18°C	0520 0061	
ISO calibration certificate/temperature ; for air/immersion probes, calibration point 0°C	0520 0062	
ISO calibration certificate/temperature ; for air/immersion probes, calibration points -18°C; 0°C	0520 0041	
ISO calibration certificate/temperature ; for air/immersion probes, calibration points -8°C; 0°C; +40°C	0520 0181	



# Temperature measuring instrument

testo 108 product series –  
for fast, easy and precise  
temperature measurements

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Optimal for use in the food sector

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Easy operation and handling

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Instrument and probe waterproof (IP67)

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Conform to HACCP and EN 13485

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Universally applicable

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Temperature measurements are among the tasks carried out daily in the food sector. Only by taking precise measurements can the quality of the products be monitored and guaranteed. And it is the only way to fulfil the HACCP guidelines.


The thermometers from the product series testo 108 carry out spot check measurements in seconds. Whether in the transportation and storage of foodstuffs, in restaurants, in large kitchens or in chain restaurants. The testo 108 is insensitive to moisture and water, and thanks to the softcase (protective cover), is safe from impact damage and dirt.

# Technical data

**testo 108**

testo 108, waterproof temperature instrument (Type T and K), incl. thermocouple probe type T, Softcase and calibration protocol


Part no. 0563 1080



**testo 108-2**

testo 108-2, waterproof TC temperature measuring instrument (Type T), incl. lockable thermocouple probe Type T, softcase and calibration protocol.

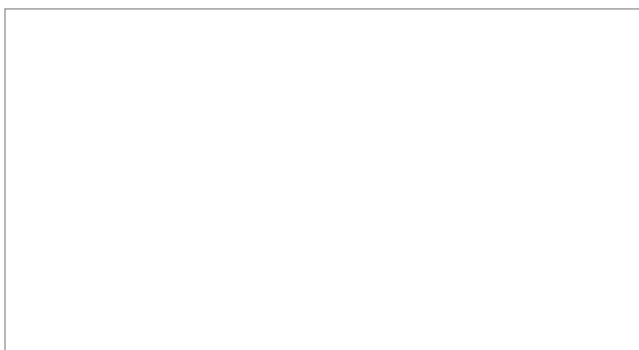
Part no. 0563 1082




- testo 108-2**
- Screw-in probe lockable, provides absolutely secure attachment
  - Auto-hold, hold and min./max. function

**Accessories for measuring instrument**

	<b>Part no.</b>
Standard TC penetration probe Type T for testo 108	0602 1080
Flexible oven probe, Tmax +250 °C, PTFE cable for testo 108	0603 0646
Stainless steel food probe (IP67), with FEP cable to +200 °C, TC Type T for testo 108	0603 3392
Quick needle probe to monitor cooking in oven, T/C Type T for testo 108	0628 0030
Standard TC penetration probe Type T for testo 108-2	0602 1081



**Sensor type**

Measurement unit	Temperature °C / °F
Connectable sensor types	Thermocouple Type T and Type K (testo 108) Thermocouple Type T (testo 108-2)
Measuring range	-50 to +300 °C
Accuracy Instrument (Ambient temperature +23 °C ±3 °C)	±0.5 °C (-30 to +70 °C) ±0.5 °C ±0.5 % of m.v. (remaining range)
Accuracy Probes	±0.5 °C (-40 to -20 °C) ±0.2 °C (-20 to +70 °C) ±0.5 °C (+70 to +125 °C) ±0.4 % of m.v. (+125 to +300 °C)
Resolution	0.1 °C

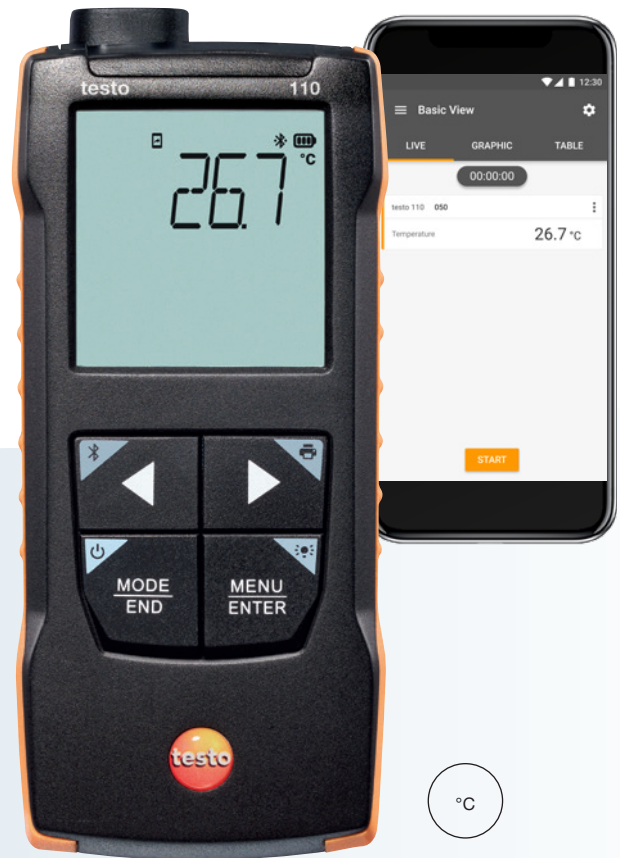
**General technical data**

Operating temperature	-20 to +60 °C
Storage temperature	-30 to +70 °C
Protection class	IP67 (with attached included probe and TopSafe)
Measurement rate	2 measurements per second
Adjustment time t <sub>99</sub>	10 s (in moving liquid)
Display	LCD, one-line, with status line
Weight	150 g (without Softcase)
Dimensions	140 x 60 x 24.5 mm (without probe)
Housing material	TPE/PC + ABS/PC + ABS + 10%GF
Standard	EN 13485
EC guideline	2014/30/EC
Power supply	3 x battery Type AAA
Battery life	2500 h (typical, at 23 °C)
Features	Auto-hold, hold and min./max. function (testo 108-2)



# Temperature measuring instrument (1-channel)

testo 110 – NTC and Pt100  
temperature measuring  
instrument with App connection



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Simple, fast and particularly precise temperature measurement with NTC or Pt100 probes (optionally available)

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Fast in-app configuration, graph history, second screen and measurement data memory in the testo Smart App

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HACCP-compliant, certified according to EN 13485 for use in the food sector

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High-precision measurement results and high system accuracy with digital Pt100 sensors (calibration without measuring instrument)

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Audible alarm sounds if a limit value is exceeded

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Easy to use and precise in measurement: This is how the compact temperature measuring instrument testo 110 convinces every day in use. The fast temperature all-rounder can show its strengths particularly in applications in **laboratories or in the food environment**: The optionally available NTC or Pt100 probes cover a comprehensive range of measuring tasks and ensure exact results with particularly high accuracy.

The digital Pt100 probes can also be calibrated without the measuring instrument - so you can easily continue working with a different probe without downtime.

Of course, the testo 110 is HACCP-compliant, certified to EN13485 and, with the optional TopSafe protective cover, dust-tight and protected against water jets (protection class IP65).

The temperature measuring instrument is rounded off by the testo Smart App for smartphones and tablets:

- Configuration of testo 110
- Second display
- Measurement data memory
- Display of the measured values (table, graphic progression)
- Documentation

 Bluetooth 5.0  
+ App 

testo Smart App  
for free download




# Ordering data / technical data / accessories

## testo 110

testo 110, 1-channel temperature measuring instrument NTC / Pt100 with App connection, TUC probe socket and audible alarm, incl. transport bag, calibration protocol and 3 x AA batteries

Order no. 0563 0110



## TopSafe

TopSafe, protects against impact and dirt, with attachment magnets and stand-up bracket

Order no. 0516 0224



### The testo Smart App

- Simple and fast: Measurement menus for numerous applications provide optimum support in configuring and carrying out the measurement
- Clear graphical presentation of readings, e.g. as a table, for quick interpretation of results
- Create digital measurement reports including photos as PDF/CSV files on site and send via e-mail




Free download for Android and iOS



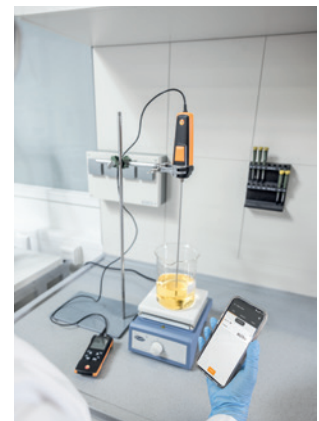
### Sensor types

NTC	
Measuring range	-50 to +150 °C
Accuracy ±1 digit	±0.2 °C (-20 to +80 °C) ±0.3 °C (remaining meas. range)
Resolution	0.1 °C

Pt100	
Measuring range	-200 to +800 °C
Accuracy ±1 digit	according to the probe accuracy
Resolution	according to the probe accuracy


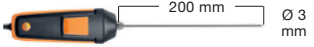
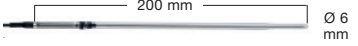



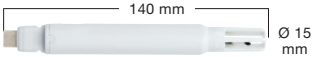
### General technical data

Operating temperature	-20 to +50 °C
Storage temperature	-20 to +50 °C
Battery type	3 x AA
Battery life	100 h
Dimensions	135 x 60 x 28 mm
Weight	187 g
Protection class	IP40 with TopSafe: IP65
Housing material	ABS + PC / TPE

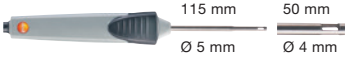
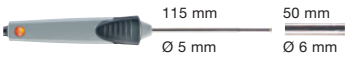



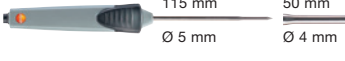
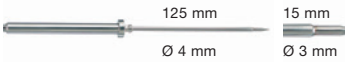
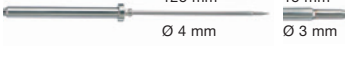
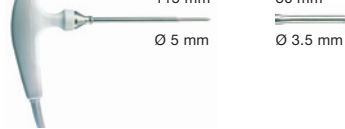
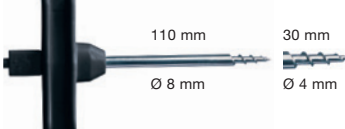


Accessories	Order no.
TopSafe, protects against impact and dirt, with attachment magnets and stand-up bracket	0516 0224
testo Bluetooth® printer, incl. 1 roll of thermal paper, rech. battery and mains unit	0554 0621
Spare thermal paper for printer (6 rolls), measurement data documentation can be read for up to 10 years	0554 0568
ISO temperature calibration certificate, for air/immersion probe, calibration points -18 °C; 0 °C; +60 °C	0520 0001
ISO temperature calibration certificate, one-point calibration for surface thermometer, calibration point +60 °C	0520 0072
ISO temperature calibration certificate, one-point calibration for surface thermometer, calibration point +120 °C	0520 0073
DAkkS temperature calibration certificate, measuring instruments with air/immersion probe; calibration points -20 °C; 0 °C; +60 °C	0520 0211

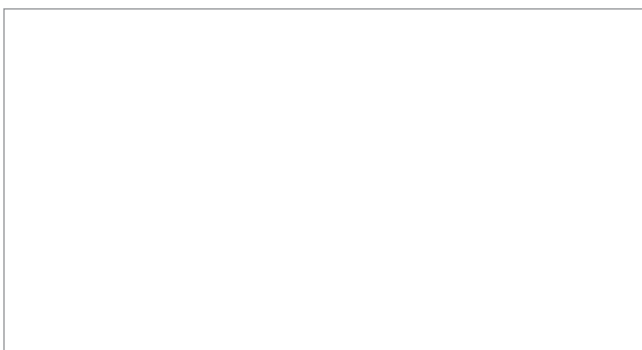
# Digital Pt100 and NTC temperature probes

Probe type		Measuring range	Accuracy	Resolution	Order no.
<b>Digital Pt100 temperature probe</b>					
<b>High-precision digital Pt100 penetration probe</b> for measurements in liquids and pastes with an accuracy of up to $\pm 0.05^\circ\text{C}$	 295 mm Ø 4 mm	-80 to +300 °C	$\pm 0.3^\circ\text{C}$ (-80 to -40.001 °C) $\pm 0.1^\circ\text{C} + 0.05\%$ of m.v.) (-40 to -0.001 °C) $\pm 0.05^\circ\text{C}$ (0 to +100 °C) $\pm (0.05^\circ\text{C} + 0.05\%$ of m.v.) (+100.001 to +300 °C)	0.001 °C	0618 0275
<b>Digital Pt100 penetration probe</b> for measurements in liquids and pastes	 200 mm Ø 3 mm	-100 to +400 °C	$\pm (0.15^\circ\text{C} + 0.2\%$ of m.v.) (-100 to -0.01 °C) $\pm (0.15^\circ\text{C} + 0.05\%$ of m.v.) (0 to +100 °C) $\pm (0.15^\circ\text{C} + 0.2\%$ of m.v.) (+100.01 to +350 °C) $\pm (0.5^\circ\text{C} + 0.5\%$ of m.v.) (+350.01 to +400 °C)	0.01 °C	0618 0073
<b>Glass-coated digital Pt100 laboratory probe</b> for measurements in corrosive media	 200 mm Ø 6 mm	-50 to +400 °C	$\pm (0.3^\circ\text{C} + 0.3\%$ of m.v.) (-50 to +300 °C) $\pm (0.4^\circ\text{C} + 0.6\%$ of m.v.) (+300.01 to +400 °C)	0.01 °C	0618 7072
<b>Robust, fast-reaction, digital Pt100 air probe</b>	 200 mm Ø 4 mm	-100 to +400 °C	$\pm (0.15^\circ\text{C} + 0.2\%$ of m.v.) (-100 to -0.01 °C) $\pm (0.15^\circ\text{C} + 0.05\%$ of m.v.) (0 to +100 °C) $\pm (0.15^\circ\text{C} + 0.2\%$ of m.v.) (+100.01 to +350 °C) $\pm (0.5^\circ\text{C} + 0.5\%$ of m.v.) (+350.01 to +400 °C)	0.01 °C	0618 0072
<b>Flexible digital Pt100 temperature probe</b> for measurements in locations that are difficult to access and in liquids	 Ø 4 mm Length 1000 mm	-100 to +260 °C	$\pm (0.3^\circ\text{C} + 0.3\%$ of m.v.)	0.01 °C	0618 0071
<b>Digital Pt100 cable temperature probe</b> Cable length 1.3 m	 Length 90 mm Ø 4 mm	-85 to +150 °C (probe and cable only)	$\pm (0.25^\circ\text{C} + 0.3\%$ of reading) at -49.9 to +99.9 °C $\pm 0.55^\circ\text{C}$ remaining measuring range	0.01 °C	0572 2163
<b>Digital NTC temperature probe</b>					
<b>Digital NTC stub temperature probe</b>	 140 mm Ø 15 mm	-30 to +50 °C	$\pm 0.4^\circ\text{C}$	0.1 °C	0572 2162

# Analog NTC temperature probe

Probe type	Dimensions Probe shaft/probe shaft tip	Measuring range	Accuracy	Response time	Order no.
<b>Air probe</b>					
Robust NTC air probe, fixed cable 1.2 m	 115 mm / 50 mm Ø 5 mm / Ø 4 mm	-50 to +125 °C <sup>2)</sup>	±0.2 °C (-25 to +80 °C) ±0.4 °C (remaining meas. range)	60 s	0615 1712
<b>Surface probe</b>					
Watertight NTC surface probe for flat surfaces, fixed cable 1.2 m	 115 mm / 50 mm Ø 5 mm / Ø 6 mm	-50 to +150 °C <sup>2)</sup>	±0.5% of m.v. (+100 to +150 °C) ±0.2 °C (-25 to +74.9 °C) ±0.4 °C (remaining meas. range)	35 s	0615 1912
Temperature probe with Velcro (NTC), fixed cable 1.4 m	 300 mm / 30 mm	-50 to +70 °C	±0.2 °C (-25 to +70 °C) ±0.4 °C (-50 to -25.1 °C)	60 s	0615 4611
Pipe wrap probe (NTC) for pipe diameters from 5 to 65 mm, fixed cable 1.2 m		-50 to +120 °C	±0.2 °C (-25 to +80 °C)		0615 5605
Clamp probe for measurements on pipes from 6 to 35 mm diameter, NTC, fixed cable 1.5 m		-40 to +125 °C	±1 °C (-20 to +85 °C)	60 s	0615 5505
<b>Immersion/penetration probe</b>					
Waterproof NTC immersion/penetration probe, fixed cable 1.2 m	 115 mm / 50 mm Ø 5 mm / Ø 4 mm	-50 to +150 °C <sup>2)</sup>	±0.5% of m.v. (+100 to +150 °C) ±0.2 °C (-25 to +74.9 °C) ±0.4 °C (remaining meas. range)	10 s	0615 1212
<b>Food probe</b>					
Stainless steel NTC food probe (IP65) with PUR cable, fixed cable 1.5 m	 125 mm / 15 mm Ø 4 mm / Ø 3 mm	-50 to +150 °C <sup>2)</sup>	±0.5% of m.v. (+100 to +150 °C) ±0.2 °C (-25 to +74.9 °C) ±0.4 °C (remaining meas. range)	8 s	0615 2211
Stainless steel NTC food probe (IP67) with PTFE cable up to +250 °C, fixed cable 1.5 m	 125 mm / 15 mm Ø 4 mm / Ø 3 mm	-50 to +150 °C <sup>2)</sup>	±0.5% of m.v. (+100 to +150 °C) ±0.2 °C (-25 to +74.9 °C) ±0.4 °C (remaining meas. range)	8 s	0615 3311
Robust NTC food penetration probe with special handle, reinforced PUR cable, fixed cable 1.3 m	 115 mm / 30 mm Ø 5 mm / Ø 3.5 mm	-25 to +150 °C <sup>2)</sup>	±0.5% of m.v. (+100 to +150 °C) ±0.2 °C (-25 to +74.9 °C) ±0.4 °C (remaining meas. range)	7 s	0615 2411
Frozen food probe NTC for screw-in use without pre-drilling (including plug-in cable 1.5 m)	 110 mm / 30 mm Ø 8 mm / Ø 4 mm	-50 to +140 °C <sup>2)</sup>	±0.5% of m.v. (+100 to +140 °C) ±0.2 °C (-25 to +74.9 °C) ±0.4 °C (remaining meas. range)	20 s	0615 3211

<sup>2)</sup> Long-term measuring range to +125 °C, briefly to +150 °C or +140 °C (2 minutes)



1981 2214/msp/11.2023

Subject to change without notice.



# Temperature measuring instrument (1-channel)

testo 112 - Universally applicable

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Highly accurate, officially calibratable temperature measuring instrument

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The instrument for official food inspections

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TopSafe, the indestructible protective cover, protects from dirt and impact  
(with TopSafe and probe attached: IP65)

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Display and storage of min./max. values

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Audible alarm (limit values adjustable)

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Large, illuminated display

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Measurement data printout on site with Testo fast printer

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IP65



°C

The officially calibratable temperature measuring instrument testo 112 was specially designed for official monitoring measurements. Thanks to the PTB type permit and the possibility of official calibration, the instrument is authorized for use in official measurements by food inspectors, assessors and authorities.

An integrated self-test provides security even before the measurement. Thanks to the broad measurement range, the testo 112 is the ideal temperature measuring instrument for all aspects of food inspection. NTC probes (thermistor probes) as well as Pt100 probes (platinum resistance probes) can be connected to the probe input, covering a

broad measuring range from deep-frozen goods to checks on deep-fryers. Occurring minimum and maximum values can be conveniently called up in the two-line display, and when individually adjustable upper and lower limit values are violated, the measuring instrument immediately provides an audible alarm.

In order to document the temperature values, the testo 112 offers the possibility of printing out the data directly on site incl. date and time using the Testo report printer.

## Technical data / Accessories

### testo 112

testo 112, 1 channel temperature measuring instrument NTC/Pt100, calibratable, with battery



Part no. 0560 1128

#### General technical data

Operating temperature	-20 to +50 °C
Storage temperature	-30 to +70 °C
Adjustment time	2 s
Battery life	100 h
Battery type	9V block battery, 6F22
Dimensions	182 x 64 x 40 mm
Weight	171 g
Housing material	ABS
EC Directive	2014/30/EU
Protection class	with TopSafe (accessory) and sensor connected: IP65

#### Sensor types

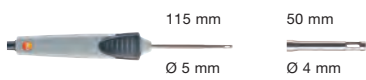
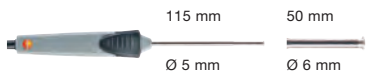
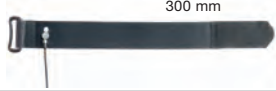
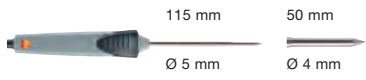
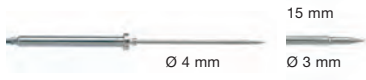
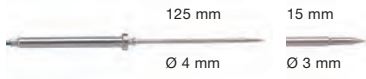
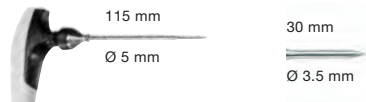

	NTC	Pt100
Measuring range	-50 to +120 °C	-50 to +300 °C
Accuracy ±1 digit	±0.2 °C (-25 to +40 °C) ±0.3 °C (+40.1 to +80 °C) ±0.5 °C (remaining range)	±0.2 °C (-50 to +200 °C) ±0.3 °C (remaining range)
Resolution	0.1 °C	0.1 °C

#### Accessories for measuring instrument

#### Part no.



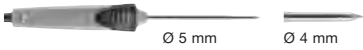


9V rech. battery for instrument, instead of battery	0515 0025	
Testo fast printer IrDA with wireless infrared interface; 1 roll thermal paper; 4 AA batteries	0554 0549	
Spare thermal paper for printer (6 rolls), permanent ink measurement data documentation legible for up to 10 years	0554 0568	
TopSafe, protects from impact and dirt	0516 0220	
Transport case (hardcase) for measuring instruments and probes, dimensions 270 x 130 x 70 mm	0590 0018	
Handy bag (softcase) for measuring instrument and probes, dimensions 350 x 100 x 40 mm	0516 0212	
Service case for measuring instrument and probes, dimensions 460 x 320 x 120 mm	0516 1201	

# Probes

Probe type	Dimensions Probe shaft/probe shaft tip	Measuring range	Accuracy	t <sub>99</sub>	Part no.
<b>Air probes</b>					
◆ Efficient, robust NTC air probe, Fixed cable 1.2 m		-50 to +125 °C <sup>2)</sup>	±0.2 °C (-25 to +80 °C) ±0.4 °C (remaining range)	60 s	0613 1712
<b>Surface probes</b>					
◆ Waterproof NTC surface probe for flat surfaces, Fixed cable 1.2 m		-50 to +150 °C <sup>2)</sup>	±0.5% of m.v. (+100 to +150 °C) ±0.2 °C (-25 to +74.9 °C) ±0.4 °C (remaining range)	35 s	0613 1912
Pipe wrap probe with Velcro for pipe diameter to max. 75 mm, Tmax. +75 °C, NTC, Fixed cable		-50 to +70 °C	±0.2 °C (-25 to +70 °C) ±0.4 °C (-50 to -25.1 °C)	60 s	0613 4611
<b>Immers./penetr. probes</b>					
◆ Waterproof NTC immersion/ penetration probe, Fixed cable		-50 to +150 °C <sup>2)</sup>	±0.5% of m.v. (+100 to +150 °C) ±0.2 °C (-25 to +74.9 °C) ±0.4 °C (remaining range)	10 s	0613 1212
<b>Food probes</b>					
◆ Stainless steel NTC food probe (IP65) with PUR cable, Fixed cable		-50 to +150 °C <sup>2)</sup>	±0.5% of m.v. (+100 to +150 °C) ±0.2 °C (-25 to +74.9 °C) ±0.4 °C (remaining range)	8 s	0613 2211
◆ Stainless steel NTC food probe (IP67) with PTFE cable to +250°C, Fixed cable		-50 to +150 °C <sup>2)</sup>	±0.5% of m.v. (+100 to +150 °C) ±0.2 °C (-25 to +74.9 °C) ±0.4 °C (remaining range)	8 s	0613 3311
◆ Robust NTC food penetration probe with special handle, reinforced PUR cable, Fixed cable		-25 to +150 °C <sup>2)</sup>	±0.5% of m.v. (+100 to +150 °C) ±0.2 °C (-25 to +74.9 °C) ±0.4 °C (remaining range)	7 s	0613 2411
◆ Frozen food probe NTC, corkscrew design (incl. plug-in wire), Plug-in cable		-50 to +140 °C <sup>2)</sup>	±0.5% of m.v. (+100 to +140 °C) ±0.2 °C (-25 to +74.9 °C) ±0.4 °C (remaining range)	20 s	0613 3211

- ◆ The measuring instrument inside TopSafe is waterproof with this probe.  
2) Long-term measurement range +125 °C, short-term +150 °C or +140 °C (2 minutes)

# Calibratable probes

Probe type	Dimensions Probe shaft/probe shaft tip	Measuring range	Accuracy	t <sub>99</sub>	Part no.
<b>Pt100</b>					
<ul style="list-style-type: none"> <li>Waterproof Pt100 immersion/penetration probe, calibratable, Fixed cable 1.2 m</li> </ul>	 <p>160 mm      50 mm Ø 5 mm      Ø 4 mm</p>	-50 to +300 °C	Class A	12 s	0614 1272
<ul style="list-style-type: none"> <li>Robust stainless steel Pt100 food probe IP65, calibratable, Fixed cable 1.2 m</li> </ul>	 <p>125 mm      15 mm Ø 4 mm      Ø 3 mm</p>	-50 to +300 °C	Class A	10 s	0614 2272
<b>NTC</b>					
<ul style="list-style-type: none"> <li>Waterproof NTC immersion/penetration probe, calibratable, Fixed cable 1.2 m</li> </ul>	 <p>160 mm      50 mm Ø 5 mm      Ø 4 mm</p>	-25 to +120 °C	±0.5% of m.v. (+100 to +120 °C) ±0.2 °C (-25 to +74.9 °C) ±0.4 °C (remaining range)	10 s	0614 1212
<ul style="list-style-type: none"> <li>Accurate, robust NTC air probe, calibratable, Fixed cable 1.2 m</li> </ul>	 <p>115 mm      50 mm Ø 5 mm      Ø 4 mm</p>	-25 to +120 °C	±0.5% of m.v. (+100 to +120 °C) ±0.2 °C (-25 to +74.9 °C) ±0.4 °C (remaining range)	60 s	0614 1712
<ul style="list-style-type: none"> <li>Stainless steel NTC food probe, calibratable (IP65), PUR cable can be used up to +80°C, IP54 plug-in connection, Fixed cable</li> </ul>	 <p>125 mm      15 mm Ø 4 mm      Ø 3 mm</p>	-25 to +120 °C	±0.5% of m.v. (+100 to +120 °C) ±0.2 °C (-25 to +74.9 °C) ±0.4 °C (remaining range)	10 s	0614 2211

◆ The measuring instrument inside TopSafe is waterproof with this probe.

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Subject to change without notice.





# Clamp thermometer operated with smartphone

## testo 115i

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Compact professional measuring instrument from the Testo Smart Probes series for use with smartphones/tablets

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Measurement of flow and return temperature of heating systems

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Temperature measurement on refrigeration systems for calculation of superheating and subcooling

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Fast identification of temperature changes by graphic progression display

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Measurement data analyzed and sent via testo Smart App

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Problem-free use at measuring points that are a long distance apart – Bluetooth® range up to 100 m

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 Bluetooth®  
+ App

testo Smart App  
for free download



In conjunction with a smartphone or tablet, the handy testo 115i clamp thermometer is suitable for servicing and troubleshooting on air conditioning and refrigeration systems, as well as for their installation. In addition, the measuring instrument can also be used to measure flow and return temperatures. The testo 115i makes it considerably easier to work on measuring points that are a long distance apart, thanks to wireless connection to a smartphone or tablet.

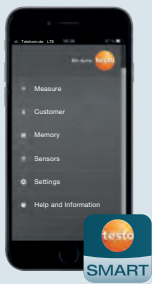
And simultaneous use of the testo 549i high-pressure measuring instrument also enables calculation of individual refrigeration system parameters, such as superheating and subcooling. Users can read off their measuring values conveniently via the testo Smart App installed on the terminal device. All measurement data are presented either as a graph or a table. Finally, the measurement data reports can be sent directly as pdf or Excel files.

## Technical data/accessories

### testo 115i

testo 115i, clamp thermometer operated with smartphone, for measurement on pipelines with diameters of 6 to max. 35 mm, including batteries and calibration protocol

Order no. 0560 2115 02



#### testo Smart App

The App turns your smartphone/tablet into the display for the testo 115i. Both the operation of the measuring instrument and the display of the readings are achieved by Bluetooth® via the testo Smart App on your smartphone or tablet – irrespective of the measuring location. In addition, you can use the App to create measurement reports, add photos and comments to these and send them by e-mail. For iOS and Android.

#### Sensor type

#### NTC

Measuring range	-40 to +150 °C
Accuracy ±1 digit	±1.3 °C (-20 to +85 °C)
Resolution	0.1 °C

#### General technical data

Compatibility	requires iOS 11.0 or newer / Android 6.0 or newer requires mobile terminal device with Bluetooth® 4.0
Storage temperature	-20 to +60 °C
Operating temperature	-20 to +50 °C
Battery type	3 micro batteries AAA
Battery life	150 hrs
Dimensions	183 x 90 x 30 mm
Bluetooth® range	up to 100 m

#### Accessories

#### Order no.

testo Smart Case (refrigeration) for the storage and transport of 2 x testo 115i and 2 x testo 549i, dimensions 250 x 180 x 70 mm	0516 0240	
testo Smart Case (heating) for the storage and transport of testo 115i, testo 410i, testo 510i, testo 549i and testo 805i, dimensions 250 x 180 x 70 mm	0516 0270	
ISO temperature calibration certificate, one-point calibration for clamp thermometer, calibration point +60 °C	0520 0072	

## Monitoring system

testo 160 – Monitoring system for the monitoring of temperature, humidity, light intensity, UV radiation and CO<sub>2</sub> concentration.



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Measurement value transfer by wireless LAN to the Cloud store

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Measurement values can be called up on all end devices

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Alarm notification by SMS or e-mail

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Inconspicuous design and small dimensions

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Deco-cover for optimum individual adaptation of the loggers to the surroundings

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The monitoring system testo 160 monitors ambient conditions in display cases, exhibition rooms and depots.

The loggers transfer measurement values by wireless LAN to the online store (Testo Cloud).

You can access all data at any time via your normal browser on your PC/tablet/smartphone. If limit values are exceeded, an alarm is immediately provided by SMS and/or e-mail.

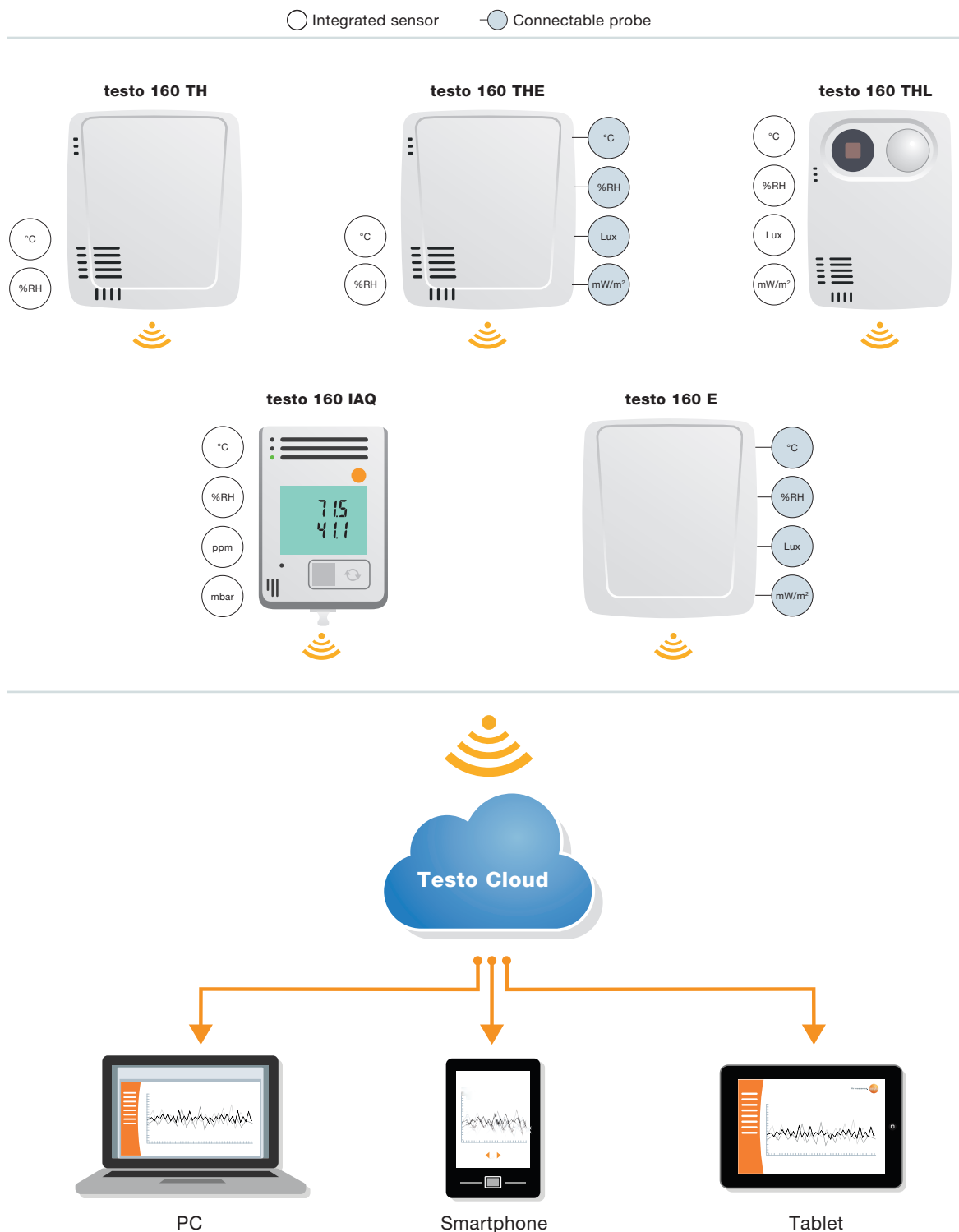
For light intensity, an alarm can also be triggered if the accumulated light quantity within a day, a week or a month exceeds a limit value.

Thanks to the optional, individually designable deco-cover, the loggers can be integrated inconspicuously in exhibitions and display cabinets. The temperature and humidity probe with wall bushing is ideal for monitoring small display cabinets in which a data logger cannot be placed.

The testo 160 thus enables you to check all relevant ambient conditions, in order to safeguard the value of the exhibits and fulfil the obligation of documentation.

# How indoor climate monitoring with **testo 160** works.

With the monitoring system testo 160 you easily have full control of all relevant ambient conditions - no matter where you are.





# The testo 160 Cloud

## Our packages

The testo 160 Cloud is the central operating element of the testo 160 monitoring system. Here you can configure your WiFi data loggers, set limit value alarms and analyze measurement data. You must first register at [www.museum.saveris.net](http://www.museum.saveris.net) to have access to the testo 160 Cloud.

Depending on the range of functions you require, you have a choice between the free Basic and the more extensive Advanced functionality: In the Advanced licence, you have access to an API interface, in order to export measurement data to your systems.

	Basic	Advanced			
<b>Measuring cycle</b>	15 min. to 24 h	1 min. to 24 h			
<b>Communication cycle</b>	15 min. to 24 h	1 min. to 24 h			
<b>Data storage</b>	Max. 3 months	Max. 2 years			
<b>Reports</b>	Manual (.pdf/.csv)	Manual (.pdf/.csv) Automatic (.pdf/.csv)			
<b>Data analysis</b>	For one measurement site each (external probes count as measurement sites)	For up to 10 measurement channels simultaneously			
<b>Number of users per account</b>	1	10			
<b>Number of WiFi data loggers per account</b>	Unlimited	Unlimited			
<b>Alarm options</b>	Upper/lower alarm limits	<ul style="list-style-type: none"> <li>• Upper/lower alarm limits</li> <li>• Alarm delay</li> <li>• Time control of alarms</li> </ul>			
<b>System notifications</b>	<ul style="list-style-type: none"> <li>• Notification of low battery</li> <li>• Radio link interrupted</li> <li>• Power supply interrupted</li> </ul>	<ul style="list-style-type: none"> <li>• Notification of low battery</li> <li>• Radio link interrupted</li> <li>• Power supply interrupted</li> </ul>			
<b>E-mail alarm</b>	Yes	Yes			
<b>SMS alarm</b>	No	<ul style="list-style-type: none"> <li>• Including 25 SMS per logger and year</li> <li>• More SMS packages purchasable</li> </ul>			
		<table border="1"> <tr> <td>12-month licence order no. 0526 0735</td> <td>24-month licence order no. 0526 0732</td> <td>36-month licence order no. 0526 0733</td> </tr> </table>	12-month licence order no. 0526 0735	24-month licence order no. 0526 0732	36-month licence order no. 0526 0733
12-month licence order no. 0526 0735	24-month licence order no. 0526 0732	36-month licence order no. 0526 0733			

Register now: [www.museum.saveris.net](http://www.museum.saveris.net)

## Ordering data WiFi data loggers

### testo 160 TH

testo 160 TH  
WiFi data logger with  
integrated temperature  
and humidity sensors



Order no. 0572 2021

### testo 160 THE

testo 160 THE  
WiFi data logger with  
integrated temperature  
and humidity sensors  
as well as connection  
possibility for two probes  
(S-TH, S-LuxUV or  
S-Lux)



Order no. 0572 2023

### testo 160 THL

testo 160 THL  
WiFi data logger with  
integrated temperature  
and humidity sensors  
as well as Lux and  
UV sensor



Order no. 0572 2024

### testo 160 IAQ

testo 160 IAQ WiFi air  
quality logger with display  
and integrated sensors for  
temperature, humidity, CO<sub>2</sub>  
and atmospheric pressure  
incl. mains unit



Order no. 0572 2014

### testo 160 E

testo 160 E  
WiFi data logger with  
connection possibility  
for two probes (S-TH,  
S-LuxUV or S-Lux)



Order no. 0572 2022

## Technical data WiFi data loggers

	WiFi data logger testo 160 TH	WiFi data logger testo 160 THE	WiFi data logger testo 160 THL	WiFi air quality logger testo 160 IAQ	WiFi data logger testo 160 E
<b>Temperature measurement</b>					
Measuring range	-10 to +50 °C			0 to +50 °C	see external probe
Accuracy	± 0.5 °C				
Resolution	0.1 °C				
<b>Humidity measurement</b>					
Measuring range	0 to 100 %RH (non-condensing)				see external probe
Accuracy	±2 %RH at +25 °C and 20 to 80 %RH ±3 %RH at +25 °C and < 20 %RH and > 80 %RH ±1 %RH hysteresis ±1 %RH / year drift				
Resolution	0.1% RH				
<b>Lux measurement</b>					
Measuring range			0 to 20,000 lux		see external probe
Accuracy		see external probe	DIN 5032-7 Class C-compliant. ±3 lux or 3 % of m.v. (refers to reference DIN 5032-7 Class L)		
Resolution			0.1 lux		
<b>UV measurement</b>					
Measuring range			0 to 10,000 mW/m <sup>2</sup>		see external probe
Accuracy		see external probe	±5 mW/m <sup>2</sup> or ±5 % of m.v. (refers to external reference)		
Resolution			0.1 mW/m <sup>2</sup>		
<b>CO<sub>2</sub> measurement</b>					
Measuring range				0 to 5,000 ppm	
Accuracy				±(50 ppm + 3 % of m.v.) at +25 °C Without external power supply: ±(100 ppm + 3 % of m.v.) at +25 °C	
Resolution				1 ppm	
<b>Pressure measurement</b>					
Measuring range				600 to 1100 mbar	
Accuracy				±3 mbar at +22 °C	
Resolution				1 mbar	
<b>WLAN</b>					
Standard	802.11 b/g/n				
Security	WPA2 Enterprise: EAP-TLS, EAP-TTLS-TLS, EAP-TTLS-MSCHAPv2, EAP-TTLS-PSK, EAP-PEAP0-TLS, EAP-PEAP0-MSCHAPv2, EAP-PEAP0-PSK, EAP-PEAP1-TLS, EAP-PEAP1-MSCHAPv2, EAP-PEAP1-PSK, WPA Personal, WPA2 (AES), WPA (TKIP), WEP				
<b>General</b>					
Operating temperature	-10 to +50 °C			0 to +50 °C	-10 to +50 °C
Storage temperature	-20 to +50 °C			0 to +50 °C	-20 to +50 °C
Protection class	IP20				
Measuring cycle	Dependent on Cloud licence / Basic: 15 min to 24 h / Advanced: 1 min to 24 h testo 160 IAQ – Advanced in battery operation: 5 mins to 24 h				
Communication cycle	Dependent on Cloud licence / Basic: 15 min to 24 h / Advanced: 1 min to 24 h				
Memory	32,000 readings (sum of all channels)				
Voltage supply (alternatively mains unit via USB connection)	4 x AAA alkaline manganese batteries 1.5 V			4 x AA alkaline manganese batteries 1.5 V	4 x AAA alkaline manganese batteries 1.5 V
Battery life (depending on the measuring and communication cycle vis-a-vis the Cloud)	1.5 years			1 year	1.5 years
Dimensions	76 x 64 x 22 mm	76 x 64 x 22 mm	92 x 64 x 22 mm	117 x 82 x 32 mm	76 x 64 x 22 mm
Weight (including batteries)	94 g	94 g	113 g	269 g	96 g

## Accessories

	<b>Order no.</b>
Deco-cover for testo 160 TH / testo 160 THE / testo 160 E	0554 2006
Deco-cover for testo 160 THL	0554 2009
Deco-cover for testo 160 IAQ	0554 2012
Wall bracket for testo 160 TH / testo 160 THE / testo 160 E / testo 160 THL	0554 2013
Wall bracket for testo 160 IAQ	0554 2015
Extension cable for probes, length 0.6 m (included with every probe)	0554 2004
Extension cable for probes, length 2.5 m	0554 2005
Display cabinet bushing for temperature and humidity probes (included with every probe)	0554 2016
Alkaline manganese microcell AAA batteries up to -10 °C, order 4 off	0515 0009
Alkaline manganese mignoncell AA batteries up to -10 °C, order 4 off	0515 0414
External USB power supply	0572 2020
ISO calibration certificate temperature -8 °C, 0 °C, +40 °C (for testo 160 TH / testo 160 THE / testo 160 E / testo 160 THL)	0520 0171
ISO calibration certificate temperature +15 °C, +25 °C, +35 °C (für testo 160 IAQ)	0520 0172
ISO calibration certificate humidity at +25 °C, humidity points 11.3 %RH and 75.3 %RH	0520 0076
ISO calibration certificate light intensity, calibration points 0; 500; 1000; 2000; 4000 Lux	0520 0010
ISO calibration certificate CO <sub>2</sub> , calibration points 0; 1000; 5000 ppm	0520 0033

## Probe

<b>Probe type</b>	Temperature and humidity probes	Lux and UV sensors	Lux sensor
			
<b>Measuring range</b>	-10 to +50 °C 0 to 100 %RH	0 to 20,000 lux 0 to 10,000 mW/m <sup>2</sup>	0 to 20,000 lux
<b>Accuracy</b>	± 0.5 °C ±2 %RH at +25 °C and 20 to 80 %RH ±3 %RH at +25 °C and < 20 %RH and > 80 %RH ±1 %RH hysteresis ± 1% RH / year drift	DIN 5032-7 Class C-compliant. ±3 lux or ±3 % of reference (DIN 5032-7 Class L) ±5 mW/m <sup>2</sup> or ±5 % of m.v. (refers to external reference)	DIN 5032-7 Class C-compliant. ±3 lux or ±3 % of reference (DIN 5032-7 Class L)
<b>Order no.</b>	0572 2156	0572 2157	0572 2158



# Data management

## The testo 160 Cloud

A free access to the testo 160 Cloud is included in delivery. In the Cloud you can view and manage the measurement values stored online, and use the alarm function via e-mail. The system can also be set up and configured here.

### The advantages of the testo 160 Cloud at a glance:

- Central operating element for the monitoring, documentation and administration of all measurement locations
- Secure protection of your measurement data from unauthorized access by third parties
- Automatic storage of your measurement values, all measurement data are constantly available
- Alarm function for critical values
- Two licence packages (Basic, Advanced) with differing extent of functions

### Maximum flexibility with the Advanced licence:

- The measuring and communication cycle is fully adjustable
- Reports automatically sent by e-mail fulfil the documentation obligation
- Several user profiles – important, for example in cases of several sites
- Alarm also by SMS



## Deco-cover

For exhibitions in rooms with coloured walls or backgrounds, the deco-covers of the data loggers can be individually designed by painting or decorating.

This places the logger in the background, and does not distract from the exhibits.



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Subject to change without notice.



## Monitoring system

testo 160 IAQ – Monitoring system for temperature, humidity, atmospheric pressure and CO<sub>2</sub> concentration.

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Measurement value transfer by wireless LAN to the Cloud store

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Measurement values can be called up on all end devices

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Alarm notification by SMS or e-mail

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Inconspicuous design and small dimensions

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Deco-cover for optimum individual adaptation of the logger to the surroundings

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The WiFi data logger testo 160 IAQ monitors the ambient conditions temperature, humidity, atmospheric pressure and the CO<sub>2</sub> concentration in buildings such as public facilities, office complexes and education institutions. The logger transfers measurement values by wireless LAN to the online store (Testo Cloud). You can access all data at any time via your normal browser on your PC/tablet/smartphone. If limit values are exceeded, an alarm is immediately provided by SMS and/or e-mail.

Thanks to the optional, individually designable deco-cover, the logger can be integrated inconspicuously in buildings. The testo 160 IAQ thus enables you to check all relevant ambient conditions and fulfil the obligation of documentation.

# The testo 160 Cloud

## Our packages

The testo 160 Cloud is the central operating element of the testo 160 monitoring system. Here you can configure your WiFi data loggers, set limit value alarms and analyze measurement data. You must first register at [www.saveris2.net](http://www.saveris2.net) to have access to the testo 160 Cloud.

Depending on the range of functions you require, you have a choice between the free Basic and the more extensive Advanced functionality.

	Basic	Advanced			
<b>Measuring cycle</b>	15 min. to 24 h	1 min. to 24 h (Battery mode: 5 min to 24 h)			
<b>Communication cycle</b>	15 min. to 24 h	1 min. to 24 h (Battery mode: 5 min to 24 h)			
<b>Data storage</b>	Max. 3 months	Max. 2 years			
<b>Reports</b>	Manual (.pdf/.csv)	Manual (.pdf/.csv) Automatic (.pdf/.csv)			
<b>Data analysis</b>	For one measurement site each (external probes count as measurement sites)	For up to 10 measurement channels simultaneously			
<b>Number of users per account</b>	1	10			
<b>Number of WiFi data loggers per account</b>	Unlimited	Unlimited			
<b>Alarm options</b>	Upper/lower alarm limits	<ul style="list-style-type: none"> <li>• Upper/lower alarm limits</li> <li>• Alarm delay</li> <li>• Time control of alarms</li> </ul>			
<b>System notifications</b>	<ul style="list-style-type: none"> <li>• Notification of low battery</li> <li>• Radio link interrupted</li> <li>• Power supply interrupted</li> </ul>	<ul style="list-style-type: none"> <li>• Notification of low battery</li> <li>• Radio link interrupted</li> <li>• Power supply interrupted</li> </ul>			
<b>E-mail alarm</b>	Yes	Yes			
<b>Multiple recipients for alarm e-mails</b>	Yes (up to 3)	Yes (unlimited)			
<b>SMS alarm</b>	No	<ul style="list-style-type: none"> <li>• Including 25 SMS per logger and year</li> <li>• More SMS packages purchasable</li> </ul>			
		<table border="1"> <tr> <td>12-month licence order no. 0526 0735</td> <td>24-month licence order no. 0526 0732</td> <td>36-month licence order no. 0526 0733</td> </tr> </table>	12-month licence order no. 0526 0735	24-month licence order no. 0526 0732	36-month licence order no. 0526 0733
12-month licence order no. 0526 0735	24-month licence order no. 0526 0732	36-month licence order no. 0526 0733			



## Ordering data/technical data

### testo 160 IAQ

testo 160 IAQ WLAN air quality logger with display and built-in sensors for temperature, humidity, CO<sub>2</sub> and atmospheric pressure, including free cloud access (Basic functionality), USB cable, batteries (4 x AA Alkaline-Manganese), wall bracket including unlocking tool and adhesive strips, QR code sticker, calibration protocol and short instructions



Order no. 0572 2014

## Accessories

	Order no.	
Deco-cover for testo 160 IAQ	0554 2012	
Wall bracket for testo 160 IAQ	0554 2015	
Alkaline manganese mignoncell AA batteries up to -10 °C, order 4 off	0515 0414	
Mains unit for testo 160 radio data logger	0572 2020	
ISO calibration certificate temperature +15 °C, +25 °C, +35 °C	0520 0172	
ISO calibration certificate humidity at +25 °C, humidity points 11.3 %RH and 75.3 %RH	0520 0076	
ISO calibration certificate CO <sub>2</sub> , calibration points 0; 1000; 5000 ppm	0520 0033	

Temperature measurement	
Measuring range	0 to +50 °C
Accuracy	± 0.5 °C
Resolution	0.1 °C
Humidity measurement	
Measuring range	0 to 100 %RH (non-condensing)
Accuracy	±2 %RH at +25 °C and 20 to 80 %RH ±3 %RH at +25 °C and < 20 %RH and > 80 %RH ±1 %RH hysteresis ±1 %RH / year drift
Resolution	0.1% RH
CO <sub>2</sub> measurement	
Measuring range	0 to 5,000 ppm
Accuracy	±(50 ppm + 3 % of m.v.) at +25 °C Without external power supply: ±(100 ppm + 3 % of m.v.) at +25 °C
Resolution	1 ppm
Pressure measurement	
Measuring range	600 to 1100 mbar
Accuracy	±3 mbar at +22 °C
Resolution	1 mbar
WLAN	
Standard	802.11 b/g/n
Security	WPA2 Enterprise: EAP-TLS, EAP-TTLS-TLS, EAP-TTLS-MSCHAPv2, EAP-TTLS-PSK, EAP-PEAP0-TLS, EAP-PEAP0-MSCHAPv2, EAP-PEAP0-PSK, EAP-PEAP1-TLS, EAP-PEAP1-MSCHAPv2, EAP-PEAP1-PSK, WPA Personal, WPA2 (AES), WPA (TKIP), WEP
General	
Operating temperature	0 to +50 °C
Storage temperature	0 to +50 °C
Protection class	IP20
Measuring cycle	Dependent on Cloud licence Basic: 15 min to 24 h Advanced: 1 min to 24 h / with battery operation: 5 mins to 24 h
Communication cycle	Dependent on Cloud licence Basic: 15 min to 24 h Advanced: 1 min to 24 h
Memory	32,000 readings (sum of all channels)
Alarm function	LED traffic light function green, amber, red (in battery mode, the traffic light only lights up during the measurement. When using the USB mains unit, the traffic light function is permanently active.)
Voltage supply (alternatively mains unit via USB connection)	4 x AA alkaline manganese batteries 1.5 V
Battery life (depending on the measuring and communication cycle vis-a-vis the Cloud)	1 year
Dimensions	117 x 82 x 32 mm
Weight (including batteries)	269 g

# Mini data logger Temperature and humidity

testo 174H

- Long-term stable humidity sensor
- High data security
- Large display
- Display of current temperature or humidity values
- Measurement data store for 16,000 measurement values
- Fast data analysis and documentation on a PC



Illustration 1.1

The mini data logger for temperature and humidity testo 174H is ideal for monitoring temperature- and humidity-sensitive goods in storage. The testo 174H also monitors building climate continuously, securely and unobtrusively. The free software ComSoft Basic allows fast programming of the data logger and easy analysis.

The low-cost temperature and humidity data logger guarantees secure measurement results on the basis of state-of-the-art measurement technology. The integrated sensors ensure long-term stable measurement values. This allows you to adhere to and safely document quality assurance guidelines.

## Technical data / Accessories

### testo 174H

testo 174H mini data logger, 2-channel, incl. wall bracket, battery (2 x CR 2032 lithium) and calibration protocol



Part no. 0572 6560

### Set testo 174H

testo 174H mini data logger set, 2-channel, incl. USB interface for programming and reading out the logger, wall bracket, battery (2 x CR 2032 lithium) and calibration protocol



Part no. 0572 0566

Sensor type	NTC
Measuring range	-20 to +70 °C
Accuracy ±1 digit	±0.5 °C (-20 to +70 °C)
Resolution	0.1 °C

Sensor type	Testo humid. sensor, cap.
Measuring range	0 to 100 %RH*
Accuracy ±1 digit	±3 %RH (2 to 98 %RH) ±0.03 %RH/K
Resolution	0.1 %RH

\* Not for condensing atmospheres. For continuous use in high humidity (>80 %RH at ≤30 °C for >12 h, >60 %RH at >30 °C for >12 h), please contact us via our website.

#### General technical data

Channels	2 x internal
Battery type	2 lithium batteries (CR2032)
Battery life	1 year (15 min measuring cycle, +25 °C)
Operating temperature	-20 to +70 °C
Storage temperature	-40 to +70 °C
Dimensions	60 x 38 x 18,5 mm
Weight	35 g
Protection class	IP20
Measuring rate	1 min - 24 h
Memory	16.000 readings

#### Accessories for measuring instrument

#### Part no.

USB interface for programming and readout of the loggers testo 174T and testo 174H	0572 0500	
Lithium battery CR 2032 button cell (please order 2 batteries per logger)	0515 5028	
ComSoft Basic, Basic software for programming and readout of Testo data loggers; graphic and tabular measurement value presentation as well as export function (free download at <a href="http://www.testo.com">www.testo.com</a> )	0572 0580	
ComSoft Professional, Pro software incl. data archiving	0554 1704	
ComSoft CFR 21 Part 11, Software for requirements according to CFR 21 Part 11 for Testo data loggers	0554 1705	
ISO calibration certificate temperature temperature probe; calibration points -18 °C; 0 °C; +40 °C per channel/instrument	0520 0153	
ISO calibration certificate humidity calibration points 11.3 %RH and 75.3 %RH at +25 °C/+77 °F; per channel/instrument	0520 0076	

# Mini data logger Temperature

## testo 174T

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Display of current temperature value

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High data security

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Large display

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Fast data analysis and documentation on a PC

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Waterproof according to IP65

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Measurement data memory for 16,000 measurement values

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HACCP-compliant and certified according to EN 12830

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Illustration 1:1



The mini data logger for temperature, testo 174T, is ideal for accompanying transports. Simply positioned close to the goods, e. g. in containers and refrigerated rooms, the data logger monitors temperature continuously, securely and unobtrusively. The free software ComSoft Basic allows fast programming of the data logger and easy analysis.

The integrated NTC probe stands for high accuracy. Its large measuring range and compact design make the testo 174T the competent assistant for almost any temperature recording job.

## Technical data / Accessories

### testo 174T

testo 174T mini data logger, 1-channel, incl. wall bracket, battery (2 x CR 2032 lithium) and calibration protocol

Part no. 0572 1560



### Set testo 174T

testo 174T mini data logger set, 1-channel, incl. USB interface for programming and reading out the logger, wall bracket, battery (2 x CR 2032 lithium) and calibration protocol

Part no. 0572 0561



#### Sensor type NTC

Measuring range	-30 to +70 °C
Accuracy ±1 digit	±0,5 °C (-30 to +70 °C)
Resolution	0,1 °C

#### General technical data

Channels	1 x internal
Battery type	2 lithium batteries (CR2032)
Battery life	500 days (15 min measuring cycle, +25 °C)
Operating temperature	-30 to +70 °C
Storage temperature	-40 to +70 °C
Dimensions	60 x 38 x 18,5 mm
Weight	35 g
Certification	EN12830
Protection class	IP65
Measuring rate	1 min - 24 h
Memory	16.000 readings

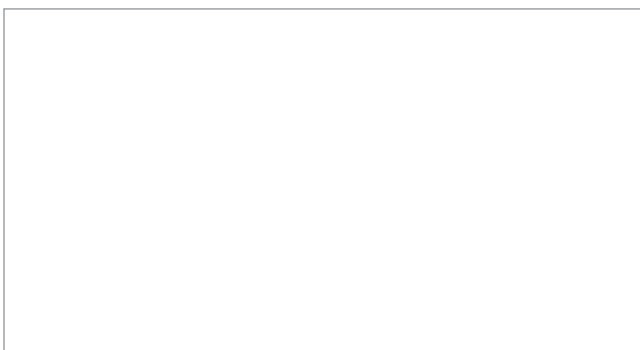
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Subject to change without notice.

#### Accessories for measuring instrument

#### Part no.

USB interface for programming and readout of the loggers testo 174T and testo 174H	0572 0500	
Lithium battery CR 2032 button cell (please order 2 batteries per logger)	0515 5028	
ComSoft Basic, Basic software for programming and readout of Testo data loggers; graphic and tabular measurement value presentation as well as export function. (free download at <a href="http://www.testo.com">www.testo.com</a> )	0572 0580	
ComSoft Professional, Pro software incl. data archiving	0554 1704	
ComSoft CFR 21 Part 11, Software for requirements according to CFR 21 Part 11 for Testo data loggers	0554 1705	
ISO calibration certificate temperature temperature probe; calibration points -18 °C; 0 °C; +40 °C per channel/instrument	0520 0153	





# Data logger Temperature and humidity

## testo 175 H1

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High level of data security

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Large, easily legible display

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Measurement data memory for 1 million measurement values

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Up to 3 years' battery life

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Data transfer via USB cable or SD card

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Permanently installed external capacitive humidity sensor

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°C

%RH

td

g/m<sup>3</sup>



IP54

With its long-term stable humidity sensor, the testo 175 H1 is the professional data logger for the monitoring of temperature and relative humidity in work and storage rooms. The external humidity probe (stub) stands out thanks to faster reaction times in comparison to probes installed inside the housing. Energy savings are an important topic for buildings. The free ComSoft Basic software allows fast programming of the data logger as well as easy data

analysis. The testo 175 H1 continuously records temperature and humidity values and, in addition to temperature and humidity, also shows the dewpoint in the display if required. The indoor climate is thus monitored, emphasizing the need for targeted ventilation and air exchange.

## Technical data / Accessories

### testo 175 H1

testo 175 H1, 2-channel temperature and humidity data logger with external humidity sensor (NTC/capacitive humidity sensor), incl. wall holder, lock, batteries and calibration protocol

Part no. 0572 1754



#### General technical data

Channels	2 x internal (stump)
Battery type	3 x battery type AAA or Energizer L92 AAA-size cells
Battery life	3 years (15 min. measuring cycle, +25 °C)
Operating temperature	-20 to +55 °C
Storage temperature	-20 to +55 °C
Dimensions	149 x 53 x 27 mm
Weight	130 g
Housing	ABS/PC
Protection class	IP54
Measuring rate	10 s - 24 h
Memory	1 mio. measurement values

#### Sensor types

	NTC	Calc. parameter $t_d$	Testo humid. sensor, cap.
Measuring range	-20 to +55 °C	-40 to +50 °C <sub>td</sub>	0 to 100 %RH*
Accuracy ±1 digit	±0.4 °C (-20 to +55 °C)	+0.03 %RH/K	±2 %RH (2 to 98 %RH) at +25 °C
Resolution	0.1 °C		0.1 %RH

\* Not for condensing atmospheres. For continuous use in high humidity (>80 %RH at ≤30 °C for >12 h, >60 %RH at >30 °C for >12 h), please contact us via our website.

#### Accessories

#### Part no.

Mobile printer for data loggers testo 175/176/184	0572 0576	
Wall holder (black) with lock for testo 175	0554 1702	
Cable for connecting the data loggers testo 175 and testo 176 to the PC, Mini-USB to USB	0449 0047	
SD card - for collecting the measurement data from the data loggers testo 175 and testo 176; 2 GB; application range to -20 °C	0554 8803	
Battery for testo 175 Range of application to -10 °C, alkali manganese microcell AAA (please order 3 batteries per logger)	0515 0009	
Batteries for for use below -10 °C, lithium batteries AAA (3 off)	0515 0042	
ComSoft Basic, Basic software for programming and readout of Testo data loggers; graphic and tabular measurement value presentation as well as export function (free download at <a href="http://www.testo.com">www.testo.com</a> )	0572 0580	
ComSoft Professional, Pro software incl. data archiving	0554 1704	
ComSoft CFR 21 Part 11, Software for requirements according to CFR 21 Part 11 for Testo data loggers	0554 1705	
ISO calibration certificate temperature temperature probe; calibration points -18 °C; 0 °C; +40 °C per channel/instrument	0520 0153	
DAkKS calibration certificate/temperature temp. data logger; cal. points -18 °C; 0 °C; +40 °C; per channel/instrument	0520 0262	
ISO calibration certificate humidity calibration points 11.3 %RH and 75.3 %RH at +25 °C/+77 °F; per channel/instrument	0520 0076	
DAkKS calibration certificate humidity humidity probe; cal. points 11.3 %RH and 75.3 %RH at +25 °C; per channel/instrument	0520 0246	

# Data logger Temperature

testo 175 T1 / testo 175 T2

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High data security

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Large, easily legible display

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Measurement data memory for 1 million measurement values

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Up to 3 years' battery life

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Data transfer via USB cable or SD card

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Complies with DIN EN 12830

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Illustration 1:1



The testo 175 T1 is the compact data logger for the long-term monitoring of refrigerated and deep-freeze rooms as well as for the documentation of transport temperature in delivery vehicles. The large 1 million measurement value memory and the long-life batteries allow readout at greater intervals, in spite of the shorter measurement rate. The free ComSoft Basic software allows fast programming of the data logger and easy data analysis. The version

testo175 T2 additionally has a connection for an external NTC temperature probe for measuring the core temperature of goods, for example. Like all Testo data loggers for applications in the food sector, the testo 175 T1 and testo 175 T2 are tested according to DIN EN 12830 by the ATP testing section of the TÜV Süd for HACCP purposes.

# Technical data

## testo 175 T1

testo 175 T1, 1-channel temperature logger with internal sensor (NTC) incl. wall holder, lock, batteries and calibration protocol

Part no. 0572 1751



## Set testo 175 T1

Starter set testo 175 T1 consisting of:  
 3 x testo 175 T1  
 1 x USB cable  
 1 x SD card

Part no. 0572 1750

## testo 175 T2

testo 175 T2, 2-channel temperature data logger with internal (NTC), and external sensor connection (NTC) incl. wall holder, lock, batteries and calibration protocol

Part no. 0572 1752



### General technical data

Battery type	3 x AIMn Type AAA or Energizer
Battery life	3 years (15 min. meas. rate, +25 °C)
Operating temperature	-35 to +55 °C
Storage temperature	-35 to +55 °C
Dimensions	89 x 53 x 27 mm
Weight	130 g
Housing	ABS/PC
EC Directive	2004/108/EC, complies with the EN standard 12830
Protection class	IP65
Measuring rate	10 s - 24 h
Memory	1 mio. measurement values

	testo 175 T1	testo 175 T2
<b>Sensor type</b>	<b>NTC</b>	<b>NTC</b>
Channels	1 x internal	1 x internal, 1 x external
Measuring range	-35 to +55 °C	-35 to +55 °C int. -40 to +120 °C ext.
Accuracy ±1 digit	±0.5 °C (-35 to +55 °C)	±0.5 °C (-35 to +55 °C) int. ±0.3 °C (-40 to +120 °C) ext.
Resolution	0.1 °C	0.1 °C



Lateral connection of Mini USB cable and SD card



Probe connection at lower end of housing for external NTC probe (testo 175 T2 only)


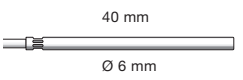
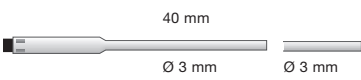
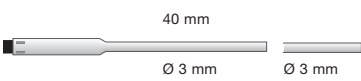
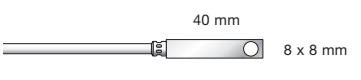

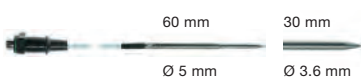


Large, clear display for showing measurement values

# Accessories

Accessories for measuring instrument	Part no.
Mobile printer for data loggers testo 175/176/184	0572 0576
Wall holder (black) with lock for testo 175	0554 1702
Cable for connecting the data loggers testo 175 and testo 176 to the PC, Mini-USB to USB	0449 0047
SD card - for collecting the measurement data from the data loggers testo 175 and testo 176; 2 GB; application range to -20 °C	0554 8803
Battery for testo 175 Range of application to -10 °C, alkali manganese microcell AAA (please order 3 batteries per logger)	0515 0009
Batteries for for use below -10 °C, lithium batteries AAA (3 off)	0515 0042
ComSoft Basic, Basic software for programming and readout of Testo data loggers; graphic and tabular measurement value presentation as well as export function (free download at <a href="http://www.testo.com">www.testo.com</a> )	0572 0580
ComSoft Professional, Pro software incl. data archiving	0554 1704
ComSoft CFR 21 Part 11, Software for requirements according to CFR 21 Part 11 for Testo data loggers	0554 1705
ISO calibration certificate temperature temperature probe; calibration points -18 °C; 0 °C; +40 °C per channel/instrument	0520 0153
DAkkS calibration certificate/temperature temp. data logger; cal. points -18 °C; 0 °C; +40 °C; per channel/instrument	0520 0262

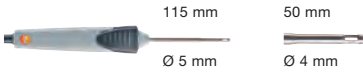

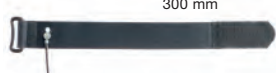
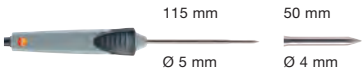
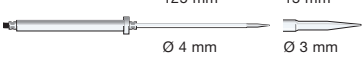
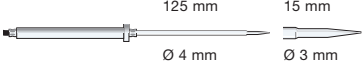


## Probes for testo 175 T2

Probe type	Dimensions Probe shaft/probe shaft tip	Measuring range	Accuracy	t <sub>99</sub>	Part no.
<b>NTC</b>					
Stub probe, IP 54	 35 mm Ø 3 mm	-20 to +70 °C	±0.2 °C (-20 to +40 °C) ±0.4 °C (+40.1 to +70 °C)	15 s	0628 7510
Stationary probe with aluminium sleeve, IP 65, Fixed cable 2.4 m	 40 mm Ø 6 mm	-30 to +90 °C	±0.2 °C (0 to +70 °C) ±0.5 °C (remaining range)	190 s	0628 7503 <sup>1)</sup>
Accurate immersion/penetration probe, 6m cable, IP 67, Fixed cable	 40 mm Ø 3 mm    Ø 3 mm	-35 to +80 °C	±0.2 °C (-25 to +74.9 °C) ±0.4 °C (remaining range)	5 s	0610 1725
Accurate immersion/penetration probe, cable: 1.5 m long, IP 67, Fixed cable 1.5 m	 40 mm Ø 3 mm    Ø 3 mm	-35 to +80 °C	±0.2 °C (-25 to +74.9 °C) ±0.4 °C (-35 to -25.1 °C) ±0.4 °C (+75 to +80 °C)	5 s	0628 0006 <sup>1)</sup>
Probe for surface measurement, Fixed cable, 2 m	 40 mm 8 x 8 mm	-50 to +80 °C	±0.2 °C (0 to +70 °C)	150 s	0628 7516
Wall surface temperature probe, e.g. to prove damage in building material, Fixed cable, 3 m	 40 mm	-50 to +80 °C	±0.2 °C (-25 to +80 °C) ±0.5 °C (-40 to -25.1 °C)	20 s	0628 7507
Penetration probe NTC with ribbon cable, cable length 2 m, IP 54, Fixed cable,	 60 mm    30 mm Ø 5 mm    Ø 3.6 mm	-40 to +125 °C	±0.5 % of m.v. (+100 to +125 °C) ±0.2 °C (-25 to +80 °C) ±0.4 °C (remaining range)	8 s	0572 1001

1) Probe tested according to EN 12830 for suitability in the transport and storage applications



# Probes for testo 175 T2

Probe type	Dimensions Probe shaft/probe shaft tip	Measuring range	Accuracy	t <sub>99</sub>	Part no.
<b>NTC</b>					
Efficient, robust NTC air probe, Fixed cable, 1.2 m		-50 to +125 °C	±0.2 °C (-25 to +80 °C) ±0.4 °C (remaining range)	60 s	0613 1712
Waterproof NTC surface probe for flat surfaces, Fixed cable, 1.2 m		-50 to +150 °C	±0.5% of m.v. (+100 to +150 °C) ±0.2 °C (-25 to +74.9 °C) ±0.4 °C (remaining range)	35 s	0613 1912
Pipe wrap probe with Velcro for pipe diameter to max. 75 mm, Tmax. +75 °C, NTC, Fixed cable		-50 to +70 °C	±0.2 °C (-25 to +70 °C) ±0.4 °C (-50 to -25.1 °C)	60 s	0613 4611
Waterproof NTC immersion/ penetration probe, Fixed cable 1.2 m		-50 to +150 °C	±0.5% of m.v. (+100 to +150 °C) ±0.2 °C (-25 to +74.9 °C) ±0.4 °C (remaining range)	10 s	0613 1212
Stainless steel NTC food probe (IP65) with PUR cable, Fixed cable 1.6 m		-50 to +150 °C <sup>1)</sup>	±0.5% of m.v. (+100 to +150 °C) ±0.2 °C (-25 to +74.9 °C) ±0.4 °C (remaining range)	8 s	0613 2211 <sup>2)</sup>
Stainless steel NTC food probe (IP67) with PTFE cable to +250°C, Fixed cable		-50 to +150 °C	±0.5% of m.v. (+100 to +150 °C) ±0.2 °C (-25 to +74.9 °C) ±0.4 °C (remaining range)	8 s	0613 3311
Robust NTC food penetration probe with special handle, reinforced PUR cable, Fixed cable		-25 to +150 °C <sup>1)</sup>	±0.5% of m.v. (+100 to +150 °C) ±0.2 °C (-25 to +74.9 °C) ±0.4 °C (remaining range)	7 s	0613 2411
Frozen food probe NTC, corkscrew design (incl. plug-in wire)		-50 to +140 °C <sup>1)</sup>	±0.5% of m.v. (+100 to +140 °C) ±0.2 °C (-25 to +74.9 °C) ±0.4 °C (remaining range)	20 s	0613 3211

1) Long-term measurement range +125 °C, short-term +150 °C (2 minutes)  
2) Probe tested according to EN 12830 for suitability in the transport and storage applications

# Data logger Temperature

## testo 175 T3

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Large, easily legible display

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High data security

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Measurement data memory for 1 million measurement values

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Up to 3 years' battery life

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Data transfer via USB cable or SD card

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Two external sensor connections  
(thermocouple Type T and Type K)

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Illustration 1:1



Temperature often needs to be monitored and recorded simultaneously at two sites. The testo 175 T3 is excellently suited to this job, thanks to two connections for external thermocouple probes (Type K and Type T). The wide measuring range makes the data logger universally applicable.

The free ComSoft Basic software allows fast programming of the data logger and easy data analysis.

In the autumn, the heating period begins, and with it the time for complaints by tenants that their apartments cannot be heated to the desired extent. With the testo 175 T3 and the versatile external thermocouple probes, you can, for example, perform targeted checks on the flow and return temperatures of individual radiators, in order to identify and remedy causes.

## Technical data / Accessories

### testo 175 T3

testo 175 T3, 2-channel temperature data logger with external sensor connections (TC Type T and Type K) incl. wall holder, lock, batteries and calibration protocol

Part no. 0572 1753



#### General technical data

Channels	2 x external
Battery type	3 x AlMn Typ AAA or Energizer
Battery life	3 years (15 min. measuring cycle, +25 °C)
Operating temperature	-20 to +55 °C
Storage temperature	-20 to +55 °C
Dimensions	89 x 53 x 27 mm
Weight	130 g
Housing	ABS/PC
EC Directive	2004/108/EC
Protection class	IP65
Measuring rate	10 s - 24 h
Memory	1 mio. measurement values

#### Sensor types

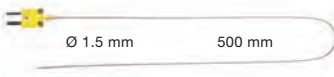
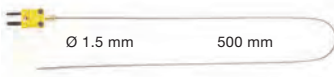


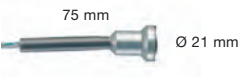

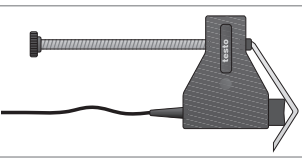

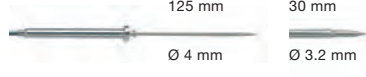
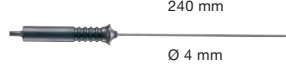
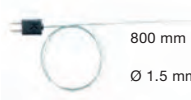

	Type T (Cu-CuNi)	Type K (NiCr-Ni)
Measuring range	-50 to +400 °C	-50 to +1000 °C
Accuracy ±1 digit	±0.5 °C (-50 to +70 °C) ±0.7 % of m.v. (+70.1 to +400 °C)	±0.5 °C (-50 to +70 °C) ±0.7 % of m.v. (+70.1 to +1000 °C)
Resolution	0.1 °C	0.1 °C

#### Accessories for measuring instrument

#### Part no.

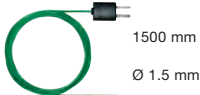
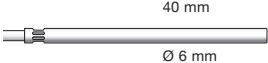

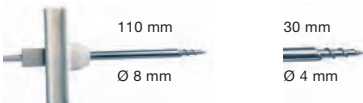

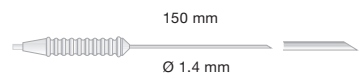
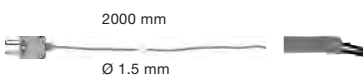
Mobile printer for data loggers testo 175/176/184	0572 0576
Wall holder (black) with lock for testo 175	0554 1702
Cable for connecting the data loggers testo 175 and testo 176 to the PC, Mini-USB to USB	0449 0047
SD card - for collecting the measurement data from the data loggers testo 175 and testo 176; 2 GB; application range to -20 °C	0554 8803
Battery for testo 175 Range of application to -10 °C, alkali manganese microcell AAA (please order 3 batteries per logger)	0515 0009
ComSoft Basic, Basic software for programming and readout of Testo data loggers; graphic and tabular measurement value presentation as well as export function (free download at <a href="http://www.testo.com">www.testo.com</a> )	0572 0580
ComSoft Professional, Pro software incl. data archiving	0554 1704
ComSoft CFR 21 Part 11, Software for requirements according to CFR 21 Part 11 for Testo data loggers	0554 1705
ISO calibration certificate temperature temperature probe; calibration points -18 °C; 0 °C; +40 °C per channel/instrument	0520 0153
DAkkS calibration certificate temperature temp. data logger; cal. points -20°C; 0°C; +60°C; per channel/instrument	0520 0261

# Probes

Probe type	Dimensions Probe shaft/probe shaft tip	Measuring range	Accuracy	t <sub>99</sub>	Part no.
<b>Probes Type K</b>					
Immersion tip, flexible, TC Type K	 Ø 1.5 mm 500 mm	-200 to +1000 °C	Class 1 <sup>1)</sup>	5 s	0602 5792
Immersion tip, flexible, TC Type K	 Ø 1.5 mm 500 mm	-200 to +40 °C	Class 3 <sup>1)</sup>	5 s	0602 5793
Immersion measurement tip, flexible, for measurements in air/exhaust gases (not suitable for measurements in smelters), TC Type K	 Ø 3 mm 1000 mm	-200 to +1300 °C	Class 1 <sup>1)</sup>	4 s	0602 5693
Magnetic probe, adhesive force approx. 20 N, with magnets, for measurements on metal surfaces, TC Type K, Fixed cable	 35 mm Ø 20 mm	-50 to +170 °C	Class 2 <sup>1)</sup>	150 s	0602 4792
Magnetic probe, adhesive force approx. 10 N, with magnets, for higher temp., for measurements on metal surfaces, TC Type K, Fixed cable	 75 mm Ø 21 mm	-50 to +400 °C	Class 2 <sup>1)</sup>		0602 4892
Pipe wrap probe with velcro strip; for temperature measurement on pipes with diameter up to max. 120 mm; Tmax. +120 °C; TC Type K, Fixed cable 1.5 m	 395 mm 20 mm	-50 to +120 °C	Class 1 <sup>1)</sup>	90 s	0628 0020
Pipe wrap probe for pipe diameter 5 to 65 mm, with exchangeable measuring head. Meas. range short-term up to +280 °C, TC Type K, Fixed cable 1.2 m		-60 to +130 °C	Class 2 <sup>1)</sup>	5 s	0602 4592
Clamp probe for measurements on pipes, pipe diameter 15 to 25 mm (max. 1"), meas. range short-term up to +130°C, TC Type K, Fixed cable		-50 to +100 °C	Class 2 <sup>1)</sup>	5 s	0602 4692
Waterproof food probe made of stainless steel (IP65), TC Type K, Fixed cable	 125 mm 30 mm Ø 4 mm Ø 3.2 mm	-60 to +400 °C	Class 2 <sup>1)</sup>	7 s	0602 2292
Waterproof robust immersion/penetration probe with metal protection hose Tmax +230°C, e.g. for monitoring temp. in cooking oil, T/C Type K, Fixed cable	 240 mm Ø 4 mm	-50 to +230 °C	Class 1 <sup>1)</sup>	15 s	0628 1292
Thermocouple with TC adapter, flexible, 800 mm long, fibre glass, TC Type K	 800 mm Ø 1.5 mm	-50 to +400 °C	Class 2 <sup>1)</sup>	5 s	0602 0644
Thermocouple with TC adapter, flexible, length 1500 mm, fibreglass, TC Type K	 1500 mm Ø 1.5 mm	-50 to +400 °C	Class 2 <sup>1)</sup>	5 s	0602 0645

1) According to standard EN 60584-2, the accuracy of Class 1 refers to -40 to +1000 °C (Type K), Class 2 to -40 to +1200 °C (Type K), Class 3 to -200 to +40 °C (Type K).

# Probes

Probe type	Dimensions Probe shaft/probe shaft tip	Measuring range	Accuracy	t <sub>99</sub>	Part no.
<b>Probes Type K</b>					
Thermocouple with TC adapter, flexible, 1500 mm long, PTFE, TC Type K		-50 to +250 °C	Class 2 <sup>1)</sup>	5 s	0602 0646
Stationary probe with stainless steel sleeve, TC Type K, Fixed cable 1.9 m		-50 to +205 °C	Class 2 <sup>1)</sup>	20 s	0628 7533
Flexible, low-mass immersion measurement tip, ideal for measurements in small volumes such as petri dishes, or for surface measurements (e.g. attached with adhesive tape), TC Type K, 2 m, FEP insulated thermal wire, temperature proof up to 200 °C, oval wire with dimensions: 2.2 mm x 1.4 mm		-200 to +1000 °C	Class 1 <sup>1)</sup>	1 s	0602 0493
<b>Probes Type T</b>					
Frozen food probe, corkscrew design, T/C Type T, Plug-in cable		-50 to +350 °C	±0.2 °C (-20 to +70 °C) Class 1 (remaining range) <sup>2)</sup>	8 s	0603 3292
Stainless steel food probe (IP67), with FEP cable to +200 °C, TC Type T, Fixed cable		-50 to +350 °C	±0.2 °C (-20 to +70 °C) Class 1 (remaining range) <sup>2)</sup>	7 s	0603 3392
Waterproof, super-quick needle probe for measurements without visible penetration hole, T/C Type T, Fixed cable		-50 to +250 °C	±0.2 °C (-20 to +70 °C) Class 1 (remaining range) <sup>2)</sup>	2 s	0628 0027
Flexible oven probe, Tmax +250 °C, PTFE cable		-50 to +250 °C	Class 1 <sup>2)</sup>		0603 0646

1) According to standard EN 60584-2, the accuracy of Class 1 refers to -40 to +1000 °C (Type K), Class 2 to -40 to +1200 °C (Type K), Class 3 to -200 to +40 °C (Type K).  
2) According to standard EN 60584-2, the accuracy of Class 1 refers to -40 to +350 °C (Type T).



# Data logger

## Temperature and humidity

testo 176 H1 / testo 176 H2

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High level of data security

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For two external temperature/humidity probes

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Parallel measurement at two sites

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Measurement data memory 2 million measurement values

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Up to 8 years' battery life

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Data transfer via USB cable or SD card

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In metal housing for more robustness (testo 176 H2) or with a large display for a clearer overview (testo 176 H1)

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When short-term measurements show no anomalies, but the ambient storage conditions still do not fulfil the desired requirements, the testo 176 H1 or testo 176 H2 is the right data logger. Both models have two connections for external temperature and humidity probes which can be positioned in a room according to individual requirements. The metal housing of the testo 176 H2 guarantees

robustness and protects from mechanical influences such as impact. This ensures a long lifetime even in rough surroundings. The clear display of the testo 176 H1, on the other hand, provides on-site information on measurement values and limit value violations. The free ComSoft Basic software allows fast programming of the data logger as well as easy data analysis.

## Technical data

### testo 176 H1

testo 176 H1, 4-channel temperature and humidity data logger with external sensor connections (NTC/capacitive humidity sensor) incl. wall holder, lock, battery and calibration protocol

Part no. 0572 1765



### testo 176 H2

testo 176 H2, 4-channel temperature and humidity data logger in metal housing with external sensor connections (NTC/capacitive humidity sensor) incl. wall holder, lock, battery and calibration protocol

Part no. 0572 1766



#### Sensor type NTC

Measuring range	-20 to +70 °C
Accuracy ±1 digit	±0.2 °C (-20 to +70 °C) ±0.4 °C (remaining range)
Resolution	0.1 °C

#### Sensor type Testo humid. sensor, cap.

Measuring range	0 to 100 %RH*
Accuracy ±1 digit	dependent on selected probe
Resolution	0.1 %RH

\* Not for condensing atmospheres. For continuous applications in high humidity (>80 %RH at ≤30 °C for >12 h, >60 %RH at >30 °C for >12 h), please contact us via our website.

#### General technical data

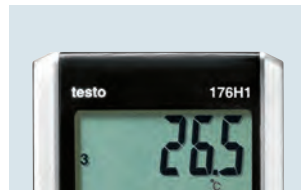
Channels	2 probes, 4 external channels
Battery type	1 x Lithium (TL-5903)
Battery life	8 years (15 min. measuring cycle, +25 °C)
Operating temperature	-20 to +70 °C
Storage temperature	-40 to +85 °C
Dimensions	103 x 63 x 33 mm
Weight	220 g (testo 176 H1) approx. 430 g (testo 176 H2)
EC Directive	2014/30/EU
Protection class	IP65
Measuring rate	1 s to 24 h (freely selectable, for online measurement 2 s to 24 h)
Memory	2 mio. measurement values
Interface	Mini USB, SD card slot



Lateral connection of Mini USB cable and SD card



Probe connection at lower end of housing for two temperature/humidity probes







Large, clear display for showing measurement values

## Accessories

Accessories for measuring instrument	Part no.
Mobile printer for data loggers testo 175/176/184	0572 0576
Wall holder (black) for testo 176	0554 1703
Cable for connecting the data loggers testo 175 and testo 176 to the PC, Mini-USB to USB	0449 0047
SD card - for collecting the measurement data from the data loggers testo 175 and testo 176; 2 GB; application range to -20 °C	0554 8803
Battery for testo 176 -1 x TL-5903 AA cell	0515 1760
ComSoft Basic, Basic software for programming and readout of Testo data loggers; graphic and tabular measurement value presentation as well as export function (free download at <a href="http://www.testo.com">www.testo.com</a> )	0572 0580
ComSoft Professional, Pro software incl. data archiving	0554 1704
ComSoft CFR 21 Part 11, Software for requirements according to CFR 21 Part 11 for Testo data loggers	0554 1705
ISO calibration certificate humidity calibration points 11.3 %RH and 75.3 %RH at +25 °C/+77 °F; per channel/instrument	0520 0076
DAkkS calibration certificate humidity humidity probe; cal. points 11.3 %RH and 75.3 %RH at +25 °C; per channel/instrument	0520 0246
ISO calibration certificate temperature temperature probe; calibration points -18 °C; 0 °C; +40 °C per channel/instrument	0520 0153
DAkkS calibration certificate temperature temp. data logger; cal. points -20°C; 0°C; +60°C; per channel/instrument	0520 0261

## Probes

Probe type	Dimensions Probe shaft/probe shaft tip	Measuring range	Accuracy	Part no.
<b>Humidity/temperature probes</b>				
Humidity/temperature probe 12 mm		-20 to +70 °C 0 to 100 %RH	±0.3 °C ±2 %RH at +25 °C (2 to 98 %RH) ±0.03 %RH/K ± 1 digit	0572 6172
Humidity/temperature probe 4 mm		0 to +40 °C 0 to 100 %RH	±0.3 °C ±2 %RH at +25 °C (2 to 98 %RH) ±0.08 %RH/K ± 1 digit	0572 6174
Plug-in humidity/temperature probe 12 mm		-30 to +50 °C 0 to 100 %RH	±0.3 °C ±2 %RH at +25 °C (2 to 98 %RH)	0572 2151
Wall surface temperature probe (connectable only to testo 176 H1)		-50 to +80 °C	±0.5 °C (-40 to -25 °C) ±0.2 °C (-25 to +80 °C)	0628 7507

# Data logger

## Pressure, temperature and humidity

testo 176 P1

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High level of data security

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Internal absolute pressure sensor and connection possibility for two external temperature/humidity probes

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Parallel temperature/humidity measurement at two sites

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Measurement data memory 2 million measurement values

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Up to 8 years' battery life

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Data transfer via USB cable or SD card

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hPa

°C

%RH

td

g/m<sup>3</sup>

inch  
H<sub>2</sub>O



IP54

When ambient conditions need to be documented extremely accurately and securely, for example in a laboratory, the testo 176 P1 is the right data logger. It has an internal absolute pressure sensor and connection possibilities for two external temperature/humidity probes.

An integrated dewpoint calculation makes it universally applicable. The free ComSoft Basic software allows fast programming and easy data analysis.

## Technical data / Accessories

### testo 176 P1

testo 176 P1, 5-channel pressure, temperature and humidity data logger with internal sensor (absolute pressure) and external sensor connections (NTC/capacitive humidity sensor) incl. wall holder, lock, battery and calibration protocol

Part no. 0572 1767



#### General technical data

Channels	1 x internal, 2 probes external, 4 external channels (temperature/humidity)
Battery type	1 x Lithium (TL-5903)
Battery life	8 years (15 min. measuring cycle, +25 °C)
Operating temperature	-20 to +70 °C
Storage temperature	-40 to +85 °C
Dimensions	103 x 63 x 33 mm
Weight	230 g
Protection class	IP54
Measuring rate	1 s to 24 h (freely selectable, for online measurement 2 s to 24 h)
Memory	2 mio. measurement values
Interface	Mini USB, SD card slot

#### Sensor types

	NTC	Testo humid. sensor, cap.	Absolute pressure sensor
Measuring range	-20 to +70 °C	0 to 100 %RH*	600 to 1100 mbar
Accuracy ±1 digit	±0.2 °C (-20 to +70 °C) ±0.4 °C (remaining range)	dependent on probe selected	±3 mbar (0 to +50 °C)
Resolution	0.1 °C	0.1 %RH	1 mbar

\* Not for condensing atmospheres. For continuous applications in high humidity (>80 %RH at ≤30 °C for >12 h, >60 %RH at >30 °C for >12 h), please contact us via our website.



Lateral connection of Mini USB cable and SD card



Probe connection at lower end of housing for two temperature/humidity probes







Large, clear display for showing measurement values



## Accessories

Accessories for measuring instrument	Part no.
Mobile printer for data loggers testo 175/176/184	0572 0576
Wall holder (black) for testo 176	0554 1703
Cable for connecting the data loggers testo 175 and testo 176 to the PC, Mini-USB to USB	0449 0047
SD card - for collecting the measurement data from the data loggers testo 175 and testo 176; 2 GB; application range to -20 °C	0554 8803
Battery for testo 176 -1 x TL-5903 AA cell	0515 1760
ComSoft Basic, Basic software for programming and readout of Testo data loggers; graphic and tabular measurement value presentation as well as export function (free download at <a href="http://www.testo.com">www.testo.com</a> )	0572 0580
ComSoft Professional, Pro software incl. data archiving	0554 1704
ComSoft CFR 21 Part 11, Software for requirements according to CFR 21 Part 11 for Testo data loggers	0554 1705
ISO calibration certificate temperature temperature probe; calibration points -18 °C; 0 °C; +40 °C per channel/instrument	0520 0153
DAkkS calibration certificate temperature temp. data logger; cal. points -20°C; 0°C; +60°C; per channel/instrument	0520 0261
ISO calibration certificate humidity calibration points 11.3 %RH and 75.3 %RH at +25 °C/+77 °F; per channel/instrument	0520 0076
DAkkS calibration certificate humidity humidity probe; cal. points 11.3 %RH and 75.3 %RH at +25 °C; per channel/instrument	0520 0246
ISO calibration certificate pressure accuracy 0.1 to 0.6 (% of fsv), 5 points distributed over meas. range	0520 0025
DAkkS calibration certificate/pressure diff. and pos. pressure; 11 measuring points distributed over the instr. meas. range	0520 0215

## Probes

Probe type	Dimensions Probe shaft/probe shaft tip	Measuring range	Accuracy	Part no.
<b>Humidity/temperature probes</b>				
Humidity/temperature probe 12 mm		-20 to +70 °C 0 to 100 %RH	±0.3 °C ±2 %RH at +25 °C (2 to 98 %RH) ±0.03 %RH/K ± 1 digit	0572 6172
Humidity/temperature probe 4 mm		0 to +40 °C 0 to 100 %RH	±0.3 °C ±2 %RH at +25 °C (2 to 98 %RH) ±0.08 %RH/K ± 1 digit	0572 6174
Plug-in humidity/temperature probe 12 mm		-30 to +50 °C 0 to 100 %RH	±0.3 °C ±2 %RH at +25 °C (2 to 98 %RH)	0572 2151
Wall surface temperature probe		-50 to +80 °C	±0.5 °C (-40 to -25 °C) ±0.2 °C (-25 to +80 °C)	0628 7507

# Data logger Temperature

testo 176 T1 / testo 176 T2

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High data security

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Highly accurate measurement with Pt100 sensor

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Measurement data memory for 2 million measurement values

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Up to 8 years' battery life

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Data transfer via USB cable or SD card

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In a metal housing and with an internal sensor for more robustness (testo 176 T1) or with a large display and two external sensor connections for a clearer overview (testo 176 T2)

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When highly accurate temperature control under extreme conditions is required, the testo 176 T1 is the right choice. In the interior, a precise Pt100 sensor measures the temperature. The testo 176 T1 is excellently suited to the recording of temperatures over long periods. The metal housing is resistant to extreme mechanical influences and hard impacts, making the data logger suitable for use in industrial surroundings. The free ComSoft Basic software allows fast programming of the data logger and easy data analysis.

The testo 176 T2, with its two inputs for external Pt100 probes, is the right data logger for simultaneous measurement at two measurement sites. A reference class data logger which can also be used to calibrate other data loggers.

Like all Testo data loggers for use in the food sector, the testo 176 T1 and testo 176 T2 are tested by the ATP testing section of the TÜV Süd according to DIN EN 12830.

# Technical data

## testo 176 T1

testo 176 T1, 1-channel temperature logger in metal housing with highly accurate internal sensor (Pt100) incl. wall holder, lock, battery and calibration protocol

Part no. 0572 1761



## testo 176 T2

testo 176 T2, 2-channel temperature logger with connections for highly accurate external sensor (Pt100) incl. wall holder, lock, battery and calibration protocol

Part no. 0572 1762



### General technical data

Battery type	1 x Lithium (TL-5903)
Battery life	8 years (15 min. meas. rate, +25 °C)
Operating temperature	-35 to +70 °C
Storage temperature	-40 to +85 °C
Dimensions	103 x 63 x 33 mm
Weight	approx. 410 g (testo 176 T1) approx. 220 g (testo 176 T2)
Protection class	IP68 (testo 176 T1) IP65 (testo 176 T2)
Measuring rate	1 s to 24 h (freely selectable, for online measurement 2 s to 24 h)
Memory	2 mio. measurement values
Interface	Mini USB, SD card slot

	testo 176 T1	testo 176 T2
<b>Sensor type</b>	<b>Pt100 class A</b>	<b>Pt100 class A</b>
Channels	1 x internal	2 x external
Measuring range	-35 to +70 °C	-100 to +400 °C
Accuracy Instrument ±1 digit	±0.4 °C (-35 to +70 °C)	±0.2 °C (-100 to +200 °C) ±0.3 °C (+200.1 to +400 °C)
Resolution	0.01 °C	0.01 °C



Lateral connection of Mini USB cable and SD card



Probe connection at lower end of housing for two Pt100 probes (testo 176 T2 only)

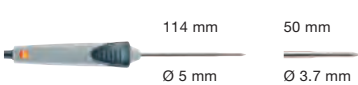

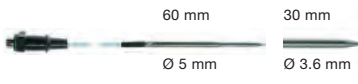

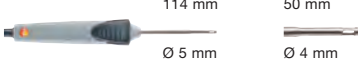


Large, clear display for showing measurement values (testo 176 T2 only)

## Accessories

Accessories for measuring instrument	Part no.
Mobile printer for data loggers testo 175/176/184	0572 0576
Wall holder (black) for testo 176	0554 1703
Cable for connecting the data loggers testo 175 and testo 176 to the PC, Mini-USB to USB	0449 0047
SD card - for collecting the measurement data from the data loggers testo 175 and testo 176; 2 GB; application range to -20 °C	0554 8803
Battery for testo 176 -1 x TL-5903 AA cell	0515 1760
ComSoft Basic, Basic software for programming and readout of Testo data loggers; graphic and tabular measurement value presentation as well as export function (free download at <a href="http://www.testo.com">www.testo.com</a> )	0572 0580
ComSoft Professional, Pro software incl. data archiving	0554 1704
ComSoft CFR 21 Part 11, Software for requirements according to CFR 21 Part 11 for Testo data loggers	0554 1705
ISO calibration certificate temperature temperature probe; calibration points -18°C; 0°C; +40°C per channel/instrument	0520 0153
DAkkS calibration certificate temperature temp. data logger; cal. points -20°C; 0°C; +60°C; per channel/instrument	0520 0261

## Probes

Probe type	Dimensions Probe shaft/probe shaft tip	Measuring range	Accuracy	t <sub>99</sub>	Part no.
<b>Pt100 probes</b>					
Robust, waterproof Pt100 immersion/penetration probe, Fixed cable	 114 mm    50 mm Ø 5 mm    Ø 3.7 mm	-50 to +400 °C	Class A (-50 to +300 °C), Class B (remaining range) <sup>1)</sup>	12 s	0609 1273
Robust, Pt100 stainless steel food probe (IP65), Fixed cable	 125 mm    15 mm Ø 4 mm    Ø 3 mm	-50 to +400 °C	Class A (-50 to +300 °C), Class B (remaining range) <sup>1)</sup>	10 s	0609 2272
Penetration probe Pt100 with ribbon cable, cable length 2 m, IP 54, Fixed cable	 60 mm    30 mm Ø 5 mm    Ø 3.6 mm	-85 to +150 °C	Class A	35 s	0572 7001
Laboratory probe Pt100, glass-coated, exchangeable glass pipe (Duran 50), resistant to corrosive substances, Fixed cable	 30 mm Ø 6 mm    Ø 5 mm	-50 to +400 °C	Class A (-50 to +300 °C), Class B (remaining range) <sup>1)</sup>	45 s 12 s Without protective glass	0609 7072
Efficient, robust air probe, Pt100, Fixed cable	 114 mm    50 mm Ø 5 mm    Ø 4 mm	-50 to +400 °C	Class A (-50 to +300 °C), Class B (remaining range) <sup>1)</sup>	70 s	0609 1773

1) According to standard 60751, the accuracies of Class A and B refer to -200 to +600 °C (Pt100)

# Data logger Temperature

testo 176 T3 / testo 176 T4

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High data security

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Thermocouples Type T, Type K, Type J connectable

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Simultaneous measurement at four sites

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Measurement data memory for 2 million measurement values

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Up to 8 years' battery life

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Data transfer via USB cable or SD card

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In a metal housing for more robustness (testo 176 T3) or with a large display for a clearer overview (testo 176 T4)

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IP65



°C

It is often important to check whether the prescribed temperature values in a process are really being adhered to. The testo 176 T3 in its robust metal housing is the right data logger for measuring and recording temperatures simultaneously at four different sites in industrial processes. Thanks to the broad selection of connectable thermocouple probes, the requirements of the most widely differing applications can be fulfilled.

Users of the testo 176 T4 can additionally count on a clear display which provides information on measurement values and limit value violations on site. This allows the user to obtain a quick overview without having to read out the logger on a PC. The free ComSoft Basic software allows fast programming of the data logger and easy data analysis.



## Technical data / Accessories

### testo 176 T3

testo 176 T3, 4-channel temperature data logger in metal housing with external sensor connection (TC Type T, Type K and Type J) incl. wall holder, lock, batteries and calibration protocol

Part no. 0572 1763



### testo 176 T4

testo 176 T4, 4-channel temperature data logger with external sensor connections (TC Type T, Type K and Type J) incl. wall holder, lock, batteries and calibration protocol

Part no. 0572 1764



#### General technical data

Channels	4 x external
Battery type	1 x Lithium (TL-5903)
Battery life	8 years (15 min. measuring cycle, +25 °C)
Operating temperature	-20 to +70 °C
Storage temperature	-40 to +85 °C
Dimensions	103 x 63 x 33 mm
Weight	approx. 430 g (testo 176 T3) approx. 230 g (testo 176 T4)
Protection class	IP65
Measuring rate	1 s to 24 h (freely selectable, for online measurement 2 s to 24 h)
Memory	2 mio. measurement values



Lateral connection of Mini USB cable and SD card



Probe connection at lower end of housing for four thermocouple probes (Type T, K and J)

#### Sensor types

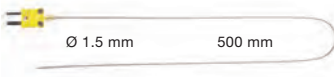
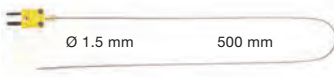


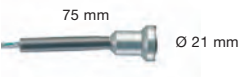

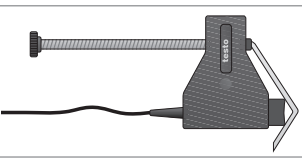

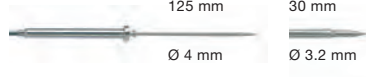
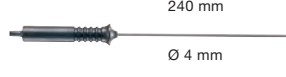
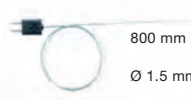

	Type T (Cu-CuNi)	Type K (NiCr-Ni)	Type J (Fe-CuNi)
Measuring range	-200 to +400 °C	-200 to +1000 °C	-100 to +750 °C
Accuracy ±1 digit	±1 % of m.v. (-200 to -100.1 °C) ±0.3 °C (-100 to +70 °C) ±0.5 % of m.v. (+70.1 to +400 °C)	±1 % of m.v. (-200 to -100.1 °C) ±0.3 °C (-100 to +70 °C) ±0.5 % of m.v. (+70.1 to +1000 °C)	±0.3 °C (-100 to +70 °C) ±0.5 % of m.v. (+70.1 to +750 °C)
Resolution	0.1 °C	0.1 °C	0.1 °C

#### Accessories

#### Part no.

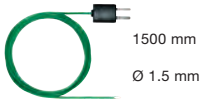
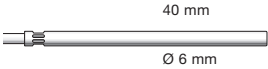

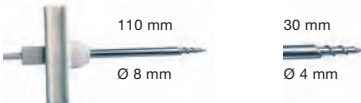
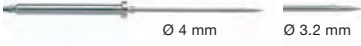
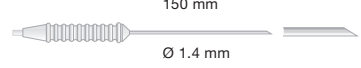

Mobile printer for data loggers testo 175/176/184	0572 0576
Wall holder (black) for testo 176	0554 1703
Cable for connecting the data loggers testo 175 and testo 176 to the PC, Mini-USB to USB	0449 0047
SD card - for collecting the measurement data from the data loggers testo 175 and testo 176; 2 GB; application range to -20 °C	0554 8803
Battery for testo 176 -1 x TL-5903 AA cell	0515 1760
ComSoft Basic, Basic software for programming and readout of Testo data loggers; graphic and tabular measurement value presentation as well as export function (free download at <a href="http://www.testo.com">www.testo.com</a> )	0572 0580
ComSoft Professional, Pro software incl. data archiving	0554 1704
ComSoft CFR 21 Part 11, Software for requirements according to CFR 21 Part 11 for Testo data loggers	0554 1705
Heat protection container, protects from temperatures up to +200 °C	0572 9999 Ident. no. 0699 6995/1
ISO calibration certificate temperature temperature probe; calibration points -18 °C; 0 °C; +40 °C per channel/instrument	0520 0153
DAkkS calibration certificate temperature temp. data logger; cal. points -20°C; 0°C; +60°C; per channel/instrument	0520 0261

# Probes

Probe type	Dimensions Probe shaft/probe shaft tip	Measuring range	Accuracy	t <sub>99</sub>	Part no.
<b>Probes Type K</b>					
Immersion tip, flexible, TC Type K	 Ø 1.5 mm 500 mm	-200 to +1000 °C	Class 1 <sup>1)</sup>	5 s	0602 5792
Immersion tip, flexible, TC Type K	 Ø 1.5 mm 500 mm	-200 to +40 °C	Class 3 <sup>1)</sup>	5 s	0602 5793
Immersion measurement tip, flexible, for measurements in air/exhaust gases (not suitable for measurements in smelters), TC Type K	 Ø 3 mm 1000 mm	-200 to +1300 °C	Class 1 <sup>1)</sup>	4 s	0602 5693
Magnetic probe, adhesive force approx. 20 N, with magnets, for measurements on metal surfaces, TC Type K, Fixed cable	 35 mm Ø 20 mm	-50 to +170 °C	Class 2 <sup>1)</sup>	150 s	0602 4792
Magnetic probe, adhesive force approx. 10 N, with magnets, for higher temp., for measurements on metal surfaces, TC Type K, Fixed cable	 75 mm Ø 21 mm	-50 to +400 °C	Class 2 <sup>1)</sup>		0602 4892
Pipe wrap probe with velcro strip; for temperature measurement on pipes with diameter up to max. 120 mm; Tmax. +120 °C; TC Type K, Fixed cable 1.5 m	 395 mm 20 mm	-50 to +120 °C	Class 1 <sup>1)</sup>	90 s	0628 0020
Pipe wrap probe for pipe diameter 5 to 65 mm, with exchangeable measuring head. Meas. range short-term up to +280 °C, TC Type K, Fixed cable 1.2 m		-60 to +130 °C	Class 2 <sup>1)</sup>	5 s	0602 4592
Clamp probe for measurements on pipes, pipe diameter 15 to 25 mm (max. 1"), meas. range short-term up to +130°C, TC Type K, Fixed cable		-50 to +100 °C	Class 2 <sup>1)</sup>	5 s	0602 4692
Waterproof food probe made of stainless steel (IP65), TC Type K, Fixed cable	 125 mm 30 mm Ø 4 mm Ø 3.2 mm	-60 to +400 °C	Class 2 <sup>1)</sup>	7 s	0602 2292
Waterproof robust immersion/penetration probe with metal protection hose Tmax +230°C, e.g. for monitoring temp. in cooking oil, T/C Type K, Fixed cable	 240 mm Ø 4 mm	-50 to +230 °C	Class 1 <sup>1)</sup>	15 s	0628 1292
Thermocouple with TC adapter, flexible, 800 mm long, fibre glass, TC Type K	 800 mm Ø 1.5 mm	-50 to +400 °C	Class 2 <sup>1)</sup>	5 s	0602 0644
Thermocouple with TC adapter, flexible, length 1500 mm, fibreglass, TC Type K	 1500 mm Ø 1.5 mm	-50 to +400 °C	Class 2 <sup>1)</sup>	5 s	0602 0645

1) According to standard EN 60584-2, the accuracy of Class 1 refers to -40 to +1000 °C (Type K), Class 2 to -40 to +1200 °C (Type K), Class 3 to -200 to +40 °C (Type K).

# Probes

Probe type	Dimensions Probe shaft/probe shaft tip	Measuring range	Accuracy	t <sub>99</sub>	Part no.
<b>Probes Type K</b>					
Thermocouple with TC adapter, flexible, 1500 mm long, PTFE, TC Type K	 1500 mm Ø 1.5 mm	-50 to +250 °C	Class 2 <sup>1)</sup>	5 s	0602 0646
Stationary probe with stainless steel sleeve, TC Type K, Fixed cable 1.9 m	 40 mm Ø 6 mm	-50 to +205 °C	Class 2 <sup>1)</sup>	20 s	0628 7533
Flexible, low-mass immersion measurement tip, ideal for measurements in small volumes such as petri dishes, or for surface measurements (e.g. attached with adhesive tape), TC Type K, 2 m, FEP insulated thermal wire, temperature proof up to 200 °C, oval wire with dimensions: 2.2 mm x 1.4 mm	 Ø 0.25 mm 500 mm	-200 to +1000 °C	Class 1 <sup>1)</sup>	1 s	0602 0493
<b>Probes Type T</b>					
Frozen food probe, corkscrew design, T/C Type T, Plug-in cable	 110 mm 30 mm Ø 8 mm Ø 4 mm	-50 to +350 °C	±0.2 °C (-20 to +70 °C) Class 1 (remaining range) <sup>2)</sup>	8 s	0603 3292
Stainless steel food probe (IP67), with FEP cable to +200 °C, TC Type T, Fixed cable	 125 mm 30 mm Ø 4 mm Ø 3.2 mm	-50 to +350 °C	±0.2 °C (-20 to +70 °C) Class 1 (remaining range) <sup>2)</sup>	7 s	0603 3392
Waterproof, super-quick needle probe for measurements without visible penetration hole, T/C Type T, Fixed cable	 150 mm Ø 1.4 mm	-50 to +250 °C	±0.2 °C (-20 to +70 °C) Class 1 (remaining range) <sup>2)</sup>	2 s	0628 0027
Flexible oven probe, Tmax +250 °C, PTFE cable	 2000 mm Ø 1.5 mm	-50 to +250 °C	Class 1 <sup>2)</sup>		0603 0646

1) According to standard EN 60584-2, the accuracy of Class 1 refers to -40 to +1000 °C (Type K), Class 2 to -40 to +1200 °C (Type K), Class 3 to -200 to +40 °C (Type K).  
2) According to standard EN 60584-2, the accuracy of Class 1 refers to -40 to +350 °C (Type T).

# USB data logger for temperature, humidity and shock

## testo 184 G1

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Clear alarm indication

---

Easiest operation

---

Easiest configuration without software installation

---

Convenient readout thanks to automatic PDF report

---

Reliable recording of vibrations (shock)

---



Illustration 1:1



The data logger testo 184 G1 is designed specifically for the monitoring of shock, relative humidity and temperature during transportation. In addition to the precise temperature and humidity measurement, a 3-axle acceleration sensor measures any vibrations which occur.

This allows impact and vibrations to be reliably recorded during the transport of sensitive pharmaceutical products, high-quality electronic products, delicate machinery or valuable art objects.

At their destination, you see at a glance whether the configured limit values have been adhered to. In order to obtain detailed information, it is sufficient to connect the logger to a PC – a PDF report is immediately generated with all relevant data.

In order for you to be able to work even more efficiently and conveniently with the data loggers, all required files and information are stored directly and securely in the testo 184 G1: Configuration file, instruction manual and PDF report of your recorded data.

## Technical data

### testo 184 G1

USB data logger testo 184 G1 for temperature, humidity and shock, unlimited operating duration thanks to exchangeable battery, incl. wall bracket

Part no. 0572 1846



#### Sensor

Measurement parameters	Temperature / humidity / shock
Measuring range	-20 to +70 °C 0 to 100 %RH 0 to 27 g
Accuracy	±0.5 °C (0 to +70 °C) ±0.8 °C (-20 to 0 °C) ±1.8 %RH + 3 % of m.v. at +25 °C (5 to 80 %RH) ±0.03 %RH / K (0 to 60 °C) ±0.1 g + 5 % of m.v.
Resolution	0.1 °C 0.1 %RH 0.1 g

#### General technical data

Power supply	Lithium battery CR2450 3V, exchangeable
Operating time	Unlimited
Battery life	120 days (at +25 °C and 15 mins measurement rate).
Measuring rate	1 min to 24 h
Memory	64000 measurement values (temperature and humidity) 1000 measurement values (shock)
Alarm identification	by LEDs and display
Dimensions	44 x 12 x 97 mm
Weight	45 g
Protection class	IP30
Operating temperature	-20 to +70 °C
Storage temperature	-55 to +70 °C
Tests, certificates	· Certified by HACCP International · testo ComSoft CFR software (V4.3 SP2 or higher) compatible with CFR 21 Part 11

## Accessories

#### Part no.

Lithium battery CR2450 3 V	0515 5841	
ComSoft Professional, Pro software incl. data archiving	0554 1704	
ComSoft CFR 21 Part 11, Software for requirements according to CFR 21 Part 11 for Testo data loggers	0554 1705	
Mobile printer for data loggers testo 175/176/184	0572 0576	
ISO calibration certificate humidity, calibration points 11.3 %RH, 50 %RH and 75.3 %RH at +25 °C	0520 0176	
ISO calibration certificate humidity, calibration points 11.3 %RH and 75.3 %RH at +25 °C/+77 °F; per channel/instrument	0520 0076	



# USB data logger for humidity and temperature

## testo 184 H1

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Clear alarm indication

---

Easiest operation

---

Easiest configuration without software installation

---

Convenient readout thanks to automatic PDF report

---

IT safe (no installation, no download)

---



Illustration 1:1

With the testo 184 data loggers, you can monitor every step of the transport chain. testo 184 H1 is specially tailored to the monitoring of relative humidity and temperature during transport, for example in order to continuously monitor fruit and vegetables, humidity-sensitive medicaments or cut flowers.

At their destination, you see at a glance whether the configured limit values have been adhered to. In order to obtain detailed information, it is sufficient to connect the logger to a PC – a PDF report is immediately generated with all relevant data.

In order for you to be able to work even more efficiently and conveniently with the data loggers, all required files and information are stored directly and securely in the testo 184 H1: Configuration file, instruction manual and PDF report of your recorded data.

## Technical data

### testo 184 H1

USB data logger testo 184 H1 for temperature and humidity, unlimited operating duration thanks to exchangeable battery

Part no. 0572 1845



### Sensor

Measurement parameters	Temperature / humidity
Measuring range	-20 to +70 °C 0 to 100 %RH
Accuracy	±0.5 °C (0 to +70 °C) ±0.8 °C (-20 to 0 °C) ±1.8 %RH + 3 % of m.v. at +25 °C (5 to 80 %RH) ±0.03 %RH / K (0 to 60 °C)
Resolution	0.1 °C 0.1 %RH

## Accessories

	Part no.
Wall bracket for testo 184	0554 1841
Lithium battery CR2450 3 V	0515 5841
ComSoft Professional, Pro software incl. data archiving	0554 1704
ComSoft CFR 21 Part 11, Software for requirements according to CFR 21 Part 11 for Testo data loggers	0554 1705
Mobile printer for data loggers testo 175/176/184	0572 0576
ISO calibration certificate humidity, calibration points 11.3 %RH, 50 %RH and 75.3 %RH at +25 °C	0520 0176
ISO calibration certificate humidity, calibration points 11.3 %RH and 75.3 %RH at +25 °C/+77 °F; per channel/instrument	0520 0076

### General technical data

Power supply	Lithium battery CR2450 3V, exchangeable
Operating time	Unlimited
Battery life	500 days (at +25 °C and 15 mins measurement rate).
Measuring rate	1 min to 24 h
Memory	64000 measurement values
Alarm identification	by LEDs and display
Dimensions	44 x 12 x 97 mm
Weight	45 g
Protection class	IP30
Operating temperature	-20 to +70 °C
Storage temperature	-55 to +70 °C
Tests, certificates	· Certified by HACCP International · testo ComSoft CFR software (V4.3 SP2 or higher) compatible with CFR 21 Part 11

# USB data logger temperature

testo 184 T1  
testo 184 T2  
testo 184 T3

---

Clear alarm indication

---

Easiest operation

---

Easiest configuration without software installation

---

Convenient readout thanks to automatic PDF report

---

IT safe (no installation, no download)

---



Illustration 1:1



With the testo 184 data loggers, you monitor every step of your cold chain in the transport of sensitive goods by rail, in the air or on the road.

testo 184 T1 and testo 184 T2 are designed as loggers with a built-in battery for use over a limited time, and therefore ideal for one-way transports.

testo 184 T3, with its exchangeable battery, is the ideal logger for inhouse logistics.

At their destination, you see at a glance whether the configured limit values have been adhered to. In order to obtain detailed information, it is sufficient to connect the logger to a PC – a PDF report is immediately generated with all relevant data.

In order for you to be able to work even more efficiently and conveniently with the data loggers, all required files and information are stored directly and securely in the respective testo 184: Configuration file, acceptance test certificate, instruction manual and PDF report of your recorded data.

# Technical data

## testo 184 T1

USB data logger testo 184 T1 for temperature, operating duration 90 days



Part no. 0572 1841

## testo 184 T3

USB data logger testo 184 T3 for temperature, unlimited operating duration thanks to exchangeable battery



Part no. 0572 1843

## testo 184 T2

USB data logger testo 184 T2 for temperature, operating duration 150 days



Part no. 0572 1842



### Sensor

Measurement parameter	Temperature
Temperature sensor	NTC sensor, internal
Measuring range	-35 to +70 °C
Accuracy	±0.5 °C
Resolution	0.1 °C

### General technical data

	testo 184 T1	testo 184 T2	testo 184 T3
Power supply	Lithium battery, non-exchangeable	Lithium battery, non-exchangeable	Lithium battery CR2450 3V, exchangeable
Operating time	90 days	150 days	Unlimited
Battery life	—	—	500 days (at +25 °C and 15 mins measurement rate).
Measuring rate	1 min to 24 h	1 min to 24 h	1 min to 24 h
Memory	16,000 readings	40,000 readings	40,000 readings
Alarm identification	by LEDs	by LEDs and display	by LEDs and display
Dimensions	33 x 9 x 74 mm	44 x 12 x 97 mm	44 x 12 x 97 mm
Weight	25 g	45 g	45 g
Protection class	IP67		
Operating temperature	-35 to +70 °C		
Storage temperature	-55 to +70 °C		
Scope of delivery	Data logger, temperature acceptance test certificate (stored as a PDF in the instrument), battery CR2450		
Tests, certificates	<ul style="list-style-type: none"> <li>· EN 12830-certified (C,D)</li> <li>· Certified by HACCP International</li> <li>· testo ComSoft CFR software (V4.3 SP2 or higher) compatible with CFR 21 Part 11</li> </ul>		

# Accessories

testo 184 T1/T2/T3	Part no.
Mobile printer for data loggers testo 175/176/184	0572 0576
ComSoft Professional, Pro software incl. data archiving	0554 1704
ComSoft CFR 21 Part 11, Software for requirements according to CFR 21 Part 11 for Testo data loggers	0554 1705
ISO calibration certificate/temperature, temperature probe; calibration points -18°C; 0°C; +60°C per channel/instrument	0520 0151

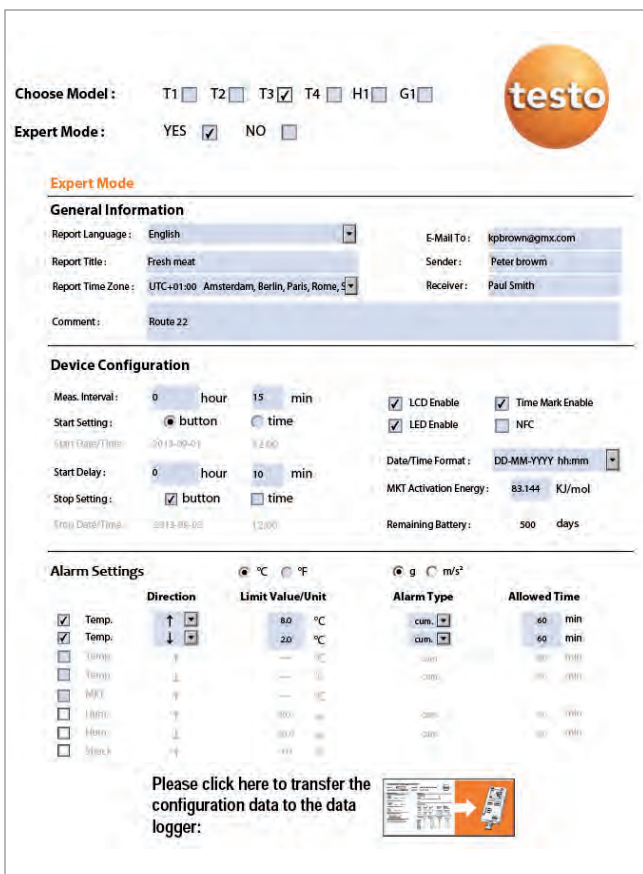
  

testo 184 T2/T3	Part no.
Wall bracket for testo 184	0554 1841

testo 184 T3	Part no.
Lithium battery CR2450 3 V	0515 5841

# Software on board



The screenshot shows the 'testo' configuration tool interface. It includes sections for 'Choose Model' (T1, T2, T3, T4, H1, G1), 'Expert Mode' (YES, NO), 'General Information' (Report Language, Title, Time Zone, E-Mail, Sender, Receiver, Comment), 'Device Configuration' (Meas. Interval, Start/Stop Setting, LCD/LED Enable, Time Mark Enable, NFC, Data/Time Format, MKT Activation Energy, Remaining Battery), and 'Alarm Settings' (Temp, Humidity, etc. with direction, limit, and allowed time options). At the bottom, there is a button that says 'Please click here to transfer the configuration data to the data logger:' with an arrow pointing to a data logger icon.

No software needs to be installed on a PC or notebook in order to configure a testo 184 data logger. The PDF configuration tool is stored on the logger itself and can be opened with a simple double-click.

No download or installation required whatsoever. After setting the relevant parameters, the configuration is simply stored on the logger – and it's ready to use!

When the logger is plugged in to a PC after a completed measurement, a PDF report with all relevant data, the programming and a graph showing the value curve is created and stored in the logger. A double-click allows it to be opened and printed out, or forwarded by e-mail.

If advanced read-out options are required, the customer can obtain these by purchasing ComSoft Professional. In order to achieve the conformity to 21 CFR Part 11 which is often required in the pharmaceutical field, there is a special software available as an accessory.



# USB data logger for temperatures up to $-80\text{ }^{\circ}\text{C}$

## testo 184 T4

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Clear alarm indication

---

Easiest operation

---

Easiest configuration without software installation

---

Convenient readout thanks to automatic PDF report

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Specially for transports up to  $-80\text{ }^{\circ}\text{C}$

---



Illustration 1:1

The data logger testo 184 T4 is designed for lowest temperatures down to  $-80\text{ }^{\circ}\text{C}$ , such as occur in dry-ice cooled transports (e.g. blood plasma). Special components are used, allowing monitoring at operating temperatures of  $-80\text{ }^{\circ}\text{C}$ .

At their destination, you see at a glance whether the configured limit values have been adhered to. In order to obtain detailed information, it is sufficient to connect the logger to a PC – a PDF report is immediately generated with all relevant data.

In order for you to be able to work even more efficiently and conveniently with the data loggers, all required files and information are stored directly and securely in the testo 184 T4: Configuration file, acceptance test certificate, instruction manual and PDF report of your recorded data.

## Technical data



### testo 184 T4

USB data logger testo 184 T4 for temperature, unlimited re-use thanks to exchangeable battery

Part no. 0572 1844



#### Sensor

Measurement parameter	Temperature
Temperature sensor	Pt1000
Measuring range	-80 to +70 °C
Accuracy	±0.8 °C (-80 to -35.1 °C) ±0.5 °C (-35 to +70 °C)
Resolution	0.1 °C

#### General technical data

Power supply	Lithium battery TLH-2450, 3.6 V, exchangeable
Operating time	Unlimited
Battery life	100 days (at 15 mins measurement rate)
Measuring rate	1 min to 24 h
Memory	40,000 readings
Alarm identification	by LEDs
Dimensions	44 x 12 x 97 mm
Weight	45 g
Protection class	IP67
Operating temperature	-80 to +70 °C
Storage temperature	-80 to +70 °C
Scope of delivery	Data logger, temperature acceptance test certificate (stored as a PDF in the instrument), battery TLH-2450
Tests, certificates	<ul style="list-style-type: none"> <li>· EN 12830-certified (C,D)</li> <li>· Certified by HACCP International</li> <li>· testo ComSoft CFR software (V4.3 SP2 or higher) compatible with CFR 21 Part 11</li> </ul>

## Accessories

	Part no.
Wall bracket for testo 184	0554 1841
Lithium battery TLH-2450	0515 5840
ComSoft Professional, Pro software incl. data archiving	0554 1704
ComSoft CFR 21 Part 11, Software for requirements according to CFR 21 Part 11 for Testo data loggers	0554 1705
Mobile printer for data loggers testo 175/176/184	0572 0576
ISO calibration cert./temperature, temperature data logger; calibration points selectable from -196 to +1260°C	0520 0141
ISO calibration certificate/temperature, temperature probe; calibration points -18°C; 0°C; +60°C per channel/instrument	0520 0151

# CFR data logger system

testo 190 – highly efficient  
validation of sterilization and  
freeze-drying processes

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1-click report: full, audit-relevant documentation  
with just the click of a mouse

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Reduction of processing time with full compliance

---

Acceptance criterion:

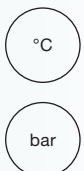
No problem meeting "10% failure rate"

---

21 CFR Part 11-compliant software:

provides both novices and experts with optimum support  
for measuring processes

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Its innovative design makes the testo 190 CFR data logger system the modern solution for the validation of sterilization and freeze-drying processes. The loggers' batteries can be changed quickly and safely without tools. This speeds up your processes enormously – and after the change, the loggers remain 100% tight. The system comprises four temperature loggers and one pressure logger with rigid and flexible probes, a multifunction case with integrated programming and readout units, as well as 21 CFR Part 11-compliant software.

The size of the data loggers can be varied by two different battery types. The battery types can be freely combined with all testo 190 data loggers. The user-friendly testo 190 CFR software and the special readout units in the case allow up to 8 data loggers to be read out and programmed simultaneously.

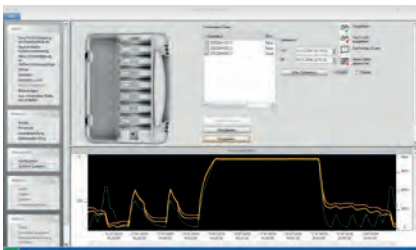
## Overview of the system components



**The CFR data loggers** come in four temperature and one pressure models. They stand for robustness, durability and reliability. The thread means batteries can be safely changed in just a few seconds without any tools. Thanks to the logger's hermetically sealed design, it remains 100% tight even after the battery has been changed.



**The multifunction case** for the testo 190 completes the system. It is robust, smart and practical, not only providing storage for the data loggers, but also enabling configuration and readout. A programming and readout unit is installed in every case. This means that up to 8 data loggers can be configured and read out simultaneously.



**The data loggers are programmed and read out** using the intuitive testo 190 CFR software. No data export is needed for data analysis (e.g. in Excel). 1-click report means that full, audit-relevant documentation can be achieved with just one click of a mouse. 21 CFR Part 11-compliant of course. It is possible to read out a total of up to 254 loggers in one validation process.

## Ordering data

### testo 190-T1

testo 190-T1, CFR temperature data logger, including large battery and adapter for testo 190 programming and readout unit.



Order no. 0572 1901

### testo 190-T2

testo 190-T2, CFR temperature data logger, including large battery and adapter for testo 190 programming and readout unit.



Order no. 0572 1902

### testo 190-T3

testo 190-T3, CFR temperature data logger, including large battery and adapter for testo 190 programming and readout unit.



Order no. 0572 1903

### testo 190-T4

testo 190-T4, CFR temperature data logger, including large battery, adapter for testo 190 programming and readout unit and thread extension.



Order no. 0572 1904

### testo 190-P1

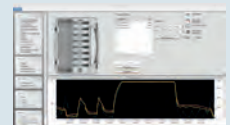
testo 190-P1, CFR pressure data logger, including large battery.



Order no. 0572 1900

### testo 190 CFR software

21 CFR Part 11-compliant software for configuration and readout of testo 190 data loggers. System requirements: Windows 7 (32/64 bit), Windows 8, Windows 10.



Order no. 0554 1901

### testo 190 small case

testo 190 small case, case for transport, storage, configuration and readout of testo 190 CFR data loggers. Including USB cable and 1 programming and readout unit for a maximum of 8 data loggers. Dimensions: 340 x 265 x 60 mm.



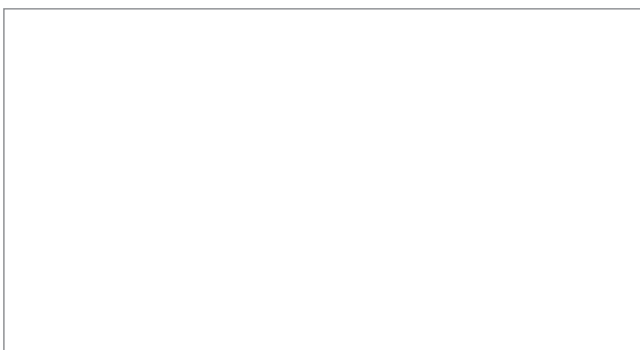
Order no. 0516 1901



## Technical data / accessories

CFR data loggers	testo 190-T1	testo 190-T2	testo 190-T3	testo 190-T4	testo 190-P1
Measurement parameter / probe type	Temperature (Pt1000)				Pressure (piezoresistive sensor)
Measuring range	-50 to +140°C				1 mbar to 4 bar abs.
Accuracy	±0,2 °C (-50 to -40 °C) ±0,1 °C (-40 to +140 °C)				± 20 mbar
Resolution	0.01°C				1 mbar
Reading memory	60,000 readings		30,000 per channel		60,000 readings
Measuring cycle	1 s to 24 h				
Operating temperature/ operating pressure	-50 to +140 °C 1 mbar to 4 bar				0 to +140 °C 1 mbar to 4 bar
Storage temperature	-20 to +50°C				
Dimensions					
Logger with small battery	20 x 40 mm (Ø x H)		20 x 45 mm (Ø x H)	20 x 53 mm (Ø x H)	22 x 64 mm (Ø x H)
Logger with large battery	20 x 59 mm (Ø x H)		20 x 63 mm (Ø x H)	20 x 72 mm (Ø x H)	22 x 83 mm (Ø x H)
Probe shaft	3 x 25 mm	3 x 115 mm		1.5 x 775 mm	
Probe shaft tip	-		3 x 25 mm		-
<b>Battery large (standard)</b>					
Battery type	½ AA lithium				
Service life	2,500 operating hours (measuring cycle 10 seconds at 121°C)				
Application range	-50 to +140°C				
<b>Battery small (option)</b>					
Battery type	2 x button cell lithium				
Service life	250 operating hours (measuring cycle 10 seconds at 121°C)				
Application range	-20 to +140°C				

testo 190 accessories	Order no.
testo 190 small case, case for transport, storage, configuration and readout of testo 190 CFR data loggers. Including USB cable and 1 programming and readout unit for a maximum of 8 data loggers. Dimensions: 340 x 265 x 60 mm.	0516 1901
testo 190 small battery, PEEK coated. For the power supply of all testo 190 models. Application range: -20 to +140°C.	0515 1900
testo 190 large battery, PEEK coated. For the power supply of all testo 190 models. Application range: -50 to +140°C.	0515 1901
testo 190 freeze-drying probe holder (puck) for more precise measurement of surface temperature with the testo 190-T3 and testo 190-T4.	0554 1907
Retaining clamps (5 off), to secure the loggers (testo 190-T1/-T2/-T3/-T4) in the application areas (e.g. in autoclaves).	0554 0297
Distance adapters short to secure the testo 190-T4 data logger in the programming and readout unit.	0554 0298
Distance adapters long to secure the testo 190-T1, testo 190-T2 and testo 190-T3 data loggers in the programming and readout unit.	0554 0299
ISO temperature calibration certificate (testo 190-T1/-T2/-T3/-T4), calibration points -50°C; 0°C; +90°C; +121°C; +140°C	0520 0141
DAkkS temperature calibration certificate (testo 190-T1/-T2/-T3/-T4), calibration points -50°C; 0°C; +90°C; +121°C; +140°C	0520 0281
ISO pressure calibration certificate (testo 190-P1), calibration points 200 / 1400 / 2600 / 3800 / 5000 mbar	0520 0025
DAkkS pressure calibration certificate (testo 190-P1), calibration points 200 / 800 / 1400 / 2000 / 2600 / 3200 / 3800 / 4400 / 5000 mbar	0520 0215
GMP compliant IQ /OQ documentation (Basic Package, Guided Service Package or Full Service Package selectable)	0520 9726



# HACCP data logger system

testo 191 – temperature and pressure monitoring in sterilization, pasteurization and freeze-drying processes

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Simply more intuitive: user-friendly software with guided measurement and documentation processes, along with 1-click report

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Simply more secure: battery and measuring technology in two separate housings – for secure battery replacement and tightly sealed loggers

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Simply faster: simultaneous configuration and readout of up to eight loggers via multifunction case

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Simply more flexible: intelligent battery concept enables different heights for versatile use in your process

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The testo 191 HACCP data logger system for pasteurization, sterilization and freeze-drying processes enables the intelligent monitoring of temperature and pressure in thermal preservation processes. 4 temperature loggers, 1 pressure logger and suitable accessories offer the appropriate solution for every measurement application – whether in products, in cans or in bottles.

The durable loggers enable fast and secure battery replacement and remain 100% tight after the change. The size of the logger can vary thanks to two different battery types.

The multifunction case allows the loggers to be securely stored and enables them to be read out and configured using the integrated programming and readout unit. Measurement studies can be carried out quickly and easily via the testo 191 professional software.

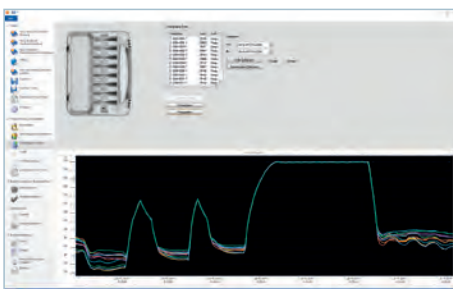
## Overview of the system components



**The HACCP data loggers** come in one pressure and four temperature models. They stand for robustness, durability and reliability. The thread means batteries can be securely changed in just a few seconds without any tools. Thanks to the logger's hermetically sealed design, it remains 100% tight even after the battery has been changed.



**The multifunction case** for the testo 191 completes the system. It is robust, smart and practical, not only providing storage for the data loggers, but also enabling configuration and readout. A programming and readout unit is installed in every case. This means that up to 8 data loggers can be configured and read out simultaneously.



**The data loggers are configured and read out using the testo 191 professional** software. And all without needing a 400-page instruction manual and complicated menus. But using guided processes, helpful data visualization and the innovative 1-click report: the report recalls the parameters of the last measurement, so that you can meet your duty to provide documentation quickly and efficiently, without needing to reset all the report parameters time and again.

# Ordering data

**testo 191-T1**

testo 191-T1, HACCP temperature data logger, including battery large, distance adapter long for testo 191 programming and readout unit, calibration protocol.



Order no. 0572 1911

**testo 191-T2**

testo 191-T2, HACCP temperature data logger, including battery large, distance adapter long for testo 191 programming and readout unit, calibration protocol.



Order no. 0572 1912

**testo 191-T3**

testo 191-T3, HACCP temperature data logger, including battery large, distance adapter long for testo 191 programming and readout unit, calibration protocol.



Order no. 0572 1913

**testo 191-T4**

testo 191-T4, HACCP temperature data logger, including battery large, distance adapter short for testo 191 programming and readout unit, thread extension, calibration protocol.



Order no. 0572 1914

**testo 191-P1**

testo 191-P1, HACCP pressure data logger, including battery large and calibration protocol.



Order no. 0572 1916

testo 191 software	Order no.
<b>testo 191 professional software</b> , software for configuration and readout of testo 191 HACCP data loggers. System requirements: Windows 7 (32/64 bit), Windows 8, Windows 10.	0554 1911

testo 191 case	Order no.
<b>testo 191 case small</b> , case for transport, storage, programming and readout of testo 191 HACCP data loggers, including USB cable and 1 programming and readout unit for a maximum of 8 data loggers. Provides space for 1 programming and readout unit. Dimensions: 340 x 265 x 60 mm.	0516 1901

Accessories	Order no.
testo 191 battery small, PEEK coated. For the power supply of all testo 191 models. Application range: -20 to +140°C.	0515 1900
testo 191 battery large, PEEK coated. For the power supply of all testo 191 models. Application range: -50 to +140°C.	0515 1901
testo 191 can and bottle attachment, fixes the testo 191 data logger to cans or bottles.	0554 0458
testo 191 can stand for adjusting the probe position of the testo 191 data loggers and for improving stability.	0554 1906
testo 191 freeze-drying probe holder for more precise measurement of surface temperature with the testo 191-T3 and testo 191-T4.	0554 1907
Retaining clamps for testo 191 loggers (pouch with 5 off).	0554 0297
Distance adapters short to secure the testo 191-T4 data logger in the programming and readout unit.	0554 0298
Distance adapters long to secure the testo 191-T1, testo 191-T2 and testo 191-T3 data loggers in the programming and readout unit.	0554 0299
ISO temperature calibration certificate (testo 191-T1/-T2/-T3/-T4), calibration points -50°C; 0°C; +90°C; +121°C; +140°C	0520 0141
DAkkS temperature calibration certificate (testo 191-T1/-T2/-T3/-T4), calibration points -50°C; 0°C; +90°C; +121°C; +140°C	0520 0281
ISO pressure calibration certificate (testo 191-P1), calibration points 200 / 1400 / 2600 / 3800 / 5000 mbar	0520 0025
DAkkS pressure calibration certificate (testo 191-P1), calibration points 200 / 800 / 1400 / 2000 / 2600 / 3200 / 3800 / 4400 / 5000 mbar	0520 0215

## Technical data

HACCP data loggers	testo 191-T1	testo 191-T2	testo 191-T3	testo 191-T4	testo 191-P1
Measurement parameter / probe type	Temperature (Pt1000)				Pressure (piezo-resistive sensor)
Measuring range	-50 to +140°C				1 mbar to 4 bar abs.
Accuracy	±0.2°C (-50 to -40°C) ±0.1°C (-40 to +140°C)				± 20 mbar
Resolution	0.01°C				1 mbar
Reading memory	60,000 readings			30,000 per channel	60,000 readings
Measuring cycle	1 s to 24 h				
Operating temperature/ operating pressure	-50 to +140 °C 1 mbar to 4 bar				0 to +140 °C 1 mbar to 4 bar
Storage temperature	-20 to +50°C				
<b>Dimensions</b>					
Logger with small battery	20 x 40 mm		20 x 45 mm	20 x 53 mm	22 x 64 mm
Logger with large battery	20 x 59 mm		20 x 63 mm	20 x 72 mm	22 x 83 mm
Probe shaft	3 x 25 mm	3 x 115 mm	1.5 x 775 mm		-
Probe shaft tip	-		3 x 25 mm		-
<b>Battery large (standard)</b>					
Battery type	½ AA lithium				
Service life	2,500 operating hours (measuring cycle 10 seconds at +121°C)				
Application range	-50 to +140°C				
<b>Battery small (option)</b>					
Battery type	2 x button cell lithium				
Service life	250 operating hours (measuring cycle 10 seconds at +121°C)				
Application range	-20 to +140°C				



# One-hand pH/temperature measuring instrument

testo 205

- pH tip embedded in breakage-proof plastic
- Combined penetration tip with temperature probe
- Maintenance-free gel electrolyte
- Measurement tip exchangeable by user
- Automatic final value recognition (auto-hold)
- 2-line, illuminated display
- 1, 2 or 3 point calibration possible

IP65



The testo 205 is a robust food penetration measuring instrument for temperature and pH values, with automatic temperature compensation. The robust penetration measurement tip is exchangeable and insensitive to dirt thanks to the hole diaphragm.

The instrument is especially well suited to pH measurements in semi-solid media such as meat. The storage cap filled with electrolyte gel is used for storing the probe between measurements.

## Technical data / Accessories

### testo 205

One-hand pH/°C measuring instrument with penetration probe, storage cap, belt/wall holder



Part no. 0563 2051

### testo 205, Starter set

One-hand pH/°C meas. instr. with penetration probe, storage cap, gel and cal. bottles 250 ml pH 4+7, belt/wall holder and aluminium case



Part no. 0563 2052

#### General technical data

Storage temperature	-20 to +70 °C
Operating temperature	0 to +50 °C
Battery type	4 x Button cell LR44
Battery life	80 h (Auto Off 10 min)
Measuring rate	0.5 s
Weight	135 g
Dimensions	145 x 38 x 167 mm
Housing	ABS
Protection class	IP65
Display	LCD, 2 lines
Temperature compensation	Automatic
Probes	Probe module

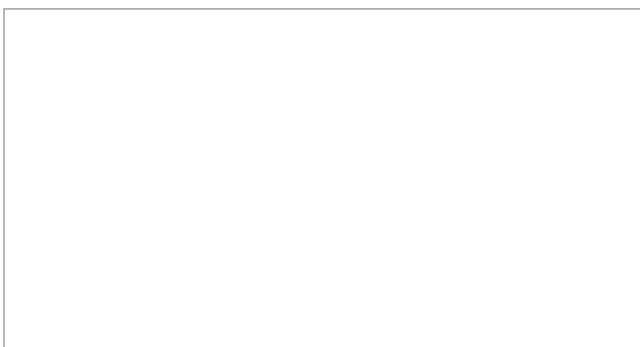
#### Sensor types

	pH electrode	NTC
Measuring range	0 to 14 pH	0 to 60 °C (Short-term to +80 °C max. 5 min)
Accuracy ±1 digit	±0.02 pH	±0.4 °C
Resolution	0.01 pH	0.1 °C

#### Accessories for measuring instrument

#### Part no.

Accessories for measuring instrument	Part no.
Spare pH probe for testo 205 with gel storage cap	0650 2051
Storage cap for testo 205 with KCL gel filling	0554 2051
Button cell batteries, Type LR 44, 1.5 Volt (4 off)	0515 0032
pH buffer solution 4.01 in dosing bottle (250 ml) with DAkKS calibration certificate	0554 2061
pH buffer solution 7.00 in dosing bottle (250 ml) with DAkKS calibration certificate	0554 2063



# pH/temperature measuring instrument

testo 206

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Ideally suited to applications in liquid and semi-solid media  
(e.g. in the food sector)

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Built-in temperature sensor

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Maintenance-free gel electrolyte

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Robust, waterproof and dishwasher-safe protective cover  
(TopSafe, protection class IP68)

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Automatic final value recognition (Auto-hold)

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Two-line display

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1, 2, or 3-point calibration possible

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The testo 206 series is ideally suited for applications in liquid and semi-solid media. The instruments stand out thanks to the combination of a pH immersion probe and a temperature probe for precise and fast temperature compensation. Thanks to the large volume of gel electrolyte and the dual wall diaphragm, the probe is leak-proof, maintenance-free and insensitive to dirt.

The automatic final value recognition supports the user during measurement. The protective cover TopSafe provides the instruments with the protection class IP68, it is dishwasher-safe, hygienic and protects the measuring instrument from dirt, water and impact.

The testo 206-pH1 is specially designed for fast pH checks in liquids.

The testo 206-pH2 is ideally suited for pH measurement in semi-solid and protein-rich foods such as jellies, creams, cheese, fruit etc.

The testo 206-pH3 is equipped with a BNC socket which allows the connection of any pH probes to the instrument, depending on the application. This makes the instrument universally applicable.

## Technical data / Accessories

### testo 206 pH1

Set testo 206-pH1, one-hand pH/°C measuring instrument, protection class IP68, incl. storage cap with gel, TopSafe and belt/wall holder

Part no. 0563 2061



### testo 206-pH1 Starter Set

Starter set testo 206-pH1, one-hand pH/°C measuring instrument, pH1 probe head for liquids, incl. storage cap with gel, calibration dosing bottles 250 ml pH 4 and 7, TopSafe, belt/wall holder and aluminium case

Part no. 0563 2065

Sensor type	pH electrode
Measuring range	0 to 14 pH
Accuracy ±1 digit	±0.02 pH
Resolution	0.01 pH

Sensor type	NTC
Measuring range	0 to 60 °C (Short-term to +80 °C max. 5 min)
Accuracy ±1 digit	±0.4 °C
Resolution	0.1 °C

#### General technical data

Operating temperature	0 to +60 °C
Storage temperature	-20 to +70 °C
No. meas. channels	2 channel
Temperature compensation	Automatic
Meas. rate	2 measurements per second
Battery type	1x CR2032
Housing material	ABS with TopSafe, Protection type IP 68
Battery life	80 h (Auto Off 10 min)
Dimensions	197 x 33 x 20 mm (110 x 33 x 20 mm without probe and TopSafe)
Weight	69 g
Display	LCD, 2 lines
Protection class	with TopSafe: IP68



Easy exchange of probes with testo 206-pH1/-pH2/-pH3



testo 206-pH1:  
pH1 probe head for liquids



Ideally suitable for monitoring heating system water according to VDI 2035.

#### Accessories

#### Part no.

Spare pH probe for testo 206 incl. gel storage cap	0650 2061	
Storage cap for testo 206 with KCl gel filling	0554 2067	
Lithium battery button cell	0515 5028	
pH buffer solution 4.01 in dosing bottle (250 ml) with DAkkS calibration certificate	0554 2061	
pH buffer solution 7.00 in dosing bottle (250 ml) with DAkkS calibration certificate	0554 2063	

## Technical data / Accessories

### testo 206-pH2

Set testo 206-pH2, one-hand pH/°C measuring instrument, pH2 probe head for semi-solid substances, incl. storage cap with gel, TopSafe and belt/wall holder

Part no. 0563 2062



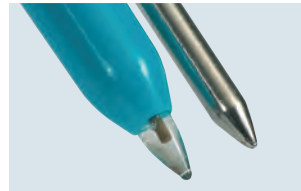
### testo 206-pH2 Starter Set

Starter set testo 206-pH2, one-hand pH/°C measuring instrument, pH2 probe head for semi-solid substances, incl. storage cap with gel, calibration dosing bottles 250 ml pH 4 and 7, TopSafe, belt/wall holder and aluminium case

Part no. 0563 2066

#### General technical data

Operating temperature	0 to +60 °C
Storage temperature	-20 to +70 °C
No. meas. channels	2 channel
Temperature compensation	Automatic
Meas. rate	2 measurements per second
Battery type	1x CR2032
Housing material	Instrument: ABS, TopSafe: PU
Protection class	with TopSafe: IP68
Battery life	80 h (Auto Off 10 min)
Dimensions	197 x 33 x 20 mm (110 x 35 x 20 mm without probe and TopSafe)
Weight	62 g
Display	LCD, 2 lines



Ideal for the testing and care of water-based coolant-lubricants (according to BGR 143).

testo 206-pH2:  
pH2 probe head for semi-solid food

#### Sensor types

	pH electrode	NTC
Measuring range	0 to 14 pH	0 to 60 °C (Short-term to +80 °C max. 5 min)
Accuracy ±1 digit	±0.02 pH	±0.4 °C
Resolution	0.01 pH	0.1 °C

#### Accessories for measuring instrument

#### Part no.

Spare pH probe pH2 for testo 206 incl. gel storage cap	0650 2062	
Storage cap for testo 206 with KCl gel filling	0554 2067	
Lithium battery button cell	0515 5028	
pH buffer solution 4.01 in dosing bottle (250 ml) with DAkKS calibration certificate	0554 2061	
pH buffer solution 7.00 in dosing bottle (250 ml) with DAkKS calibration certificate	0554 2063	

## Technical data / Accessories

### testo 206-pH3

Set testo 206-pH3, one-hand pH/°C measuring instrument, pH3 probe head with BNC interface, incl. TopSafe and belt/wall holder

Part no. 0563 2063



#### Sensor type

#### pH electrode / NTC

Measuring range	0 to 14 pH 0 to 80 °C (depending on the pH probe used)
Interface	BNC

#### General technical data

Operating temperature	0 to +60 °C
Storage temperature	-20 to +70 °C
Battery life	80 h (Auto Off 10 min)
Dimensions	197 x 33 x 20 mm
Weight	69 g
Display	LCD, 2 lines



testo 206-pH3:  
pH3 probe head with BNC  
interface

#### Accessories for measuring instrument

#### Part no.

pH universal plastic electrode without temperature sensor	0650 2063	
pH universal plastic electrode with temperature sensor	0650 2064	
Glass pH electrode with temperature sensor	0650 1623	
pH food electrode without temperature sensor	0650 0245	
Lithium battery button cell	0515 5028	
Storage solution for pH-electrode, 50 ml	0554 2318	
pH buffer solution 4.01 in dosing bottle (250 ml) with DAkKS calibration certificate	0554 2061	
pH buffer solution 7.00 in dosing bottle (250 ml) with DAkKS calibration certificate	0554 2063	



# Cooking oil tester

**testo 270 – Ensure cooking oil quality and save costs**



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Intuitive alarms thanks to coloured, illuminated traffic-light display

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Ergonomic design and robust construction

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Washable under running water (IP65)

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Hold and Auto-Hold function

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Calibration and adjustment can be carried out by the user

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The cooking oil tester testo 270 easily, quickly and reliably determines the quality of cooking oil. To do so, it measures the so-called „Total Polar Material“ (TPM) content in the oil and gives it as a percentage. If the oil is aged, it shows an increased TPM value. As a result, qualitatively inferior deep-fried goods are produced. In addition to this, it can contain potentially health-damaging substances. Regular measurement with the testo 270 can prevent this. The use of the measuring instrument also prevents too early replacement of the cooking oil. That reduces the cooking oil consumption by up to 20 %.

The new testo 270 stands out thanks to its ergonomic design, which prevents the direct exposure of the hand to the hot oil. The clear alarm via the coloured backlit display makes it even easier to evaluate the quality of the cooking oil: Green means the TPM content is OK. Orange: TPM value is borderline. Red: TPM value exceeded. The TPM limit values can also be individually defined, and can, like other instrument configurations, be protected from inadvertent alteration by a PIN.

## Technical data / Accessories

### testo 270

Cooking oil tester testo 270 in a case, with reference oil, short instructions, full instruction manual and training card, as well as calibration protocol and batteries

Part no. 0563 2750



#### Sensor type **Testo cooking oil sensor, cap. (%TPM); PTC (°C)**

Measuring range	0.0 to 40.0 %TPM +40 to +200 °C
Accuracy ±1 digit	±2 %TPM (+40 to +190 °C)* ±1.5 °C *(typical, refers to Testo-internal reference, at ambient temperature 25 °C)
Resolution	0.5 %TPM 0.1 °C

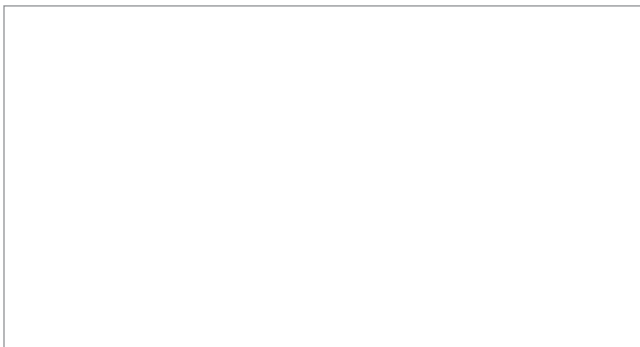
#### General technical data

Cooking oil operating temperature	+40 to +200 °C
Storage temperature	-20 to +70 °C
Operating temperature	0 to +50 °C
Dimensions	50 x 170 x 300 mm
Weight	255 g
Display	LCD, 2-line, backlit
Battery type	2 AAA micro batteries
Battery life	approx. 25 h continuous operation (corresponds to approx. 500 measurements)
Housing material	ABS / ABS-PC fibre glass 10%
Reaction time	Approx. 30 s
Protection class	IP65
Calibratability	On-site calibration with reference oil ISO calibration by TIS
Alarm function	Upper and lower TPM limit value freely adjustable, visual alarm via 3-colour display backlighting (green, orange, red), values and illumination flash in the display until the measurement is ended (Auto Hold)

#### Accessories for measuring instrument

#### Part no.

Storage case for testo 270	0516 7301	
Reference oil for calibrating and adjusting the cooking oil tester testo 270 (1 x 100 ml)	0554 2650	
ISO calibration certificate analysis; Calibration points approx. 3 %TPM and approx. 24 %TPM at 50 °C	0520 0028	



## Flue gas analyzer

testo 300 - flue gas measurement truly smart.

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Large scratch-resistant 5" HD display with smart-touch operation and replaceable protective film

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Stored, intuitive menus for all relevant measurements

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4 strong magnets with rubber coating for material friendly mounting

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Ready to measure at the touch of a button in standby mode

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Optional: extremely durable O<sub>2</sub> sensor and automatic dilution up to 30,000 ppm CO

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E-mailing of reports directly on site

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Flue gas measurement truly smart: that is what the testo 300 stands for. The compact flue gas analyzer is fully operated via the large touch display. You can see all the measuring values straight away on this without scrolling. The particularly scratch-resistant screen is embedded in a robust plastic housing which remains reliable even in tough day-to-day working conditions.

Menus for the most important measurements are already stored in the testo 300 and reliably guide you through the relevant application. The flue gas analyzer is not familiar with waiting times or start-up phases, it is immediately

ready to go at the touch of a button in standby mode. Documentation is dealt with just as quickly – with the testo 300, reports can be created and sent directly on site. The testo 300 is available with a 2-year or 4-year warranty. The testo 300 can additionally be equipped with an optional NO, NO<sub>low</sub> or CO<sub>low</sub> sensor. The O<sub>2</sub> sensor, fitted in all Longlife models, is extremely durable and an optional automatic dilution up to a maximum of 30,000 ppm CO protects the CO sensor.

# Truly smart: The testo 300 flue gas analyzer.

Providing reliably accurate results is not enough. A contemporary flue gas analyzer also makes all work steps as easy as possible for you, both before and after the measurement, as well as in terms of the measurement itself. The user-friendly testo 300 was developed with precisely

this objective in mind. It is not just the fruit of decades of experience in measuring technology. With smart-touch operation, robust construction and e-mailing of reports, the testo 300 will quickly become your indispensable companion for all measuring tasks involving heating.

### Operation via smart-touch

The smart-touch display responds immediately without any delay. That allows intuitive operation – just as easy as on your smartphone

### E-mailing of reports

The testo 300 enables the convenient creation of documentation directly on site. And the dictation function even saves you typing in the process. You can send reports to the office or customers straight away via WLAN.

### Keep an eye on all the measuring values

You can see all the system's parameters straight away on the large 5" HD display.

### Get the result faster

Clearly structured menus for all relevant measurements are already stored in the measuring instrument and guide you efficiently through the application.

### Ready to use straight away

No more waiting time. In standby mode, the testo 300 is ready to measure at the touch of a button.

### Completely worry-free

The testo 300 has quality sensor technology with up to 6 years' service life, measures high CO values up to 30,000 ppm and is future-proofed thanks to NO preparation.





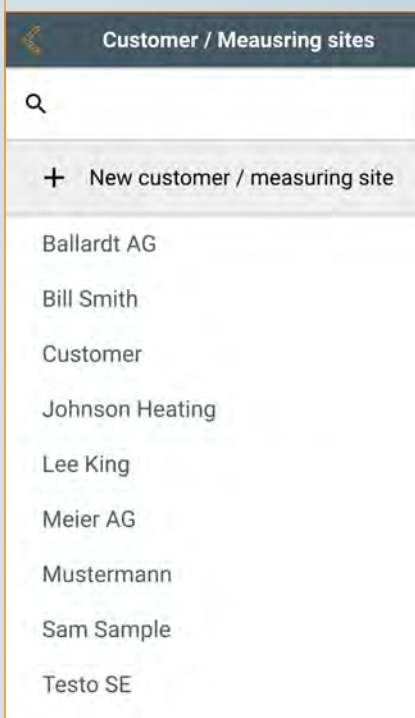
**Customers/measuring points**

Integrated address book with details of the relevant heating system (e.g. manufacturer, system type, system name, serial no., fuel, etc.).



**Professional documentation**

Create measurement protocols with all the information about readings, customers and heating systems directly on site, add comments to them, have the protocols confirmed by the customer's signature and send the protocols. You can also store your company logo. All PDF reports with all the important information are also saved in the instrument, so that they are always to hand.



**Intuitive measurement menus**

Clearly structured and explicit menus for all applications involving heating systems are already stored in the testo 300. This allows you to do your jobs even more efficiently.



## Instrument models and accessories

testo 300 flue gas analyzer						
Order no.	Longlife sensors	O <sub>2</sub> sensor	CO sensor	CO H <sub>2</sub> sensor	NO sensor, NO <sub>low</sub> sensor and CO <sub>low</sub> sensor - can be retrofitted	Zeroing with probe in flue gas
0633 3002 70	–	✓	4,000 ppm	–	–	–
0633 3002 71	–	✓	8,000 ppm	✓	–	–

testo 300 Longlife flue gas analyzer						
Order no.	Longlife sensors	O <sub>2</sub> sensor	CO sensor	CO H <sub>2</sub> sensor	NO sensor, NO <sub>low</sub> sensor and CO <sub>low</sub> sensor - can be retrofitted	Zeroing with probe in flue gas
0633 3004 72	✓	✓	4,000 ppm	–	✓	–
0633 3004 73	✓	✓	8,000 ppm	✓	✓	–
0633 3004 82	✓	✓	15,000 ppm	–	✓	✓
0633 3004 88	✓	✓	30,000 ppm	✓	✓	✓

### Longlife sensors

High-end sensors with a service life of up to 6 years for intensive use (several times a day). At least one sensor replacement is saved in the course of a normal working life.

Spare gas sensors/retrofitting	Order no.
O <sub>2</sub> sensor, with 4-year warranty	0393 0023
CO sensor (without H <sub>2</sub> compensation), with 4-year warranty	0393 0051
CO sensor (without H <sub>2</sub> compensation), with 2-year warranty	0393 0053
CO sensor, H <sub>2</sub> -compensated, with 4-year warranty	0393 0101
CO sensor, H <sub>2</sub> -compensated, with 2-year warranty	0393 0105
CO <sub>low</sub> sensor, H <sub>2</sub> -compensated, with 2-year warranty	0393 0103
NO sensor	0393 0151
NO <sub>low</sub> sensor	0393 0152

Accessories	Order no.
testo Bluetooth® printer, including 1 roll of thermal paper, rechargeable battery and mains unit, for instruments including the testo 300, testo 330i and testo 440	0554 0621
Spare thermal paper for printer, permanent ink	0554 0568
Smoke tester, including oil and soot papers for measuring soot in flue gas, excluding cone (order no. 0554 9010)	0554 0307
Filter paper for determining soot number, 40 measuring strips for approx. 200 measurements	0554 0308
USB mains unit, including USB cable	0554 1106
testo EasyHeat PC software for displaying measurement procedures as diagrams, tables and for customer data management.	0554 3332
ISO calibration certificate for flue gas	0520 0055

Cases and carrying bags	Order no.
Instrument case (height: 130 mm) for instrument, probes and accessories	0516 3300
Instrument case with double base (height: 180 mm) for instrument, probes and accessories	0516 3301
testo 300 instrument bag with carrying strap	0516 3001



## Suitable kits

testo 300 kits		
	testo 300 Kit 1	testo 300 Kit 1 with printer
Order no.	0564 3002 70	0564 3002 71
Instrument, including mains unit	O <sub>2</sub> , CO, 4,000 ppm,	O <sub>2</sub> , CO, 4,000 ppm,
Probe, including 10 spare filters	Compact flue gas probe (180 mm, Ø 6 mm)	Compact flue gas probe (180 mm, Ø 6 mm)
Printer, including spare paper	✘	✔
testo EasyHeat PC software	✔	✔
Instrument bag	✔	✔
Warranty	2 years	2 years


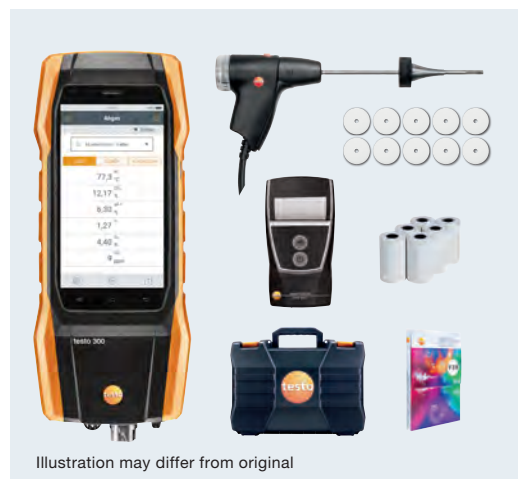


Illustration may differ from original

testo 300 Longlife kits				
	testo 300 Longlife kit 1	testo 300 Longlife kit 1 with printer	testo 300 Longlife kit 2	testo 300 Longlife kit 2 with printer
Order no.	0564 3004 70	0564 3004 71	0564 3004 82	0564 3004 89
Instrument, including mains unit	O <sub>2</sub> , CO, 4,000 ppm, NO, NO <sub>low</sub> CO <sub>low</sub> sensor - can be retrofitted	O <sub>2</sub> , CO, 4,000 ppm, NO, NO <sub>low</sub> CO <sub>low</sub> sensor - can be retrofitted	O <sub>2</sub> , CO H <sub>2</sub> , 30,000 ppm, NO, NO <sub>low</sub> CO <sub>low</sub> sensor - can be retrofitted	O <sub>2</sub> , CO H <sub>2</sub> , 30,000 ppm, NO, NO <sub>low</sub> CO <sub>low</sub> sensor - can be retrofitted
Probe, including 10 spare filters	Compact flue gas probe (180 mm, Ø 6 mm)	Compact flue gas probe (180 mm, Ø 6 mm)	Modular flue gas probe (180 mm, Ø 8 mm)	Modular flue gas probe (180 mm, Ø 8 mm)
Printer, including spare paper	✘	✔	✘	✔
testo EasyHeat PC software	✔	✔	✔	✔
Instrument case	✔	✔	✔	✔
Warranty	4 years	4 years	4 years	4 years



## Probes and accessories

<b>Modular flue gas probes</b>	<b>Order no.</b>
Modular flue gas probe, including cone for fixing; thermocouple NiCr-Ni; hose 2.2 m; dirt filter; length 180 mm; Ø 8 mm; Tmax. +500 °C, TÜV-tested	0600 9760
Modular flue gas probe, including cone for fixing; thermocouple NiCr-Ni; hose 2.2 m; dirt filter; length 300 mm; Ø 8 mm; Tmax. +500 °C, TÜV-tested	0600 9761
Modular flue gas probe, including cone for fixing; thermocouple NiCr-Ni; hose 2.2 m; dirt filter; length 180 mm; Ø 6 mm; Tmax. +500 °C	0600 9762
Modular flue gas probe, including cone for fixing; thermocouple NiCr-Ni; hose 2.2 m; dirt filter; length 300 mm; Ø 6 mm; Tmax. +500 °C	0600 9763
Flexible flue gas probe; thermocouple NiCr-Ni; hose 2.2 m; dirt filter; length 330 mm; Ø 9 mm; Tmax. +180 °C; short-term +200 °C; ideal for measurements in difficult-to-access locations	0600 9770

<b>Compact flue gas probes</b>	<b>Order no.</b>
Compact basic flue gas probe, 180 mm, Ø 6 mm, Tmax. +500 °C	0600 9740
Compact basic flue gas probe, 300 mm, Ø 6 mm, Tmax. +500 °C	0600 9741

<b>Probe accessories and probe filter</b>	<b>Order no.</b>
Modular probe shaft; length 180 mm; Ø 8 mm; Tmax. +500 °C	0554 9760
Modular probe shaft; length 300 mm; Ø 8 mm; Tmax. +500 °C	0554 9761
Probe shaft; length 335 mm; including cone; Ø 8 mm; Tmax. +1,000 °C	0554 8764
Probe shaft; length 700 mm; including cone; Ø 8 mm; Tmax. +1,000 °C	0554 8765
Flexible probe shaft; length 330 mm; Ø 9 mm; Tmax. +180 °C	0554 9770
Multi-hole probe shaft; length 300 mm; Ø 8 mm; for CO mean value calculation	0554 5762
Multi-hole probe shaft; length 180 mm; Ø 8 mm; for CO mean value calculation	0554 5763
Hose extension; 2.8 m; probe-instrument extension tube	0554 1202
Spare dirt filter, modular probe, 10 off	0554 3385
Spare dirt filter, compact probe, 10 off	0554 0040
Cone with spring clamp and handle option, Tmax. +200 °C, Teflon material, Ø 6 mm	0554 3327
Cone with spring clamp and handle option, Tmax. +200 °C, Teflon material, Ø 8 mm	0554 3328

<b>More probes and accessories</b>	<b>Order no.</b>
Dual wall clearance probe for O <sub>2</sub> air input measurement	0632 1260
Ambient CO probe (digital), fixed cable	0632 1272
Solid fuel kit, including probe shaft, adapter	0600 9765
Hose connection kit with adapter for testo 300 for separate gas pressure measurement	0554 1203
Pressure connection hose, single, Ø 4/6 mm	0554 0449
Capillary hose kit for 4 Pa measurement (can only be used in combination with 0554 1203)	0554 1215
Pressure test kit for gas pipe test, testo 300, testo 330-1/-2 LL version 2010	0554 1213

<b>Temperature probes</b>	<b>Order no.</b>
Combustion air temperature probe with 190 mm probe shaft incl. cone and magnets for attachment	0600 9799
Clamp probe with NTC temperature sensor for measurements on pipes (Ø 6 to 35 mm)	0615 5505
Pipe wrap probe (NTC) for pipe diameters from 5 to 65 mm	0615 5605
Waterproof immersion/penetration probe with NTC temperature sensor	0615 1212
Temperature probe with Velcro (NTC)	0615 4611

## Technical data

Measurement parameter	Measuring range	Accuracy ( $\pm 1$ digit)	Resolution
<b>O<sub>2</sub> measurement</b>	0 to 21 vol. %	$\pm 0.2$ vol. %	0.1 vol. %
<b>CO measurement (without H<sub>2</sub> compensation)</b>	0 to 4,000 ppm	$\pm 20$ ppm (0 to 400 ppm) $\pm 5$ % of m.v. (401 to 2,000 ppm) $\pm 10$ % of m.v. (2,001 to 4,000 ppm)	1 ppm
<b>CO measurement (with H<sub>2</sub> compensation)</b>	0 to 8,000 ppm	$\pm 10$ ppm or $\pm 10$ % of m.v. (0 to 200 ppm) $\pm 20$ ppm or $\pm 5$ % of m.v. (201 to 2,000 ppm) $\pm 10$ % of m.v. (2,001 to 8,000 ppm)	1 ppm
<b>CO measurement (without H<sub>2</sub> compensation with dilution)</b>	0 to 15,000 ppm	$\pm 200$ ppm or $\pm 20$ % of m.v.	1 ppm
<b>CO measurement (with H<sub>2</sub> compensation and dilution)</b>	0 to 30,000 ppm	$\pm 100$ ppm or $\pm 10$ % of m.v.	1 ppm
<b>CO<sub>low</sub> measurement (with H<sub>2</sub> compensation)</b>	0 to 500 ppm	$\pm 2$ ppm (40 to 500 ppm) $\pm 5$ % of m.v. (remaining meas. range)	0.1 ppm
<b>NO measurement</b>	0 to 3,000 ppm	$\pm 5$ ppm (0 to 100 ppm) $\pm 5$ % of m.v. (101 to 2,000 ppm) $\pm 10$ % of m.v. (2,001 to 3,000 ppm)	1 ppm
<b>NO<sub>low</sub> measurement</b>	0 to 300 ppm	$\pm 2$ ppm (0 to 39.9 ppm) $\pm 5$ % of m.v. (40 to 300 ppm)	0.1 ppm
<b>Efficiency testing (Eta)</b>	0 to 120 %		0.1 %
<b>Flue gas loss</b>	0 to 99.9 %		0.1 %
<b>CO<sub>2</sub> determination (digital calculation from O<sub>2</sub>)</b>	Display range 0 to CO <sub>2</sub> max.	$\pm 0.2$ vol. %	0.1 vol. %
<b>Draught measurement</b>	-9.99 to +40 hPa	$\pm 0.005$ hPa (0 to 0.1 hPa) $\pm 0.02$ hPa (0.1 to +3.00 hPa) $\pm 1.5$ % of m.v. (+3.01 to +40 hPa)	0.001 hPa (0 to 0.1 hPa) 0.01 hPa (remaining meas. range)
<b>4 Pa measurement (for instruments with dilution)</b>	-50 to +50 Pa	$\pm 0.3$ Pa (< 10 Pa) $\pm 3$ % of m.v. (remaining meas. range)	0.1 Pa
<b>Pressure measurement</b>	-100 to +200 hPa	$\pm 0.5$ hPa (0 to +50.0 hPa) $\pm 1$ % of m.v. (+50.1 to +100.0 hPa) $\pm 1.5$ % of m.v. (+100.1 to +200 hPa)	0.01 hPa
<b>Temperature (instrument)</b>	-40 to +1,200 °C	$\pm 0.5$ °C (0.0 to +100.0 °C) $\pm 0.5$ % of m.v. (remaining meas. range)	0.1 °C (-40 to +999.9 °C) 1 °C (remaining meas. range)
<b>Ambient CO measurement (internal/flue gas probe)</b>	0 to 2,000 ppm	$\pm 10$ ppm (0 to 100 ppm) $\pm 10$ % of m.v. (101 to 2,000 ppm)	1 ppm
<b>Ambient CO measurement (external with CO probe)</b>	0 to 500 ppm	$\pm 3$ ppm (0 to 29 ppm) $\pm 10$ % of m.v. (30 to 500 ppm)	1 ppm

### General technical data

Certification	The testo 300 is TÜV-tested according to 1st German Federal Immission Control Ordinance (BImSchV) EN 50379, Parts 1-3
Storage temperature	-20 to +50 °C
Operating temperature	-5 to +45 °C
Charging temperature	0 to +45 °C
Humidity application range	15 to 90 %RH, not condensing
Power supply	Rechargeable battery, USB mains unit
Rechargeable battery life	10 hrs
Protection class	IP 40
Memory	1 million measuring values
Display	5.0" touch display, HD 1280*720 pixels, IPS (160 k)
Weight	Approx. 800 g
Dimensions	L: 244 mm (including probe connection) H: 59 mm W: 98 mm
testo 300 warranty	Instrument/probe/gas sensors O <sub>2</sub> , CO sensor 24 months Thermocouple and rechargeable battery 12 months
testo 300 Longlife warranty	Instrument/probe/gas sensors O <sub>2</sub> , CO sensor 48 months NO, NO <sub>low</sub> , CO <sub>low</sub> sensor 24 months Thermocouple and rechargeable battery 12 months
Warranty terms	<a href="https://www.testo.com/guarantee">https://www.testo.com/guarantee</a>

# Differential pressure measuring instrument

**testo 312-4 – For gas and water installers**

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Gas-tightness and serviceability test by pressure drop on gas pipes according to DVGW-TRGI 2008

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Load test on gas pipes according to DVGW-TRGI 2008 with the help of the high pressure probe

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Checking the regulator by recording the measurement values over a defined period

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Checking the gas connection pressure and gas flow pressure as well as setting the jet pressure on gas burners and boilers

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Pressure tests on drinking water pipes with water using the high-pressure probe according to DIN 1988 (TRWI) as well as with air according to the ZVSHK information sheet

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Pressure test on waste water pipes according to DIN EN 1610 using the high pressure probe

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hPa

bar

°C

With the electronic differential pressure gauge testo 312-4, fine pressure measurements can be carried out quickly and reliably when checking the resting pressure and flow pressure of gas, and when setting the correct jet pressure on gas burners and boilers.

Tests on newly installed gas pipes (load and gas-tightness tests), or on pipes already in use (serviceability tests) can also be carried out quickly and in accordance with the law. Time and money can be saved in customer service when checking the gas pressure regulator, thanks to the automatic measurement value recording over several hours by testo 312-4 (max. 25,000 measurement values).

The simultaneous recording of pressure and temperature allows the detection of unusual pressure fluctuations which are graphically analyzed by the Easyheat PC software, and can thus be easily explained to the customer.

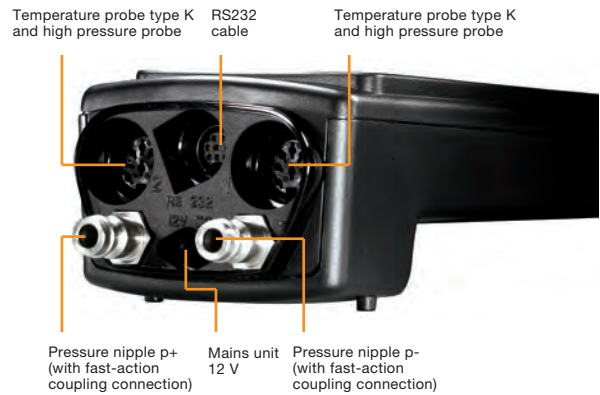
Load tests and leakproofness tests on drinking water and waste water pipes can be carried out without complications using the handy high-pressure probe. The external probe provides protection for the instrument from water and high pressures.

# Ordering data / Technical data

**testo 312-4**

testo 312-4 differential pressure meter incl. battery and calibration protocol

Part no. 0632 0327

**Basic set testo 312-4**

testo 312-4 differential pressure gauge  
 testo 312-4 hose set  
 balloon pump with release screw  
 conical test plug 1/2  
 conical test plug 3/4  
 testo fast printer  
 pressure set for gas pressure measurements in heating systems  
 system case



Part no. 0563 1327

Illustration may differ from original

**High-pressure set testo 312-4**

testo 312-4 differential pressure gauge  
 testo 312-4 hose set  
 balloon pump with release screw  
 conical test plug 1/2  
 conical test plug 3/4  
 testo fast printer  
 pressure set for gas pressure measurements on heating systems  
 high-pressure plug 3/8 and 3/4  
 high-pressure plug 1/2 and 1  
 high-pressure probe 1 up to 25 bar  
 system case



Part no. 0563 1328

Illustration may differ from original

**Sensor types**

	<b>Pressure (internal sensor in the testo 312-4)</b>	<b>Pressure (via high-pressure probe)</b>	<b>Temperature (via external temperature probe Type K)</b>
Measuring range	0 to 200 hPa	0 to 25 bar	dependent on probe type used
Accuracy ±1 digit	±0.03 hPa (0 to +3 hPa) ±1.5% of m.v. (+3.1 to +40 hPa) ±2 hPa or ±1% of fsv (+41 to +200 hPa)	±0.6% of fsv (0 to 10 bar) ±0.6% of fsv (>10 to 25 bar)	±0.4 °C (-100 to +200 °C) ±1 °C (remaining range)
Resolution	0.01 hPa	10 hPa	0.01 °C

**General technical data**

PC software	Easyheat
Interface for printer	infrared
Interface for PC	RS 232
Measurement data store	Approx. 25.000 readings

Weight	Approx. 600 g
Dimensions	219 x 68 x 50 mm
Measurement rate	auto 1 s to 24 h fast 0.04 s



## Accessories

Accessories for measuring instrument testo 312-4	Part no.
Pressure set for gas pressure measurement on heating systems	0554 0449
testo 312-4 hose set	0554 3172
9V rech. battery for instrument	0515 0025
Desk-top power supply with international connection options	0554 1143
easyheat PC analysis software, shows measurement in form of diagrams, tables and manages customer data.	0554 3332
RS232 cable	0409 0178
Testo fast printer IrDA with wireless infrared interface; 1 roll thermal paper; 4 AA batteries	0554 0549
Spare thermal paper for printer, permanent ink	0554 0568
Instrument case (height: 130 mm) for instrument, probes and accessories. Please order the foam insert for the testo 312-4 (0193 0234) separately.	0516 3300
testo 316-1 electronic gas leak detector with flexible probe and battery	0632 0316
testo 316-1 TopSafe; protection case, incl. stand, protects from dirt and impact	0516 0189
testo 316-2 testo 316-2 electronic gas leak detector with flexible measurement probe, mains charger and earphones	0632 3162
testo 316-Ex testo 316-EX, electronic gas leak detector with EX-protection, incl. batteries, cases, Allen key and calibration protocol	0632 0336
Balloon pump with release valve	0554 3173
Conical test stop 1/2" (19 - 32mm)	0554 3151
Conical test stop 3/4" (24 - 44 mm)	0554 3155
Single-pipe counter cap, connects test fittings to pipe	0554 3156
Test pump for creating test pressure	0554 3157
High-pressure probe up to 25 bar	0638 1748
High-pressure stage stop 3/8 and 3/4; to connect test set to gas pipe	0554 3163
High-pressure stage stop 1/2 and 1; to connect test set to gas pipe	0554 3164
Very fast reaction surface probe	0604 0194
Connection cable, length 1.5 m, for probes with plug-in heads	0430 0143



## Ambient CO-/CO<sub>2</sub> measuring instrument

testo 315-3 – Parallel measurement of  
CO and CO<sub>2</sub> in ambient air according  
to European standard EN 50543

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Parallel and direct CO-/CO<sub>2</sub> measurement

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TÜV-tested according to EN 50543

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Convenient, easy handling

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Measurement values transferrable to the testo 330 (V2010)

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Data printout on site

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### Precision – from the sensor to the housing

With a highly accurate electrochemical sensor for CO measurement and a shock-resistant infrared CO<sub>2</sub> sensor, the measuring instrument testo 315-3 is state-of-the-art technology. It is excellently equipped to resist external influences by its robust design and the optionally available TopSafe. And that's not all. During the measurement, optical and audible signals let you know immediately whether the variably adjustable limit values have been exceeded.

Thanks to the wireless data transfer via IrDA or Bluetooth, you can transfer your measurement data directly to the flue gas analyzer testo 330, or print them out. Your customers receive a special service: the results are presented directly on site. The Auto-off function and a Lithium polymer rechargeable battery ensure that the instrument, thanks to its long running time, can be used for long periods without using unnecessary power.

## Technical data

### testo 315-3 without Bluetooth

testo 315-3 ambient CO/CO<sub>2</sub> measuring instrument without Bluetooth incl. USB mains unit and cable

Part no. 0632 3153



#### General technical data

Storage temperature	-20 to +60 °C / -4 to +140 °F
Operating temperature	0 to +40 °C / +32 to +104 °F
Oper. humidity	0 to 95 %RH
Protection class	IP40 acc. to EN 60529
Power supply	Lithium polymer battery pack
Battery life	10 h measurement time (at +20 °C/+68 °F) / Mains operation possible
Battery charging	In instrument via charger
Interface	IrDA interface / optional: Bluetooth
Permit	Acc. to EN 50543
EC guideline	2004/108/EC
Dimensions	190 x 65 x 40 mm
Weight	200 g

Sensor type	Measuring range	Accuracy ±1 digit	Resolution
CO sensor	0 to 100 ppm	±3 ppm (0 to 20 ppm) ±5 ppm (>20 ppm)	0.5 ppm
CO <sub>2</sub> sensor	0 to 10.000 ppm	±300 ppm (0 to 4.000 ppm) ±8% of m.v. (4.000 to 6.000 ppm) ±500 ppm (6.000 to 10.000 ppm)	10 ppm
Temperature/humidity module	+5 to +95 %RH -10 to +60 °C	±2.5 %RH (5 to 95 %RH) ±0.5 °C (±1 Digit)	0.1 %RH 0.1 °C

# Accessories

<b>Accessories for measuring instrument</b>	<b>Part no.</b>	
Temperature/humidity module Ø 25 mm, plug-in	0636 9725	
USB mains unit incl. cable	0554 1105	
<b>Transport and Protection</b>		
Topsafe testo 315-3	0516 0223	
Case for secure storage of measuring instrument	0516 0191	
<b>Printer and Accessories</b>		
Testo fast printer IrDA with wireless infrared interface; 1 roll thermal paper; 4 AA batteries	0554 0549	
Spare thermal paper for printer, permanent ink	0554 0568	
<b>Additional accessories</b>		
Control and adjustment set for humidity sensors (11.3 %RH and 75.3 %RH)	0554 0660	



Topsafe testo 315-3



Temperature/humidity module Ø 25 mm, plug-in



Case for secure storage of measuring instrument (without content)



Testo fast printer IRDA with wireless infrared interface

Data sheet

testo 315-4 / testo 317-1 /  
testo 317-3

Be sure. 

# CO measuring instruments and gas spillage detectors

For safety and service

testo 315-4  
testo 317-1  
testo 317-3



CO

In order to commission heating systems safely and without danger, you are reliant on dependable measurement technology. For this reason, we developed our CO measuring instruments and gas spillage detectors.

With the testo 315-4 and testo 317-3, you ensure that the CO burden at combustion locations and frequently used rooms is measured and monitored precisely. testo 317-1, on the other hand, warns you quickly and reliably of flue gas leaking from the heating system, which is an indicator for a malfunction in the area of combustion plants.

[www.testo.com](http://www.testo.com)

# CO measuring instrument testo 315-4

## testo 315-4

testo 315-4, CO measuring instrument  
incl. USB mains unit and cable

Order no. 0632 3155



The testo 315-4 is a convenient, precise and robust measuring instrument for recording ambient CO values. It identifies even the slightest concentrations of the highly toxic gas. This allows you to safely judge whether, e.g. ambient air-dependent heating systems can be operated without danger.

- TÜV-tested according to EN 50543
- Electrochemical CO sensor for reliable and highly precise measurement results
- Optical and audible alarm when limit values are exceeded (freely adjustable limit values)
- Printout of measurement data possible directly on site

### General technical data

Storage temperature	-20 to +60 °C / -4 to +140 °F
Operating temperature	0 to +40 °C / +32 to +104 °F
Operating humidity	0 to 95 %RH
Protection class	IP40 acc. to EN 60529
Power supply	Lithium-polymer battery pack
Battery life	50 h measuring time (at +20 °C / +68 °F) / Mains operation possible
Battery charging	In the instrument via mains unit
Interface	IRDA interface
Approval	In accordance with EN 50543
EC Directive	2014/30/EU
Dimensions	190 x 65 x 40 mm

Sensor type	Measuring range	Accuracy ( $\pm 1$ digit)	Resolution
CO sensor	0 to 100 ppm	$\pm 3$ ppm (0 to 20 ppm) $\pm 5$ ppm (> 20 ppm)	0.5 ppm
Temperature/humidity module	+5 to +95 %RH -10 to +60 °C / 14 to +140 °F	$\pm 2.5$ %RH (5 to 95 %RH) $\pm 0.5$ °C ( $\pm 1$ digit) / $\pm 32.9$ °F ( $\pm 1$ digit)	0.1 %RH 0.1 °C / 0.1 °F

### Measuring instrument accessories

### Order no.

Temperature/humidity module $\varnothing$ 25 mm, plug-in	0636 9725	
USB mains unit incl. cable	0554 1105	
TopSafe testo 315-4	0516 0221	
Bag for safe storage of the measuring instrument	0516 0191	
Testo IRDA printer with wireless infrared interface, 1 roll of thermal paper and 4 AA batteries	0554 0549	
Spare thermal paper for printer, permanent ink	0554 0568	
Control and calibration set for humidity sensors (11.3% RH and 75.3% RH)	0554 0660	

## Gas spillage detector testo 317-1



The gas spillage detector testo 317-1 reliably detects leaking flue gas from heating systems. The handy instrument provides immediate optical and audible alarms. This means no visual contact with the measuring instrument is needed. The flexible probe enables use even in the tightest spaces.

- Reliable detection of leaking flue gases
- Flexible probe for inaccessible areas
- Audible and visual alarm

### General technical data

Measuring medium	Ambient air
Response time	2 s
Display	optical / audible
Battery type	3 micro batteries AAA
Weight	300 g
Dimensions	128 x 46 x 18 mm
Diameter probe shaft tip	Ø 10 mm
Length Probe shaft tip	35 mm
Probe tube length	200 mm

## CO monitor testo 317-3



The testo 317-3 detects the presence of carbon monoxide in the ambient air and alerts you optically and audibly to hazardous gas concentrations, e.g. during installation and maintenance work on gas heaters.

- 3-year guarantee on CO sensor
- Immediately ready for action: No zeroing phase
- Adjustable alarm thresholds
- CO zeroing at measuring location

### General technical data

Measuring range	0 to +1999 ppm
Accuracy ±1 digit	±3 ppm (0 to +29 ppm) ±10 % (+30 to +1999 ppm)
Resolution	1 ppm
Operating temperature	-5 to +45 °C
Battery type	2 micro batteries AAA
Battery life	150 h (with beeper switched off)
Response time	40 s
Guarantee	2-years on instrument 3-years on CO sensor
Guarantee conditions	<a href="https://www.testo.com/guarantee">https://www.testo.com/guarantee</a>



# Electronic leakage detector for refrigerants

testo 316-3 – Find any leak  
reliably

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High sensitivity < 4 g/a allows the detection of the smallest leaks

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Detects all common refrigerants

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Easiest possible operation thanks to a single button

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Immediate readiness with no pre-settings

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LED indicator of leakage with simultaneous audible alarm

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g/a

testo 316-3 is a reliable leakage detector for refrigerants which should be a part of every professional's refrigeration technology equipment. It detects even the smallest leaks thanks to its high level of sensitivity of 4 g/a, and fulfils the requirements of the F-gas regulation as well as the standards SAE J1627 and EN14624:2012.

The instrument is ready for use immediately after switching on, without the need for selecting a characteristic curve. Thanks to the automatic zeroing, the testo 316-3 detects leaks even in rooms which have already been contaminated.

## Technical data / Accessories

### testo 316-3

testo 316-3, leakage detector for CFC, HFC, HCFC incl. sensor head, transport case, calibration protocol, batteries and filter

Part no. 0563 3163



#### Techn. data sensor

Meas. parameter	g/a
Sensitivity	4 g/a (0.15 oz/a)

#### General technical data

Detectable refrigerants	R-22, R134a, R-404A, R-410A, R-507, R438A and all CFCs, HFCs, and HCFCs
Conformities	SAE J1627, EN 14624:2012, EG 2004/108/EG
Operating temperature	-18 to +50 °C
Oper. humidity	20 to 80 %RH
Storage temperature	0 to +50 °C
Battery type	2 x D
Battery life	16h permanent operation
Sensor lifetime	Approx. 80 to 100 h (corresponds to approx. 1 year)
Weight	Approx. 500 g (incl. batteries)

#### Accessories for measuring instrument

#### Part no.

Sensor head for the testo 316-3	0554 2610	
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# Leak detection set for refrigerants

## testo 316-4

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Very high sensitivity of < 3g/a allows the detection of the smallest leaks

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Very long sensor life

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Optical and audible alarm for optimum leakage detection

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Permanent sensor check for fast and safe work

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Earphone connection for secure leakage detection in loud surroundings

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Trend display shows maximum leakages

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The testo 316-4 (Set 1) is a fast and reliable leakage detector for all common refrigerants. The sensor is permanently monitored and shows malfunctions or contamination in the display. The use of test leaks is thus superfluous. If dirty, the sensor can simply be cleaned, and is immediately ready for use again.

The very high level of sensitivity of < 3g/a according to EN 14624 allows the detection of the smallest leakages. The display changes from green to red when leaks occur. An audible signal additionally indicates detected leakages. With the earphone, testo 316 can also be used in loud surroundings.

The trend display shows maximum leakages and facilitates the localization of leaks. The flexible gooseneck allows the optimum positioning of the sensor close to the pipe or other measurement site.


For refrigeration systems which operate with ammonia, there is the testo 316-4 (Set 2) specially for ammonia, or the replacement ammonia head (NH<sub>3</sub>) for the testo 316-4 (Set 1).

# Technical data / Accessories

## testo 316-4 Set 1

Set for leak detection on refrigeration systems for CFC, HCFC, HFC, H2 accessories: testo 316-4, case, mains unit and earphones


Part no. 0563 3164



## testo 316-4 Set 2

Set for leak detection on refrigeration systems for NH<sub>3</sub> accessories: testo 316-4, case, mains unit and earphones

Part no. 0563 3165



**Detectable refrigerants**

Refrigerants Refrigerants group	Reference refrigerant (Lower response threshold specified)	Refrigerant detectable	Refrigerant selection in instrument
CFC		x	R22
H-CFC		x	R22
H-HFC		x	R404a
R12		x	R22
R22	x	x	R22
R123		x	R22
R134a	x	x	R134a
R404	x	x	R404a
R407a, b, c, d, e		x	R134a
R408		x	R22
R409		x	R22
R410a		x	R134a
R505		x	R22
R507		x	R134a
R600/R600a		x	R22
Hydrogen	x	x	H <sub>2</sub>
Ammonia	x	x	NH <sub>3</sub>
R410a		x	R134a
R124		x	R22
R227		x	R134a
R422d		x	R134a
R11		x	R22
R290		x	H <sub>2</sub>
R508		x	R134a
R427a		x	R404a
R1270		x	R22
R1150		x	R22
R170		x	R134a

**Techn. data sensor**

Meas. parameter	g/a
Detectable	R134a, R22, R404a, H <sub>2</sub> and all common refrigerants such as CFC, HCFC, HFC NH <sub>3</sub> (separate sensor head)
Lower reaction threshold	3 g/a

**General technical data**

Reaction time	< 1 s
Leakage alarm	optical and audible alarm
Complies with:	1g/year sensitivity acc. to EN 14624 and E 35-422
Length of gooseneck	370 mm
Start-up time	< 50 s (0 to +50 °C) < 80 s (-20 to 0 °C)
Operating temperature	-20 to +50 °C
Oper. humidity	20 to 80 %RH
Storage temperature	-25 to +70 °C
Power supply	1 battery block (6 cells NiMh)
Battery life	6 h (Continuous operation)
Dimensions	190 x 57 x 42 mm
Weight	348 g

**Accessories for measuring instrument**

Accessories for measuring instrument	Part no.
Spare head for refrigerants (CFC, HCFC, HFC, H <sub>2</sub> )	0554 3180
Spare head for ammonia (NH <sub>3</sub> )	0554 3181

0981 9224/msp/1/01.2021

Subject to change without notice.

### Data sheet

testo 317-2 / testo 316-1 /  
testo 316-2 / testo gas detector /  
testo 316-EX



# Gas leak detectors

For a quick overview

testo 317-2  
testo 316-1  
testo 316-2  
testo gas detector  
testo 316-Ex



### Gas leak testing

Over and over again, devastating explosions and fires are caused by leaky gas pipelines. However, even smaller leaks in the gas pipelines, some of which cannot be detected by odour, lead directly to higher consumption and, in the long run, increase the risk of accidents.


### How do leaks occur?

Leaks can be caused, for example, by hairline cracks (cracks which are hardly identifiable with the naked eye) in the pipelines. The often used hemp sealant can also, after many years of use, become leaky.

### Fast testing

Thanks to technological developments, it is today possible to use a test instrument to carry out a gas pipeline test (leak quantity test) in a very short time. If a leak is determined, the site of the gas leak can be identified very quickly and reliably with the help of the gas leak detector.

# Overview Testo gas leak detectors

Measuring instrument	testo 317-2	testo 316-1	testo 316-2	testo gas detector	testo 316-EX
	<b>The convenient gas leak detector for beginners</b>	<b>The detector for leaks in natural gas pipes</b>	<b>The gas leak detector with integrated pump for fast check measurements</b>	<b>Gas detector</b>	<b>Gas detector with EX-protection</b>
					
Measuring range					
Methane	100 to 20.000 ppm CH <sub>4</sub>	100 to 10,000 ppm CH <sub>4</sub>	10 ppm to 4,0 Vol. % CH <sub>4</sub>	10 to 999 ppm CH <sub>4</sub> 0,1 to 4,4 Vol. % CH <sub>4</sub>	1 ppm to 2.5 Vol. % CH <sub>4</sub>
Propane	50 to 10.000 C <sub>3</sub> H <sub>8</sub>	–	10 ppm to 1,9 Vol. % C <sub>3</sub> H <sub>8</sub>	10 to 999 ppm C <sub>3</sub> H <sub>8</sub> 0,1 to 1,9 Vol. % C <sub>3</sub> H <sub>8</sub>	1 ppm to 1.0 Vol. % C <sub>3</sub> H <sub>8</sub>
Hydrogen	–	–	10 ppm to 4,0 Vol. % H <sub>2</sub>	10 to 999 ppm H <sub>2</sub> 0,1 to 4,0 Vol. % H <sub>2</sub>	1 ppm to 2.0 Vol. % H <sub>2</sub>
Lower response thresholds	100 ppm CH <sub>4</sub> 50 C <sub>3</sub> H <sub>8</sub>	100 ppm	10 ppm	10 ppm	–
1st alarm limit	10.000 ppm CH <sub>4</sub> 5000 C <sub>3</sub> H <sub>8</sub> (20% LEL)	from 200 ppm CH <sub>4</sub> (LED yellow)	200 ppm CH <sub>4</sub> 100 ppm C <sub>3</sub> H <sub>8</sub> 200 ppm H <sub>2</sub>	–	–
2nd alarm limit	–	from 10.000 ppm CH <sub>4</sub> (LED red)	10.000 ppm CH <sub>4</sub> 5.000 ppm C <sub>3</sub> H <sub>8</sub> 10.000 ppm H <sub>2</sub>	–	–
Resolution	–	–	–	1 ppm / 0,1 Vol. %	1 ppm / 0,1 Vol. %
Display	8 segment trend display	LED (3 colour)	18 segment bar display	ppm display	–
Battery life	4 h (LR03)	> 5 h	6 h	> 8 h	to 10 h
Other features	audible signal	Semi-conductor sensor	Earphone socket	· extendable probe · Inherently safe sensor according to DMT	Protection class IP54 EU guideline 94/9/EG (ATEX) 2004/108/EG EX-protection II 2G EEx ib IIC T1 (Ex Zone 1)



# The convenient gas leak detector for beginners

## testo 317-2

testo 317-2 gas leak detector including case with belt clip and wrist strap and batteries

Part no. 0632 3172



Highly practical gas leak detector for fast checks on gas pipe connections, with visual bar display.

- Optical bar display
- Sensor self-test after switching on
- Rising alarm tone with increasing gas concentration
- Continuous tone when alarm threshold is exceeded
- Audible confirmation of readiness to operate
- Battery monitoring with optical display

### Sensor types

	<b>Methane</b>	<b>Propane</b>
Measuring range	100 to 20.000 ppm CH <sub>4</sub>	50 to 10.000 C <sub>3</sub> H <sub>8</sub>
Lower response thresholds	100 ppm CH <sub>4</sub>	50 C <sub>3</sub> H <sub>8</sub>
1st alarm limit	10.000 ppm CH <sub>4</sub> (20% LEL)	5000 C <sub>3</sub> H <sub>8</sub> (20% LEL)

### General technical data

Storage temperature	-20 to +50 °C
Operating temperature	-5 to +45 °C
Battery type	2 batteries type micro AAA 1.5 V (LR03)
Battery life	4 h (LR03)
Weight	< 300 g
Display	8 segment trend display

t90	< 5 s
Heat-up time	60 s
Other features	audible signal (85 dB(A))

# The detector for leaks in natural gas pipes

## testo 316-1

testo 316-1 electronic gas leak detector with flexible probe and battery

Part no. 0632 0316



The testo 316-1 gas leak detector quickly detects even the smallest leaks.

- Flexible measurement probe for inaccessible pipes
- TopSafe case protects from dirt and impact (optional)
- Audible alarm if limit value is exceeded
- Optical alarm

### Sensor types

	<b>Methane</b>
Measuring range	100 to 10,000 ppm CH <sub>4</sub>
Lower response thresholds	100 ppm
1st alarm limit	from 200 ppm CH <sub>4</sub> (LED yellow)
2nd alarm limit	from 10.000 ppm CH <sub>4</sub> (LED red)

### General technical data

Storage temperature	-20 to +50 °C	Display	LED (3 colour)
Operating temperature	+4 to +45 °C	t90	< 5 s
Oper. humidity	0 to 95 %RH	Heat-up time	< 30 s
Battery type	9V block battery	Other features	Semi-conductor sensor
Battery life	> 5 h		
Weight	Approx. 300 g		
Dimensions	190 x 57 x 42 mm (without sensors)		

### Accessories for measuring instrument testo 316-1

### Part no.

testo 316-1 TopSafe; protection case, incl. stand, protects from dirt and impact	0516 0189
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# The gas leak detector with integrated pump for fast check measurements

## testo 316-2

testo 316-2 electronic gas leak detector with flexible measurement probe, mains charger and earphones

Part no. 0632 3162



The testo 316-2 is extremely user-friendly and ideally suited to fast check measurements thanks to its integrated pump, its optical presentation of the gas concentrations detected, and the integrated rechargeable battery.

- Optical and audible alarm with bar display for increasing and dangerous gas concentrations
- Trend display shows maximum leakage
- Integrated pump
- Flexible measurement probe for inaccessible places
- Earphone connection for secure leakage localization in loud surroundings
- High duration of use thanks to rechargeable battery

### Sensor types

	<b>Methane</b>	<b>Propane</b>	<b>Hydrogen</b>
Measuring range	10 ppm to 4,0 Vol. % CH <sub>4</sub>	10 ppm to 1,9 Vol. % C <sub>3</sub> H <sub>8</sub>	10 ppm to 4,0 Vol. % H <sub>2</sub>
Lower response thresholds	10 ppm	10 ppm	10 ppm
1st alarm limit	200 ppm CH <sub>4</sub>	100 ppm C <sub>3</sub> H <sub>8</sub>	200 ppm H <sub>2</sub>
2nd alarm limit	10.000 ppm CH <sub>4</sub>	5.000 ppm C <sub>3</sub> H <sub>8</sub>	10.000 ppm H <sub>2</sub>

### General technical data

Storage temperature	-25 to +60 °C
Operating temperature	-5 to +50 °C
Oper. humidity	20 to 80 %RH
Battery type	NiMH battery
Battery life	6 h
Weight	348 g
Dimensions	190 x 57 x 42 mm (without sensors)

Display	18 segment bar display
t90	< 2 s
Heat-up time	60 s
Other features	Earphone socket

### Accessories for measuring instrument testo 316-2

### Part no.

Mains unit 12V / DC / 300 mA	0554 1093	
Case for secure storage of measuring instrument	0516 0191	

# Gas detector

## testo gas detector

testo gas detector incl. flexible probe extension, rechargeable battery and mains unit for mains operation and battery recharging, with calibration protocol

Part no. 0632 0323



Testo's gas detector is a multi-range gas detector for the gas types methane, propane and hydrogen. Gas concentrations are measured by the semi-conductor sensor in the ppm range and are shown in the display with a resolution of 1 ppm.

- Audible signals if approaching lower explosion limit
- Continuous tone and warning in display if explosion limit is reached
- Flexible probe extension for difficult-to-access points

### Sensor types

	<b>Methane</b>	<b>Propane</b>	<b>Hydrogen</b>
Measuring range	10 to 999 ppm CH <sub>4</sub> 0,1 to 4,4 Vol. % CH <sub>4</sub>	10 to 999 ppm C <sub>3</sub> H <sub>8</sub> 0,1 to 1,9 Vol. % C <sub>3</sub> H <sub>8</sub>	10 to 999 ppm H <sub>2</sub> 0,1 to 4,0 Vol. % H <sub>2</sub>
Lower response thresholds	10 ppm	10 ppm	10 ppm
Resolution	1 ppm / 0,1 Vol. %	1 ppm / 0,1 Vol. %	1 ppm / 0,1 Vol. %

### General technical data

Storage temperature	-25 to +70 °C	t90	2-3 s
Operating temperature	-15 to +40 °C	Heat-up time	40 s
Battery type	NiMH battery, 1600 mAh	Other features	· extendable probe · Inherently safe sensor according to DMT
Battery life	> 8 h		
Weight	320 g		
Dimensions	190 x 40 x 28 mm		
Display	ppm display		

# Gas detector with EX-protection

## testo 316-EX

testo 316-EX, electronic gas leak detector with EX-protection, incl. batteries, cases, Allen key and calibration protocol

Part no. 0632 0336



Proof of gas and leakage localization on gas pipes and installations in indoor and outdoor areas

The testo 316-EX, which conforms to the guideline 94/9/EG (ATEX), is a multi-range gas detector with Ex protection for the gases methane, propane and hydrogen. The gas concentrations are measured by the semi-conductor sensor in the ppm range and are shown in the display with a resolution of 1ppm.

- Flexible measurement probe for inaccessible pipes
- 1 ppm resolution on display
- Indicator suppression for comfortable locating of the leak
- 94/9/EG (ATEX) conform

### Sensor types

	Methane	Propane	Hydrogen
Measuring range	1 ppm to 2.5 Vol. % CH <sub>4</sub>	1 ppm to 1.0 Vol. % C <sub>3</sub> H <sub>8</sub>	1 ppm to 2.0 Vol. % H <sub>2</sub>
Trigger threshold	1 ppm	1 ppm	1 ppm
Resolution	1 ppm / 0,1 Vol. %	1 ppm / 0,1 Vol. %	1 ppm / 0,1 Vol. %

### General technical data

Storage temperature	-10 to +50 °C
Operating temperature	-10 to +40 °C
Oper. humidity	20 to 80 %RH (not condensed)
Voltage supply	2 x 1,5 V (Mignon) / AA Type permitted for use in areas with danger of explosion: Camelion Plus Alkaline LR6 (see order data, order no. 0515 0316)
Battery life	to 10 h
t <sub>90</sub>	14 s

Weight	Approx. 200 g
Dimensions	135 x 45 x 25 mm
Protection class	IP54
EU guideline	94/9/EG (ATEX) 2004/108/EG
EX-protection	II 2G EEx ib IIC T1 (Ex Zone 1)

### Accessories for measuring instrument testo 316-EX

### Part no.

Spare battery Camelion Plus Alkaline LR6 (AA), 1.5 V / 2600 mAh	0515 0316
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# Pressure and leakage measuring instrument

## testo 324 - Pressure and leakage measurement on gas and water pipes

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All measurements for gas and water pipes in one instrument

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High-resolution colour graphic display

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Simple menu structure

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Easy operation thanks to single-hose connection

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Case with gas-feed appliance

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Integrated pressure set-up up to 300 mbar

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Highly accurate sensors

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DVGW-compliant measurement results

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hPa

mbar

bar

psi

l/h

°C

In the course of years, gas and water systems can become untight. For this reason, according to the legal requirements of DVGW, ÖVGW and UNI, all pipes and valves must be regularly checked for functional safety and tightness, also when new adjustments or significant changes are made. With the testo 324, not only can load and tightness tests be carried out exactly and easily, but also the important servability test. Only a test under real conditions shows whether all pipes and valves are working properly. The

testo 324 is a digital measuring instrument of the newest generation. A flow-through sensor, an absolute pressure sensor and two pressure sensors offer the highest level of accuracy. Developed specially for professional applications in everyday work, all relevant elements for the measurement are combined in one instrument case. Thanks to the fact that gas is fed into the system, the development of a dangerous gas-air mixture is avoided. DVGW-G-5952-tested.



## Well equipped for all tests

You can carry out all tests on gas and water pipes with the allround measuring instrument testo 324:

- Tightness of gas pipes (according to TRGI 2018 G-600 and DVGW G 5952)
  - Load and tightness test
  - Servicability test
- Tightness of LPG pipes (according to TRF 2012)
  - Load and tightness test
  - Repeated tests
- Gas pressure regulator for identifying errors in pressure reducer
- Drinking water pipes according to ZVSHK (EN 806-4)
- Waste water pipes according to DIN EN 1610



Automatic servicability test with gas-feed appliance with connection to the gas boiler



Load test



Automatic tightness test



Servicability test



Drinking and waste water test with high-pressure probe up to 25 bar

## Ordering data

### Basic set testo 324: Ready to measure for all legally required tests

testo 324 leakage measuring instrument, mains unit, system case incl. gas-feed appliance, connection block\* with connection hose, manual test pump for creating test pressure, adapter for measurement connection to gas boiler, high-pressure stage stop 3/4" and 1 1/4"

Part no. 0563 3240 70

### Pro set testo 324: Professional measurement, documentation and testing

testo 324 leakage measuring instrument, mains unit for testo 324 and basic printer, system case incl. gas-feed appliance, connection block\* with connection hose, manual test pump for creating test pressure, adapter for measurement connection to gas boiler, high-pressure stage stops 3/4" & 1 1/4", high-pressure stage stops 3/8" und 3/4", high-pressure stage stops 1/2" and 1", conical test stop 1/2", conical test stop 3/4", gas leak detector testo 316-2, infrared basic printer (incl. batteries), spare printer paper

Part no. 0563 3240 71

\* Instrument, pump and hose connection incl. overpressure valve and stopcock

## Ordering data / Accessories

<b>Measuring instrument and accessories</b>	<b>Part no.</b>	
testo 324 pressure and leakage measuring instrument	0632 3240	
Option Bluetooth® wireless transmission		
Bluetooth® retrofit		
Mains unit for testo 324 (also suitable for infrared basic printer)	0554 1096	
PC software easyHeat	0554 3332	
USB connection cable, instrument-PC	0449 0047	
<b>Printer and Accessories</b>		
	<b>Part no.</b>	
Basic infrared printer (incl. batteries)	0554 0549	
Testo Bluetooth®/IRDA printer incl. 1 roll of printer paper, rechargeable battery and mains unit	0554 0620	
Spare thermal paper for printer, permanent ink	0554 0568	
<b>Cases</b>		
	<b>Part no.</b>	
System case incl. gas-feed appliance, connection block* & connection hose; 476 x 191 x 363 mm (WxHxD)	0516 3240	
Instrument case (height: 130 mm) for instrument, probes and accessories	0516 3300	
<b>Stops, caps, hoses etc.</b>		
	<b>Part no.</b>	
Conical test stop 1/2" for connecting test set to the gas pipe 19–32 mm	0554 3151	
Conical test stop 3/4" for connecting the test set to the gas pipe 24–44 mm	0554 3155	
High-pressure stage stop 3/8 and 3/4; to connect test set to gas pipe	0554 3163	
High-pressure stage stop 1/2 and 1; to connect test set to gas pipe	0554 3164	
High-pressure stage stop 3/4" and 1 1/4"	0554 0533	
Single-pipe counter cap, connects test fittings to pipe		
Y-distributor with hose	0554 0532	
High-pressure connection	0554 3139	
<b>Probes</b>		
	<b>Part no.</b>	
Very fast reaction surface probe with sprung thermocouple band, measuring range short-term up to +500 °C	0604 0194	
High-pressure probe up to 25 bar	0638 1748	
Connection cable, length 1.5 m, for probes with plug-in heads	0430 0143	
<b>Other accessories</b>		
	<b>Part no.</b>	
Test pump for creating test pressure	0554 3157	
ISO calibration certificate/flow in gases	0520 0084	
testo 316-2 electronic gas leak detector with flexible measurement probe, mains charger and earphones	0632 3162	

\* Instrument, pump and hose connection incl. overpressure valve and stopcock

## Technical data

Protection class	IP40 according to EN 60526
Operating temperature	+5 to +40 °C
Storage temperature	-20 to +50 °C
Additional probe sockets	2 Hirschmann sockets for connecting pressure and temperature probes
Gas connections	2 pressure connections DN 5
Battery life	approx. 5 h measurement time, mains operation possible
Display	Colour display, presentation of graphic curves
Data transfer	USB, IRDA, Bluetooth® (option)
Compatible printers	0554 0549, 0554 0547, 0554 0544, 0554 0553 (with Bluetooth® option)
DVGW permit according to G 5952	Instrument class L up to volume = 200 litres
Leakage measurement	Measuring range: 0 to 10 l/h Accuracy: $\pm 0.2$ l/h or $\pm 5\%$ of m.v. Resolution: 0.1 l/h
Pressure measurement	Measuring range: 0 to 1000 hPa Accuracy: $\pm 0.5$ hPa or $\pm 3\%$ of m.v. Hysteresis: $\leq 0.2$ mbar (0 to 300 mbar)
Pressure measurement with a high pressure probe (optional)	Measuring range: 0 to 25 bar Accuracy: $\pm 0.6\%$ of fsv (0 to 10 bar) / $\pm 0.6\%$ of fsv (>10 to 25 bar)
Absolute pressure measurement	Measuring range: 600 to 1150 hPa Accuracy: $\pm 3$ hPa
Overload	to 1200 hPa
Temperature measurement TC Type K (instrument only)	Measuring range: -40 to +600 °C Accuracy: $\pm 0.5$ °C or $\pm 0.5\%$
Temperature measurement TC Type 5k (instrument only)	Measuring range: -20 to +100 °C
Weight	Basic set (0563 3240 70): 7.0 kg Professional set (0563 3240 71): 8.5 kg
Pipe volume calculation	Measuring range: max. 1200 l Accuracy: $\pm 0.2$ l or 5 % of m.v. (1 to 200 l)

# Professional flue gas analyzer

testo 330-LL – Up to 6 years' sensor lifetime

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Many measurement menus for analyses on heating systems, incl. solid fuel and gas pipe test menus

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Integrated sensor monitoring

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4 years' warranty without maintenance contract

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Dilution up to 30,000 ppm CO (testo 330-2 LL)

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Zeroing in flue possible (testo 320-2 LL)

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High-resolution colour graphic display

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Logger function (up to 2h continuous measurement value recording)

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TÜV-tested according to EN50379, Parts 1-3

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The testo 330 LL is the professional flue gas analyzer. It fulfils the highest demands and can cope with all measurement tasks on heating systems. Multiple country-specific measurement menus are stored in the instrument. It is possible to select from an extensive program of flue gas probes, which often replaces an additional measuring instrument. Other fuels can be defined by the user as desired. Apart from this, gas pipe tests or solid fuel measurement can also be carried out with the testo 330 LL.

The high-quality instrument is especially excellent thanks to the successful combination of outstanding sensor technology, long life and security. It has three high-quality measuring cells for O<sub>2</sub>, CO and NO (optional) as well as a temperature probe integrated into the flue gas probe for the direct measurement of temperature, O<sub>2</sub>, CO and NO. The abbreviation „LL“ stands for „Longlife“. The sensors of the instrument series testo 330 LL have an extended lifetime of up to 6 years. At least one O<sub>2</sub> and CO sensor replacement can be saved in the course of the typical working life.



# Product properties

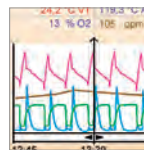
**Longlife sensors**

The sensors of the instrument family testo 330 LL have a lifetime of up to 6 years. At least one sensor replacement is saved in the course of the typical working life.



**Graphic presentation of the measurement data**

Fine presentation of the measurement procedures as a flue gas matrix and line diagram



**Sensors exchangeable by the user**

Easy exchange of the sensors by the user – no adjustment necessary



**Stamp of approval**

The testo 330 LL is TÜV-tested according to 1. BImSchV EN 50379, Parts 1-3, TÜV-tested solid fuel measurement for O<sub>2</sub> and CO.



**CO dilution**

In CO measurement, the automatic dilution to min. 30,000 ppm CO takes place from 8,000 ppm (only for testo 330-2 LL).



**Efficient exchange of probes**

Fast and easy exchange of probes via the probe coupling. All gas paths are connected to the instrument at once with the bayonet connection.



**Attachment**

Integrated magnets for fast attachment to burner/boiler.



**Robust design**

Robust and ergonomic instrument – ideally suited even to rough surroundings.



**Long battery life**

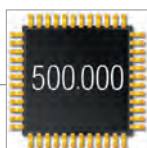
Powerful Li-ion rechargeable battery – no battery replacement. Up to eight hours' lifetime with pump running. Battery chargeable separately in instrument, no memory effect, no deep discharge.





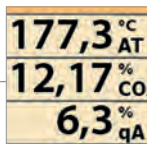
**Sensor monitoring**

Integrated traffic light system which continuously monitors the sensor functionality.



**Memory**

Up to 500,000 measurement values can be saved in the memory of the testo 330 LL.



**High-resolution colour graphic display**

The measurement menus and measurement values are presented in detail and always easily legible.



**Draught and gas zeroing**

Integrated draught and gas zeroing with probe removal: the probe can remain in the flue during zeroing (only for testo 330-2 LL).



**Fast sensor zeroing**

Automatic zeroing of the sensor in only 30 seconds after start-up, and which can be cancelled if not required.



**Logger function for long-term measurements**

Logger function for easy long-term recording of the measurement curve.



**Flexibility with modular probes**

A range of probe lengths and diameters ensure a high degree of flexibility for all applications. To exchange the probe shaft, it is simply placed on the probe handle and engages.



**Condensate trap**

Integrated condensate trap – very easily emptied.




**Probe filter**

Easy exchange of probe filter.





## Ordering data

**Order suggestion  Bluetooth®**  
**testo 330-1 LL**

testo 330-1 LL flue gas analyzer with longlife gas sensors, incl. rechargeable battery and calibration protocol


testo 330-1 LL	0632 3306
Option: H <sub>2</sub> -compensated CO sensor	✓
Option: Bluetooth	✓




**Order suggestion  Bluetooth®**  
**testo 330-2 LL**


testo 330-2 LL flue gas analyzer with longlife gas sensors and integrated draught and gas zeroing, incl. rechargeable battery and calibration protocol

testo 330-2 LL	0632 3307
Option: H <sub>2</sub> -compensated CO sensor	✓
Option: Bluetooth	✓




**Order suggestion  Bluetooth®**  
**longlife set for service technicians and assessors with the fine pressure probe**


testo 330-2 LL	0632 3307
Option: H <sub>2</sub> -compensated CO sensor	✓
Option: Bluetooth	✓
International mains unit 100-240 V AC / 6.3 V DC	0554 1096
flue gas probe modular 300 mm, Ø 6 mm	0600 9763
Combustion air temperature probe 190 mm	0600 9787
testo BLUETOOTH® printer	0554 0620
PC analysis software easyheat	0554 3332
USB connection cable instrument-PC	0449 0047
Fine pressure probe	0638 0330

**Order suggestion  Bluetooth®**  
**longlife set for customer service and maintenance engineers**

testo 330-2 LL	0632 3307
Option: H <sub>2</sub> -compensated CO cell	✓
Option: Bluetooth	✓
International mains unit 100-240 V AC / 6.3 V DC	0554 1096
Flue gas probe modular 300 mm, Ø 6 mm	0600 9763
Combustion air temperature probe 190 mm	0600 9787
testo BLUETOOTH® printer	0554 0620
Hose connection set	0554 1203
System case (height: 130 mm)	0516 3300

The gas pipe test is integrated in the testo 330 LL (see ill.).  
 Order accessory 0554 1213, and if not included in the set, accessory 0554 1203.



**Order suggestion  Bluetooth®**  
**longlife set for assessors**

testo 330-2 LL	0632 3307
Option: H <sub>2</sub> -compensated CO sensor	✓
Option: Bluetooth	✓
International mains unit 100-240 V AC / 6.3 V DC	0554 1096
Flue gas probe modular 300 mm, Ø 6 mm	0600 9763
Combustion air temperature probe 190 mm	0600 9787
testo 308 smoke count measuring instrument	0632 0309
Probe attachment for testo 308	0554 0616
System case with double base (height: 180 mm)	0516 3301

Measuring instrument	Part no.
testo 330-1 LL flue gas analyzer with long life gas sensors, inkl. O <sub>2</sub> -/CO-sensor; without H <sub>2</sub> -compensation, incl. rech. battery and calibration protocol; with graphic display	0632 3306
testo 330-2 LL flue gas analyzer with long-life gas sensors and built-in draught and gas zeroing; incl. O <sub>2</sub> -/CO-sensor; without H <sub>2</sub> -compensation, rech. battery and calibration protocol; with graphic display	0632 3307


Spare gas sensors	Part no.
Option: Fine draught measurement, Resolution 0.1 Pa, measurement range to 100 Pa (instead of the standard draught measurement)	
Option fine differential pressure measurement	
Option: NO sensor, meas. range 0 to 3000 ppm, 1 ppm resolution	
Option H <sub>2</sub> -compensated CO cell	
Option CO <sub>low</sub> sensor	
Option NO <sub>low</sub> sensor	
Option Bluetooth	

## Accessories

Spare gas sensors	Part no.
O <sub>2</sub> sensor for testo 330-1 LL/-2 LL	0393 0002
CO sensor (without H <sub>2</sub> -compensation) for testo 330-1 LL/-2 LL	0393 0061
CO sensor, H <sub>2</sub> -compensated, 0 to 8000 ppm for testo 330-1 LL/-2 LL	0393 0101
Spare CO <sub>low</sub> sensor for testo 330-1 LL/-2 LL	0393 0103
Spare NO sensor, 0 to 3000 ppm for testo 330-1 LL/-2 LL	0393 0151
NO <sub>low</sub> spare sensor 0 to 300 ppm, 0.1 ppm, ±2 ppm (0 to 39.9 ppm) ±5% of m.v.	0393 0152
Upgrade NO-sensor; 0 to 3000 ppm; resolution 1 ppm	0554 2151

Accessories	Part no.
	0554 1096
Spare battery 2600 mA	0515 5107
Charger for spare battery testo 308 / testo 338 / testo 330-1/-2 LL	0554 1103
Testo fast printer IrDA with wireless infrared interface; 1 roll thermal paper; 4 AA batteries	0554 0549
testo Bluetooth®/IRDA printer incl. 1 roll of printer paper, rechargeable battery and mains unit	0554 0620
testo 330i Bluetooth®/IRDA printer incl. 1 roll of printer paper, rechargeable battery and mains unit	0554 0621
Spare thermal paper for printer, permanent ink	0554 0568
Smoke tester with oil and soot sheet, for measuring soot in flue gas, excl. cone (part no. 0554 9010)	0554 0307
Filter paper for determining smoke count, 40 measurement strips for approx. 200 measurements	0554 0308
Hose connection set with adapter for separate gas pressure measurement	0554 1203
Pressure set for testing gas line testo 330-1/-2 LL version 2010	0554 1213
Differential temperature set; consisting of 2 Velcro probes and temperature adapter	0554 1208
Spare dirt filter, modular probe; 10 off	0554 3385
easyheat PC analysis software, shows measurement in form of diagrams, tables and manages customer data.	0554 3332
USB connection cable instrument to PC testo 330-1/-2 LL / testo 335	0449 0047
ISO calibration certificate/flue gas	0520 0055
Instrument case (height: 130 mm) for instrument, probes and accessories	0516 3300
Instrument case with double base (height: 180 mm) for instrument, probes and accessories	0516 3301

# Probes

<b>Modular flue gas probes, available in 2 lengths, incl. positioning cone, NiCr-Ni thermocouple, 2.2 m hose and particle filter</b>		<b>Part no.</b>
Flue gas probe modular, incl. cone for attachment; thermocouple NiCr-Ni; hose 2.2 m; particle filter; length 180 mm; Ø 8 mm; Tmax. 500 °C; TÜV-tested		0600 9760
Flue gas probe; length 300 mm; Ø 8 mm; Tmax. 500 °C; TÜV approval; probe stop; NiCr-Ni thermocouple; 2.2 m hose and particle filter included		0600 9761
Flue gas probe; length 180 mm; Ø 6 mm; Tmax. 500 °C; probe stop; NiCr-Ni thermocouple; 2.2 m hose and particle filter included		0600 9762
Flue gas probe; length 300 mm; Ø 6 mm; Tmax. 500 °C; probe stop; NiCr-Ni thermocouple; 2.2 m hose and particle filter included		0600 9763
Flue gas probe flexible; thermocouple NiCr-Ni; hose 2.2. m; dirt filter; length 330 mm; Ø 9 mm; Tmax. 180 °C; short-term 200 °C; ideal for measuring at inaccessible points		0600 9770
<b>Probe accessories</b>		<b>Part no.</b>
Probe shaft; length 180 mm; 8 mm; Tmax. 500 °C		0554 9760
Probe shaft; length 300 mm; Ø 8 mm; Tmax. 500 °C		0554 9761
Probe shaft, length 335 mm, incl. cone, Ø 8 mm, Tmax 1000 °C		0554 8764
Probe shaft, length 700 mm, incl. cone, Ø 8 mm, Tmax 1000 °C		0554 8765
Probe shaft flexible; length 330 mm; Ø 9 mm; Tmax. 180 °C		0554 9770
Probe shaft multi-hole; length 300 mm; Ø 8 mm; for mean CO calculation		0554 5762
Probe shaft multi-hole; length 180 mm; Ø 8 mm; for mean CO calculation		0554 5763
Hose extension; 2.8 m; extension cable for probe		0554 1202
<b>Additional probes</b>		<b>Part no.</b>
Dual wall clearance probe for O <sub>2</sub> supply air measurement		0632 1260
Gas leak detection probe; 0 to 10000 ppm CH <sub>4</sub> /C <sub>3</sub> H <sub>8</sub>		0632 3330
Ambient CO probe, for detecting CO in buildings and rooms; 0 to +500 ppm		0632 3331
Connection cable for ambient CO <sub>2</sub> probe		0430 0143
Fine pressure probe: highly accurate probe for the measurement of differential pressure and temperature, as well as Pitot tube measurement of flow velocities (see technical data)		0638 0330
Capillary hose set for 4 Pa measurement (fine pressure probe 0638 0330 is additionally required)		0554 1215
Solid fuel set (probe shaft, adapter, upgrade CD)		0600 9765
<b>Combustion air temperature probes</b>		<b>Part no.</b>
Combustion air temperature probe, immersion depth 190 mm		0600 9787
Combustion air temperature probe, immersion depth 60 mm		0600 9797
<b>Additional temperature probes</b>		<b>Part no.</b>
Mini ambient air probe; for separate ambient air temperature measurement; 0 to +80 °C		0600 3692
Very fast-reaction surface probe, connection cable 0430 0143 required		0604 0194
Connection cable for surface probe 0604 0194		0430 0143

# Technical data

	Measuring range	Accuracy ±1 digit	Resolution	Adjustment time t <sub>90</sub>
<b>Temperature</b>	-40 to +1.200 °C	±0.5 °C (0.0 to +100.0 °C) ±0.5 % of m.v. (remaining range)	0.1 °C (-40 to 999.9 °C) 1 °C (remaining range)	
<b>Draught measurement</b>	-9.99 to +40 hPa	±0.02 hPa or ±5% of m.v. (-0.50 to +0.60 hPa) ±0.03 hPa (+0.61 to +3.00 hPa) ±1.5% of m.v. (+3.01 to +40.00 hPa)	0.01 hPa	
<b>Pressure measurement</b>	0 to 300 hPa	±0.5 hPa (0.0 to 50.0 hPa) ±1% of m.v. (50.1 to 100.0 hPa) ±1.5 % of m.v. (remaining range)	0.1 hPa	
<b>O<sub>2</sub> measurement</b>	0 to 21 Vol. %	±0.2 Vol. %	0.1 Vol. %	< 20 s
<b>CO measurement (without H<sub>2</sub> compensation)</b>	0 to 4.000 ppm	±20 ppm (0 to 400 ppm) ±5% of m.v. (401 to 2.000 ppm) ±10% of m.v. (2.001 to 4.000 ppm)	1 ppm	< 60 s
<b>CO measurement (H<sub>2</sub>-compensated)</b>	0 to 8.000 ppm	±10 ppm or ±10% of m.v. (0 to 200 ppm) ±20 ppm or ±5% of m.v. (201 to 2.000 ppm) ±10% of m.v. (2.001 to 8.000 ppm)	1 ppm	< 60 s
automatic dilution in testo 320-2 LL <b>CO determination (H<sub>2</sub>-compensated)</b>	0 to 30000 ppm	±100 ppm (0 to 1000 ppm) ±10% of m.v. (1001 to 30000 ppm)	1 ppm	
<b>Efficiency (ETA)</b>	0 to 120%		0.1%	
<b>Flue gas loss</b>	0 to 99.9%		0.1%	
<b>CO<sub>2</sub> determination</b> Digital calculation from O <sub>2</sub>	Display range 0 to CO <sub>2</sub> max	±0.2 Vol. %	0.1 Vol. %	< 40 s
<b>Option: CO<sub>low</sub> measurement</b>	0 to 500 ppm	±2 ppm (0 to 39.9 ppm) ±5% of m.v. (remaining range)	0.1 ppm	< 40 s
<b>Option: NO measurement</b>	0 to 3.000 ppm	±5 ppm (0 to 100 ppm) ±5% of m.v. (101 to 2.000 ppm) ±10% of m.v. (2.001 to 3.000 ppm)	1 ppm	< 30 s
<b>Ambient CO measurement (with CO probe)</b>	0 to 500 ppm	±5 ppm (0 to 100 ppm) ±5% of m.v. (>100 ppm)	1 ppm	Approx. 35 s
<b>Gas leak measurement for combustible gases (with gas leak detection probe)</b>	Display range 0 to 10.000 ppm CH <sub>4</sub> /C <sub>3</sub> H <sub>8</sub>	Signal    Optical display (LED) Audible alarm via buzzer		< 2 sec.
<b>Ambient CO<sub>2</sub> measurement (with ambient CO<sub>2</sub> probe)</b>	0 to 1 Vol. % 0 to 10.000 ppm	±50 ppm or ±2% of m.v. (0 to 5.000 ppm) ±100 ppm or ±3% of m.v. (5.001 to 10.000 ppm)		Approx. 35 s
<b>NO<sub>low</sub></b>	0 to 300 ppm	±2 ppm (0 to 39.9 ppm) ±5% of m.v. (40 to 300 ppm)	0.1 ppm	< 30 s
<b>Differential pressure, flow velocity and temperature via the fine pressure probe</b>	±10.000 Pa  0.15 to 3 m/s max. -40 to +1,200 °C (dependent on probe)	±0.3 Pa (0 to 9.99 Pa) plus ±1 digit ±3% of m.v. (10 to 10.000 Pa) plus ±1 digit  ±0.5 °C (-40 to 100 °C) ±0.5 % of m.v. (rem. meas. range) plus probe accuracy	0.1 m/s 0.1 °C	

## General technical data

Storage temperature	-20 to +50 °C	Display	Colour graphic display with 240 x 320 pixels
Operating temperature	-5 to +45 °C	Weight	600 g (without rechargeable battery)
Power supply	Rechargeable battery pack 3.7 V / 2.6 Ah Mains unit 6 V / 1.2 A	Dimensions	270 x 90 x 65 mm
Memory	500.000 readings	Guarantee	Instrument/probe/gas sensors (O <sub>2</sub> , CO) 48 months NO, CO <sub>low</sub> sensor 24 months Thermocouple and rech. battery 12 months
		Guarantee conditions	<a href="https://www.testo.com/guarantee">https://www.testo.com/guarantee</a>

# Flue gas analyzer

## testo 330i



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Measurement location-independent operation and Bluetooth measurement value display via Smartphone/tablet and testo 330i App

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Non-paper documentation and report creation directly on site with the testo 330i App

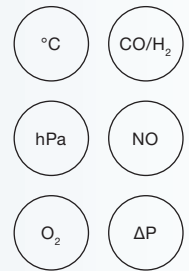
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Reliable flue gas probe attachment with the testoFix probe mount

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Robust, completely sealed plastic housing for use in tough conditions

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The testo 330i is the combination of proven technology and revolutionary handling. The basis of the flue gas analyzer is the measurement technology of the proven predecessor testo 330 LL, with these outstanding features:

- Longlife sensors with up to 6 years' lifetime, exchangeable by the user
- TÜV-tested according to 1. BImSchV (VDI 4206) and EN 50379, Parts 1-3
- Integrated gas and draught zeroing without probe removal
- Measuring range extension up to 30,000 ppm CO through automatic fresh air dilution

The operation of the measuring instrument and the display of the measurement values take place by Bluetooth via the testo 330i App on your Smartphone/tablet. This means you always have all relevant values at your fingertips right where you need them. After finishing the measurement, you can insert comments or photos of the plant into your report, and send it to your customer or your office by e-mail. Today's way to measure flue gas.

## Technical data

### Order suggestion testo 330i

testo 330i flue gas analyzer with  
Longlife gas sensors and integrated draught and  
gas zeroing, Bluetooth, rechargeable battery and calibration protocol



testo 330i 0632 3000  
Option: H<sub>2</sub>-compensated CO sensor ✓

### Order suggestion basic set testo 330i

testo 330i	0632 3000
Option: H <sub>2</sub> -compensated CO sensor	✓
Modular flue gas probe with hose (650 mm)	0600 9780
Combustion air temperature probe (190 mm)	0600 9787
International mains unit	0554 1096
testoFix probe mount	0554 3006
Instrument case for testo 330i, probes and accessories	0516 3302

### General technical data

Compatibility	requires iOS 7.1 or newer / Android 4.3 or newer requires mobile end device with Bluetooth 4.0
Storage temperature	-20 to +50 °C
Operating temperature	-5 to +45 °C
Power supply	Rech. batt. block 3.7 V / 2.6 Ah Mains unit 6 V / 1.2 A (optional)
Memory	500000 readings
Weight	720 g (excluding battery)
Dimensions	270 x 160 x 57 mm
Guarantee	Instrument/probe/gas sensors O <sub>2</sub> , CO: 48 months Gas sensor NO: 24 months Thermocouple and rech. battery: 12 months
Guarantee conditions	<a href="https://www.testo.com/guarantee">https://www.testo.com/guarantee</a>

### Order suggestion professional set testo 330i

testo 330i	0632 3000
Option: H <sub>2</sub> -compensated CO sensor	✓
Modular flue gas probe with hose (650 mm)	0600 9780
Combustion air temperature probe (190 mm)	0600 9787
International mains unit	0554 1096
testoFix probe mount	0554 3006
testo 330i BLUETOOTH®/IRDA printer	0554 0621
Instrument case for testo 330i, probes and accessories	0516 3302

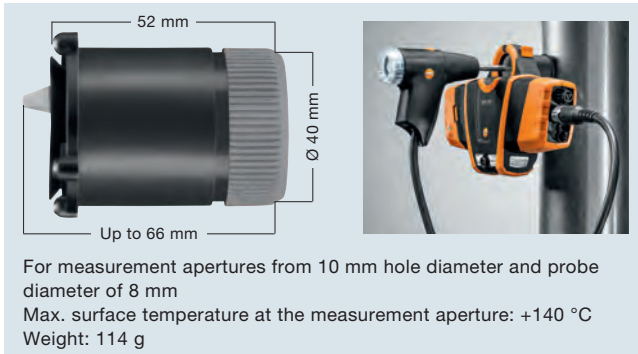
Measurement parameter	Measuring range	Accuracy (± 1 digit)	Resolution
<b>Temperature (dependent on the thermocouple in the flue gas probe)</b>	-40 to +1200 °C	±0.5 °C (0.0 - +100.0 °C) ±0.5 % of m.v. (remaining meas. range)	±0.1 °C (-40 - +999.9 °C) ±1 °C (remaining meas. range)
<b>Draught measurement</b>	-9.99 to +40 hPa	±0.02 hPa or ± 5 % of m.v. (-0.50 to +0.60 hPa) ±0.03 hPa (+0.61 to +3.00 hPa) ±1.5 % of m.v. (+3.01 to +40.00 hPa) (the greater value applies)	0.01 hPa
<b>Pressure measurement</b>	0 to 300 hPa	±0.5 hPa (0.0 to +50.0 hPa) ±1 % of m.v. (+50.1 to +100.0 hPa) ±1.5 % of m.v. (remaining meas. range)	0.1 hPa
<b>O<sub>2</sub> measurement</b>	0 to 21 vol. %	±0.2 vol. %	0.1 vol. %
<b>CO measurement (not H<sub>2</sub>-compensated)</b>	0 to 4000 ppm	±20 ppm or ±10 % of m.v. (0 to 400 ppm) ±5 % of m.v. (401 to 2000 ppm) ±10 % of m.v. (2001 to 4000 ppm)	1 ppm
<b>CO measurement (not H<sub>2</sub>-compensated) with activated measuring range extension</b>	0 to 15000 ppm	±200 ppm or ±20 % of m.v. (0 to 15000 ppm)	1 ppm
<b>CO measurement (H<sub>2</sub>-compensated)</b>	0 to 8000 ppm	±10 ppm or ±10 % of m.v. (0 to 200 ppm) ±20 ppm or ±5 % of m.v. (201 to 2000 ppm) ±10 % of m.v. (2001 to 8000 ppm)	1 ppm
<b>CO measurement (H<sub>2</sub>-compensated) with activated measuring range extension</b>	0 to 30000 ppm	±200 ppm or ±20 % of m.v. (0 to 30000 ppm)	1 ppm
<b>Efficiency testing (Eta)</b>	0 to 120 %		0.1 %
<b>Flue gas loss</b>	0 to 99.9 %		0.1 %
<b>CO<sub>2</sub> determination (Calculation from O<sub>2</sub>)</b>	Display area 0 to CO <sub>2</sub> max	±0.2 vol. %	0.1 vol. %
<b>Option: NO measurement:</b>	0 to 3000 ppm	±5 ppm (0 to 100 ppm) ±5 % of m.v. (101 to 2000 ppm) ±10 % of m.v. (2001 to 3000 ppm)	1 ppm



## Ordering data

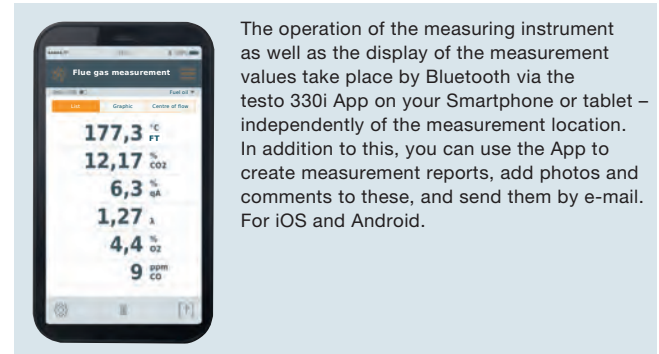
### testoFix probe mount

Newly developed: Securely fixes the probe and the measuring instrument to the plant.



### testo 330i App

The App turns your Smartphone/tablet into the display of the testo 330i.



### Measuring instrument

#### Order no.

testo 330i flue gas analyzer with Longlife gas sensors and integrated draught and gas zeroing, 3 slots, incl. H <sub>2</sub> -compensated CO sensor, O <sub>2</sub> sensor, rechargeable battery and calibration protocol	0632 3000 71	
testo 330i flue gas analyzer with Longlife gas sensors and integrated draught and gas zeroing, 3 slots, incl. O <sub>2</sub> /CO sensor, rechargeable battery and calibration protocol	0632 3000 70	
testo 330i flue gas analyzer with Longlife gas sensors and integrated draught and gas zeroing, 3 slots, incl. CO/NO sensor, rechargeable battery and calibration protocol	0632 3000 72	
testo 330i flue gas analyzer with Longlife gas sensors and integrated draught and gas zeroing, 3 slots, incl. H <sub>2</sub> -compensated CO sensor, NO sensor, rechargeable battery and calibration protocol	0632 3000 73	

### Spare gas sensors

#### Order no.

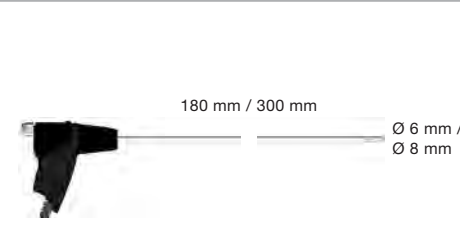
O <sub>2</sub> sensor	0393 0002	
CO sensor, without H <sub>2</sub> -compensation, 0 to 4000 ppm	0393 0061	
CO sensor, H <sub>2</sub> -compensated, 0 to 8000 ppm	0393 0101	
NO sensor 0 to 3000 ppm	0393 0151	

### Accessories

#### Order no.

testoFix probe mount for flue gas probes with 8 mm diameter	0554 3006	
Smoke tester incl. oil and soot papers for measuring soot in flue gas, excl. cone (order no. 0554 9010)	0554 0307	
Hose connection set with adapter for separate gas pressure measurement	0554 1203	
Differential temperature set consisting of 2 Velcro probes and temperature adapter	0554 1208	
International mains unit, 100-240 V AC / 6.3 V DC; for mains operation or battery charging in the instrument	0554 1096	
Spare rechargeable battery 2600 mA	0515 5107	
Charger for spare rechargeable battery	0554 1103	
testo 330i BLUETOOTH®-/IRDA printer, incl. 1 roll of thermal paper, rech. battery and mains unit	0554 0621	
Spare thermal paper for printer, permanent ink	0554 0568	
Spare dirt filter for probe handle, modular probe; 10 pcs.	0554 3385	
Instrument case for testo 330i, probes and accessories (520 x 130 x 400 mm, WxHxD)	0516 3302	
Instrument case for testo 330i, probes and accessories (520 x 210 x 400 mm, WxHxD)	0516 3303	
ISO calibration certificate flue gas	0520 0055	
USB connection cable, instrument-PC, testo 330i / 330-1/-2 LL / testo 335	0449 0047	

# Probes

Modular flue gas probes		Order no.
Modular flue gas probe incl. cone for fixing; thermocouple NiCr-Ni; hose 650 mm; dirt filter; length 180 mm; Ø 8 mm; Tmax. 500 °C; TÜV-tested		0600 9780
Modular flue gas probe incl. cone for fixing; thermocouple NiCr-Ni; hose 650 mm; dirt filter; length 300 mm; Ø 8 mm; Tmax. 500 °C; TÜV-tested		0600 9781
Modular flue gas probe incl. cone for fixing; thermocouple NiCr-Ni; hose 650 mm; dirt filter; length 180 mm; Ø 6 mm; Tmax. 500 °C		0600 9782
Modular flue gas probe incl. cone for fixing; thermocouple NiCr-Ni; hose 650 mm; dirt filter; length 300 mm; Ø 6 mm; Tmax. 500 °C		0600 9783

Other probes	Order no.
Dual wall clearance probe for O <sub>2</sub> air input measurement	0632 1260
Multi-hole probe shaft, length 180 mm, Ø 8 mm, for CO mean value calculation	0554 5763
Multi-hole probe shaft, length 300 mm, Ø 8 mm, for CO mean value calculation	0554 5762
Probe shaft, length 180 mm, Ø 8 mm, Tmax. +500 °C	0554 9760
Probe shaft, length 300 mm, Ø 8 mm, Tmax. +500 °C	0554 9761
Probe shaft, length 335 mm, Ø 8 mm, Tmax. +1000 °C	0554 8764

Combustion air temperature probe	Order no.
Combustion air temperature probe, immersion depth 190 mm	0600 9787
Combustion air temperature probe, immersion depth 60 mm	0600 9797

# Flue gas analyzer for industry

testo 340 – Portable measuring instrument for industrial emission measurement

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Measuring range extension for unrestricted measurement at high gas concentrations

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Flue gas analysis with up to 4 gas sensors – freely configurable

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Large selection of probes

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Bluetooth interface

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Convenient measurement data management

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TÜV-tested /EN norm

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The handy, easy-to-operate emission measuring instrument testo 340 is the right tool for many different emission measurements. The compact design and the reliable technology make it the ideal measuring instrument for commissioning, service and maintenance work and in test measurements on industrial burners, stationary industrial engines, gas turbines and thermal processes.

The unique measuring range extension allows unrestricted measurements to be carried out even at high gas concentrations. The testo 340 is equipped with an O<sub>2</sub> sensor as standard. Three further gas sensors can be configured individually, in order to be able to adapt the instrument optimally to the respective measurement task. The instrument can also be operated remotely from your Android Smartphone or tablet using the free App.

## Ordering data

### testo 340

testo 340 flue gas analyzer, incl. rechargeable battery, calibration protocol and carrying strap, equipped with O<sub>2</sub> sensor, integrated flow/differential pressure measurement, single dilution and dilution of all sensors

Part no. 0632 3340



testo 340 must be equipped with a second gas sensor otherwise the analyzer cannot function. Max. 3 additional sensors can be fitted.

#### Options

Option CO sensor, 0 to 10000 ppm, Resolution 1 ppm	
Option CO <sub>low</sub> sensor, 0 to 500 ppm, Resolution 0.1 ppm	
Option NO sensor, 0 to 4000 ppm, Resolution 1 ppm	
Option NO <sub>low</sub> sensor, 0 to 300 ppm, Resolution 0.1 ppm	
Option NO <sub>2</sub> sensor, 0 to 500 ppm, Resolution 0.1 ppm	
Option: SO <sub>2</sub> sensor, 0 to 5,000 ppm, Resolution 1 ppm	
Option: BLUETOOTH® module	

#### Accessories

#### Part no.

Transport case for flue gas analyzer and probes	0516 3400
Mains unit international 100-240 V AC / 6.3 V DC for mains operation or battery charging in instrument, for mains operation or battery charging in instrument	0554 1096
Software „easyEmission“, incl. USB connection cable instrument-PC	0554 3334
Multiple license/“easyEmission“ software	0554 3338
Testo fast printer IrDA with wireless infrared interface; 1 roll thermal paper; 4 AA batteries	0554 0549
Testo Bluetooth®/IRDA printer incl. 1 roll of printer paper, rechargeable battery and mains unit	0554 0620
Spare thermal paper for printer, permanent ink	0554 0568
Replacement filter for NO sensor (1 pcs.), blocks transverse gas SO <sub>2</sub>	0554 4150
Replacement CO sensor (1 off.), blocks transverse gas SO <sub>2</sub> and NO	0554 4100

#### Calibration Certificates

#### Part no.

ISO calibration certificate/flue gas	0520 0055
ISO calibration certificate velocity, hot wire, vane anemometer, Pitot tube; calibration points 5; 10; 15; 20 m/s	0520 0034

## Ordering suggestions

### Your low-budget entry into industrial emission measurement

	Part no.
testo 340 flue gas analyzer	0632 3340
Option CO (H <sub>2</sub> compensated) measurement module, 0 to 10,000 ppm	
Option BLUETOOTH® module	
Flue gas probe modular 335 mm immersion depth	0600 9766
International mains unit 100-240 V	0554 1096
testo BLUETOOTH® printer	0554 0620
Transport case for measuring instrument and probes	0516 3400

### Monitoring and adjustment work on stationary industrial engines

	Part no.
testo 340 flue gas analyzer	0632 3340
Option CO (H <sub>2</sub> compensated) measurement module, 0 to 10,000 ppm	
Option NO measurement module, 0 to 4,000 ppm	
Option NO <sub>2</sub> measurement module, 0 to 500 ppm	
Flue gas probe for industrial engines, 335 mm immersion depth*	0600 7555
International mains unit 100-240 V	0554 1096
Software „easyEmission“	0554 3334
Transport case for measuring instrument and probes	0516 3340

\*For measurement on stationary diesel engines, we recommend the flue gas probe with probe pre-filter (0600 7556).

### Service and maintenance work on industrial burners and furnaces

	Part no.
testo 340 flue gas analyzer	0632 3340
Option CO (H <sub>2</sub> compensated) measurement module, 0 to 10,000 ppm	
Option NO measurement module, 0 to 4,000 ppm*	
Option SO <sub>2</sub> measurement module, 0 to 5,000 ppm	
Flue gas probe modular 700 mm immersion depth	0600 8765
Software „easyEmission“	0554 3334
Transport case for measuring instrument and probes	0516 3340

\*For the measurement of low NO values, we recommend the NO<sub>low</sub> sensor (0393 1152).

### Measurements on turbines

	Part no.
testo 340 flue gas analyzer	0632 3340
Option CO (H <sub>2</sub> compensated) measurement module, 0 to 10,000 ppm*	
Option NO <sub>low</sub> measurement module, 0 to 300 ppm	
Option NO <sub>2</sub> measurement module, 0 to 500 ppm	
Flue gas probe for industrial engines, 335 mm immersion depth	0600 7555
International mains unit 100-240 V	0554 1096
Software „easyEmission“	0554 3334
Transport case for measuring instrument and probes	0516 3340

\*For the measurement of low CO values, we recommend the CO<sub>low</sub> sensor (0393 1102).

# Gas sampling probes

<b>Standard gas sampling probes: Modular flue gas probes, available in 2 lengths, incl. probe stop, NiCr-Ni thermocouple, 2.2 m hose and particle filter</b>	<b>Part no.</b>
Modular flue gas probe 335 mm immersion depth, incl. cone, thermocouple NiCr-Ni (TI) Tmax 500 °C and NO <sub>2</sub> /SO <sub>2</sub> special hose 2.2 m	0600 9766
Modular flue gas probe 700 mm immersion depth, incl. cone, thermocouple NiCr-Ni (TI) Tmax 500 °C and NO <sub>2</sub> /SO <sub>2</sub> special hose 2.2 m	0600 9767
Modular flue gas probe 335 mm immersion depth, incl. cone, thermocouple NiCr-Ni (TI) Tmax 1000 °C and NO <sub>2</sub> /SO <sub>2</sub> special hose 2.2 m	0600 8764
Modular flue gas probe, 700 mm immersion depth, incl. cone, thermocouple NiCr-Ni (TI) Tmax 1000 °C and NO <sub>2</sub> /SO <sub>2</sub> special hose 2.2 m	0600 8765
Modular flue gas probe with pre-filter Ø 14 mm 335 mm immersion depth, incl. cone, thermocouple NiCr-Ni (TI) Tmax 1000°C and NO <sub>2</sub> /SO <sub>2</sub> special hose 2.2 m	0600 8766
Modular flue gas probe with pre-filter Ø 14 mm 700 mm immersion depth, incl. cone, thermocouple NiCr-Ni (TI) Tmax 1000°C and NO <sub>2</sub> /SO <sub>2</sub> special hose 2.2 m	0600 8767

<b>Probe accessories modular gas sampling probes</b>	<b>Part no.</b>
Hose extension; 2.8 m; extension cable for probe	0554 1202
Probe shaft with pre-filter Ø 14 mm, length selectable up to 2500 mm, incl. cone, Ø 8 mm, thermocouple NiCr-Ni (TI) Tmax. 500 °C	On request
Probe shaft with pre-filter Ø 14 mm, length selectable up to 2500 mm, incl. cone, Ø 8 mm, thermocouple NiCr-Ni (TI) Tmax. 1000 °C	On request
Spare probe pre-filter (sinter filter) 2 off	0554 3372
Spare dirt filter, modular probe; 10 off	0554 3385
Probe shaft, length 700 mm, incl. cone, Ø 8 mm, Tmax 500 °C	0554 9767
Probe shaft, length 335 mm, incl. cone, Ø 8 mm, Tmax 1000 °C	0554 8764
Probe shaft, length 700 mm, incl. cone, Ø 8 mm, Tmax. 1000 °C	0554 8765

<b>Gas sampling probe for measurement on industrial engines</b>	<b>Part no.</b>
Flue gas probe for industrial engines, 335 mm immersion depth incl. probe stop and heat protection plate, Tmax. +1,000 °C, special hose for NO <sub>2</sub> -/SO <sub>2</sub> measurements, length 4 m	0600 7555
Flue gas probe for industrial engines with probe shaft preliminary filter, 335 mm immersion depth incl. probe stop and heat protection plate, Tmax. +1,000 °C, special hose for NO <sub>2</sub> -/SO <sub>2</sub> measurements, length 4 m	0600 7556
Thermocouple for flue gas temperature measurement, NiCr-Ni, length 400 mm, Tmax +1,000 °C, with 4 m connecting cable and additional heat protection	0600 8898

<b>Temperature probes</b>	<b>Part no.</b>
Mini ambient air probe; for separate ambient air temperature measurement; 0 to +80 °C	0600 3692
Combustion air temperature probe, immersion depth 60 mm	0600 9797

<b>Pitot tubes</b>	<b>Part no.</b>
Pitot tube, 350 mm long, stainless steel, measures flow velocity	0635 2145
Pitot tube, 1000 mm long, stainless steel, measures flow velocity	0635 2345
Connection hose; silicone; length 5 m; max. load 700 hPa (mbar)	0554 0440
Pitot tube, stainless steel, 750 mm long, measures flow velocity with temperature, 3x hoses (5 m long) and heat shield	0635 2042



# Gas sampling probes

Industrial probes	Details	Part no.
<p>Industrial probe set 1200 °C consisting of:</p> <ul style="list-style-type: none"> <li>- unheated handle</li> <li>- unheated probe shaft up to 1200 °C flue gas temperature</li> <li>- unheated gas sampling hose incl. inline filter, length 4 m</li> <li>- thermocouple Type K, length 1.2 m</li> </ul> <p>The set can optionally come with an extension tube and probe preliminary filter.</p>	<p>Probe shaft: T<sub>max.</sub> +1200 °C Length 1.0 m, Ø 12 mm Material 2.4856 alloy 625 Handle: T<sub>max.</sub> +600 °C Material: 1.4404 stainless steel Gas sampling hose: 2-chamber hose with PTFE inner core; length 4.0 m TC: Type K, Length 1.2 m, Ø 2 mm T<sub>max.</sub> +1200 °C</p>	0600 7610
<p>Industrial probe set 1800 °C consisting of:</p> <ul style="list-style-type: none"> <li>- unheated handle</li> <li>- unheated probe shaft up to 1800 °C flue gas temperature</li> <li>- unheated gas sampling hose incl. inline filter, length 4 m</li> </ul> <p>For temperature measurements &gt; +1370 °C, we recommend a thermocouple Type S.</p>	<p>Probe shaft: T<sub>max.</sub> +1800 °C Material Al<sub>2</sub>O<sub>3</sub> &gt; 99.7% Length 1.0 m, Ø 12 mm Gas sampling hose: 2-chamber hose with PTFE inner core; length 4.0 m Handle: T<sub>max.</sub> +600 °C Material: 1.4404 stainless steel</p>	0600 7620
<p>Heated industrial probe set consisting of:</p> <ul style="list-style-type: none"> <li>- heated probe shaft up to 600 °C flue gas temperature</li> <li>- heated gas sampling hose, length 4 m</li> <li>- thermocouple Type K, length 1.2 m</li> </ul> <p>The set can optionally come with an extension tube and probe preliminary filter.</p>	<p>Probe shaft: temperature-proof up to +600 °C Voltage supply 230 V / 50 Hz Length 1.0 m, Ø 25 mm Heating temperature range +200 °C Material stainless steel 1.4571 Gas sampling hose: corrugated hose with PTFE inner core Length 4.0 m; outside diameter 34 mm Heating temperature range &gt; +120 °C TC: Type K Length 1.2 m, Ø 2 mm T<sub>max.</sub> +1200 °C</p>	0600 7630
<p>Extension tube 1200 °C for extending the industrial probe set 1200 °C (0600 7610) and heated industrial probe set (0600 7630)</p> <p>The extension tube can be screwed directly onto the unheated probe shaft up to +1200 °C and the heated probe shaft up to +600 °C.*</p>	<p>Probe shaft: T<sub>max.</sub> +1200 °C Length 1.0 m, Ø 12 mm Material 2.4856 alloy 625</p>	0600 7617
<p>Thermocouple Type K, length 2.2 m</p>	<p>Type K Length 2.2 m, Ø 2 mm T<sub>max.</sub> +1200 °C</p>	0600 7615
<p>Industrial probe preliminary filter for dust-laden flue gas</p> <p>The probe preliminary filter can be screwed directly onto the unheated probe shaft up to +1200 °C and the heated probe shaft up to +600 °C.*</p>	<p>Material porous silicon carbide T<sub>max.</sub> +1,000 °C, Length 105 mm, Ø 30 mm Filtration grade 10 µm</p>	0600 7616
<p>Heated gas sampling hose</p>	<p>Corrugated hose with PTFE inner core Length 4.0 m; outside diameter 34 mm Heating temperature range &gt; +120 °C</p>	on request
<p>Transport case for probes Suitable for all probes with a total length &gt; 335 mm.</p>		0516 7600
<p>Spare dirt filter (10 off)</p>		0554 3371

\*For ease of tightening and releasing, we recommend the use of ceramic paste on the thread. This is available from retailers.

# Technical data

	Measuring range	Accuracy $\pm 1$ digit	Resolution	Adjustment time $t_{90}$
<b>O<sub>2</sub> measurement</b>	0 to 25 Vol. %	$\pm 0.2$ Vol. %	0.01 Vol. %	< 20 sec
<b>CO measurement (H<sub>2</sub> compensated)</b>	0 to 10.000 ppm	$\pm 10$ ppm or $\pm 10\%$ of m.v. (0 to 200 ppm) $\pm 20$ ppm or $\pm 5\%$ of m.v. (201 to 2.000 ppm) $\pm 10\%$ of m.v. (2.001 to 10.000 ppm)	1 ppm	< 40 sec
<b>CO<sub>low</sub> measurement (H<sub>2</sub> compensated)</b>	0 to 500 ppm	$\pm 2$ ppm (0 to 39.9 ppm) $\pm 5\%$ of m.v. (remaining range) <sup>x</sup> <small><sup>x</sup> data corresponds to 20°C ambient temperature. Additional temperature coefficient 0.25% of reading/K.</small>	0.1 ppm	< 40 sec
<b>NO measurement</b>	0 to 4.000 ppm	$\pm 5$ ppm (0 to 99 ppm) $\pm 5\%$ of m.v. (100 to 1.999 ppm) $\pm 10\%$ of m.v. (2.000 to 4.000 ppm)	1 ppm	< 30 sec
<b>NO<sub>low</sub> measurement</b>	0 to 300 ppm	$\pm 2$ ppm (0 to 39.9 ppm) $\pm 5\%$ of m.v. (remaining range)	0.1 ppm	< 30 sec
<b>NO<sub>2</sub> measurement*</b>	0 to 500 ppm	$\pm 10$ ppm (0 to 199 ppm) $\pm 5\%$ of m.v. (remaining range)	0.1 ppm	< 40 sec
<b>SO<sub>2</sub> measurement*</b>	0 to 5.000 ppm	$\pm 10$ ppm (0 to 99 ppm) $\pm 10\%$ of m.v. (remaining range)	1 ppm	< 40 sec
<b>Temperature meas.</b> <small>Probe type Type K (NiCr-Ni)</small>	-40 to +1.200 °C	$\pm 0.5$ °C (0 to +99 °C) $\pm 0.5$ % of m.v. (remaining range)	0.1 °C	
<b>Draught measurement</b>	-40 to +40 hPa	$\pm 0.03$ hPa (-2.99 to +2.99 hPa) $\pm 1.5$ % of m.v. (remaining range)	0.01 hPa	
<b>Differential pressure measurement</b>	-200 to 200 hPa	$\pm 0.5$ hPa (-49.9 to 49.9 hPa) $\pm 1.5$ % of m.v. (remaining range)	0.1 hPa	
<b>Absolute pressure measurement</b>	600 to +1.150 hPa	$\pm 10$ hPa	1 hPa	
<b>Derived parameters</b>				
Efficiency	0 to 120 %		0.1 %	
Flue gas loss	0 to 99.9 %		0.1 %	
Exhaust gas dewpoint	0 to 99.9 °C		0.1 °C	
<b>CO<sub>2</sub> measurement</b> (Calculated from O <sub>2</sub> )	0 to CO <sub>2</sub> max.	$\pm 0.2$ Vol. %	0.1 Vol. %	< 40 sec

\*To avoid absorption, a maximum measurement duration of 2 hours should not be exceeded.



## Country permits BLUETOOTH® wireless transmission for testo 340

The BLUETOOTH® radio module used by Testo is permitted for the following countries and may only be used in those countries, i.e. the BLUETOOTH® wireless transmission may not be used in any other country!

### Europe including all EU member states

Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Great Britain, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden and Turkey

### European countries (EFTA)

Iceland, Liechtenstein, Norway, Switzerland

### Non-European countries

Canada, USA, Japan, Ukraine, Australia, Columbia, El Salvador, Mexico, Venezuela, Ecuador, New Zealand, Bolivia, Dominican Republic, Peru, Chile, Cuba, Costa Rica, Nicaragua, Korea, Belarus.

# Technical data

## Measuring range extension

Single dilution, factor 5 (standard)	Measuring range	Accuracy	Resolution
<b>CO measurement (H<sub>2</sub> compensated)</b>	700 ppm to 50.000 ppm	±10 % of m.v. (additional error)	1 ppm
<b>CO<sub>low</sub> measurement (H<sub>2</sub> compensated)</b>	300 ppm to 2.500 ppm	±10 % of m.v. (additional error)	0.1 ppm
<b>NO measurement</b>	500 ppm to 20.000 ppm	±10 % of m.v. (additional error)	1 ppm
<b>NO<sub>low</sub> measurement</b>	150 ppm to 1.500 ppm	±10 % of m.v. (additional error)	0,1 ppm
<b>SO<sub>2</sub> measurement</b>	500 ppm to 25.000 ppm	±10 % of m.v. (additional error)	1 ppm

## Dilution of all sensors, factor 2 (standard)

<b>O<sub>2</sub> measurement</b>	When measuring range extension switched on, over all sensors: 0 to 25 Vol. %	±1 Vol. % additional error (0 to 4.99 Vol. %) ±0.5 Vol. % additional error (5 to 25 Vol. %)	0.01 Vol. %
<b>CO measurement (H<sub>2</sub> compensated)</b>	700 ppm to 20.000 ppm	±10 % of m.v. (additional error)	1 ppm
<b>CO<sub>low</sub> measurement (H<sub>2</sub> compensated)</b>	300 ppm to 1.000 ppm	±10 % of m.v. (additional error)	0.1 ppm
<b>NO measurement</b>	500 ppm to 8.000 ppm	±10 % of m.v. (additional error)	1 ppm
<b>NO<sub>low</sub> measurement</b>	150 ppm to 600 ppm	±10 % of m.v. (additional error)	0.1 ppm
<b>NO<sub>2</sub> measurement</b>	200 ppm to 1.000 ppm	±10 % of m.v. (additional error)	0.1 ppm
<b>SO<sub>2</sub> measurement</b>	500 ppm to 10.000 ppm	±10 % of m.v. (additional error)	1 ppm

## General technical data

Memory Maximum Per folder Per site	100 folders Max. 10 sites Max. 200 logs The max. number of logs is determined by the number of folders or sites
User-defined fuels	10 user-defined fuels incl. test gas as fuel
Regulated diaphragm pump Pump flow Hose length Max. pos. press./flue gas Max. neg. press./flue gas	0.6 l/min (regulated) max. 7.8 m (corresponds to two probe hose extensions) +50 mbar -200 mbar
Weight	960 g
Dimensions	283 x 103 x 65 mm
Storage temperature	-20 to +50 °C
Operating temperature	-5 to +50 °C

Display	Graphic display 160 x 240 pixels
Power supply	Battery block 3.7 V / 2.4 Ah Mains unit 6.3 V / 2 A
Housing material	TPE PC
Protection class	IP40
Guarantee Measuring instrument Gas sensors	2 years CO, NO, CO <sub>low</sub> , NO <sub>low</sub> , NO <sub>2</sub> , SO <sub>2</sub> : 1 year O <sub>2</sub> : 1.5 years
Pumps	0,5 years
Solenoid valves	0,5 years
Thermocouples	1 year
Rechargeable batteries	1 year
Probes	2 years
Guarantee conditions	<a href="https://www.testo.com/guarantee">https://www.testo.com/guarantee</a>

# Flue gas analyzer for industry

**testo 350 - Professional measurement system for portable, industrial emission measurement**

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Application-guided operation with useful instrument pre-settings

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Large colour graphical display

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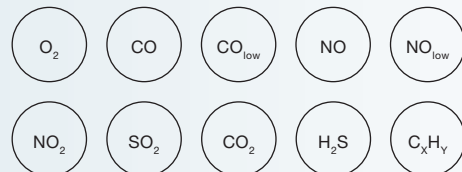
Industrial-standard design:

- insensitive to impact and dirt thanks to integrated impact protection
- robust plug-in connections
- closed chambers protect the interior of the instrument from dirt

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Easy exchange of gas sensors and quick access to wearing parts

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The portable flue gas analyzer testo 350 is the ideal tool for professional flue gas analysis. The Control Unit is the removable operation and display unit of the testo 350. The presentation of the measurement values takes place via the colour graphic display. Thanks to the internal memory, measurement data can be transferred from the analyzer box to the Control Unit. If required, several analyzer boxes can be operated and controlled with one Control Unit. The measurement technology is situated in the analyzer box. The robust housing has integrated impact protection.

Downtimes due to contamination of the instrument are almost completely eliminated. Inherently closed chambers protect the interior of the instrument from dirt from the surroundings. Operation can also be carried out in direct connection to a PC or notebook or via Android smartphone or tablet with the free App, as an alternative to the Control Unit. After programming, the analyzer box is able to carry out measurements and store measurement data independently.

## Ordering data

### testo 350 Control Unit

testo 350 Control Unit, displays measurement values and controls analyzer box, incl. rech. battery, measurement data store, USB interface and connection for Testo databus



Part no. 0632 3511

### testo 350 analyzer box

testo 350 analyzer box, equipped with O<sub>2</sub>, incl. differential pressure sensor, temperature probe input Type K NiCr-Ni and Type S Pt10Rh-Pt, connection Testo databus, rech. battery, integrated combustion air probe (NTC), trigger input, measurement data store, USB interface, updatable to max. 6 gas sensors selected from CO, CO<sub>low</sub>, NO, NO<sub>low</sub>, NO<sub>2</sub>, SO<sub>2</sub>, CO<sub>2</sub> NDIR, C<sub>x</sub>H<sub>y</sub>, H<sub>2</sub>S, Carrying strap set for analyzer unit and control unit



Part no. 0632 3510

#### Accessories testo 350 Control Unit

#### Part no.

Option BLUETOOTH® wireless transmission		
Mains unit international 100-240 V AC / 6.3 V DC for mains operation or battery charging in instrument	0554 1096	

**The testo 350 analyzer box must be equipped with a second gas sensor, otherwise the instrument cannot function. A maximum of five additional sensors can be fitted.**

Option CO sensor (H <sub>2</sub> -compensated), 0 to 10,000 ppm, resolution 1 ppm		
Option CO <sub>low</sub> sensor (H <sub>2</sub> -compensated), 0 to 500 ppm, resolution 0.1 ppm		
Option NO sensor, 0 to 4,000 ppm, resolution 1 ppm		
Option NO <sub>low</sub> sensor, 0 to 300 ppm, resolution 0.1 ppm		
Option NO <sub>2</sub> sensor, 0 to 500 ppm, resolution 0.1 ppm		
Option SO <sub>2</sub> sensor, 0 to 5,000 ppm, resolution 1 ppm		
Option CO <sub>2</sub> (NDIR) sensor, 0 to 50 Vol %, resolution 0.01 Vol %, infrared measurement principle, incl. absolute pressure measurement and CO <sub>2</sub> -absorption filter with refill pack. For long-term measurements >15 minutes measurement time, the additional Peltier gas preparation option is recommended.		
Option C <sub>x</sub> H <sub>y</sub> sensor, methane 100 to 40,000 ppm, propane 100 to 21,000 ppm, butane 100 to 18,000 ppm, resolution 10 ppm. Pellistor is adjusted to methane ex-works.		
Option H <sub>2</sub> S sensor, 0 to 300 ppm, resolution 0.1 ppm		
Option BLUETOOTH® wireless transmission		
Option Peltier gas preparation incl. peristaltic pump for automatic condensate trap evacuation		
Option fresh air valve for long-term measurement, incl. measuring range extension with dilution factor 5 for all sensors. For long-term measurements >2 hours measurement time, the additional Peltier gas preparation option is recommended.		
Option measuring range extension for single slot with the following selectable dilution factors: 0, 2, 5, 10, 20, 40		
Option DC voltage input 11 V to 40 V		
Option special gas pump for long-term measurements. For long-term measurements > 2 hours measurement time, the additional Peltier gas preparation option is recommended.		
Option automatic zeroing of pressure sensor for continuous flow velocity/differential pressure measurement		

#### Accessories testo 350 analyzer box

#### Part no.

Exchangeable filter NO sensor (1 off), blocks cross-gas SO <sub>2</sub>	0554 4150	
Transport case for secure and tidy storage of testo 350 flue gas analyzer, flue gas probe and accessories, dimensions 570 x 470 x 210 mm (LxWxH)	0516 3510	
Spare particle filter for testo 350 analyzer box (20 pcs.)	0554 3381	
Cable with battery clips and adapter for connection to DC voltage input testo 350 analyzer box	0554 1337	

## Ordering data

<b>PC software and Testo databus</b>	<b>Part no.</b>	
Software „easyEmission“, incl. USB connection cable instrument-PC Functions: user-defined measurement intervals, transfer of measurement values to Microsoft EXCEL in seconds, user-defined fuels, presentation of measurement values as a table or graph, easy configuration of customer-specific reports, etc.	0554 3334	
Software „easyEmission“ for testo 350 incl. Testo databus controller with USB connection instrument-PC, cable for Testo databus and terminal plug. If several testo 350 flue gas analyzers are connected to the Testo databus, they can then be controlled and read out on a PC (possible measurement interval in databus of 1 measurement per second).	0554 3336	
Connection cable for Testo databus between Control Unit and analyzer box or between several analyzer boxes, with bayonet connection, length 2 m.	0449 0075	
Connection cable for Testo databus between Control Unit and analyzer box or between several analyzer boxes, with bayonet fitting, length 5 m	0449 0076	
More cable lengths up to 800 m on request		
Set Analog output box, 6 channels, 4 to 20 mA, for output of the measurement values on for example an analog recorder, set consists of analog output box, connection cable Testo databus, length 2 m, Testo databus terminal plug	0554 3149	

<b>Printer and Accessories</b>	<b>Part no.</b>	
Testo fast printer IrDA with wireless infrared interface; 1 roll thermal paper; 4 AA batteries	0554 0549	
Testo Bluetooth®/IRDA printer incl. 1 roll of printer paper, rechargeable battery and mains unit	0554 0620	
Spare thermal paper for printer, permanent ink	0554 0568	

<b>Calibration Certificates</b>	<b>Part no.</b>	
ISO calibration certificate/flue gas	0520 0055	
ISO calibration certificate velocity; hot wire, vane anemometer, Pitot tube; calibration points 5; 10; 15; 20 m/s	0520 0034	



# Gas sampling probes

<b>Standard gas sampling probes: Modular flue gas probes, available in 2 lengths, incl. probe stop, NiCr-Ni thermocouple, 2.2 m hose and particle filter</b>	<b>Part no.</b>	
Modular flue gas probe 335 mm immersion depth, incl. cone, thermocouple NiCr-Ni (TI) Tmax 500 °C and NO <sub>2</sub> /SO <sub>2</sub> special hose 2.2 m	0600 9766	
Modular flue gas probe 700 mm immersion depth, incl. cone, thermocouple NiCr-Ni (TI) Tmax 500 °C and NO <sub>2</sub> /SO <sub>2</sub> special hose 2.2 m	0600 9767	
Modular flue gas probe 335 mm immersion depth, incl. cone, thermocouple NiCr-Ni (TI) Tmax 1000 °C and NO <sub>2</sub> /SO <sub>2</sub> special hose 2.2 m	0600 8764	
Modular flue gas probe, 700 mm immersion depth, incl. cone, thermocouple NiCr-Ni (TI) Tmax 1000 °C and NO <sub>2</sub> /SO <sub>2</sub> special hose 2.2 m	0600 8765	
Modular flue gas probe with pre-filter Ø 14 mm 335 mm immersion depth, incl. cone, thermocouple NiCr-Ni (TI) Tmax 1000°C and NO <sub>2</sub> /SO <sub>2</sub> special hose 2.2 m	0600 8766	
Modular flue gas probe with pre-filter Ø 14 mm 700 mm immersion depth, incl. cone, thermocouple NiCr-Ni (TI) Tmax 1000°C and NO <sub>2</sub> /SO <sub>2</sub> special hose 2.2 m	0600 8767	
<b>Probe accessories modular gas sampling probes</b>		
<b>Part no.</b>		
Hose extension; 2.8 m; extension cable for probe	0554 1202	
Probe shaft with pre-filter Ø 14 mm, length selectable up to 2500 mm, incl. cone, Ø 8 mm, thermocouple NiCr-Ni (TI) Tmax. 500 °C	On request	
Probe shaft with pre-filter Ø 14 mm, length selectable up to 2500 mm, incl. cone, Ø 8 mm, thermocouple NiCr-Ni (TI) Tmax. 1000 °C	On request	
Spare probe pre-filter (sinter filter) 2 off	0554 3372	
Spare dirt filter, modular probe; 10 off	0554 3385	
Probe shaft, length 700 mm, incl. cone, Ø 8 mm, Tmax 500 °C	0554 9767	
Probe shaft, length 335 mm, incl. cone, Ø 8 mm, Tmax 1000 °C	0554 8764	
Probe shaft, length 700 mm, incl. cone, Ø 8 mm, Tmax. 1000 °C	0554 8765	
<b>Gas sampling probes for industrial engines</b>		
<b>Part no.</b>		
Flue gas probe for industrial engines, 335 mm immersion depth incl. probe stop and heat protection plate, Tmax. +1,000 °C, special hose for NO <sub>2</sub> -/SO <sub>2</sub> measurements, length 4 m	0600 7555	
Flue gas probe for industrial engines with probe shaft preliminary filter, 335 mm immersion depth incl. probe stop and heat protection plate, Tmax. +1,000 °C, special hose for NO <sub>2</sub> -/SO <sub>2</sub> measurements, length 4 m	0600 7556	
Thermocouple for flue gas temperature measurement, NiCr-Ni, length 400 mm, Tmax +1,000 °C, with 4 m connecting cable and additional heat protection	0600 8898	
<b>SO<sub>2</sub> low probes for measurements after flue gas post-treatment systems (e.g. scrubbers)</b>		
<b>Part no.</b>		
SO <sub>2</sub> low set unheated, consisting of: SO <sub>2</sub> low sensor, measuring range 0 to 200 ppm, resolution 0.1 ppm, special SO <sub>2</sub> low gas sampling probe, probe shaft length 735 mm, Tmax. probe shaft 220 °C, hose length 2.35 m, Ø probe shaft 8 mm, incl. cone, thermocouple NiCr-N (TI)	0563 1251	
Spare thermocouple	0430 0053	
Spare SO <sub>2</sub> sensor	0393 0251	
SO <sub>2</sub> low set heated, consisting of: SO <sub>2</sub> low sensor, measuring range 0 to 200 ppm, resolution 0.1 ppm, industrial probe set heated 0600 7630, heated probe shaft, heated gas sampling hose, thermocouple NiCr-Ni (TI)	0563 2251	
Spare SO <sub>2</sub> sensor	0393 0251	
<b>Temperature probes</b>		
<b>Part no.</b>		
Combustion air temperature probe, immersion depth 60 mm	0600 9797	
<b>Pitot tubes</b>		
<b>Part no.</b>		
Pitot tube, 350 mm long, stainless steel, measures flow velocity	0635 2145	
Pitot tube, 1000 mm long, stainless steel, measures flow velocity	0635 2345	
Connection hose; silicone; length 5 m; max. load 700 hPa (mbar)	0554 0440	
Pitot tube, stainless steel, 750 mm long, measures flow velocity with temperature, 3x hoses (5 m long) and heat shield	0635 2042	

# Gas sampling probes

Industrial probes	Details	Part no.
<p>Industrial probe set 1200 °C consisting of:</p> <ul style="list-style-type: none"> <li>- unheated handle</li> <li>- unheated probe shaft up to 1200 °C flue gas temperature</li> <li>- unheated gas sampling hose incl. inline filter, length 4 m</li> <li>- thermocouple Type K, length 1.2 m</li> </ul> <p>The set can optionally come with an extension tube and probe preliminary filter.</p>	<p>Probe shaft: T<sub>max.</sub> +1200 °C Length 1.0 m, Ø 12 mm Material 2.4856 alloy 625 Handle: T<sub>max.</sub> +600 °C Material: 1.4404 stainless steel Gas sampling hose: 2-chamber hose with PTFE inner core; length 4.0 m TC: Type K, Length 1.2 m, Ø 2 mm T<sub>max.</sub> +1200 °C</p>	0600 7610
<p>Industrial probe set 1800 °C consisting of:</p> <ul style="list-style-type: none"> <li>- unheated handle</li> <li>- unheated probe shaft up to 1800 °C flue gas temperature</li> <li>- unheated gas sampling hose incl. inline filter, length 4 m</li> </ul> <p>For temperature measurements &gt; +1370 °C, we recommend a thermocouple Type S.</p>	<p>Probe shaft: T<sub>max.</sub> +1800 °C Material Al<sub>2</sub>O<sub>3</sub> &gt; 99.7% Length 1.0 m, Ø 12 mm Gas sampling hose: 2-chamber hose with PTFE inner core; length 4.0 m Handle: T<sub>max.</sub> +600 °C Material: 1.4404 stainless steel</p>	0600 7620
<p>Heated industrial probe set consisting of:</p> <ul style="list-style-type: none"> <li>- heated probe shaft up to 600 °C flue gas temperature</li> <li>- heated gas sampling hose, length 4 m</li> <li>- thermocouple Type K, length 1.2 m</li> </ul> <p>The set can optionally come with an extension tube and probe preliminary filter.</p>	<p>Probe shaft: temperature-proof up to +600 °C Voltage supply 230 V / 50 Hz Length 1.0 m, Ø 25 mm Heating temperature range +200 °C Material stainless steel 1.4571 Gas sampling hose: corrugated hose with PTFE inner core Length 4.0 m; outside diameter 34 mm Heating temperature range &gt; +120 °C TC: Type K Length 1.2 m, Ø 2 mm T<sub>max.</sub> +1200 °C</p>	0600 7630
<p>Extension tube 1200 °C for extending the industrial probe set 1200 °C (0600 7610) and heated industrial probe set (0600 7630)</p> <p>The extension tube can be screwed directly onto the unheated probe shaft up to +1200 °C and the heated probe shaft up to +600 °C.*</p>	<p>Probe shaft: T<sub>max.</sub> +1200 °C Length 1.0 m, Ø 12 mm Material 2.4856 alloy 625</p>	0600 7617
<p>Thermocouple Type K, length 2.2 m</p>	<p>Type K Length 2.2 m, Ø 2 mm T<sub>max.</sub> +1200 °C</p>	0600 7615
<p>Industrial probe preliminary filter for dust-laden flue gas</p> <p>The probe preliminary filter can be screwed directly onto the unheated probe shaft up to +1200 °C and the heated probe shaft up to +600 °C.*</p>	<p>Material porous silicon carbide T<sub>max.</sub> +1,000 °C, Length 110 mm, Ø 30 mm Filtration grade 10 µm</p>	0600 7616
<p>Heated gas sampling hose</p>	<p>Corrugated hose with PTFE inner core Length 4.0 m; outside diameter 34 mm Heating temperature range &gt; +120 °C</p>	on request
<p>Transport case for probes Suitable for all probes with a total length &gt; 335 mm.</p>		0516 7600
<p>Spare dirt filter (10 off)</p>		0554 3371

\*For ease of tightening and releasing, we recommend the use of ceramic paste on the thread. This is available from retailers.

# Technical data

## testo 350 Control Unit

	testo 350 Control Unit	Analog output box (mA Out)
Operating temperature	-5 to +45 °C	-5 to +45 °C
Storage temperature	-20 to +50 °C	-20 to +50 °C
Battery type	Lithium battery	–
Battery life	5 h (without wireless connection)	–
Memory	2 MB (250,000 meas. values)	–
Weight	440 g	305 g
Dimensions	88 x 38 x 220 mm	200 x 89 x 37 mm
Protection class	IP40	–

### Country permits BLUETOOTH® wireless transmission for testo 350

The BLUETOOTH® radio module used by Testo is permitted for the following countries and may only be used in those countries, i.e. the BLUETOOTH® wireless transmission may not be used in any other country!

#### Europe including all EU member states

Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Great Britain, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden and Turkey

#### European countries (EFTA)

Iceland, Liechtenstein, Norway, Switzerland

#### Non-European countries

Canada, USA, Japan, Ukraine, Australia, Columbia, El Salvador, Mexico, Venezuela, Ecuador, New Zealand, Bolivia, Dominican Republic, Peru, Chile, Cuba, Costa Rica, Nicaragua, Korea, Belarus.

## Technical data testo 350 analyzer box

	Measuring range	Accuracy ±1 digit	Resolution	Reaction time $t_{95}$
<b>O<sub>2</sub> measurement</b>	0 to +25 Vol. % O <sub>2</sub>	±0.8% of fsv (0 to +25 Vol. % O <sub>2</sub> )	0.01 Vol. % O <sub>2</sub> (0 to +25 Vol. % O <sub>2</sub> )	20 s ( $t_{95}$ )
<b>CO measurement (H<sub>2</sub> compensated)*</b>	0 to +10.000 ppm CO	±5% of m.v. (+200 to +2.000 ppm CO) ±10% of m.v. (+2.001 to +10.000 ppm CO) ±10 ppm CO (0 to +199 ppm CO)	1 ppm CO (0 to +10.000 ppm CO)	40 s
<b>CO<sub>low</sub> measurement (H<sub>2</sub> compensated)*</b>	0 to 500 ppm CO	±5% of m.v. (+40 to +500 ppm CO) ±2% ppm CO (0 to +39,9 ppm CO)	0.1 ppm CO (0 to +500 ppm CO)	40 s
<b>NO measurement</b>	0 to +4.000 ppm NO	±5% of m.v. (+100 to +1.999 ppm NO) ±10% of m.v. (+2.000 to +4.000 ppm NO) ±5 ppm NO (0 to +99 ppm NO)	±1 ppm NO (0 to +4.000 ppm NO)	30 s
<b>NO<sub>low</sub> measurement</b>	0 to +300 ppm NO	±5% of m.v. (+40 to +300 ppm NO) ±2 ppm NO (0 to +39.9 ppm NO)	±0.1 ppm NO (0 to +300 ppm NO)	30 s
<b>NO<sub>2</sub> measurement</b>	0 to +500 ppm NO <sub>2</sub>	±5% of m.v. (+100 to +500 ppm NO <sub>2</sub> ) ±5 ppm NO <sub>2</sub> (0 to +99,9 ppm NO <sub>2</sub> )	±0.1 ppm NO <sub>2</sub> (0 to +500 ppm NO <sub>2</sub> )	40 s
<b>SO<sub>2</sub> measurement</b>	0 to +5.000 ppm SO <sub>2</sub>	±5% of m.v. (+100 to +2.000 ppm SO <sub>2</sub> ) ±10% of m.v. (+2.001 to +5.000 ppm SO <sub>2</sub> ) ±5 ppm SO <sub>2</sub> (0 to +99 ppm SO <sub>2</sub> )	±1 ppm SO <sub>2</sub> (0 to +5.000 ppm SO <sub>2</sub> )	30 s
<b>CO<sub>2</sub> measurement (IR)</b>	0 to +50 Vol. % CO <sub>2</sub>	±0.3 Vol. % CO <sub>2</sub> + 1% of m.v. (0 to 25 Vol. % CO <sub>2</sub> ) ±0.5 Vol. % CO <sub>2</sub> + 1.5% of m.v. (>25 to 50 Vol. % CO <sub>2</sub> )	0.01 Vol. % CO <sub>2</sub> (0 to 25 Vol. % CO <sub>2</sub> ) 0.1 Vol. % CO <sub>2</sub> (>25 Vol. % CO <sub>2</sub> )	10 s
<b>H<sub>2</sub>S measurement</b>	0 to +300 ppm H <sub>2</sub> S	±5% of m.v. (+40 to +300 ppm) ±2 ppm (0 to +39.9 ppm)	0.1 ppm (0 to +300 ppm)	35 s

\* H<sub>2</sub> only as an indicator

	Single dilution with selectable dilution factor (x2, x5, x10, x20, x40)			Dilution of all sensors (factor 5) When dilution of all sensors is activated, the measurement values of O <sub>2</sub> , CO <sub>2</sub> -(IR) and C <sub>x</sub> H <sub>y</sub> are not shown in the display.		
	Measuring range	Accuracy ±1 digit	Resolution	Measuring range	Accuracy ±1 digit	Resolution
<b>CO measurement (H<sub>2</sub> compensated)</b>	depending on selected factor	±2% of m.v. (additional error)	1 ppm	2.500 to 50.000 ppm	±5 % of m.v. (additional error) Press. range -100 to 0 mbar at probe tip	1 ppm
<b>CO<sub>low</sub> measurement (H<sub>2</sub> compensated)</b>	depending on selected dil. factor		0.1 ppm	500 to 2.500 ppm		0.1 ppm
<b>NO measurement</b>			1 ppm	1.500 to 20.000 ppm		1 ppm
<b>NO<sub>low</sub> measurement</b>	0.1 ppm		300 to 1.500 ppm	0.1 ppm		
<b>SO<sub>2</sub> measurement</b>	1 ppm		500 to 25.000 ppm	1 ppm		
<b>C<sub>x</sub>H<sub>y</sub> measurement</b>	Methane: 100 to 40,000 ppm Propane: 100 to 21,000 ppm Butane: 100 to 18,000 ppm		10 ppm			
<b>NO<sub>2</sub> measurement</b>				500 to 2.500 ppm		0.1 ppm
<b>H<sub>2</sub>S measurement</b>			200 to 1.500 ppm	0.1 ppm		

# Technical data

## Technical data testo 350 analyzer box

	Measuring range	Accuracy ±1 digit	Resolution	Reaction time $t_{90}$
Degree of effectivity	0 to +120 %		0.1 % (0 to +120 %)	
Flue gas loss	0 to +99.9 % qA		0.1 % qA (-20 to +99.9 % qA)	
CO <sub>2</sub> calculation	0 to CO <sub>2 max</sub> Vol. % CO <sub>2</sub>	calculated from O <sub>2</sub> ±0.2 Vol.%	0.01 Vol. % CO <sub>2</sub>	40 s
Differential pressure 1	-40 to +40 hPa	±1.5% of m.v. (-40 to -3 hPa) ±1.5% of m.v. (+3 to +40 hPa) ±0.03 hPa (-2.99 to +2.99 hPa)	0.01 hPa (-40 to +40 hPa)	
Differential pressure 2	-200 to +200 hPa	±1.5% of m.v. (-200 to -50 hPa) ±1.5% of m.v. (+50 to +200 hPa) ±0.5 hPa (-49.9 to +49.9 hPa)	0.1 hPa (-200 to +200 hPa)	
Flow velocity	0 to +40 m/s		0.1 m/s (0 to +40 m/s)	
Absolute pressure (opt. when equipped with IR sensor)	-600 to +1.150 hPa	±10 hPa	1 hPa	
Flue gas dewpoint calculation	0 to 99.9 °C td		0.1 °C td (0 to 99.9 °C td)	
Type K (NiCr-Ni)	-200 to +1.370 °C	±0.4 °C (-100 to +200 °C) ±1 °C (-200 to -100.1 °C) ±1 °C (+200.1 to +1370 °C)	0.1 °C (-200 to +1.370 °C)	
Type S (Pt10Rh-Pt)		±1 °C (0 to +1.760 °C)	0.1 °C (0 to +1.760 °C)	
Ambient temperature probe (NTC)	-20 to +50 °C	±0.2 °C (-10 to +50 °C)	0.1 °C (-20 to +50 °C)	

## Technical data CxHy sensor

Meas. parameter	Measuring range <sup>1</sup>	Accuracy ±1 digit	Resolution	Min. O <sub>2</sub> requirement in flue gas	Reaction time $t_{90}$	Response factor <sup>2</sup>
Methane	100 to 40.000 ppm	< 400 ppm (100 to 4.000 ppm) < 10% of m.v. (>4.000 ppm)	10 ppm	2% + (2 x m.v. methane)	< 40 s	1
Propane	100 to 21.000 ppm			2% + (5 x m.v. propane)		1.5
Butane	100 to 18.000 ppm			2% + (6.5 x m.v. butane)		2

<sup>1</sup> Lower explosion limit (LEL) must be adhered to.

<sup>2</sup> The HC sensor is adjusted to methane ex-works. It can be adjusted to a different gas (propane or butane) by the user.

## General technical data

Dimensions	330 x 128 x 438 mm	Trigger input	Voltage 5 to 12 Volt (rising or trailing edge) pulse width > 1 sec load: 5 V/max, 5 mA, 12 V/max. 40 mA
Weight	4800 g	Guarantee	
Storage temperature	-20 to +50 °C	Measuring instrument	2 years
Operating temperature	-5 to +45 °C	Gas sensors	CO, NO, NO <sub>2</sub> , SO <sub>2</sub> , H <sub>2</sub> S, C <sub>x</sub> H <sub>y</sub> : 1 year O <sub>2</sub> sensor: 1.5 years CO <sub>2</sub> -IR sensors: 2 years
Housing material	ABS	Pumps	0.5 years
Memory	250,000 readings	Solenoid valves	0.5 years
Power supply	AC mains unit 100V to 240V (50 to 60 Hz)	Thermocouples	1 year
DC voltage input	11 V to 40 V	Rechargeable batteries	1 year
Max. dust load	20 g/m <sup>3</sup> dust in flue gas	Probes	2 years
Dewpoint calculation	0 to 99 °Ctd	Guarantee conditions	<a href="https://www.testo.com/guarantee">https://www.testo.com/guarantee</a>
Max. positive pressure	max. +50 mbar	Protection class	IP40
Max. negative pressure	min. -300 mbar	Battery life	Maximum load approx. 2.5 h
Pump through-flow	1 l/min. with through-flow monitoring		
Hose length	16.2 m (corresponds to 5 probe hose extensions)		
Max. humidity load	+70 °C dewpoint temperature		

## Ordering suggestions

### Emission measurement on industrial engines

	Part no.
testo 350 control unit	0632 3511
Option BLUETOOTH® wireless transmission	
testo 350 analyzer unit	0632 3510
Option CO (H2-compensated) sensor, 0 to 10,000 ppm	
Option NO sensor, 0 to 4,000 ppm	
Option NO2 sensor, 0 to 500 ppm	
Option Peltier gas preparation incl. hose pump	
Option BLUETOOTH® wireless transmission	
Option fresh air valve for long-term measurement	
Option measuring range extension	
Flue gas probe for industrial engines	0600 7555
testo BLUETOOTH® printer	0554 0620
easyEmission software	0554 3334
International mains unit for control unit	0554 1096
Transport case	0516 3510

### Emission measurement on burners

	Part no.
testo 350 control unit	0632 3511
Option BLUETOOTH® wireless transmission	
testo 350 analyzer unit	0632 3510
Option CO (H2-compensated) sensor, 0 to 10,000 ppm	
Option NO sensor, 0 to 4,000 ppm	
Option NO2 sensor, 0 to 500 ppm	
Option SO2 sensor, 0 to 5,000 ppm	
Option Peltier gas preparation incl. hose pump	
Option BLUETOOTH® wireless transmission	
Option measuring range extension	
Gas sampling probe, modular	0600 8764
testo BLUETOOTH® printer	0554 0620
easyEmission software	0554 3334
International mains unit for control unit	0554 1096
Transport case	0516 3510

### Emission measurement on gas turbines

	Part no.
testo 350 control unit	0632 3511
Option BLUETOOTH® wireless transmission	
testo 350 analyzer unit	0632 3510
Option COlow (H2 compensated) sensor, 0 to 500 ppm	
Option NOlow sensor, 0 to 300 ppm	
Option NO2 sensor, 0 to 500 ppm	
Option Peltier gas preparation incl. hose pump	
Option BLUETOOTH® wireless transmission	
Option fresh air valve for long-term measurement	
Option measuring range extension	
Flue gas probe for industrial engines	0600 7555
testo BLUETOOTH® printer	0554 0620
easyEmission software	0554 3334
International mains unit for control unit	0554 1096
Transport case	0516 3510

### Emission measurement on thermal processes

	Part no.
testo 350 control unit	0632 3511
Option BLUETOOTH® wireless transmission	
testo 350 analyzer unit	0632 3510
Option CO (H2-compensated) sensor, 0 to 10,000 ppm	
Option CO2 (NDIR) sensor, 0 to 50 Vol%	
Option NO sensor, 0 to 4,000 ppm	
Option NO2 sensor, 0 to 500 ppm	
Option Peltier gas preparation incl. hose pump	
Option BLUETOOTH® wireless transmission	
Industrial probe set 1200 °C	0600 7610
easyEmission software	0554 3334
International mains unit for control unit	0554 1096
Transport case	0516 3510

## Exhaust gas analyzer

**testo 350 MARITIME –  
for emission measurement on  
marine diesel engines**

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With DNV GL and NK certificate according to MARPOL  
Annexe VI and NOx Technical Code 2008

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Unrestricted availability thanks to pre-calibrated gas  
sensors which are exchangeable on site

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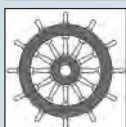
Ready to measure in less than 2 minutes

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Tested gas sensors – as good as reference measurement  
technology

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Robust protective case with trolley function allows transport  
by plane



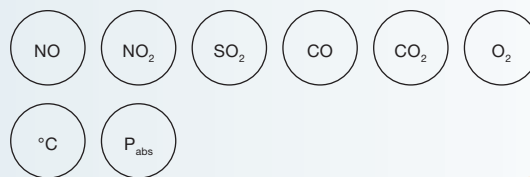
0098/2018



TAA00001K0



14DD001B



The certified testo 350 MARITIME is the world's first portable exhaust gas analysis system for the measurement of exhaust gas emissions according to MARPOL Annexe VI and NOx Technical Code 2008.

The testo 350 MARITIME has the following certificates: Germanischer Lloyd (DNV GL) certificate no. TAA00001K0, according to MARPOL Annexe VI and NOx Technical Code 2008 and Nippon Kaiji Kyokai (Class NK) certificate no. 14DD001B. In addition, the exhaust gas analyzer fulfils the directive on marine equipment and has the MED mark of conformity 0098/2018.

Gas sampling takes place with a special, easy-to-install sampling probe. The certified and durable electrochemical gas sensors record the concentrations of the exhaust gas components NOx (NO + NO<sub>2</sub> separately), CO, CO<sub>2</sub>, O<sub>2</sub> and SO<sub>2</sub> highly accurately and with long-term stability. CO<sub>2</sub> is recorded using the certified IR measurement principle. In order to withstand the tough conditions at sea, the complete exhaust gas analyzer incl. accessories is stored in a robust protective case.



## Overview of the advantages of the testo 350 MARITIME.

### On-board verification examination according to NOx Technical Code 2008.

The testo 350 MARITIME is the ideal tool for the professional exhaust gas analysis of NO, NO<sub>2</sub>, SO<sub>2</sub>, CO, CO<sub>2</sub>, O<sub>2</sub> and supports you in these jobs:

- In direct measurement and monitoring on board (e.g. periodical examinations and intermediate examinations).
- In simplified test and measurement procedures, e.g. when modifications such as re-adjustment of the engines have been carried out.

In addition to this, you can use it for official NOx-monitoring measurements to check the NOx limit values prescribed in MARPOL Annexe VI on board.

In addition to this, NOx measurement in special regional zones is also possible with the testo 350 MARITIME, for example for reducing the NOx tax in Norway.



Control unit  
testo 350 MARITIME

Analyzer box  
testo 350 MARITIME

Gas sampling probe  
with probe pre-filter



Practical trolley

## Ordering data / Technical data

### testo 350 MARITIME

- Analyzer box testo 350 MARITIME V2 equipped with O<sub>2</sub>, CO, CO<sub>2</sub>-(IR), NO, NO<sub>2</sub>, SO<sub>2</sub>, incl. gas preparation, measuring range extension for individual slot (for SO<sub>2</sub> only), fresh air valve for continuous measurement, differential pressure sensor, temperature probe input Type K NiCr-Ni and Type S Pt10Rh-Pt, Testo databus connection, rech. battery, integrated combustion air probe (NTC), trigger input, measurement data store, USB interface
- Control unit testo 350 MARITIME V2
- Robust protective case with trolley function
- Gas sampling probe with pre-filter for industrial probes, probe shaft length 335 mm, incl. probe stop, heat protection shield, special hose for NO<sub>2</sub>-/SO<sub>2</sub>-measurement, Tmax probe shaft 1000 °C, hose length 4 m incl. thermocouple for exhaust gas temperature measurement, NiCr-Ni, length 400 mm, Tmax. +1000 °C with 4 m connection line and additional temperature protection
- Connection line between exhaust gas analyzer and control unit, length 5 m
- Testo fast printer with wireless infrared interface, 1 roll thermal paper and 4 AA batteries for measurement value printout on site
- Humidity/temperature measuring instrument testo 610
- Germanischer Lloyd certificate no. TAA00001K0
- Nippon Kaijiki Kyokai (Class NK) certificate no. 14DD001B

Part no. 0563 3503

#### General technical data

Operating temperature	+5 to +45 °C
Storage temperature	-20 to +50 °C
Voltage supply	Li ion rechargeable battery AC mains unit 100 V to 240 V (50 to 60 Hz)
Electrical power consumption	max. 40 W
Max. positive pressure at gas input	50 hPa
Max. negative pressure at gas input	-300 hPa
Weight	Approx. 17 kg
Dimensions (case)	56.5 x 45.5 x 26.5 cm
Guarantee	
Measuring instrument	2 years
Gas sensors	CO, NO, NO <sub>2</sub> , SO <sub>2</sub> : 1 year O <sub>2</sub> sensor: 1.5 years CO <sub>2</sub> -IR sensor: 2 years
Pumps	0.5 years
Solenoid valves	0.5 years
Thermocouples	1 year
Rechargeable batteries	1 year
Probes	2 years
Guarantee conditions	<a href="https://www.testo.com/guarantee">https://www.testo.com/guarantee</a>

### Technical data testo 350 MARITIME

	Measuring range	Tolerance
°C, exhaust gas	-40 to +1000 °C	max. ±5 K
O <sub>2</sub>	0 to 25 Vol. %	According to MARPOL Annex VI and NO <sub>x</sub> Technical Code
CO	0 to 3000 ppm	
NO	0 to 3000 ppm	
NO <sub>2</sub>	0 to 500 ppm	
SO <sub>2</sub>	0 to 3000 ppm	
CO <sub>2</sub> (IR)	0 to 40 Vol. %	
P <sub>abs</sub>	600 to 1150 hPa	±5 hPa at +22 °C ±10 hPa at -5 to +45 °C

# Fine particle measuring system

## testo 380 – The innovative complete solution

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In combination with testo 330-2 LL, the innovative complete solution for solid fuels, oil and gas systems.

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Unrestricted TÜV test for the limit value levels 1/2 and according to VDI 4206 Sheet 2

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Parallel measurement of fine particles, O<sub>2</sub> und CO

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Graphic presentation of all measurement values in real time

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Especially economic in operation and maintenance

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Effortless handling and easy transport

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High-tech in a case: Measurement of all relevant values with only one probe

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mg/m<sup>3</sup>

°C

hPa

O<sub>2</sub>

CO/H<sub>2</sub>

NO

ΔP

The constantly growing number of solid fuel systems leads to a further increase in the emission of fine particles. The new amendment to the 1. BImSchV prescribes fine particle measurement, presenting chimneysweeps, heating constructors and service technicians with new challenges. With the new fine particle measuring system testo 380, fine particles can for the first time be measured simply on site. The completely new measurement method developed by Testo enables easy monitoring and implementation of the fine particle limit values. Combustion systems can be optimized to minimum emissions with the system.

The „command centre“ of the testo 380 is the proven emission analyzer testo 330-2 LL. When you take it out of the case, you can as usual determine, among other things, flue gas, flue draught and pressure on gas and oil systems. In connection with the testo 380, the simultaneous measurement of O<sub>2</sub>, CO and fine particles is possible for the first time.



# Overview of the measurement system

The fine particle measuring system testo 380 consists of two system components: the fine particle analyzer testo 380 including fine particle probe, and the testo 330-2 LL as a command centre and a flue gas analyzer. Together, this system offers the highest possible level of compactness, ease of handling and precision in the measurement of solid fuel, oil and gas systems.

**Fine particle case**

for easy transport of the fine particle measuring system. The entire measurement technology is contained in a convenient case with a weight of only 7.9 kg.

**Fine particle probe**

transforms a part of the raw gas into measurement gas. The contamination of the system is limited to a minimum, and a highly accurate measurement guaranteed at the same time. The innovative technology makes the fine particle probe compact and easy to use.

**Compartment for instruction manual**

The instruction manual is stored ready to hand in the lid.

**Flue gas analyzer testo 330--2 LL**  
(from version 2006)

The command centre of the system measures not only fine particles, but simultaneously also CO, O<sub>2</sub> and other flue gas parameters. The portable instrument can be removed from the case easily, and used for flue gas analysis on oil and gas systems.

**Condensate trap and filters**

The condensate trap and several filters prepare the raw gas for flue gas analysis in the testo 330-2 LL.

**Storage compartment**

for various materials such as the cleaning set.

**Fine particle sensor**

Thanks to sophisticated technology, Testo has succeeded in making fine particle measurement easy. The fine particle values are displayed in real time, so that the effect of any action taken on the boiler can be traced directly.

**Pre-heating stretch**

ensures optimum gas temperature, and therefore an extremely accurate fine particle measurement.



**Further storage space**  
e.g. for spare sensor module

**Printer**  
(optionally available) for documentation on site

**Mains unit**  
for testo 330-2 LL





## Innovative technology

### The fine particle probe

Everything you need for your professional fine particle measurement is contained in Testo's own development, the handy fine particle probe. The probe samples the raw gas directly from the flue gas flow and transports it to the testo 330-2 LL for flue gas analysis. Simultaneously, the raw gas is mixed with fresh air in the rotation diluter – creating the necessary measurement gas for the fine particle measurement. The fine particle probe is also responsible for the measurement of the flue gas temperature and the flue draught. The probe is equipped with a heating element which ensures a constant temperature of 120 °C, in order that the flue gas does not condense during the measurement. The probe can be quickly and effortlessly stored in the measurement box, and just as easily removed again. Other probes are not necessary for the measurement of fine particles.



### The rotation diluter

In order to achieve an especially reliable fine particle measurement, the raw gas is passed through a rotation diluter made of technical ceramics. Thanks to the patented technology, the particle concentration is diluted with the help of a defined quantity of fresh air, so that the contamination of the gas paths and the entire measurement system is reduced to a minimum, and at the same time a precise fine particle measurement takes place. This means the system works without deterioration, cleaning takes place using conventional household cotton buds.

### The fine particle sensor

The fine particle sensor measures the mass of the particles contained in the measurement gas. For this purpose, the measurement gas is passed on to the oscillating fine particle sensor through a jet. Depending on the mass of the particles deposited, the oscillation frequency changes, thus allowing the particle mass to be determined. Because this calculation can be carried out at very short intervals thanks to Testo technology\*, it is possible to follow the measurement values in the display of the testo 330-2 LL in real time during the entire duration of the measurement. This way, no smoke input is ever missed, any change in the heating boiler and its effects are immediately visible, and the system can be adjusted especially quickly and efficiently.

\* several patents pending



## Ordering data

### testo 380 fine particle analyzer

- Without flue gas analyzer testo 330-2 LL (already owned testo 330-2 LL from version 2010 can be used after a Firmware update)



Part no. 0632 3800

### testo 380 fine particle measuring system

- testo 380 fine particle analyzer with fine particle probe and cleaning set
- Flue gas analyzer testo 330-2 LL with mains unit (incl. Bluetooth, H<sub>2</sub>-compensated CO cell)
- Modular flue gas probe 300 mm
- Combustion air temperature probe 190 mm



Part no. 0632 3801

## Accessories

#### Flue gas analyzer testo 330-2 LL

#### Part no.

Bluetooth testo 330-2 LL flue gas analyzer set with Longlife gas sensors; BLUETOOTH® and H <sub>2</sub> -compensated CO sensor as well as integrated draught and gas zeroing, incl. rech. battery and calibration protocol; with graphic display	0632 3307 70	
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#### Accessories testo 380

#### Part no.

testo 606-2 wood and material humidity meter with integrated humidity measurement and NTC air thermometer incl. protection cap, batteries, belt holder and calibration protocol, TÜV permit according to VDI 4206 page 4	0560 6062	
Combustion air temperature probe, immersion depth 190 mm	0600 9787	
testo 317-3 CO monitor, incl. carrying case with belt clip, headphones, wrist strap, sampler and calibration protocol	0632 3173	
Testo fast printer IrDA with wireless infrared interface; 1 roll thermal paper; 4 AA batteries	0554 0549	
Testo Bluetooth®/IRDA printer incl. 1 roll of printer paper, rechargeable battery and mains unit	0554 0620	
Spare thermal paper for printer, permanent ink	0554 0568	
easyheat PC analysis software, shows measurement in form of diagrams, tables and manages customer data.	0554 3332	
USB connection cable instrument-PC, length 2 m	0449 0047	

#### Spare parts testo 380

#### Part no.

Spare fine particle sensor module	0394 0001	
Spare jet	0394 0002	
Spare particle filter for testo 350 analyzer box (20 pcs.)	0554 3381	
Probe attachment chain	0554 9356	
Probe cleaning brush	0554 0228	

# Probes and accessories testo 330-2 LL

Retrofits / spare gas sensors	Part no.
O <sub>2</sub> sensor for testo 330-1 LL/-2 LL	0393 0002
CO sensor (without H <sub>2</sub> -compensation) for testo 330-1 LL/-2 LL	0393 0061
CO sensor, H <sub>2</sub> -compensated, 0 to 8000 ppm for testo 330-1 LL/-2 LL	0393 0101
Spare CO <sub>low</sub> sensor for testo 330-1 LL/-2 LL	0393 0103
Spare NO sensor, 0 to 3000 ppm for testo 330-1 LL/-2 LL	0393 0151
Upgrade NO-sensor; 0 to 3000 ppm; resolution 1 ppm	0554 2151
NO <sub>low</sub> spare sensor 0 to 300 ppm, 0.1 ppm, ±2 ppm (0 to 39.9 ppm) ±5% of m.v.	0393 0152



Modular flue gas probes	Part no.
Flue gas probe modular, incl. cone for attachment; thermocouple NiCr-Ni; hose 2.2 m; particle filter; length 180 mm; Ø 8 mm; Tmax. 500 °C; TÜV-tested	0600 9760
Flue gas probe; length 300 mm; Ø 8 mm; Tmax. 500 °C; TÜV approval; probe stop; NiCr-Ni thermocouple; 2.2 m hose and particle filter included	0600 9761
Flue gas probe; length 180 mm; Ø 6 mm; Tmax. 500 °C; probe stop; NiCr-Ni thermocouple; 2.2 m hose and particle filter included	0600 9762
Flue gas probe; length 300 mm; Ø 6 mm; Tmax. 500 °C; probe stop; NiCr-Ni thermocouple; 2.2 m hose and particle filter included	0600 9763
Flue gas probe flexible; thermocouple NiCr-Ni; hose 2.2. m; dirt filter; length 330 mm; Ø 9 mm; Tmax. 180 °C; short-term 200 °C; ideal for measuring at inaccessible points	0600 9770

Probe accessories	Part no.
Probe shaft; length 180 mm; 8 mm; Tmax. 500 °C	0554 9760
Probe shaft; length 300 mm; Ø 8 mm; Tmax. 500 °C	0554 9761
Probe shaft, length 335 mm, incl. cone, Ø 8 mm, Tmax 1000 °C	0554 8764
Probe shaft flexible; length 330 mm; Ø 9 mm; Tmax. 180 °C	0554 9770
Probe shaft multi-hole; length 300 mm; Ø 8 mm; for mean CO calculation	0554 5762
Probe shaft multi-hole; length 180 mm; Ø 8 mm; for mean CO calculation	0554 5763
Hose extension; 2.8 m; extension cable for probe	0554 1202
Probe stop 8 mm; steel; with spring clamp and handle; Tmax. 500 °C	0554 3330
Probe stop 6 mm; steel; with spring clamp and handle; Tmax. 500 °C	0554 3329

Additional probes	Part no.
Dual wall clearance probe for O <sub>2</sub> supply air measurement	0632 1260
Gas leak detection probe; 0 to 10000 ppm CH <sub>4</sub> /C <sub>3</sub> H <sub>8</sub>	0632 3330
Ambient CO probe, for detecting CO in buildings and rooms; 0 to +500 ppm	0632 3331
Connection cable for ambient CO <sub>2</sub> probe	0430 0143
Fine pressure probe: highly accurate probe for the measurement of differential pressure and temperature, as well as Pitot tube measurement of flow velocities (see technical data)	0638 0330

## Probes and accessories testo 330-2 LL

<b>Combustion air temperature probes</b>	<b>Part no.</b>	
Combustion air temperature probe, immersion depth 190 mm	0600 9787	
Combustion air temperature probe, immersion depth 60 mm	0600 9797	

<b>Additional temperature probes</b>	<b>Part no.</b>	
Mini ambient air probe; for separate ambient air temperature measurement; 0 to +80 °C	0600 3692	
Very fast reaction surface probe	0604 0194	
Connection cable	0430 0143	

<b>Accessories testo 330-2 LL</b>	<b>Part no.</b>	
Mains unit international 100-240 V AC / 6.3 V DC for mains operation or battery charging in instrument	0554 1096	
Spare battery 2600 mA	0515 5107	
Smoke tester with oil and soot sheet, for measuring soot in flue gas, excl. cone (part no. 0554 9010)	0554 0307	
Hose connection set with adapter for separate gas pressure measurement	0554 1203	
Pressure set for testing gas line testo 330-1/-2 LL version 2010	0554 1213	
Differential temperature set; consisting of 2 Velcro probes and temperature adapter	0554 1208	
Spare dirt filter, modular probe; 10 off	0554 3385	
easyheat PC analysis software, shows measurement in form of diagrams, tables and manages customer data.	0554 3332	
USB connection cable instrument to PC testo 330-1/-2 LL / testo 335	0449 0047	
ISO calibration certificate/flue gas	0520 0055	

# Technical data

## Measuring range, accuracy, resolution

Measuring range	0 to 300 mg/m <sup>3</sup>
Accuracy	acc. VDI 4206-2
Resolution	0.1 mg/m <sup>3</sup> (>5mg/m <sup>3</sup> )
Memory	500.000 readings

## Other instrument information

Storage and transport temperature	-20 to +50 °C
Operating temperature	+5 to +40 °C
Protection class	IP40
Weight	testo 380: 7.9 kg, testo 330-2 LL: 0.65 kg
Dimensions	475 x 360 x 190 mm
Housing material	ABS
Power supply	via internal mains unit: 100 V AC/0.45 A to 240 V AC/0.2 A (50 to 60 Hz)
Power consumption	max. 100 W

## Information fine particle probe

Probe length	270 mm
Probe shaft diameter	12 mm
Probe shaft material	Stainless steel 1.4301
Probe cable length	2.2 m
Integrated elements	Draught measurement, sampling, temperature measurement, probe heating, rotation diluter
Flue gas temperature	max. +500 °C
Probe shaft heating	to +120 °C
Rotation diluter	heated up to +80 °C
Status display	LED, shows warm-up phase and operational readiness

# Universal IAQ instrument

testo 400 - the multitasker  
for IAQ professionals

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Measures all IAQ-related parameters: Flow, temperature, humidity, pressure, illuminance, radiant heat, turbulence, CO<sub>2</sub> and CO

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High-precision, location-independent and integrated differential pressure sensor

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High-quality digital probes and an intelligent calibration concept

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Document measuring values directly on the customer's site and send them by e-mail, or further analyze them using the testo DataControl PC software

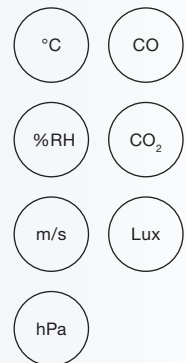
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Smart and intuitive measurement programs:

- HVAC grid measurement in accordance with EN ISO 12599 and ASHRAE 111
  - PMV/PPD in accordance with EN ISO 7730 and ASHRAE 55
  - Draught and degree of turbulence in accordance with EN ISO 7730 and ASHRAE 55
  - WBGT measurement in line with DIN 33403 and EN ISO 7243, NET measurement in accordance with DIN 33403
- 

testo 400 is the universal measuring instrument for all IAQ professionals, enabling them to measure, document and analyze all IAQ parameters with just one instrument. Your benefits:

- Smart support through stored measurement menus and evaluation of measuring values according to the traffic light principle – for error-free measurements
- Manage all the relevant customer data, including measuring points, directly in the instrument - work directly and efficiently on site
- Complete and send measuring values with full documentation, including photos, comments and your own logo directly on site – get to the next job faster



Compatible with a comprehensive selection of Bluetooth® and cable probes.



- Probe heads can be changed without restarting the instrument – easy handling with no lost time
- Calibration of probes which is independent of the measuring instrument and adjustment function at up to six measuring points for zero-error display – fewer downtimes and high-precision measurements

As consultants, experts, technical service providers or service technicians in the air conditioning and ventilation sector, the testo 400 therefore supports you in the truly smart performance of your measuring tasks. Relevant quality parameters in industrial production and manufacturing processes can also be reliably and accurately checked using the testo 400.

## Technical data

Differential pressure (integrated)	
Measuring range	-100 to +200 hPa
Accuracy ( $\pm 1$ digit)	$\pm(0.3 \text{ Pa} \pm 1\% \text{ of m.v.})$ (0 to 25 hPa) $\pm(0.1 \text{ hPa} + 1.5\% \text{ of m.v.})$ (25.001 to 200 hPa)
Resolution	0.001 hPa
Absolute pressure (integrated)	
Measuring range	700 to +1100 hPa
Accuracy ( $\pm 1$ digit)	$\pm 3 \text{ hPa}$
Resolution	0.1 hPa
Temperature NTC (with appropriate probe)	
Measuring range	-40 to +150 °C
Accuracy ( $\pm 1$ digit)	$\pm 0.2 \text{ °C}$ (-25 to 74.9 °C) $\pm 0.4 \text{ °C}$ (-40 to -25.1 °C) $\pm 0.4 \text{ °C}$ (+75 to +99.9 °C) $\pm 0.5\% \text{ of m.v.}$ (remaining meas. range)
Resolution	0.1 °C
Temperature TC type K (with appropriate probe)	
Measuring range	-200 to +1370 °C
Accuracy ( $\pm 1$ digit)	$\pm(0.3 \text{ °C} + 0.1\% \text{ of m.v.})$
Resolution	0.1 °C

General technical data	
Probe connections	4x Bluetooth®, 2x TUC*, 2x TC type K
Interfaces	Bluetooth®, WLAN, USB
Operating temperature	-5 to +45 °C
Storage temperature	-20 to +60 °C
Power supply	Rechargeable li-ion battery (5550 mAh)
Battery life	approx. 10 hrs continuous operation
Display	5.0 inch HD touch display 1280 x 720 px resolution
Camera	Main camera: 8.0 MP Front camera: 5.0 MP
Memory	2 GB (corresponds to approx. 1,000,000 readings)
Protection class	IP40
Dimensions	210 x 95 x 39 mm
Weight	510 g

\*TUC connection (Testo Universal Connector): For the connection of fixed cable digital probes and NTC probes.

## Ordering data

**testo 400**

testo 400 universal IAQ instrument, including transport case for volume flow measurement, connection hose, mains unit with USB cable and calibration protocol.



Order no. 0560 0400

**IAQ data logger**

IAQ data logger for long-term measurements with the testo 400 including mains unit with USB cable and calibration protocol.



Order no. 0577 0400



## Ordering data for kits

### testo 400 air flow kit with hot wire probe

- testo 400 universal IAQ instrument, including transport case for volume flow measurement, silicone hoses, mains unit with USB cable and calibration protocol
- Hot wire probe with Bluetooth®, including temperature and humidity sensor (comprising hot wire probe head, telescope (extendable to 1.0 m) handle adapter and Bluetooth® handle), 4 x AA batteries and calibration protocol
- Vane probe head (Ø 100 mm), including temperature sensor and calibration protocol
- High-precision humidity/temperature probe head, including calibration protocol
- 90° angle for connecting vane probes (Ø 100 mm)

Order no. 0563 0400 71



### testo 400 air flow kit with 16 mm vane probe

- testo 400 universal IAQ instrument, including transport case for volume flow measurement, silicone hoses, mains unit with USB cable and calibration protocol
- Vane probe (Ø 16 mm) with Bluetooth®, including temperature sensor (comprising 16 mm vane probe head, telescope (extendable to 1.0 m), handle adapter and Bluetooth® handle), 4 x AA batteries and calibration protocol
- Vane probe head (Ø 100 mm), including temperature sensor and calibration protocol
- High-precision humidity/temperature probe head, including calibration protocol
- 90° angle for connecting vane probes (Ø 100 mm)

Order no. 0563 0400 72



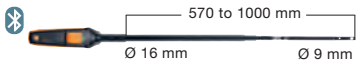
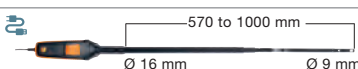
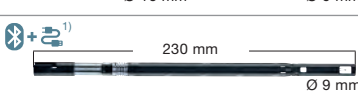
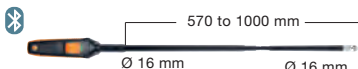













### testo 400 IAQ and comfort kit with tripod

- testo 400 universal IAQ instrument, including transport case for comfort level measurement, silicone hoses, mains unit with USB cable and calibration protocol
- CO<sub>2</sub> probe with Bluetooth®, including temperature and humidity sensor, (comprising CO<sub>2</sub> probe head and Bluetooth® handle), 4 x AA batteries, table stand and calibration protocol
- Turbulence probe with fixed cable, including calibration protocol
- Globe thermometer Ø 150 mm with fixed cable, TC type K, for measuring radiant heat
- Measuring tripod for comfort level measurement, consisting of folding stand, mounting rod, 4 x probe mounts, including bag

Order no. 0563 0401






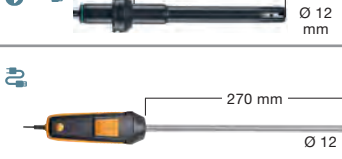






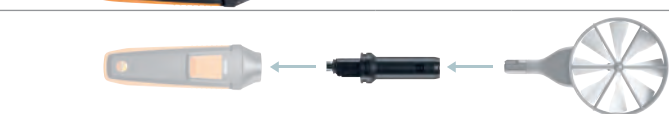


# Digital flow probes

Probe type		Measuring range	Accuracy	Resolution	Order no.
<b>Digital flow probes</b>					
Hot wire probe with Bluetooth®, including temperature and humidity sensor		0 to 50 m/s -20 to +70 °C 5 to 95 %RH 700 to 1100 hPa	±(0.03 m/s + 4% of m.v.) (0 to 20 m/s) ±(0.5 m/s + 5% of m.v.) (20.01 to 30 m/s) ±0.5 °C (0 to +70 °C) ±0.8 °C (-20 to 0 °C) ±3.0 %RH (10 to 35 %RH) <sup>3)</sup> ±2.0 %RH (35 to 65 %RH) <sup>3)</sup> ±3.0 %RH (65 to 90 %RH) <sup>3)</sup> ±5 %RH (remaining meas. range) <sup>3)</sup> ±3 hPa	0.01 m/s 0.1 °C 0.1 %RH 0.1 hPa	0635 1571
Hot wire probe, fixed cable, including temperature and humidity sensor					0635 1572
Hot wire probe head, including temperature and humidity sensor					0635 1570
Vane probe (Ø 16 mm) with Bluetooth®, including temperature sensor		0.6 to 50 m/s -10 to +70 °C	±(0.2 m/s + 1% of m.v.) (0.6 to 40 m/s) ±(0.2 m/s + 2% of m.v.) (40.1 to 50 m/s) ±1.8 °C	0.1 m/s 0.1 °C	0635 9571
Vane probe (Ø 16 mm), fixed cable, including temperature sensor					0635 9572
Vane probe head (Ø 16 mm), including temperature sensor					0635 9570
Hot wire probe, fixed cable, including temperature sensor		0 to 30 m/s -20 to +70 °C 700 to 1100 hPa	±(0.03 m/s + 4% of m.v.) (0 to 20 m/s) ±(0.5 m/s + 5% of m.v.) (20.01 to 30 m/s) ±0.5 °C ±3 hPa	0.01 m/s 0.1 °C 0.1 hPa	0635 1032
Hot wire probe (Ø 7.5 mm), fixed cable, including temperature sensor		0 to 20 m/s -20 to +70 °C 700 to 1100 hPa	±(0.03 m/s + 5% of m.v.) (0 to 20 m/s) ±0.5 °C ±3 hPa	0.01 m/s 0.1 °C 0.1 hPa	0635 1026
Hot ball probe (Ø 3 mm), fixed cable, including temperature sensor		0 to 10 m/s -20 to +70 °C 700 to 1100 hPa	±(0.03 m/s + 5% of m.v.) (0 to 10 m/s) ±0.5 °C ±3 hPa	0.01 m/s 0.1 °C 0.1 hPa	0635 1051
Vane probe (Ø 16 mm), fixed cable		0.6 to 50 m/s	±(0.2 m/s + 1% of m.v.) (0.6 to 40 m/s) ±(0.2 m/s + 2% of m.v.) (40.1 to 50 m/s)	0.1 m/s	0635 9532
Fume cupboard probe, fixed cable (Measurement of flow velocity and volume flow at laboratory extractors based on DIN EN 14175-3/-4.)		0 to 5 m/s 0 to +50 °C 700 to 1100 hPa	±(0.02 m/s + 5% of m.v.) (0 to 5 m/s) ±0.5 °C ±3 hPa	0.01 m/s 0.1 °C 0.1 hPa	0635 1052
High-precision vane probe (Ø 100 mm) with Bluetooth®, including temperature sensor		0.1 to 15 m/s -20 to +70 °C	±(0.1 m/s + 1.5% of m.v.) (0.1 to 15 m/s) ±0.5 °C	0.01 m/s 0.1 °C	0635 9371
High-precision vane probe (Ø 100 mm), fixed cable, including temperature sensor					0635 9372
High-precision vane probe head (Ø 100 mm), including temperature sensor					0635 9370
Vane probe (Ø 100 mm) with Bluetooth®, including temperature sensor		0.3 to 35 m/s -20 to +70 °C	±(0.1 m/s + 1.5% of m.v.) (0.3 to 20 m/s) ±(0.2 m/s + 1.5% of m.v.) (20.01 to 35 m/s) ±0.5 °C	0.01 m/s 0.1 °C	0635 9431
Vane probe (Ø 100 mm), fixed cable, including temperature sensor					0635 9432
Vane probe head (Ø 100 mm), including temperature sensor					0635 9430

<sup>1)</sup> For use with cable handle (order no. 0554 2222) or Bluetooth® handle (order no. 0554 1111) in conjunction with handle adapter (order no. 0554 2160).  
<sup>3)</sup> Please see the additional accuracy information for humidity in the instruction manual.

# Other digital probes and probe accessories

Probe type		Measuring range	Accuracy	Resolution	Order no.
<b>Digital humidity probes</b>					
Humidity/temperature probe with Bluetooth®		0 to 100 %RH -20 to +70 °C	±2 %RH (5 to 90 %RH) <sup>3)</sup> ±0.5 °C	0.1 %RH 0.1 °C	0636 9731
Humidity/temperature probe, fixed cable					0636 9732
Humidity/temperature probe head					0636 9730
High-precision humidity/temperature probe with Bluetooth®		0 to 100 %RH -20 to +70 °C	±(0.6 %RH + 0.7% of m.v.) (0 to 90 %RH) <sup>3)</sup> ±(1.0 %RH + 0.7% of m.v.) (90 to 100 %RH) <sup>3)</sup> ±0.3 °C (15 to 30 °C) ±0.5 °C (remaining meas. range)	0.01 %RH 0.1 °C	0636 9771
High-precision humidity/temperature probe, fixed cable					0636 9772
High-precision humidity/temperature probe head					0636 9770
Robust humidity/temperature probe for temperatures up to +180 °C, fixed cable		0 to 100 %RH -20 to +180 °C	±3 %RH (0 to 2 %RH) <sup>3)</sup> ±2 %RH (2.1 to 98 %RH) <sup>3)</sup> ±3 %RH (98.1 to 100 %RH) <sup>3)</sup> ±0.5 °C (-20 to 0 °C) ±0.4 °C (0.1 to +50 °C) ±0.5 °C (+50.1 to +180 °C)	0.1 %RH 0.1 °C	0636 9775
<b>Digital comfort probes</b>					
Turbulence probe, fixed cable		0 to +5 m/s 0 to +50 °C 700 to 1100 hPa	±(0.03 m/s + 4% of m.v.) (0 to 5 m/s) ±0.5 °C ±3 hPa	0.01 m/s 0.1 °C 0.1 hPa	0628 0152
Lux probe, fixed cable		0 to 100,000 lux	DIN 13032-1 Appendix B F1 = 6 % = V(Lambda) adjustment F2 = 5 % = cos-true evaluation Class C according to DIN 5032-7	0.1 lux (< 10,000 lux) 1 lux (≥ 10,000 lux)	0635 0551
CO <sub>2</sub> probe with Bluetooth®, including temperature and humidity sensor		0 to 10,000 ppm CO <sub>2</sub> 5 to 95 %RH 0 to +50 °C 700 to 1100 hPa	±(50 ppm + 3% of m.v.) (0 to 5,000 ppm) ±(100 ppm + 5% of m.v.) (5,001 to 10,000 ppm) ±3 %RH (10 to 35 %RH) <sup>3)</sup> ±2 %RH (35 to 65 %RH) <sup>3)</sup> ±3 %RH (65 to 90 %RH) <sup>3)</sup> ±5 %RH (remaining meas. range) <sup>3)</sup> ±0.5 °C ±3 hPa	1 ppm 0.1 %RH 0.1 °C 0.1 hPa	0632 1551
CO <sub>2</sub> probe, fixed cable, including temperature and humidity sensor					0632 1552
CO <sub>2</sub> probe head, including temperature and humidity sensor					0632 1550
CO probe with Bluetooth®		0 to 100 ppm  100.1 to 500 ppm	±3 ppm (0 to 30 ppm) ±5 ppm (30.1 to 100 ppm)  ±10 % of m.v. (100.1 ... 500 ppm)	0.1 ppm	0632 1271
CO probe, fixed cable					0632 1272
CO probe head					0632 1270
<b>Probe handles and adapters</b>					
Bluetooth® handle for connecting testo 400 testo 440 probe heads					0554 1111
Cable handle for connecting testo 400 / testo 440 probe heads					0554 2222
Handle adapter for connecting testo 400 / testo 440 flow probes					0554 2160

<sup>2)</sup> For use with cable handle (order no. 0554 2222) or Bluetooth® handle (order no. 0554 1111).

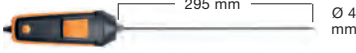
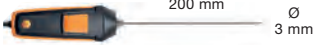



<sup>3)</sup> Please see the additional accuracy information for humidity in the instruction manual.

# Testo Smart Probes



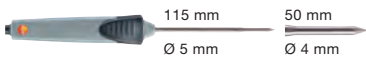



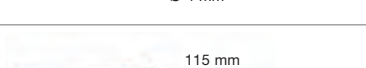
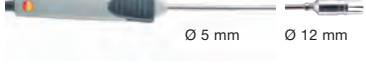





Testo Smart Probes		Measuring range	Accuracy $\pm 1$ digit	Resolution	Order no.
<b>Temperature</b>					
<b>testo 115i</b> Clamp thermometer with smartphone operation, for measurements on pipelines with diameters of 6 to max. 35 mm, including batteries and calibration protocol		-40 to +150 °C	$\pm 1.3$ °C (-20 to +85 °C)	0.1 °C	0560 2115 02
<b>testo 905i</b> Thermometer with smartphone operation, including batteries and calibration protocol		-50 to +150 °C	$\pm 1$ °C	0.1 °C	0560 1905
<b>testo 805i</b> Infrared thermometer with smartphone operation, including batteries and calibration protocol		-30 to +250 °C	$\pm 1.5$ °C or $\pm 1.5\%$ of m.v. (0 to +250 °C) $\pm 2.0$ °C (-20 to -0.1 °C) $\pm 2.5$ °C (-30 to -20.1 °C)	0.1 °C	0560 1805
<b>Humidity</b>					
<b>testo 605i</b> Thermohygrometer with smartphone operation, including batteries and calibration protocol		0 to 100 %RH -20 to +60 °C	$\pm 3.0$ %RH (10 to 35 %RH) $\pm 2.0$ %RH (35 to 65 %RH) $\pm 3.0$ %RH (65 to 90 %RH) $\pm 5$ %RH (< 10 %RH or > 90 %RH) <sup>3)</sup> $\pm 0.8$ °C (-20 to 0 °C) $\pm 0.5$ °C (0 to +60 °C)	0.1 %RH 0.1 °C	0560 2605 02
<b>Flow</b>					
<b>testo 405i</b> Thermal anemometer with smartphone operation, telescopic tube extendable to up to 400 mm, including batteries and calibration protocol		0 to 30 m/s -20 to +60 °C	$\pm (0.1 \text{ m/s} + 5\% \text{ of m.v.})$ (0 to 2 m/s) $\pm (0.3 \text{ m/s} + 5\% \text{ of m.v.})$ (2 to 15 m/s) $\pm 0.5$ °C	0.01 m/s 0.1 °C	0560 1405
<b>testo 410i</b> Vane anemometer with smartphone operation, including batteries and calibration protocol		0.4 to 30 m/s -20 to +60 °C	$\pm (0.2 \text{ m/s} + 2\% \text{ of m.v.})$ (0.4 to 20 m/s) $\pm 0.5$ °C	0.1 m/s 0.1 °C	0560 1410
<b>Pressure</b>					
<b>testo 510i</b> Differential pressure measuring instrument with smartphone operation, including hose kit (Ø 4 mm and 5 mm) with adapter, batteries and calibration protocol		-150 to 150 hPa	$\pm 0.05$ hPa (0 to 1 hPa) $\pm (0.2 \text{ hPa} + 1.5\% \text{ of m.v.})$ (1 to 150 hPa)	0.01 hPa	0560 1510
<b>testo 549i</b> High-pressure measuring instrument with smartphone operation, including batteries and calibration protocol		-1 to 60 bar	0.5% of final value	0.01 bar	0560 2549 02

<sup>3)</sup> Please see the additional accuracy information for humidity in the instruction manual.

# Digital temperature probes

Probe type		Measuring range	Accuracy	Resolution	Order no.
<b>Digital temperature probes</b>					
<b>High-precision digital Pt100 penetration probe</b> for measurements in liquids and pastes with an accuracy of up to $\pm 0.05$ °C		-80 to +300 °C	$\pm 0.3$ °C (-80 to -40.001 °C) $\pm (0.1$ °C + 0.05% of m.v.) (-40 to -0.001 °C) $\pm 0.05$ °C (0 to +100 °C) $\pm (0.05$ °C + 0.05% of m.v.) (+100.001 to +300 °C)	0.001 °C	0618 0275
<b>Digital Pt100 penetration probe</b> for measurements in liquids and pastes		-100 to +400 °C	$\pm (0.15$ °C + 0.2% of m.v.) (-100 to -0.01 °C) $\pm (0.15$ °C + 0.05% of m.v.) (0 to +100 °C) $\pm (0.15$ °C + 0.2% of m.v.) (+100.01 to +350 °C) $\pm (0.5$ °C + 0.5% of m.v.) (+350.01 to +400 °C)	0.01 °C	0618 0073
<b>Glass-coated digital Pt100 laboratory probe</b> for measurements in corrosive media		-50 to +400 °C	$\pm (0.3$ °C + 0.3% of m.v.) (-50 to +300 °C) $\pm (0.4$ °C + 0.6% of m.v.) (+300.01 to +400 °C)	0.01 °C	0618 7072
<b>Robust, fast-reaction, digital Pt100 air probe</b>		-100 to +400 °C	$\pm (0.15$ °C + 0.2% of m.v.) (-100 to -0.01 °C) $\pm (0.15$ °C + 0.05% of m.v.) (0 to +100 °C) $\pm (0.15$ °C + 0.2% of m.v.) (+100.01 to +350 °C) $\pm (0.5$ °C + 0.5% of m.v.) (+350.01 to +400 °C)	0.01 °C	0618 0072
<b>Flexible digital Pt100 temperature probe</b> for measurements in locations that are difficult to access and in liquids		-100 to +260 °C	$\pm (0.3$ °C + 0.3% of m.v.)	0.01 °C	0618 0071

# Analog temperature probe

Probe type	Probe shaft/probe shaft tip dimensions	Measuring range	Accuracy	Response time	Order no.
Pipe wrap probe (NTC) for pipe diameters of 5 to 65 mm, fixed cable 1.2 m		-50 to +120 °C	±0.2 °C (-25 to +80 °C)		0615 5605
Temperature probe with Velcro (NTC), fixed cable 1.4 m	 300 mm 30 mm	-50 to +70 °C	±0.2 °C (-25 to +70 °C) ±0.4 °C (-50 to -25.1 °C)	60 s	0615 4611
Watertight immersion/penetration probe NTC, fixed cable 1.2 m	 115 mm 50 mm Ø 5 mm Ø 4 mm	-50 to +150 °C	±0.5% of m.v. (+100 to +150 °C) ±0.2 °C (-25 to +74.9 °C) ±0.4 °C (remaining meas. range)	10 s	0615 1212
Robust air probe NTC, fixed cable 1.2 m	 115 mm 50 mm Ø 5 mm Ø 4 mm	-50 to +125 °C	±0.2 °C (-25 to +80 °C) ±0.4 °C (remaining meas. range)	60 s	0615 1712
Clamp probe for measurements on pipes from 6 to 35 mm diameter, NTC, fixed cable 1.5 m		-40 to +125 °C	±1 °C (-20 to +85 °C)	60 s	0615 5505
Robust air probe, TC type K, fixed cable	 115 mm Ø 4 mm	-60 to +400 °C	Class 2 <sup>1)</sup>	200 sec	0602 1793
Very fast-reaction surface probe with sprung thermocouple strip, also suitable for uneven surfaces, measuring range briefly up to +500 °C, TC type K, fixed cable	 115 mm Ø 5 mm Ø 12 mm	-60 to +300 °C	Class 2 <sup>1)</sup>	3 sec	0602 0393
Fast-reaction paddle surface probe, for measurements in places that are difficult to access, e.g. narrow openings and cracks, TC type K, fixed cable	 145 mm 40 mm Ø 8 mm Ø 7 mm	0 to +300 °C	Class 2 <sup>1)</sup>	5 sec	0602 0193
Precise, watertight surface probe with small measuring head for even surfaces, TC type K, fixed cable	 150 mm Ø 2.5 mm Ø 4 mm	-60 to +1000 °C	Class 1 <sup>1)</sup>	20 sec	0602 0693
Very fast-reaction surface probe with sprung thermocouple strip, angled for uneven surfaces as well, measuring range briefly up to +500 °C, TC type K, fixed cable	 80 mm 50 mm Ø 5 mm Ø 12 mm	-60 to +300 °C	Class 2 <sup>1)</sup>	3 sec	0602 0993
Surface temperature probe TC type K, with telescope max. 985 mm, for measurements in locations that are difficult to access, fixed cable 1.6 m (correspondingly shorter when telescope is extended)	 985 ±5 mm 12 mm Ø 25 mm	-50 to +250 °C	Class 2 <sup>1)</sup>	3 sec	0602 2394
Magnetic probe, adhesive power approx. 20 N, with adhesive magnets, for measurements on metal surfaces, TC type K, fixed cable	 35 mm Ø 20 mm	-50 to +170 °C	Class 2 <sup>1)</sup>	150 sec	0602 4792
Magnetic probe, adhesive power approx. 10 N, with adhesive magnets, for measurements on metal surfaces, TC type K, fixed cable	 75 mm Ø 21 mm	-50 to +400 °C	Class 2 <sup>1)</sup>		0602 4892

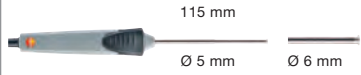





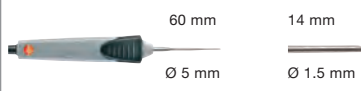



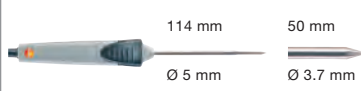
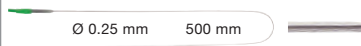
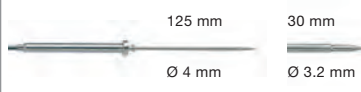
<sup>1)</sup> According to standard EN 60584-2, the accuracy of Class 1 refers to -40 to +1000 °C (type K), of Class 2 to -40 to +1200 °C (type K) and of Class 3 to -200 to +40 °C (type K). A probe only ever complies with one accuracy class.

### Information about surface measurement:

- The specified response times  $t_{90}$  are measured on polished steel or aluminium plates at +60 °C.
- The specified accuracies are sensor accuracies.
- The accuracy in your application depends on the surface properties (roughness), the material of the measurement object (thermal capacity and heat transfer) and the sensor accuracy. Testo will produce a corresponding calibration certificate for the deviations of your measurement system in your application. For this, Testo uses a surface test bed developed in cooperation with the PTB (Physikalisch Technische Bundesanstalt - National Metrology Institute of Germany).

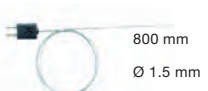






# Analog temperature probe

Probe type	Probe shaft/probe shaft tip dimensions	Measuring range	Accuracy	t <sub>99</sub>	Order no.
Watertight surface probe with wider measuring tip for even surfaces, TC type K, fixed cable		-60 to +400 °C	Class 2 <sup>1)</sup>	30 sec	0602 1993
Pipe wrap probe with Velcro strip, for measuring temperatures on pipes with diameters up to max. 120 mm, Tmax +120 °C, TC type K, fixed cable		-50 to +120 °C	Class 1 <sup>1)</sup>	90 sec	0628 0020
Pipe wrap probe for pipe diameters 5 to 65 mm, with interchangeable measuring head, measuring range briefly up to +280 °C, TC type K, fixed cable		-60 to +130 °C	Class 2 <sup>1)</sup>	5 sec	0602 4592
Replacement measuring head for pipe wrap probe, TC type K		-60 to +130 °C	Class 2 <sup>1)</sup>	5 sec	0602 0092
Clamp probe for measurements on pipes, pipe diameters 15 to 25 mm (max. 1"), measuring range briefly up to +130 °C, TC type K, fixed cable		-50 to +100 °C	Class 2 <sup>1)</sup>	5 sec	0602 4692
Precise and fast immersion probe, flexible, watertight, TC type K, fixed cable		-60 to +1000 °C	Class 1 <sup>1)</sup>	2 sec	0602 0593
Ultra-fast, watertight immersion/penetration probe, TC type K, fixed cable		-60 to +800 °C	Class 1 <sup>1)</sup>	3 sec	0602 2693
Immersion measuring tip, flexible, TC type K		-200 to +1000 °C	Class 1 <sup>1)</sup>	5 sec	0602 5792
Immersion measuring tip, flexible, TC type K		-200 to +40 °C	Class 3 <sup>1)</sup>	5 sec	0602 5793
Immersion measuring tip, flexible, for measurements in air/flue gases (not suitable for measurements in smelters), TC type K		-200 to +1300 °C	Class 1 <sup>1)</sup>	4 sec	0602 5693
Watertight immersion/penetration probe, TC type K, fixed cable		-60 to +400 °C	Class 2 <sup>1)</sup>	7 sec	0602 1293
Flexible, low-mass immersion measuring tip, ideal for measurements in small volumes, such as Petri dishes, or for surface measurements (e.g. fixed with adhesive tape)	 TC type K, 2 m, FEP-insulated thermal wire, temperature-resistant up to 200 °C, oval cable with dimensions: 2.2 mm x 1.4 mm	-200 to +1000 °C	Class 1 <sup>1)</sup>	1 sec	0602 0493
Watertight food probe made of stainless steel (IP65), TC type K, fixed cable		-60 to +400 °C	Class 2 <sup>1)</sup>	7 sec	0602 2292

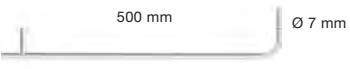
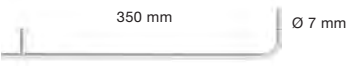
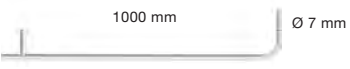

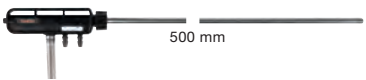

<sup>1)</sup> According to standard EN 60584-2, the accuracy of Class 1 refers to -40 to +1000 °C (type K), of Class 2 to -40 to +1200 °C (type K) and of Class 3 to -200 to +40 °C (type K). A probe only ever complies with one accuracy class.

# Analog probes

Probe type	Probe shaft/probe shaft tip dimensions	Measuring range	Accuracy	t <sub>99</sub>	Order no.
<b>Thermoelectric couples</b>					
Thermoelectric couple with TC plug, flexible, length 800 mm, glass fibre, TC type K	 800 mm Ø 1.5 mm	-50 to +400 °C	Class 2 <sup>1)</sup>	5 sec	0602 0644
Thermoelectric couple with TC plug, flexible, length 1500 mm, glass fibre, TC type K	 1500 mm Ø 1.5 mm	-50 to +400 °C	Class 2 <sup>1)</sup>	5 sec	0602 0645
Thermoelectric couple with TC plug, flexible, length 1500 mm, PTFE, TC type K	 1500 mm Ø 1.5 mm	-50 to +250 °C	Class 2 <sup>1)</sup>	5 sec	0602 0646
<b>Comfort probe</b>					
Globe thermometer Ø 150 mm, TC type K, for measuring radiant heat		0 to +120 °C	Class 1 <sup>1)</sup>		0602 0743
<b>WBGT kit for testo 400</b>					
WBGT kit (Wet Bulb Globe Temperature) for evaluating workplaces with heat immission based on ISO 7243 and DIN 33403-3, incl. transport case and tripod		Globe thermometer Ø 150 mm (TC Type K)	0 to +120 °C	Class 1 <sup>1)</sup>	0618 7220
		Ambient temperature probe (Pt100)	+10 to +60 °C	±(0.3 °C + 0.3 % of m.v.)	
		Wet bulb temperature probe (Pt100)	+5 to +40 °C	±(0.3 °C + 0.3 % of m.v.)	















<sup>1)</sup> According to standard EN 60584-2, the accuracy of Class 1 refers to -40 to +1000 °C (type K), of Class 2 to -40 to +1200 °C (type K) and of Class 3 to -200 to +40 °C (type K). A probe only ever complies with one accuracy class.

# Pitot tubes

Probe type	Probe shaft/probe shaft tip dimensions	Measuring range	Order no.
Pitot tube, length 500 mm, Ø 7 mm, stainless steel, for measuring flow velocity*	 500 mm Ø 7 mm	Measuring range 1 to 100 m/s Operating temperature 0 to +600 °C Pitot tube factor 1.0	0635 2045
Pitot tube, length 350 mm, Ø 7 mm, stainless steel, for measuring flow velocity*	 350 mm Ø 7 mm	Measuring range: 1 to 100 m/s Operating temperature: 0 to +600 °C Pitot tube factor: 1.0	0635 2145
Pitot tube, length 1000 mm, stainless steel, for measuring flow velocity*	 1000 mm Ø 7 mm	Measuring range: 1 to 100 m/s Operating temperature: 0 to +600 °C Pitot tube factor: 1.0	0635 2345
Straight Pitot tube with integrated temperature measurement, including connection hose, length 360 mm	 360 mm	Measuring range: 1 to 30 m/s Operating temperature: 0 to +600 °C Pitot tube factor: 0.67 Minimum immersion depth: 150 mm	0635 2043
Straight Pitot tube with integrated temperature measurement, including connection hose, length 500 mm	 500 mm	Measuring range: 1 to 30 m/s Operating temperature: 0 to +600 °C Pitot tube factor: 0.67 Minimum immersion depth: 150 mm	0635 2143
Straight Pitot tube with integrated temperature measurement, including connection hose, length 1000 mm	 1000 mm	Measuring range: 1 to 30 m/s Operating temperature: 0 to +600 °C Pitot tube factor: 0.67 Minimum immersion depth: 150 mm	0635 2243

\*Connection hose required (order no. 0554 0440) or (order no. 0554 0453)

## Accessories

Accessories for comfort level measurement		Order no.
	IAQ data logger for long-term measurements with the testo 400	0577 0400
	Measuring tripod for comfort level measurements with standard-compliant positioning of probes (including bag)	0554 1591
Accessories for digital flow probes		Order no.
	Extendable telescope for testo 400 / 440 flow probes (37.5 to 100 cm including 90° angle)	0554 0960
	Telescope extension (0.9 m) for testo 400 / 440 flow probes	0554 0990
	90° angle for connecting vane probes (Ø 100 mm)	0554 0991
	Handle adapter for connection to flow probes	0554 2160
	Telescopic rod with universal joint for testo 400 / testo 440 / testo 480 flow velocity probes (0.6 to 1.8 m)	0430 0946
Other accessories		Order no.
	Transport case for air flow measurement (520 x 410 x 160 mm)	0516 1400
	Transport case for IAQ and comfort level measurement (520 x 410 x 210 mm)	0516 2400
	testovent 417 funnel kit comprising funnel for plate outlets (Ø 200 mm) and funnel for fans (330 x 330 mm) for incoming / outgoing air	0563 4170
	testovent 417 volume flow straightener	0554 4172
	USB mains unit, including cable	0554 1106
	Connection hose, silicone, length 5 m, maximum load capacity 700 hPa (mbar)	0554 0440
	Connection hose, silicone-free for differential pressure measurement, length 5 m, maximum load capacity 700 hPa (mbar)	0554 0453
	Control and calibration kit for Testo humidity probes, saline solution with 11.3 %RH and 75.3 %RH, including adapter for Testo humidity probes	0554 0660
	PC software testo DataControl for data analysis	0501 4000

## Accessories

Calibration certificates	Order no.
ISO flow calibration certificate; hot wire/vane anemometer, Pitot tube; calibration points 1; 2; 5; 10 m/s	0520 0004
ISO flow calibration certificate; hot wire/vane anemometer, Pitot tube; calibration points 0.3; 0.5; 0.8; 1.5 m/s	0520 0024
ISO flow calibration certificate; hot wire/vane anemometer, Pitot tube; calibration points 5; 10; 15; 20 m/s	0520 0034
ISO flow calibration certificate; hot wire/vane anemometer, Pitot tube; selective calibration points in the 0.5 to 27 m/s range	0520 0104
DAkKS flow calibration certificate; hot wire/vane anemometer, Pitot tube; selective calibration points in the 0.1 to 27 m/s range	0520 0214
DAkKS flow calibration certificate; hot wire/vane anemometer, Pitot tube; calibration points 0.5; 1; 2; 5; 10 m/s	0520 0244
ISO pressure calibration certificate; 5 calibration points; accuracy > 0.6% of f.v.	0520 0005
ISO pressure calibration certificate; 5 calibration points; accuracy 0.1 to 0.6% of f.v.	0520 0025
DAkKS pressure calibration certificate; 5 calibration points; accuracy > 0.6% of f.v.	0520 0225
ISO humidity calibration certificate, electronic hygrometer; calibration points 11.3 %RH and 75.3 %RH at +25 °C	0520 0006
ISO humidity calibration certificate; electronic hygrometer; calibration points 11.3; 50; 75.3 %RH at +25 °C	0520 0166
DAkKS humidity calibration certificate; electronic hygrometer; calibration points 11.3 %RH and 75.3 %RH at +25 °C	0520 0206
DAkKS humidity calibration certificate; electronic hygrometer; selective calibration points 5 to 95 %RH at -18 to +70 °C	0520 0216
ISO temperature calibration certificate, for air/immersion probe, calibration points -18°C; 0 °C; +60 °C	0520 0001
ISO temperature calibration certificate for air/immersion probe, selective calibration points in the -196 to +1200 °C range	0520 0101
DAkKS temperature calibration certificate for air/immersion probe, selective calibration points in the -196 to +1000 °C range	0520 0201
DAkKS temperature calibration certificate; measuring instruments with air/immersion probe; calibration points -20 °C; 0 °C; +60 °C	0520 0211
ISO luminous intensity calibration certificate; calibration points 0; 500; 1000; 2000; 4000 lux	0520 0010
ISO luminous intensity calibration certificate; selective calibration points in the 0; 50 to 10,000 lux range	0520 0123
ISO CO <sub>2</sub> calibration certificate; CO <sub>2</sub> probes; calibration points 0; 1000; 5000 ppm	0520 0033

# testo 400 air flow kit with hot wire probe

Kit for standard-compliant volume flow measurement in ducts, at outlets and on filters

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Determination of volume flow in ducts using grid measurement in accordance with EN ISO 12599 and ASHRAE 111

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Determination of volume flow at outlets or on individual components through measurement of the reference pressure and input of the manufacturer-specific K factor

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Complete measurement with full documentation directly on site with the customer or further analysis with the measurement data management and analysis software testo DataControl

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Parallel measurement of flow, differential pressure, humidity and temperature

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Integrated absolute pressure sensor, high-precision and location-independent differential pressure sensor; external high-precision humidity/temperature probe head

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Compatible with a comprehensive selection of Bluetooth® and cable probes.



The testo 400 air flow kit with hot wire probe is the ideal equipment for all air velocity & IAQ professionals focusing on volume flow measurement. It provides you with smart support through stored measurement menus and an evaluation of measuring values according to the traffic light principle – for error-free measurements. You can manage all the relevant customer data, including measuring points, directly in the instrument and thus work directly and efficiently on site. The probe heads can be changed very quickly and easily without restarting the instrument. Both calibration of probes which is independent of the measuring instrument and the adjustment function at up to six measuring points for zero-error display ensure fewer downtimes and high-precision measurements.

Your advantages in application:

- You can combine the 100 mm vane probe including Bluetooth® with the telescope and 90° angle for ceiling outlets or with the funnel kit for plate outlets
- Simple filter checks on air conditioning and ventilation systems thanks to integrated differential pressure measurement
- Set HVAC systems properly in accordance with EN ISO 12599
- The Bluetooth® handle can be combined with probe heads and the telescope, thus avoiding troublesome cable clutter in the case

**Scope of delivery**

- testo 400 universal IAQ instrument, including transport case, for volume flow measurement, silicone hoses, mains unit with USB cable (order no. 0560 0400)
- Hot wire probe with Bluetooth®, including temperature and humidity sensor (comprising hot wire probe head, telescope (extendable to 1.0 m) handle adapter and Bluetooth® handle), 4 x AA batteries (order no. 0635 1571)
- Vane probe head (Ø 100 mm), including temperature sensor (order no. 0635 9430)
- High-precision humidity/temperature probe head (order no. 0636 9770)
- 90° angle for connecting vane probes (Ø 100 mm) (order no. 0554 0991)

Order no. 0563 0400 71



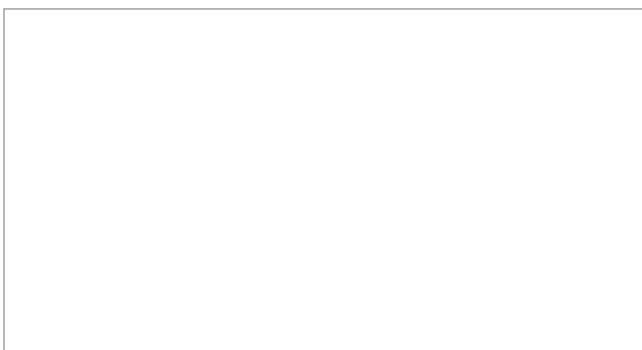
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Technical data	Measuring range	Accuracy	Resolution
<b>Digital probes</b>			
<b>Hot wire probe with Bluetooth®</b> , including temperature and humidity sensor 	0 to 50 m/s -20 to +70 °C 5 to 95 % RH 700 to 1100 hPa	$\pm(0.03 \text{ m/s} + 4\% \text{ of m.v.})$ (0 to 20 m/s) $\pm(0.5 \text{ m/s} + 5\% \text{ of m.v.})$ (20.01 to 30 m/s) $\pm 0.5 \text{ °C}$ (0 to +70 °C) $\pm 0.8 \text{ °C}$ (-20 to 0 °C) $\pm 3.0 \text{ \%RH}$ (10 to 35 \%RH)* $\pm 2.0 \text{ \%RH}$ (35 to 65 \%RH)* $\pm 3.0 \text{ \%RH}$ (65 to 90 \%RH)* $\pm 5 \text{ \%RH}$ (remaining meas. range)* $\pm 3 \text{ hPa}$	0.01 m/s 0.1 °C 0.1 %RH 0.1 hPa
<b>Vane probe head (Ø 100 mm)</b> , including temperature sensor 	0.3 to 35 m/s -20 to +70 °C	$\pm(0.1 \text{ m/s} + 1.5\% \text{ of m.v.})$ (0.3 to 20 m/s) $\pm(0.2 \text{ m/s} + 1.5\% \text{ of m.v.})$ (20.01 to 35 m/s) $\pm 0.5 \text{ °C}$	0.01 m/s 0.1 °C
<b>High-precision humidity/temperature probe head</b> 	0 to 100 %RH -20 to +70 °C	$\pm(0.6 \text{ \%RH} + 0.7\% \text{ of m.v.})$ (0 to 9 \%RH)* $\pm(1.0 \text{ \%RH} + 0.7\% \text{ of m.v.})$ (90 to 100 \%RH)* $\pm 0.3 \text{ °C}$ (15 to 30 °C) $\pm 0.5 \text{ °C}$ (remaining meas. range)	0.01 %RH 0.1 °C
<b>testo 400</b>			
<b>testo 400 universal IAQ instrument</b> Connectable probes: 2x TC type K, 2x NTC (TUC) / digital probes with cable, 4x Bluetooth® probes 	<b>Differential pressure</b>		0.001 hPa
	-100 to +200 hPa	$\pm 0.3 \text{ Pa} + 1\% \text{ of m.v.}$ (0 to +25 hPa) $\pm 0.1 \text{ hPa} + 1.5\% \text{ of m.v.}$ (+25.001 to +200 hPa)	
	<b>Absolute pressure</b>		0.1 hPa
	700 to 1100 hPa	$\pm 3 \text{ hPa}$	

\*Please see the additional accuracy information for humidity in the instruction manual.

General technical data	testo 400	Hot wire probe with Bluetooth®	Vane probe head (Ø 100 mm)	High-precision humidity/temperature probe head
Data transmission	Bluetooth®, USB, WLAN	Bluetooth®		
Operating temperature	-5 to +45 °C	-20 to +70 °C	-20 to +70 °C	-20 to +70 °C
Storage temperature	-20 to +60 °C	-20 to +70 °C	-20 to +70 °C	-20 to +70 °C
Dimensions	210 x 95 x 39 mm	780 x 50 x 40 mm	180 x 105 x 46 mm	160 x 28 x 28 mm
Probe head diameter		9 mm	100 mm	12 mm
Weight	510 g	400 g	125 g	20 g

You will find the complete selection of probes and accessories for the testo 400 in the testo 400 data sheet or at [www.testo.com](http://www.testo.com).



Subject to change without notice.



# testo 400 air flow kit with 16 mm vane probe

Kit for standard-compliant  
measurement in ducts,  
at outlets and on filters

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Determination of volume flow in ducts using grid measurement  
in accordance with EN ISO 12599 and ASHRAE 111

---

Determination of volume flow at outlets or on individual  
components through measurement of the reference  
pressure and input of the manufacturer-specific K factor

---

Complete measurement with full documentation directly  
on site with the customer or further analysis with the  
measurement data management and analysis software  
testo DataControl

---

Parallel measurement of flow, differential pressure, humidity  
and temperature

---

Integrated absolute pressure sensor, high-precision and  
location-independent differential pressure sensor; external  
high-precision humidity/temperature probe head

---



Compatible with a  
comprehensive selection of  
Bluetooth® and cable probes.



The testo 400 air flow kit with 16 mm vane probe is the ideal equipment for all air velocity & IAQ professionals focusing on volume flow measurement. It provides you with smart support through stored measurement menus and an evaluation of measuring values according to the traffic light principle – for error-free measurements. You can manage all the relevant customer data, including measuring points, directly in the instrument and thus work directly and efficiently on site. The probe heads can be changed very quickly and easily without restarting the instrument. Both calibration of probes which is independent of the measuring instrument and the adjustment function at up to six measuring points for zero-error display ensure fewer downtimes and high-precision measurements.

Your advantages in application:

- You can combine the 100 mm vane probe including Bluetooth® with the telescope and 90° angle for ceiling outlets or with the funnel kit for plate outlets
- Simple filter checks on air conditioning and ventilation systems thanks to integrated differential pressure measurement
- Set HVAC systems properly in accordance with EN ISO 12599
- The Bluetooth® handle can be combined with probe heads and the telescope, thus avoiding troublesome cable clutter in the case

**Scope of delivery**

- testo 400 universal IAQ instrument, including transport case, for volume flow measurement, silicone hoses, mains unit with USB cable (order no. 0560 0400)
- Vane probe (Ø 16 mm) with Bluetooth®, including temperature sensor (comprising 16 mm vane probe head, 1 m long extendable telescope, handle adapter and Bluetooth® handle), 4 x AA batteries (order no. 0635 9571)
- Vane probe head (Ø 100 mm), including temperature sensor (order no. 0635 9430)
- High-precision humidity/temperature probe head (order no. 0636 9770)
- 90° angle for connecting vane probes (Ø 100 mm) with universal handle (order no. 0554 0991)



Order no. 0563 0400 72

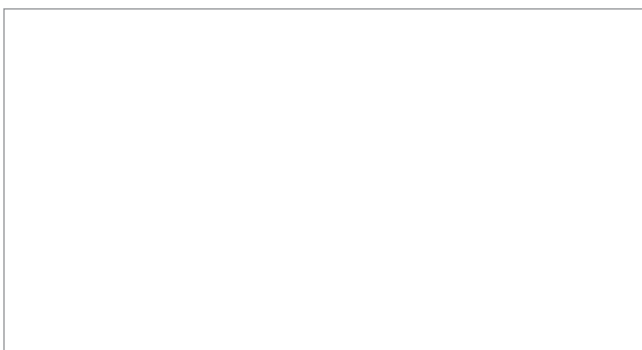
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Technical data	Measuring range	Accuracy	Resolution
<b>Digital probes</b>			
<b>Vane probe (Ø 16 mm) with Bluetooth®</b> , including temperature sensor 	0.6 to 50 m/s -10 to +70 °C	±(0.2 m/s + 1% of m.v.) (0.6 to 40 m/s) ±(0.2 m/s + 2% of m.v.) (40.1 to 50 m/s) ±1.8 °C	0.1 m/s 0.1 °C
<b>Vane probe head (Ø 100 mm)</b> , including temperature sensor 	0.3 to 35 m/s -20 to +70 °C	±(0.1 m/s + 1.5% of m.v.) (0.3 to 20 m/s) ±(0.2 m/s + 1.5% of m.v.) (20.01 to 35 m/s) ±0.5 °C	0.01 m/s 0.1 °C
<b>High-precision humidity/temperature probe head</b> 	0 to 100 %RH -20 to +70 °C	±(0.6 %RH + 0.7% of m.v.) (0 to 90 %RH)* ±(1.0 %RH + 0.7% of m.v.) (90 to 100 %RH)* ±0.3 °C (15 to 30 °C) ±0.5 °C (remaining meas. range)	0.01 %RH 0.1 °C
<b>testo 400</b>			
<b>testo 400 universal IAQ instrument</b> Connectable probes: 2x TC type K, 2x NTC (TUC) / digital probes with cable, 4x Bluetooth® probes 	<b>Differential pressure</b>		
	-100 to +200 hPa	±0.3 Pa + 1% of m.v. (0 to +25 hPa) ±0.1 hPa + 1.5% of m.v. (+25.001 to +200 hPa)	0.001 hPa
	<b>Absolute pressure</b>		
700 to 1100 hPa	±3 hPa	0.1 hPa	

\*Please see the additional accuracy information for humidity in the instruction manual.

General technical data	testo 400	16 mm vane probe with Bluetooth®	Vane probe head (Ø 100 mm)	High-precision humidity/temperature probe head
Data transmission	Bluetooth®, USB, WLAN	Bluetooth®		
Operating temperature	-5 to +45 °C	-10 to +70 °C	-20 to +70 °C	-20 to +70 °C
Storage temperature	-20 to +60 °C	-10 to +70 °C	-20 to +70 °C	-20 to +70 °C
Dimensions	210 x 95 x 39 mm	790 x 50 x 40 mm	180 x 105 x 46 mm	160 x 28 x 28 mm
Probe head diameter		16 mm	100 mm	12 mm
Weight	510 g	400 g	125 g	20 g

You will find the complete selection of probes and accessories for the testo 400 in the testo 400 data sheet or at [www.testo.com](http://www.testo.com).



# testo 400 IAQ and comfort kit with tripod

## Kit for standard-compliant measurement of indoor air quality and comfort level

Determination of the PMV and PPD comfort level parameters in accordance with EN ISO 7730 and ASHRAE 55

Determination of the draught and degree of turbulence comfort level parameters in accordance with EN ISO 7730 and ASHRAE 55

Indoor air quality: Determination of CO<sub>2</sub> concentration, humidity, air temperature and degree of turbulence in workplaces, including long-term measurement

Complete measurement with full documentation directly on site with the customer or further analysis with the PC software testo DataControl

Globe thermometer for measuring radiant heat, measuring tripod for comfort level measurement to ensure standard-compliant positioning of probes



Compatible with a comprehensive selection of Bluetooth® and cable probes.



The testo 400 IAQ and comfort kit with tripod is the ideal equipment for all air velocity & IAQ professionals focusing on indoor air quality and comfort level. It provides you with smart support through stored measurement menus and an evaluation of measuring values according to the traffic light principle – for error-free measurements. You can manage all the relevant customer data, including measuring points, directly in the instrument and thus work directly and efficiently on site. The probe heads can be changed very quickly and easily without restarting the instrument. Both calibration of probes which is independent of the measuring instrument and the adjustment function at up to six measuring points for zero-error display ensure fewer downtimes and high-precision measurements.

Your advantages in application:

- Determination of the PMV/PPD, draught rate and degree of turbulence comfort level parameters with the measuring tripod to ensure standard-compliant positioning of up to 3 probes at the same time
- Long-term measurements up to 2 weeks can be recorded using the IAQ data logger (please order separately), even without the testo 400
- Can be extended at any time with a large portfolio of digital probes


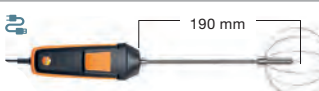
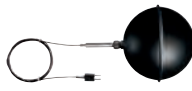
**Scope of delivery**

- testo 400 universal IAQ instrument, silicone hoses, mains unit with USB cable
- CO<sub>2</sub> probe with Bluetooth®, including temperature and humidity sensor, (comprising CO<sub>2</sub> probe head and Bluetooth® handle), including 4 x AA batteries and table stand (order no. 0632 1551)
- Turbulence probe with fixed cable (order no. 0628 0152)
- Globe thermometer Ø 150 mm with fixed cable, TC type K, for measuring radiant heat (order no. 0602 0743)
- Measuring tripod for comfort level measurements, comprising a folding stand, mounting rod, handheld instrument holder, 4 x probe mounts, including large bag (order no. 0554 1591)
- testo 400 transport case for comfort level measurement (order no. 0516 2400)



Order no. 0563 0401

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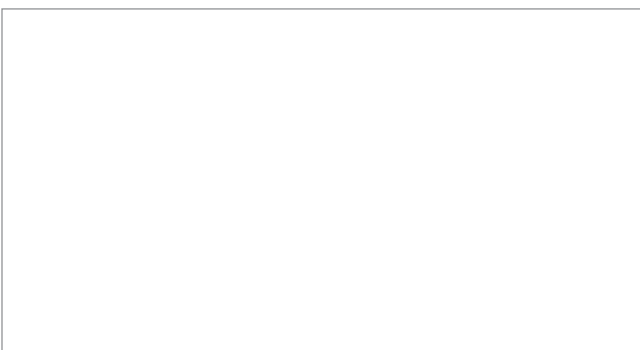
Technical data	Measuring range	Accuracy	Resolution
<b>Probes</b>			
<b>CO<sub>2</sub> probe with Bluetooth®,</b> including temperature and humidity sensor 	0 to 10,000 ppm CO <sub>2</sub> 5 to 95 %RH 0 to +50 °C 700 to 1100 hPa	±(50 ppm + 3% of m.v.) (0 to 5,000 ppm) ±(100 ppm + 5% of m.v.) (5,001 to 10,000 ppm) ±3% RH (10 to 35% RH) ±2 %RH (35 to 65 %RH) ±3 %RH (65 to 90 %RH) ±5 %RH (remaining meas. range) ±0.5 °C ±3 hPa	1 ppm 0.1 %RH 0.1 °C 0.1 hPa
<b>Turbulence probe, fixed cable</b> 	0 to +5 m/s 0 to +50 °C 700 to 1100 hPa	±(0,03 m/s + 4% of m.v.) (0 to 5 m/s) ±0.5 °C ±3 hPa	0.01 m/s 0.1 °C 0.1 hPa
<b>Globe thermometer Ø 150 mm,</b> TC type K, for measuring radiant heat 	0 to +120 °C	Class 1 <sup>1)</sup>	

<sup>1)</sup> According to standard EN 60584-2, the accuracy of Class 1 refers to -40 to +1000 °C (type K), Class 2 to -40 to +1200 °C (type K), Class 3 to -200 to +40 °C (type K). A probe only ever complies with one accuracy class.

<b>testo 400</b>			
<b>testo 400 universal IAQ instrument</b> Connectable probes: 2x TC type K, 2x NTC (TUC) / digital probes with cable, 4x Bluetooth® probes 	<b>Differential pressure</b>		
	-100 to +200 hPa	±0.3 Pa + 1% of m.v. (0 to +25 hPa) ±0.1 hPa + 1.5% of m.v. (+25.001 to +200 hPa)	0.001 hPa
<b>Absolute pressure</b>			
700 to 1100 hPa	±3 hPa		0.1 hPa

General technical data	testo 400	CO <sub>2</sub> probe with Bluetooth®	Turbulence probe	Globe thermometer
Data transmission	Bluetooth®; USB, WLAN	Bluetooth®		
Operating temperature	-5 to +45 °C	0 to +50 °C	0 to +50 °C	
Storage temperature	-20 to +60 °C	0 to +50 °C	-20 to +60 °C	
Dimensions	210 x 95 x 39 mm	290 x 50 x 40 mm	400 x 90 x 90 mm	250 x 150 x 150 mm
Probe head diameter		30 mm	820 mm	
Weight	510 g	195 g	250 g	385 g

You will find the complete selection of probes and accessories for the testo 400 in the testo 400 data sheet or at [www.testo.com](http://www.testo.com).



Subject to change without notice.



# IAQ data logger for long-term measurements

Data logger configurable via testo 400 universal IAQ instrument

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Stand-alone data logger for long-term measurements up to 2 weeks

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Compatible with probes for measuring comfort level, degree of turbulence, radiant heat, CO<sub>2</sub>, CO, illuminance, air flow velocity, humidity and temperature

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Connect up to six fixed cable probes at the same time

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Analysis and archiving of measurement data with testo DataControl PC software

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Practical tripod for mounting data logger and probes as an accessory

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Compatible with a comprehensive selection of cable probes.



The IAQ data logger is an autonomous measuring unit for long-term measurements with the testo 400. The universal IAQ instrument is used for programming measuring interval and time. During the measurement, the IAQ data logger works independently from the measuring instrument. In the meantime, the testo 400 can be used for measurements elsewhere. Once the IAQ measurement is completed, you can read out, analyze and document all the saved values with the testo 400.

Main applications of the IAQ data logger in combination with the appropriate probes:

- PMV/PPD measurement in accordance with EN ISO 7730 / ASHRAE 55
- Local discomfort level measurement in accordance with EN ISO 7730 / ASHRAE 55, e.g. draught rate and degree of turbulence at up to three positions at the same time
- NET measurement in accordance with DIN 33403

A practical tripod is available as an accessory for mounting logger and probes.

## Ordering data

### IAQ data logger

IAQ data logger for long-term measurements with the testo 400, including mains unit with USB cable and certificate of conformity.



Order no. 0577 0400

### Measuring tripod

Measuring tripod for comfort level measurement, consisting of folding stand, mounting rod, 4 x probe mounts, including bag.



Order no. 0554 1591

## Technical data

#### Temperature NTC (with appropriate probe)

Measuring range	-40 to +150 °C
Accuracy (±1 digit)	±0.2 °C (-25.0 to +74.9 °C) ±0.4 °C (-40.0 to -25.1 °C) ±0.4 °C (+75.0 to +99.9 °C) ±0.5 % of m.v. (remaining meas. range)
Resolution	0.1 °C

#### Temperature TC type K (with appropriate probe)

Measuring range	-200 to +1370 °C
Accuracy (±1 digit)	±(0.3 °C + 0.1 % of m.v.)
Resolution	0.1 °C

#### General technical data

Probe connections	4x TUC*, 2x TC type K
Interface	USB
Operating temperature	-5 to +45 °C
Storage temperature	-20 to +60 °C
Power supply	External power supply via mains unit
Memory	1.5 MB = 360,000 readings
Protection class	IP 20
Dimensions	136 x 89 x 39 mm
Weight	162 g

\*TUC connection (Testo Universal Connector): For the connection of fixed cable digital probes and NTC probes.

You will find the complete selection of probes and accessories for the testo 400 in the testo 400 data sheet or at [www.testo.com](http://www.testo.com).



# Thermal anemometer

testo 405

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Flow velocity measuring instrument with temperature measurement

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Volume flow measurement up to 99990 m<sup>3</sup>/h

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Extendable telescope up to 300 mm

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Display illumination

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testo 405 is a thermal anemometer. It allows the precise measurement of air flow velocity, volume flow and temperature. With the extendable telescope (up to 300 mm), testo 405 is particularly suited for measuring the flow velocity in ducts. Thanks to the attachment included in delivery, the telescope can be optimally positioned in a duct.

The testo 405 measures especially accurately in the range from 0 and 2 m/s. Low air flow velocities such as at draughty windows, for example, can thus be localized exactly and measured extremely accurately. The display can be rotated into different positions. This enables optimum readout of the measurement values.

## Technical data / Accessories

### testo 405

testo 405 thermal anemometer with duct holder,  
incl. attachment clip and batteries

Part no. 0560 4053



#### General technical data

Storage temperature	-20 to +70 °C
Operating temperature	0 to +50 °C
Battery type	3 AAA micro batteries
Battery life	Approx. 20 h
Dimensions	490 x 37 x 36 mm
Length Probe shaft	300 mm
Diameter Probe shaft / Probe shaft tip	Ø 16 mm / Ø 12 mm
Weight	115 g (with batteries, without packaging)

#### Sensor types

	Thermal	NTC
Measuring range	0 to 5 m/s (-20 to 0 °C) 0 to 10 m/s (0 to +50 °C) 0 to +99990 m <sup>3</sup> /h	-20 to +50 °C
Accuracy ±1 digit	±(0.1 m/s + 5% of m.v.) (0 to +2 m/s) ±(0.3 m/s + 5% of m.v.) (remaining range)	±0.5 °C
Resolution	0.01 m/s	0.1 °C

#### Accessories for measuring instrument

#### Part no.

ISO calibration certificate velocity, two point calibration; calibration points 5m/s and 10m/s	0520 0094	
ISO calibration certificate velocity, hot wire, vane anemometer, Pitot tube; calibration points 1; 2; 5; 10 m/s	0520 0004	

# Thermal anemometer operated with smartphone

## testo 405i

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Compact professional measuring instrument from the Testo Smart Probes series, for use with smartphones/tablets

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Measurement of air flow velocity, temperature and volume flow

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Easy configuration (dimensions and geometry) of the duct cross-section for determining volume flow

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Measurement data analyzed and sent via testo Smart App

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Telescopic shaft, extendable up to 400 mm

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Space-saving and easy to transport

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 Bluetooth  
+ App

testo Smart App  
for free download



The hot-wire anemometer testo 405i, in combination with a smartphone or tablet, is a compact measuring instrument for air flow velocities, temperatures and volume flows.

Equipped with a telescopic shaft, extendable to 400 mm, it allows flexible applications in rooms and ducts. Via the testo Smart App installed on the end device, users can comfortably read off their measurement values, configure volume flow measurements quickly and easily, and reliably determine timed and multi-point mean values.


The measurement protocols can then be directly sent as PDF or Excel files. In combination with the thermal hygrometer testo 605i, the testo 405i is suitable for determining cooling or heating performance.

# Technical data/accessories

**testo 405i**

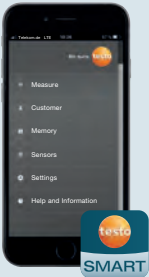
testo 405i, thermal anemometer operated with smartphone, incl. batteries and calibration protocol

Order no. 0560 1405



**testo Smart App**

The App turns your smartphone/tablet into the display of the testo 405i. The operation of the measuring instrument as well as the display of the measurement values take place by Bluetooth via the Testo Smart App on your smartphone or tablet – independently of the measurement location. In addition to this, you can use the App to create measurement reports, add photos and comments to these, and send them by e-mail. For iOS and Android.



Sensor type	Hot wire
Measuring range	0 to 30 m/s
Accuracy ±1 digit	±(0.1 m/s + 5 % of m.v.) (0 to 2 m/s) ±(0.3 m/s + 5 % of m.v.) (2 to 15 m/s)
Resolution	0.01 m/s

Sensor type	NTC
Measuring range	-20 to +60 °C
Accuracy ±1 digit	±0.5 °C
Resolution	0.1 °C

### General technical data

Compatibility	requires iOS 11.0 or newer / Android 6.0 or newer requires mobile end device with Bluetooth 4.0
Storage temperature	-20 to +60 °C
Operating temperature	-20 to +50 °C
Battery type	3 micro batteries AAA
Battery life	15 hrs
Dimensions	200 x 30 x 41 mm Telescope extendable to 400 mm

### Accessories

### Order no.

testo Smart Case (VAC) for the storage and transport of testo 405i, testo 410i, testo 510i, testo 605i, testo 805i and testo 905i, dimensions 270 x 190 x 60 mm	0516 0260	
ISO calibration certificate flow velocity, two-point calibration, calibration points 5; 10 m/s	0520 0094	
ISO calibration certificate flow velocity, hot-wire/vane anemometer, Pitot tube; calibration points 1; 2; 5; 10 m/s	0520 0004	



## Vane anemometer

### testo 410 – Pocket-sized flow velocity measuring instrument

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Flow velocity measuring instrument with temperature measurement

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Integrated measurement with 30 mm vane

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Time mean value calculation

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Hold function and max./min. values

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Windchill calculation for outdoor areas

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Additional advantages testo 410-2: Air humidity measurement with long-term stable Testo humidity sensor

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Illustration 1.1

The vane anemometers testo 410-1 and testo 410-2 offer perfect flow velocity measurement results in handy pocket format. The small, user-friendly testo 410-1 measures air flow velocity and temperature, and is suitable for fast spot checks on ventilation outlets thanks to the integrated measurement with the 30 mm vane. A timed mean value calculation is also possible. The measuring instrument has an illuminated display, a clip-on protective cap, and a wrist strap and a belt holder ensure safekeeping.

In addition to air flow velocity and air temperature, the testo 410-2 also measures air humidity. This allows air conditions to be tested reliably. In addition to this, dewpoint and wet bulb are calculated and displayed fully automatically.

# Technical data / Accessories

## testo 410-1

testo 410-1 handy vane anemometer with integrated NTC air thermometer incl. protection cap, batteries and calibration protocol

Part no. 0560 4101



### General technical data

Dimensions	133 x 46 x 25 mm (incl. protective cap)
Operating temperature	-10 to +50 °C
Storage temperature	-20 to +70 °C
Protection class	IP10
Battery type	2 AAA micro batteries
Weight	110 g (with protective cap and batteries)
Measuring rate	0.5 s

## testo 410-2

testo 410-2 handy vane probe anemometer with integrated humidity measurement and NTC-air thermometer incl. protection cap, batteries and calibration protocol

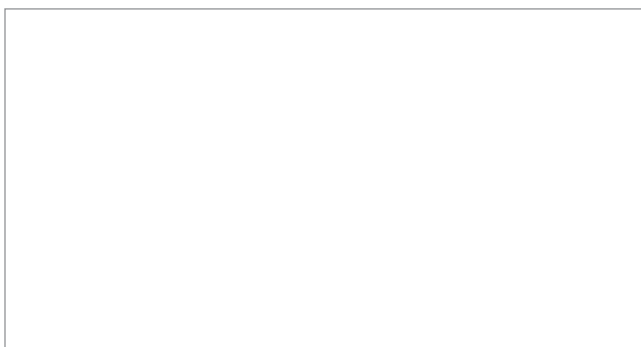
Part no. 0560 4102



Technical data	testo 410-1/-2		testo 410-2
Sensor types	Vane	NTC	Testo humid. sensor, cap.
Measuring range	0.4 to 20 m/s	-10 to +50 °C	0 to 100 %RH
Accuracy ±1 digit	±(0.2 m/s + 2% of m.v.)	±0.5 °C	±2.5 %RH* (5 to 95 %RH)
Resolution	0.1 m/s	0.1 °C	±0.1 %RH
Battery life	100 h (average, without display illumination)		60 h (average, without display illumination)

\*Please see the additional accuracy information for humidity in the instruction manual.

Accessories for measuring instrument	Part no.
ISO calibration certificate velocity two point calibration; calibration points 5m/s and 10m/s	0520 0094
ISO calibration certificate velocity hot wire, vane anemometer, Pitot tube; calibration points 5; 10; 15; 20 m/s	0520 0034





# Vane anemometer operated with smartphone

testo 410i

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Compact professional measuring instrument from the Testo Smart Probes series, for use with smartphones/tablets

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Measurement of air flow velocity, volume flow and temperature

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Easy parameterization of the outlet for volume flow measurement (dimensions and geometry)

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Presentation of the volume flow of several outlets for the purposes of regulating systems

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Measurement data analyzed and sent via testo Smart App

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Space-saving and easy to transport

---



Bluetooth  
+ App

testo Smart App  
for free download




The compact vane anemometer testo 410i, in combination with a smartphone or tablet, is suitable for measuring air flow velocity, volume flow and temperature at air outlets, and for regulating the air flow of a ventilation system. Via the testo Smart App installed on the end device, users can comfortably read off their measurement values, configure volume flow measurements quickly and easily, and reliably determine timed and multi-point mean values.

Especially useful: when regulating a ventilation system, you can compare the volume flows of several outlets. The measurement protocols can then be directly sent as PDF or Excel files.

# Technical data/accessories

**testo 410i**

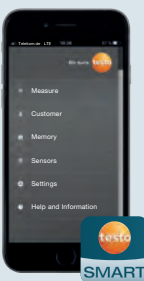
testo 410i, vane anemometer operated with smartphone, incl. batteries and calibration protocol



Order no. 0560 1410

**testo Smart App**

The App turns your smartphone/tablet into the display of the testo 410i. The operation of the measuring instrument as well as the display of the measurement values take place by Bluetooth via the testo Smart App on your smartphone or tablet – independently of the measurement location. In addition to this, you can use the App to create measurement reports, add photos and comments to these, and send them by e-mail. For iOS and Android.



Sensor type	Vane
Measuring range	0.4 to 30 m/s
Accuracy ±1 digit	±(0.2 m/s + 2 % of m.v.) (0.4 to 20 m/s)
Resolution	0.1 m/s

Sensor type	NTC
Measuring range	-20 to +60 °C
Accuracy ±1 digit	±0.5 °C
Resolution	0.1 °C

**General technical data**

Compatibility	requires iOS 11.0 or newer / Android 6.0 or newer
	requires mobile end device with Bluetooth 4.0
Storage temperature	-20 to +60 °C
Operating temperature	-20 to +50 °C
Battery type	3 micro batteries AAA
Battery life	130 hrs
Dimensions	154 x 43 x 21 mm
	30 mm vane diameter

Accessories	Order no.
testo Smart Case (VAC) for the storage and transport of testo 405i, testo 410i, testo 510i, testo 605i, testo 805i and testo 905i, dimensions 270 x 190 x 60 mm	0516 0260
ISO calibration certificate flow velocity, two-point calibration, calibration points 5 m/s and 10 m/s	0520 0094
ISO calibration certificate flow velocity, hot-wire/vane anemometer, Pitot tube; calibration points 5; 10; 15; 20 m/s	0520 0034

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Subject to change without notice.



# Vane anemometer

## testo 416 - Digital 16 mm vane anemometer with App connection

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Simple, fast and precise flow measurement and volume flow calculation in the ventilation duct

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More flexibility for duct measurements with the cable-connected telescopic probe (maximum length 850 mm)

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Fast in-app (duct) configuration, graph history, second screen and measurement data memory in the testo Smart App

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Timed and point mean value calculation

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Durability through compact design with robust housing

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With the compact 16 mm vane anemometer testo 416 with telescopic probe and App connection, you can carry out flow measurements in the ventilation duct of **air conditioning and ventilation systems** easily, quickly and precisely.

The integrated telescope can be extended up to 850 mm, making it easier to work overhead or in large diameter ducts. To ensure that you have all the relevant information

at your fingertips, the testo 416 automatically calculates time and point average values as well as the volume flow rate. And thanks to the compact design and the robust housing, the vane anemometer can also stand it if conditions get a little rougher at times.

Incidentally: Configuration of the measuring instrument, display and storage of measured values as well as documentation are all particularly convenient with the testo Smart App. This also turns your smartphone into a second display.

 Bluetooth 5.0  
+ App 

testo Smart App  
for free download

 JETZT BEI  
Google Play


 Laden im  
App Store



# Ordering data / technical data / accessories

**testo 416**

testo 416, 16 mm vane anemometer with App connection, fixed telescope (max. 850 mm), incl. carrying bag, calibration protocol and 3 X AA batteries



Order no. 0563 0416



**The testo Smart App**

- Simple and fast: Measurement menus for numerous applications provide optimum support in configuring and carrying out the measurement
- Clear graphical presentation of readings, e.g. as a table, for quick interpretation of results
- Create digital measurement reports including photos as PDF/CSV files on site and send via e-mail




Free download for Android and iOS

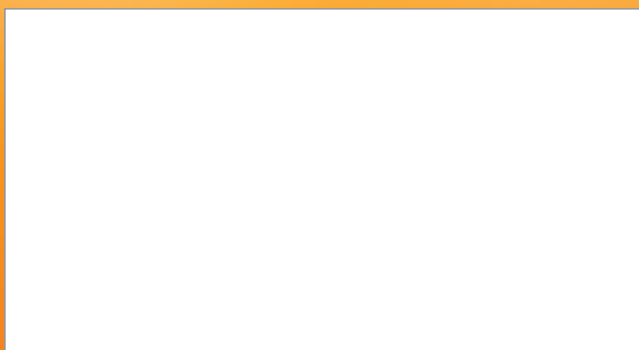


Sensor type	Vane
Measuring range	0.6 to 40 m/s
Accuracy ±1 digit	±(0.2 m/s +1% of m.v.)
Resolution	0.1 m/s
General technical data	
Operating temperature	Measuring instrument: -10 to +50 °C Probe: -10 to +70 °C
Storage temperature	-10 to +50 °C
Battery type	3 x AA
Battery life	60 h
Dimensions	Measuring instrument: 135 x 60 x 28 mm Probe: Length 329 mm, Ø 16 mm Cable length 1.5 m
Weight	323 g
Protection class	Measuring instrument: IP 40 Probe: IP20
Housing material	ABS + PC / TPE

Accessories	Order no.
testo Bluetooth® printer, incl. 1 roll of thermal paper, rech. battery and mains unit	0554 0621
Spare thermal paper for printer (6 rolls), measurement data documentation can be read for up to 10 years	0554 0568
ISO flow velocity calibration certificate Hot wire, vane anemometer, Pitot tube; calibration points 1; 2; 5; 10 m/s	0520 0004
ISO flow velocity calibration certificate Hot wire, vane anemometer, Pitot tube; calibration points 5; 10; 15; 20 m/s	0520 0034

1981 2224/msp/10.2022

Subject to change, including technical modifications.





## Vane anemometer

### testo 417 - Digital 100 mm vane anemometer with App connection

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Easy, fast and precise measurement of flow, volume flow and temperature at air inlets and outlets

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Efficient regulation of balanced residential ventilation and fast documentation with the testo Smart App

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Fast in-app configuration, graph history, second screen and measurement data memory in the testo Smart App

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Timed and point mean value calculation

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Durability through compact design with robust housing

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The compact vane anemometer testo 417 was developed to make it as easy as possible for you to take measurements on air inlets and outlets of **air conditioning and ventilation systems**. The integrated 100 mm vane quickly ensures precise results. Time and point average values as well as the volume flow are automatically calculated in the instrument and shown on the display.

This allows **balanced residential ventilation systems** to be adjusted especially efficiently – including quick documentation with the testo Smart App. In addition, the App not only supports you in configuring the


measuring instrument and takes over display, storage and documentation of the measured values – it also turns your smartphone into a second display.

testo 417 is also available in two practical kits: The **testo 417 kit 1** includes two measuring funnels for plate outlets and ventilation grilles. These can be easily attached to the vane, covering a wide range of outlet sizes and formats. In addition to the two measuring funnels, the **testo 417 kit 2** includes a volume flow straightener to achieve precise results even at swirl diffusers.

# Order data / Technical data

## testo 417


testo 417, 100 mm vane anemometer with App connection, incl. carrying bag, calibration protocol and 3 X AA batteries



Order no. 0563 0417

## testo 417 kit 1


testo 417 funnel kit 1, consisting of vane anemometer testo 417, measuring funnel for plate outlets, measuring funnel for ventilation grilles, carrying bag, calibration protocol and 3 x AA batteries



Order no. 0563 1417

## testo 417 kit 2

testo 417 funnel kit 2, consisting of vane anemometer testo 417, measuring funnel for plate outlets, measuring funnel for ventilation grilles, flow straightener, carrying bag, calibration protocol and 3 x AA batteries



Order no. 0563 2417

Sensor types	
Vane	
Measuring range	0.3 to 20 m/s
Accuracy ±1 digit	±(0.1 m/s +1.5% of m.v.)
Resolution	0.01 m/s
Volume flow calculation	
Measuring range	0 to +99999 m <sup>3</sup> /h 0 to +440 m <sup>3</sup> /h (testo 417 in combination with funnel kit 0563 4170) 0.1 to +200 m <sup>3</sup> /h, preferably 0.1 to 100 m <sup>3</sup> /h, (testo 417 in combination with funnel & flow straightener 0554 4172)
Resolution	0.1 m <sup>3</sup> /h (0 to +99.9 m <sup>3</sup> /h) 1 °C /h (rem. measuring range)
NTC	
Measuring range	0 to +50 °C
Accuracy ±1 digit	±0.5 °C
Resolution	0.1 °C
General technical data	
Operating temperature	-20 to +50 °C
Storage temperature	-20 to +50 °C
Battery type	3 x AA
Battery life	50 h
Dimensions	236 x 108 x 45
Weight	243 g
Protection class	Measuring instrument: IP 40 Probe: IP20
Housing material	ABS + PC / TPE



### The testo Smart App

- Simple and fast: Measurement menus for numerous applications provide optimum support in configuring and carrying out the measurement
- Clear graphical presentation of readings, e.g. as a table, for quick interpretation of results
- Create digital measurement reports including photos as PDF/CSV files on site and send via e-mail



Free download  
for Android and iOS







## Accessories

Accessories	Order no.	
testo Bluetooth® printer, incl. 1 roll of thermal paper, rech. battery and mains unit	0554 0621	
Spare thermal paper for printer (6 rolls), measurement data documentation can be read for up to 10 years	0554 0568	
testovent 417, funnel kit consisting of a funnel for plate outlets (Ø 200 mm) and a funnel for fans (330 x 330 mm)	0563 4170	
testovent 417 volume flow straightener	0554 4172	
DAkkS flow calibration certificate; hot wire, vane anemometer, calibration points 0.5; 1; 2; 5; 10 m/s	0520 0244	
ISO calibration certificate for flow, hot wire/vane anemometer, Pitot tube; calibration points 1; 2; 5; 10 m/s	0520 0004	
ISO calibration certificate for flow, hot wire/vane anemometer, Pitot tube; calibration points 5; 10; 15; 20 m/s	0520 0034	
ISO flow calibration certificate, hot wire, vane anemometer, Pitot tube, calibration points 0.3; 0.5; 0.8; 1.5 m/s	0520 0024	



## Volume flow hood

**testo 420 – light, precise and convenient**

---

Less than 2.9 kg weight

---

Flow straightener for more precise measurement at swirl outlets

---

Removable and tiltable measuring instrument with a large display

---

App integration via Bluetooth for fast and easy monitoring and reporting on site

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The new volume flow hood testo 420 is the light, precise and convenient solution for regulating volume flows at larger air intakes and outlets. At swirl outlets in particular, the flow straightener significantly reduces the usual measurement errors. This allows users to fulfil hygienic Indoor Air Quality guidelines and stipulations in ventilation and air conditioning systems quickly and precisely, e.g. in industry, office rooms or in cleanrooms.

Handling is especially easy with a uniquely low weight of less than 2.9 kg and ergonomic handles. The measuring instrument can be tilted and removed for more comfortable readout of the measurement values. In addition to this, mobile devices can be used via Bluetooth App integration as a second display and remote control. This makes the use of a tripod for high ceilings especially secure and comfortable. Users can furthermore use the App to finalize and send the measurement report directly on site.

# Technical data

**testo 420 set**

testo 420 volume flow hood, with measuring instrument, body, 610 x 610 mm flow hood, 5 x tension rods, USB cable, batteries and trolley, incl. calibration protocol



Part no. 0563 4200

**testo 420**

testo 420 differential pressure measuring instrument incl. batteries and calibration protocol



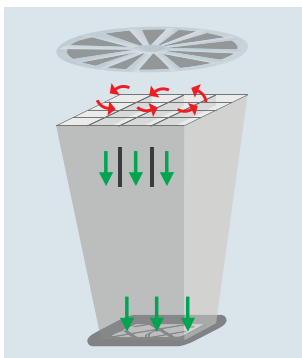
Part no. 0560 0420

**General technical data**

Compatibility	requires iOS 7.1 or newer / Android 4.3 or newer
	requires mobile end device with Bluetooth 4.0
Operating temperature	-5 to +50 °C
Storage temperature	-20 to +60 °C
Weight	2.9 kg
Standard hood	610 x 610 mm
Battery type	Alkali manganese, mignon, Type AA
Battery life	40 h (Zeroing interval 10 seconds, display illumination off, Bluetooth off)
Display	Dot matrix with illumination 3.5 inch
Memory	2 GB internal (approx. 18,000 measurements)
Interface	Micro USB
Material	Measuring instrument housing: ABS Base: PP Standard hood: Nylon

**Sensor types**

	Volume flow	NTC	Capacitive humidity sensor	Differential pressure sensor	Absolute pressure probe
Measuring range	40 to 4000 m <sup>3</sup> /h	-20 to +70 °C	0 to 100 %RH	-120 to +120 Pa	+700 to +1100 hPa
Accuracy ±1 digit	±3 % of m.v. +12 m <sup>3</sup> /h at +22 °C, 1013 hPa (85 to 3500 m <sup>3</sup> /h)	±0.5 °C (0 to +70 °C) ±0.8 °C (-20 to 0 °C)	±1.8 %RH +3 % of m.v. at +25 °C (5 to 80 %RH)	±2 % of m.v. +0.5 Pa at +22 °C, 1013 hPa	±3 hPa
Resolution	1 m <sup>3</sup> /h	0.1 °C	0.1 %RH	0.001 Pa	0.1 hPa



Functional principle of the flow straightener.



Flow straightener for significantly more precise measurements at swirl outlets.



App integration via Bluetooth for displaying the measurement data on mobile devices and finalizing the measurement report on site.



Stable, wheeled tripod with central fitting for secure working at high ceiling outlets.


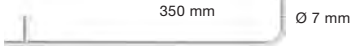

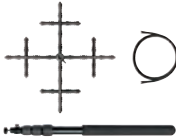

## Accessories

	Part no.
Flow hood 360 x 360 mm, with bag	0554 4200
Flow hood 305 x 1220 mm, with bag	0554 4201
Flow hood 610 x 1220 mm, with bag	0554 4202
Flow hood 915 x 915 mm, with bag	0554 4203
Tripod, extendable to 3.3 m, with rollers	0554 4209
Connection hose; silicone; length 5 m; max. load 700 hPa (mbar)	0554 0440
Connection hose silicone-free for differential pressure measurement, length 5 m, load up to maximum 700 hPa, (mbar)	0554 0453

### Calibration Certificates

ISO calibration certificate, 15 to 2000 m <sup>3</sup> /h bi-directional	0520 0154
ISO calibration certificate, 10 measurement points regularly distributed over the measuring range (bi-directional) Calibration points 150/300/450/600/750/900/1050/1200/1350/1500 Nm <sup>3</sup> /h	0520 0194
ISO calibration certificate, 5 measurement points regularly distributed over the measuring range (bi-directional) Calibration points 300/600/900/1200/1500 Nm <sup>3</sup> /h	0520 0164
DAkkS calibration certificate, 15 to 1800 Nm <sup>3</sup> /h bi-directional	0520 1264
DAkkS calibration certificate, 10 measurement points regularly distributed over the measuring range (bi-directional) Calibration points 150/300/450/600/750/900/1050/1200/1350/1500 Nm <sup>3</sup> /h	0520 0294
DAkkS calibration certificate, 5 measurement points regularly distributed over the measuring range (bi-directional) Calibration points 300/600/900/1200/1500 Nm <sup>3</sup> /h	0520 0264

## Pitot tubes / air flow velocity matrix

Probe type	Dimensions Probe shaft/probe shaft tip	Measuring range	Part no.
Pitot tube, 500 mm long, Ø 7 mm, stainless steel, for measuring flow velocity*		Measuring range: 1 to 100 m/s Operating temperature: 0 to +600 °C Pitot tube factor: 1.0	0635 2045
Pitot tube, 350 mm long, Ø 7 mm, stainless steel, for measuring flow velocity*		Measuring range: 1 to 100 m/s Operating temperature: 0 to +600 °C Pitot tube factor: 1.0	0635 2145
Pitot tube, 1000 mm long, stainless steel, for measuring flow velocity*		Measuring range: 1 to 100 m/s Operating temperature: 0 to +600 °C Pitot tube factor: 1.0	0635 2345
Air flow velocity matrix, telescope with ball head, length 1.8 m, with 2 x 2 m connection hose, silicon-free, with Velcro attachment on the telescope, for connection to differential pressure measuring instrument		ID no. 0699 7077/1	0635 8888
Air flow velocity matrix, telescope with ball head, length 1.8 m, with 2 x 2 m connection hose, silicon-free, with Velcro attachment on the telescope, and testo 420 measuring instrument		ID no. 0699 7077/2	0635 8888

\*Connection hose required (order no. 0554 0440) or (order no. 0554 0453)



Comfortable measurement thanks to low weight



Removable instrument allows Pitot tube measurements in ducts (Pitot tube available separately)

1981 0414/msp/l/01.2018

Subject to change without notice.





# Thermal anemometer

## testo 425 - Digital hot wire anemometer with App connection

Simple, fast and precise flow and temperature measurement plus volume flow calculation in the ventilation duct

More flexibility for duct measurements with the cable-connected telescopic probe (maximum length 820 mm)

Fast in-app (duct) configuration, graph history, second screen and measurement data memory in the testo Smart App

Timed and point mean value calculation

Durability through compact design with robust housing



Optimally adjusted **air conditioning and ventilation systems** are a decisive factor for modern buildings. Accordingly, it is important to use the appropriate measurement technology to ensure that the flow, temperature and volume flow in the ventilation duct are correct.

The testo 425 thermal anemometer is your fast, easy and precise companion. The cable-connected telescopic probe can be extended up to 820 mm, making it easier

to work overhead or in large diameter ducts. All relevant calculations, such as volume flow or time and point averages, are performed automatically by the particularly robust and compact measuring instrument.

Incidentally: Configuration of the measuring instrument, display and storage of measured values as well as documentation are all particularly convenient with the testo Smart App. This also turns your smartphone into a second display.

 Bluetooth 5.0  
+ App 

testo Smart App  
for free download

 GET IT ON  
Google Play

 Download on the  
App Store






# Ordering data / technical data / accessories

**testo 425**

testo 425, thermal hot wire anemometer with App connection and fixed telescope (max. 820 mm), incl. carrying bag, calibration protocol and 3 X AA batteries



Order no. 0563 0425



**The testo Smart App**

- Simple and fast: Measurement menus for numerous applications provide optimum support in configuring and carrying out the measurement
- Clear graphical presentation of readings, e.g. as a table, for quick interpretation of results
- Create digital measurement reports including photos as PDF/CSV files on site and send via e-mail



Free download for Android and iOS




**Sensor types**

Hot wire	
Measuring range	0.01 to 30 m/s
Accuracy ±1 digit	±(0.03 m/s + 4% of m.v.) (0.01 to 20 m/s) ±(0.5 m/s + 5% of m.v.) (20.01 to 30 m/s)
Resolution	0.01 m/s

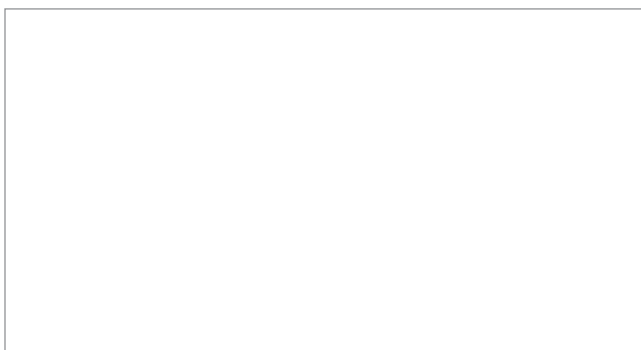
NTC	
Measuring range	-20 to +70 °C
Accuracy ±1 digit	±0.5 °C (1 to 30 m/s)
Resolution	0.1 °C

General technical data	
Operating temperature	Measuring instrument: -20 to +50 °C Probe: -20 to +70 °C
Storage temperature	-20 to +50 °C
Battery type	3 x AA
Battery life	35 h
Dimensions	Measuring instrument: 135 x 60 x 28 mm Probe: Length 180 mm, Ø 7.5 mm Cable length 1.5 m
Weight	268 g
Protection class	Measuring instrument: IP 40 Probe: IP20
Housing material	ABS + PC / TPE

Accessories	Order no.
testo Bluetooth® printer, incl. 1 roll of thermal paper, rech. battery and mains unit	0554 0621
Spare thermal paper for printer (6 rolls), measurement data documentation can be read for up to 10 years	0554 0568
ISO calibration certificate for flow, hot wire/vane anemometer, Pitot tube; calibration points 1; 2; 5; 10 m/s	0520 0004
ISO calibration certificate for flow, hot wire/vane anemometer, Pitot tube; calibration points 5; 10; 15; 20 m/s	0520 0034
ISO flow calibration certificate, hot wire, vane anemometer, Pitot tube, calibration points 0.3; 0.5; 0.8; 1.5 m/s	0520 0024

1981 2244/oa/07.2023

Subject to change, including technical modifications.



# testo 440 16 mm vane kit

## Kit for measurements in ventilation ducts

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Structured measurement menu for volume flow

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Determination of flow velocity in ventilation ducts

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Built-in telescope which can be scaled up to 0.85 m

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Internal data storage and USB port for data export

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Can be extended with a large portfolio of digital probes

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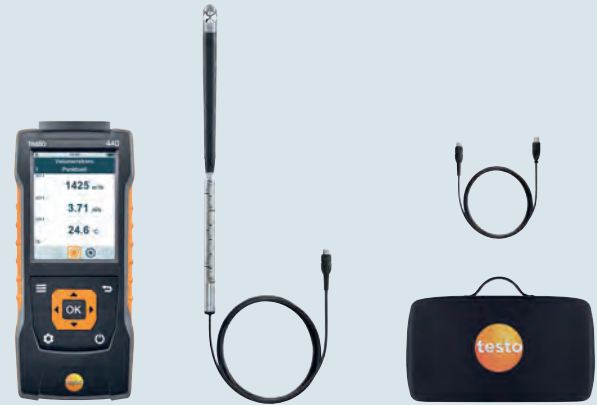


With the testo 440 16 mm vane kit, all IAQ-related parameters in ventilation ducts can be measured and documented. The testo 440 air velocity & IAQ measuring instrument recognizes probes automatically, and its structured measurement menus simplify the adjustment of air conditioning and ventilation systems. Up to 3 probes can be connected simultaneously to the measuring instrument: a Bluetooth® probe, a wired probe and a temperature probe with Type K thermocouple connector.

In addition to the measuring instrument, the kit also contains a wired vane probe and a storage case.



**Scope of delivery**

- testo 440 air velocity & IAQ measuring instrument, 3x AA batteries, USB cable and calibration protocol (0560 4401)
- Vane probe (Ø 16 mm) with fixed cable (cable length 1.7 m) including telescope (can be extended to 0.85 m) and calibration protocol (0635 9532)
- Basic case for testo 440 and 1 probe



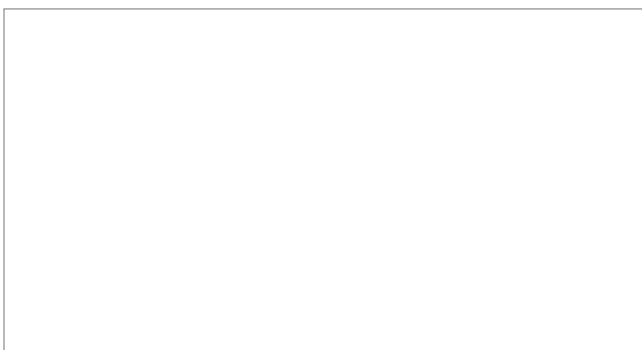
Order no. 0563 4401

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Technical data	Measuring range	Accuracy	Resolution
<b>Digital probe</b>			
<b>Vane probe (Ø 16 mm)</b> 	0.6 to 50 m/s	±(0.2 m/s + 1 % of m.v.) (0.6 to 40 m/s) ±(0.2 m/s + 2 % of m.v.) (40.01 to 50 m/s)	0.1 m/s
<b>testo 440</b>			
<b>testo 440 air velocity &amp; IAQ measuring instrument</b> Connectable probes: 1x digital probe with cable or 1x temperature NTC TUC, 1x digital Bluetooth® probe or Testo Smart Probes, 1x temperature TE Type K			

General technical data	testo 440	Vane probe (Ø 16 mm)
Data transmission	Bluetooth®, USB interface	
Operating temperature	-20 to +50 °C	-10 to +70 °C
Storage temperature	-20 to +50 °C	-10 to +70 °C
Dimensions	154 x 65 x 32 mm	330 x 16 x 16 mm
Probe head diameter		Ø 16 mm
Weight	250 g	150 g

You will find the complete selection of probes and accessories for the testo 440 in the testo 440 data sheet or at [www.testo.com](http://www.testo.com).



# testo 440 100 mm vane kit with Bluetooth®

Kit for measurements at air vents

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Structured measurement menu for volume flow

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Parallel recording of flow velocity, air humidity and temperature

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Vane probe can be combined on request with telescope for ceiling vents or funnel set for plate outlets (please order separately)

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Wireless probe, internal data storage and USB port for data export

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Can be extended with a large portfolio of digital probes

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Compatible with a wide selection of Bluetooth® and wired probes.

With the testo 440 100 mm vane kit with Bluetooth®, all IAQ-related parameters at air vents can be measured and documented wirelessly. The testo 440 air velocity & IAQ measuring instrument recognizes probes automatically, and its structured measurement menus simplify the adjustment of air conditioning and ventilation systems. Up to 3 probes can be connected simultaneously to the measuring instrument: a Bluetooth® probe, a wired probe and a temperature probe with Type K thermocouple connector.

The versatile Bluetooth® handle allows the connection of many different wireless probe heads for all applications. In addition to this, the kit contains a vane probe head and a storage case.

**Scope of delivery**

- testo 440 air velocity & IAQ measuring instrument, 3x AA batteries, USB cable and calibration protocol (0560 4401)
- Vane probe (Ø 100 mm) with Bluetooth® incl. temperature sensor (consisting of 100 mm vane probe head, handle adapter and Bluetooth® handle); bracket for testovent measurement funnel; 4x AA batteries and calibration protocol (0635 9431)
- Basic case for testo 440 and 1 probe



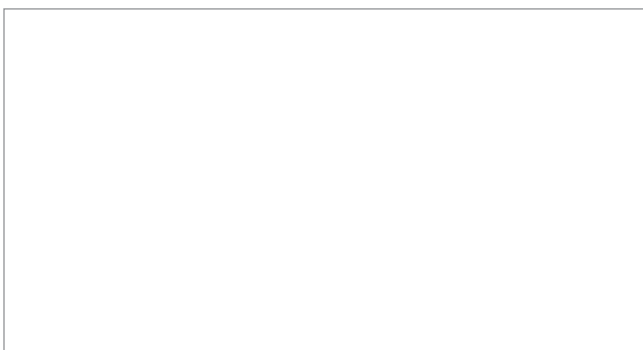
Order no. 0563 4403

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Technical data		Measuring range	Accuracy	Resolution
<b>Digital probe</b>				
<b>Vane probe (Ø 100 mm) with Bluetooth®</b> , including temperature sensor  Ø 100 mm		0.3 to 35 m/s -20 to +70 °C	±(0.1 m/s + 1.5 % of m.v.) (0.3 to 20 m/s) ±(0.2 m/s + 1.5 % of m.v.) (20.1 to 35 m/s) ±0.5 °C	0.01 m/s 0.1 °C
<b>testo 440</b> <b>testo 440 air velocity &amp; IAQ measuring instrument</b> Connectable probes: 1x digital probe with cable or 1x temperature NTC TUC, 1x digital Bluetooth® probe or Testo Smart Probes, 1x temperature TE Type K 				

General technical data	testo 440	Vane probe (Ø 100 mm) with Bluetooth®
Data transmission	Bluetooth®, USB interface	Bluetooth®, wireless range up to 20 m
Operating temperature	-20 to +50 °C	-20 to +70 °C
Storage temperature	-20 to +50 °C	-20 to +70 °C
Dimensions	154 x 65 x 32 mm	375 x 105 x 46 mm
Probe head diameter		Ø 100 mm
Weight	250 g	360 g

You will find the complete selection of probes and accessories for the testo 440 in the testo 440 data sheet or at [www.testo.com](http://www.testo.com).



Subject to change, including technical modifications.

# testo 440 CO<sub>2</sub> kit with Bluetooth®

## Kit for evaluating indoor air quality

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Structured measurement menu for long-term measurements

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Parallel determination of CO<sub>2</sub> concentration, air humidity and air temperature

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Absolute pressure compensation, calculation of wet bulb temperature, dewpoint and absolute humidity

---

Wireless probe, internal data storage and USB port for data export

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Can be extended with a large portfolio of digital probes

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Compatible with a wide selection of Bluetooth® and wired probes.

With the testo 440 CO<sub>2</sub> kit with Bluetooth®, all IAQ-related parameters for evaluating indoor air can be measured and documented wirelessly. The testo 440 air velocity & IAQ measuring instrument recognizes probes automatically, and its structured measurement menus simplify the adjustment of air conditioning and ventilation systems. Up to 3 probes can be connected simultaneously to the measuring instrument: a Bluetooth® probe, a wired probe and a temperature probe with Type K thermocouple connector.

The versatile Bluetooth® handle allows the connection of many different wireless probe heads for all applications. In addition to this, the kit contains a CO<sub>2</sub> probe head and a storage case.





**Scope of delivery**

- testo 440 air velocity & IAQ measuring instrument, incl. 3x AA batteries, USB cable and calibration protocol (0560 4402)
- CO<sub>2</sub> probe with Bluetooth®, including temperature and humidity sensor (consisting of CO<sub>2</sub> probe head and Bluetooth® handle); 4x AA batteries, table stand and calibration protocol (0632 1551)
- Basic case for testo 440 and 1 probe



Order no. 0563 4405

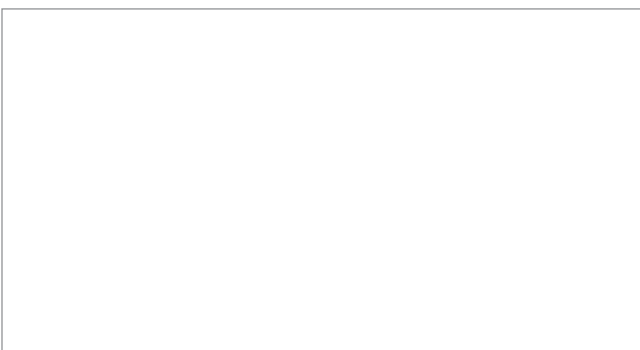
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Technical data	Measuring range	Accuracy	Resolution
<b>Digital probe</b>			
<b>CO<sub>2</sub> probe with Bluetooth®</b> , incl. temperature and humidity sensor 	0 to 10 000 ppm CO <sub>2</sub> 5 to 95 %RH 0 to +50 °C 700 to 1100 hPa	±(50 ppm + 3 % of m.v.) (0 to 5 000 ppm) ±(100 ppm + 5 % of m.v.) (5 001 to 10 000 ppm) ±3 %RH (10 to 35 %RH)* ±2 %RH (35 to 65 %RH)* ±3 %RH (65 to 90 %RH)* ±5 %RH (remaining meas. range)* ±0.5 °C ±3 hPa	1 ppm 0.1 %RH 0.1 °C 0.1 hPa
<b>testo 440</b> <b>testo 440 air velocity &amp; IAQ measuring instrument</b> Connectable probes: 1x digital probe with cable or 1x temperature NTC TUC, 1x digital Bluetooth® probe or Testo Smart Probes, 1x temperature TE Type K 			

\*Please see the additional accuracy information for humidity in the instruction manual.

General technical data	testo 440	CO <sub>2</sub> probe with Bluetooth®
Data transmission	Bluetooth®, USB interface	Bluetooth®, wireless range up to 20 m
Operating temperature	-20 to +50 °C	0 to +50 °C
Storage temperature	-20 to +50 °C	0 to +50 °C
Dimensions	154 x 65 x 32 mm	295 x 50 x 40 mm
Probe head diameter		Ø 30 mm
Weight	250 g	195 g

You will find the complete selection of probes and accessories for the testo 440 in the testo 440 data sheet or at [www.testo.com](http://www.testo.com).



# testo 440 flow ComboKit 1 with Bluetooth®

Kit for measurements in ducts  
and at outlets

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Structured measurement menu for volume flow

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Parallel recording of flow velocity, air humidity and temperature

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Incl. hot wire probe with telescope (0.85 m),  
vane probe (ø 100 mm) with Bluetooth®

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Internal data storage and USB port for data export

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Can be extended with a large portfolio of digital probes

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With the testo 440 flow ComboKit 1 with Bluetooth®, all IAQ-related parameters at air vents and in ducts can be measured and documented wirelessly. The testo 440 air velocity & IAQ measuring instrument recognizes probes automatically, and its structured measurement menus simplify the adjustment of air conditioning and ventilation systems. Up to 3 probes can be connected simultaneously to the measuring instrument: a Bluetooth® probe, a wired probe and a temperature probe with Type K thermocouple connector.

The versatile Bluetooth® handle allows the connection of many different wireless probe heads for all applications. In addition to this, the kit contains a vane probe head, a wired hot wire probe and a storage case.




**Scope of delivery**

- testo 440 air velocity & IAQ measuring instrument, incl. 3x AA batteries, USB cable and calibration protocol (0560 4401)
- Vane probe (Ø 100 mm) with Bluetooth® incl. temperature sensor (consisting of 100 mm vane probe head, handle adapter and Bluetooth® handle); bracket for testovent measurement funnel; 4x AA batteries and calibration protocol (0635 9431)
- Hot wire probe including temperature sensor with fixed cable (length 1.7 m) including temperature sensor, with telescope (can be extended to 0.85 m) and calibration protocol (0635 1032)
- Combi-case for testo 440 and multiple probes (0516 4401)



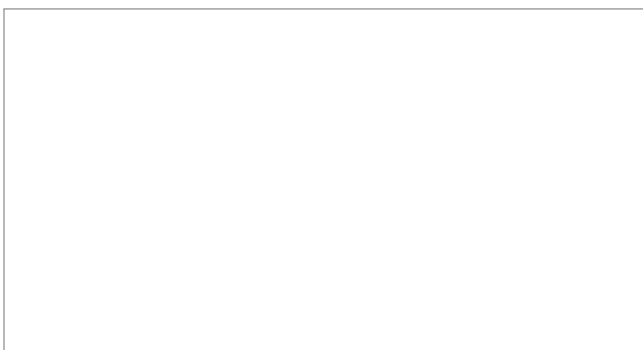
Order no. 0563 4406

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Technical data	Measuring range	Accuracy	Resolution
<b>Digital probes</b>			
<b>Vane probe (Ø 100 mm) with Bluetooth®</b> , including temperature sensor 	0.3 to 35 m/s -20 to +70 °C	±(0.1 m/s + 1.5 % of m.v.) (0.3 to 20 m/s) ±(0.2 m/s + 1.5 % of m.v.) (20.1 to 35 m/s) ±0.5 °C	0.01 m/s 0.1 °C
<b>Hot wire probe (Ø 9 mm)</b> incl. temperature sensor 	0 to 30 m/s -20 to +70 °C 700 to 1100 hPa	±(0.03 m/s + 4 % of m.v.) (0 to 20 m/s) ±(0.5 m/s + 5 % of m.v.) (20.01 to 30 m/s) ±0.5 °C ±3 hPa	0.01 m/s 0.1 °C 0.1 hPa
<b>testo 440</b>			
<b>testo 440 air velocity &amp; IAQ measuring instrument</b> Connectable probes: 1x digital probe with cable or 1x temperature NTC TUC, 1x digital Bluetooth® probe or Testo Smart Probes, 1x temperature TE Type K 			

General technical data	testo 440	Vane probe (Ø 100 mm) with Bluetooth®	Hot wire probe (Ø 9 mm)
Data transmission	Bluetooth®, USB interface	Bluetooth®, wireless range up to 20 m	
Operating temperature	-20 to +50 °C	-20 to +70 °C	-20 to +70 °C
Storage temperature	-20 to +50 °C	-20 to +70 °C	-20 to +70 °C
Dimensions	154 x 65 x 32 mm	375 x 105 x 46 mm	315 x 12 x 12 mm
Probe head diameter		Ø 100 mm	Ø 9 mm
Weight	250 g	360 g	90 g

You will find the complete selection of probes and accessories for the testo 440 in the testo 440 data sheet or at [www.testo.com](http://www.testo.com).



Subject to change, including technical modifications.

# testo 440 flow ComboKit 2 with Bluetooth®

Kit for measurements in ducts  
and at outlets

---

Structured measurement menu for volume flow

---

Parallel recording of flow velocity, air humidity and temperature

---

Incl. vane probe head (Ø 16 mm) with telescope (0.85 m) and vane probe head (Ø 100 mm) with Bluetooth®

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Internal data storage and USB port for data export

---

Can be extended with a large portfolio of digital probes

---



Compatible with a wide selection of Bluetooth® and wired probes.

With the testo 440 flow ComboKit 2 with Bluetooth®, all IAQ-related parameters at air vents and in ducts can be measured and documented wirelessly. The testo 440 air velocity & IAQ measuring instrument recognizes probes automatically, and its structured measurement menus simplify the adjustment of air conditioning and ventilation systems. Up to 3 probes can be connected simultaneously to the measuring instrument: a Bluetooth® probe, a wired probe and a temperature probe with Type K thermocouple connector.

The versatile Bluetooth® handle allows the connection of many different wireless probe heads for all applications. In addition to this, the kit contains a vane probe head, a wired vane probe and a storage case.




**Scope of delivery**

- testo 440 air velocity & IAQ measuring instrument, incl. 3x AA batteries, USB cable and calibration protocol (0560 4401)
- Vane probe (Ø 100 mm) with Bluetooth® incl. temperature sensor (consisting of 100 mm vane probe head, handle adapter and Bluetooth® handle); bracket for testovent measurement funnel; 4x AA batteries and calibration protocol (0635 9431)
- Vane probe (Ø 16 mm) with fixed cable (cable length 1.7 m) including telescope (can be extended to 0.85 m) and calibration protocol (0635 9532)
- Combi-case for testo 440 and multiple probes (0516 4401)



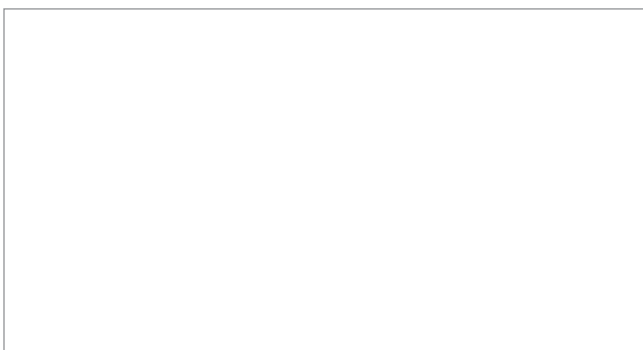
Order no. 0563 4407

1981 0654/msp/1/02.2019

Technical data	Measuring range	Accuracy	Resolution
<b>Digital probes</b>			
<b>Vane probe (Ø 100 mm) with Bluetooth®,</b> including temperature sensor 	0.3 to 35 m/s -20 to +70 °C	±(0.1 m/s + 1.5 % of m.v.) (0.3 to 20 m/s) ±(0.2 m/s + 1.5 % of m.v.) (20.1 to 35 m/s) ±0.5 °C	0.01 m/s 0.1 °C
<b>Vane probe (Ø 16 mm)</b> 	0.6 to 50 m/s	±(0.2 m/s + 1 % of m.v.) (0.6 to 40 m/s) ±(0.2 m/s + 2 % of m.v.) (40.01 to 50 m/s)	0.1 m/s
<b>testo 440</b>			
<b>testo 440 air velocity &amp; IAQ measuring instrument</b> Connectable probes: 1x digital probe with cable or 1x temperature NTC TUC, 1x digital Bluetooth® probe or Testo Smart Probes, 1x temperature TE Type K 			

General technical data	testo 440	Vane probe (Ø 100 mm) with Bluetooth®	Vane probe (Ø 16 mm)
Data transmission	Bluetooth®, USB interface	Bluetooth®, wireless range up to 20 m	
Operating temperature	-20 to +50 °C	-20 to +70 °C	-10 to +70 °C
Storage temperature	-20 to +50 °C	-20 to +70 °C	-10 to +70 °C
Dimensions	154 x 65 x 32 mm	375 x 105 x 46 mm	330 x 16 x 16 mm
Probe head diameter		Ø 100 mm	Ø 16 mm
Weight	250 g	360 g	150 g

**You will find the complete selection of probes and accessories for the testo 440 in the testo 440 data sheet or at [www.testo.com](http://www.testo.com).**



Subject to change, including technical modifications.



## Air velocity & IAQ measuring instruments

- testo 440 air velocity & IAQ measuring instrument
- testo 440 dP air velocity & IAQ measuring instrument incl. differential pressure

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Intuitive: clearly structured measurement menus for the most important applications stored on the instrument

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Wireless: Bluetooth probes for greater measuring convenience and a reduced tangle of cables in the case

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Space-saving: a universal handle for all probes

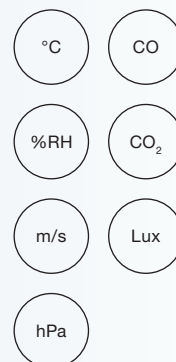
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Clear overview: parallel display of 3 measuring values; configuration and results at a glance

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Reliable: internal memory for up to 7500 measurement protocols, USB interface for data export and optional printout of measuring values

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Compatible with a wide selection of Bluetooth™ and wired probes.

The testo 440 combines the benefits of a compact handheld device with intuitive measurement menus and a comprehensive selection of air velocity & IAQ probes. This means you have all measuring tasks on air conditioning and ventilation systems reliably under control.

You can connect the testo 440 air velocity & IAQ measuring instrument either to a large selection of digital probes, the Testo Smart Probes or numerous Testo temperature probes. Clearly structured menus for measuring volume flow in ducts/at outlets, K-factor, degree of turbulence, cooling/heating load, mould indication and logging mode

are stored on the instrument. These menus enable you to accomplish the relevant measuring task more quickly, more efficiently and more reliably. Reports can be exported as Excel files via the USB interface or printed out on site.


The testo 440 air velocity & IAQ measuring instrument is available in two versions. The testo 440 dP model version also has an integrated differential pressure sensor. This makes measurements at filters as well as Pitot tube and K-factor measurements possible.



# Ordering data for testo 440

**testo 440**


Air velocity & IAQ measuring instrument, 3 x AA batteries, USB cable and calibration protocol.



Order no. 0560 4401

**testo 440 dP**

Air velocity & IAQ measuring instrument with integrated differential pressure sensor, connection hose, 3 x AA batteries, USB cable and calibration protocol.



Order no. 0560 4402

# Technical data testo 440

	testo 440	testo 440 dP
<b>Temperature (NTC)</b>		
Measuring range	-40 to +150 °C	
Accuracy (±1 digit)	±0.4 °C (-40 to -25.1 °C) ±0.3 °C (-25 to +74.9 °C) ±0.4 °C (+75 to +99.9 °C) ±0.5% of m.v. (remaining meas. range)	
Resolution	0.1 °C	
<b>Temperature (TC)</b>		
Measuring range	-200 to +1370 °C	
Accuracy (±1 digit)	±(0.3 °C + 0.3% of m.v.)	
Resolution	0.1 °C	
<b>Differential pressure</b>		
Measuring range		-150 to +150 hPa
Accuracy (±1 digit)	-	±0.05 hPa (0 to +1.00 hPa) ±0.2 hPa + 1.5% of m.v. (+1.01 ... +150 hPa)
Resolution		0.01 hPa
<b>Probe connections</b>		
TC type K		1x
NTC TUC / digital probe with cable		1x
Bluetooth probe	1x digital Bluetooth probe or testo Smart Probe	
Differential pressure	-	+
<b>Technical data</b>		
Operating temperature	-20 to +50 °C	
Storage temperature	-20 to +50 °C	
Battery type	3 x AA batteries	
Battery life	12 h (typically vane measurement)	
Weight	250 g	
Dimensions	154 x 65 x 32 mm	



The wired digital probes and the NTC probes of the testo 440 all have the practical TUC connection (Testo **U**niversal **C**onnecto**r**).

## Ordering data for kits

### Kits for measurement in ducts, at outlets and at filters

#### testo 440 delta P Air Flow ComboKit 1 with BT

- testo 440 dP air velocity & IAQ measuring instrument incl. differential pressure with internal memory and data export function
- Universal probe handle with Bluetooth
- Hot wire probe head incl. temperature and humidity sensor
- 100 mm vane probe head incl. temperature sensor
- Telescope (1 m) and 90° angle to fit both probes
- Combi case for testo 440 dP and multiple probes



Order no. 0563 4409

#### testo 440 delta P Air Flow ComboKit 2 with BT

- testo 440 dP air velocity & IAQ measuring instrument incl. differential pressure with internal memory and data export function
- Universal probe handle with Bluetooth
- 16 mm vane probe head incl. temperature sensor
- 100 mm vane probe head incl. temperature sensor
- Humidity probe head incl. temperature sensor
- Telescope (1 m) and 90° angle to fit both probes
- Combi case for testo 440 dP and multiple probes



Order no. 0563 4410

### Kits for measurements in ducts and at outlets

#### testo 440 Air Flow ComboKit 1 with BT

- testo 440 air velocity & IAQ measuring instrument with internal memory and data export function
- 100 mm vane probe with Bluetooth, incl. temperature sensor
- Hot wire probe with telescope (0.85 m) incl. temperature sensor, fixed cable (1.8 m)
- Measurement menu, e.g. for determining the volume flow
- Combi case for testo 440 and multiple probes



Order no. 0563 4406

#### testo 440 Air Flow ComboKit 2 with BT

- testo 440 air velocity & IAQ measuring instrument with internal memory and data export function
- 100 mm vane probe with Bluetooth, incl. temperature sensor
- 16 mm vane probe with telescope (0.85 m), fixed cable (1.8 m)
- Measurement menu, e.g. for determining the volume flow
- Combi case for testo 440 and multiple probes



Order no. 0563 4407

# Ordering data for kits

## Additional kits

### testo 440 Hot Wire Kit

- testo 440 air velocity & IAQ measuring instrument with internal memory and data export function
- Hot wire probe incl. temperature sensor, fixed cable (1.8 m) with telescope (0.85 m)
- Measurement menu, e.g. for determining the volume flow and timed and multi-point mean calculation
- Basic case for testo 440 and 1 probe



### testo 440 16 mm Vane Kit

- testo 440 air velocity & IAQ measuring instrument with internal memory and data export function
- Vane probe, fixed cable (1.8 m) with telescope (0.85 m)
- Measurement menu, e.g. for determining the volume flow and timed and multi-point mean calculation
- Basic case for testo 440 and 1 probe



### testo 440 100 mm Vane Kit with BT

- testo 440 air velocity & IAQ measuring instrument with internal memory and data export function
- 100 mm vane probe with Bluetooth, incl. temperature sensor
- Measurement menu, e.g. for determining the volume flow
- Basic case for testo 440 and 1 probe



Order no. 0563 4403

### testo 440 Indoor Comfort ComboKit with BT

- testo 440 air velocity & IAQ measuring instrument with internal memory and data export function
- Turbulence probe (400 mm)
- CO<sub>2</sub> probe with Bluetooth, incl. temperature and humidity sensor
- Combi case for testo 440 and multiple probes



Order no. 0563 4408

### testo 440 CO<sub>2</sub> Kit with BT

- testo 440 air velocity & IAQ measuring instrument
- CO<sub>2</sub> probe with Bluetooth, incl. temperature and humidity sensor
- Basic case for testo 440 and 1 probe



Order no. 0563 4405

### testo 440 Humidity Kit with BT

- testo 440 air velocity & IAQ measuring instrument
- Humidity and temperature probe with Bluetooth
- Basic case for testo 440 and 1 probe



Order no. 0563 4404

### testo 440 Lux Kit

- testo 440 air velocity & IAQ measuring instrument
- Lux probe
- Basic case for testo 440 and 1 probe



Order no. 0563 4402

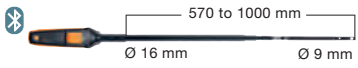
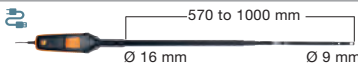
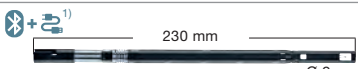
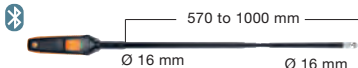

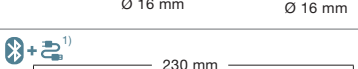











### testo 440 Laboratory kit

- testo 440 air velocity & IAQ measuring instrument
- Glass-coated digital Pt100 laboratory probe
- Basic case for testo 440 and 1 probe












Order no. 0563 4412

# Digital air velocity probes

Probe type		Measuring range	Accuracy	Resolution	Order no.
<b>Digital flow probes</b>					
Hot wire probe with Bluetooth®, including temperature and humidity sensor		0 to 50 m/s -20 to +70 °C 5 to 95 %RH 700 to 1100 hPa	±(0.03 m/s + 4% of m.v.) (0 to 20 m/s) ±(0.5 m/s + 5% of m.v.) (20.01 to 30 m/s) ±0.5 °C (0 to +70 °C) ±0.8 °C (-20 to 0 °C) ±3.0 %RH (10 to 35 %RH) <sup>3)</sup> ±2.0 %RH (35 to 65 %RH) <sup>3)</sup> ±3.0 %RH (65 to 90 %RH) <sup>3)</sup> ±5 %RH (remaining meas. range) <sup>3)</sup> ±3 hPa	0.01 m/s 0.1 °C 0.1 %RH 0.1 hPa	0635 1571
Hot wire probe, fixed cable, including temperature and humidity sensor					0635 1572
Hot wire probe head, including temperature and humidity sensor					0635 1570
Vane probe (Ø 16 mm) with Bluetooth®, including temperature sensor		0.6 to 50 m/s -10 to +70 °C	±(0.2 m/s + 1% of m.v.) (0.6 to 40 m/s) ±(0.2 m/s + 2% of m.v.) (40.1 to 50 m/s) ±1.8 °C	0.1 m/s 0.1 °C	0635 9571
Vane probe (Ø 16 mm), fixed cable, including temperature sensor					0635 9572
Vane probe head (Ø 16 mm), including temperature sensor					0635 9570
Hot wire probe, fixed cable, including temperature sensor		0 to 30 m/s -20 to +70 °C 700 to 1100 hPa	±(0.03 m/s + 4% of m.v.) (0 to 20 m/s) ±(0.5 m/s + 5% of m.v.) (20.01 to 30 m/s) ±0.5 °C ±3 hPa	0.01 m/s 0.1 °C 0.1 hPa	0635 1032
Hot wire probe (Ø 7.5 mm), fixed cable, including temperature sensor		0 to 20 m/s -20 to +70 °C 700 to 1100 hPa	±(0.03 m/s + 5% of m.v.) (0 to 20 m/s) ±0.5 °C ±3 hPa	0.01 m/s 0.1 °C 0.1 hPa	0635 1026
Hot ball probe (Ø 3 mm), fixed cable, including temperature sensor		0 to 10 m/s -20 to +70 °C 700 to 1100 hPa	±(0.03 m/s + 5% of m.v.) (0 to 10 m/s) ±0.5 °C ±3 hPa	0.01 m/s 0.1 °C 0.1 hPa	0635 1051
Vane probe (Ø 16 mm), fixed cable		0.6 to 50 m/s	±(0.2 m/s + 1% of m.v.) (0.6 to 40 m/s) ±(0.2 m/s + 2% of m.v.) (40.1 to 50 m/s)	0.1 m/s	0635 9532
Fume cupboard probe, fixed cable (Measurement of flow velocity and volume flow at laboratory extractors based on DIN EN 14175-3/-4.)		0 to 5 m/s 0 to +50 °C 700 to 1100 hPa	±(0.02 m/s + 5% of m.v.) (0 to 5 m/s) ±0.5 °C ±3 hPa	0.01 m/s 0.1 °C 0.1 hPa	0635 1052
High-precision vane probe (Ø 100 mm) with Bluetooth®, including temperature sensor		0.1 to 15 m/s -20 to +70 °C	±(0.1 m/s + 1.5% of m.v.) (0.1 to 15 m/s) ±0.5 °C	0.01 m/s 0.1 °C	0635 9371
High-precision vane probe (Ø 100 mm), fixed cable, including temperature sensor					0635 9372
High-precision vane probe head (Ø 100 mm), including temperature sensor					0635 9370
Vane probe (Ø 100 mm) with Bluetooth®, including temperature sensor		0.3 to 35 m/s -20 to +70 °C	±(0.1 m/s + 1.5% of m.v.) (0.3 to 20 m/s) ±(0.2 m/s + 1.5% of m.v.) (20.01 to 35 m/s) ±0.5 °C	0.01 m/s 0.1 °C	0635 9431
Vane probe (Ø 100 mm), fixed cable, including temperature sensor					0635 9432
Vane probe head (Ø 100 mm), including temperature sensor					0635 9430

<sup>1)</sup> For use with cable handle (order no. 0554 2222) or Bluetooth handle (order no. 0554 1111) in conjunction with adapter (order no. 0554 2160).  
<sup>3)</sup> Please see the additional accuracy information for humidity in the instruction manual.

# Other digital probes and probe accessories

Probe type		Measuring range	Accuracy	Resolution	Order no.
<b>Digital humidity probes</b>					
Humidity/temperature probe with Bluetooth®		0 to 100 %RH -20 to +70 °C	±2 %RH (5 to 90 %RH) <sup>3)</sup> ±0.5 °C	0.1 %RH 0.1 °C	0636 9731
Humidity/temperature probe, fixed cable					0636 9732
Humidity/temperature probe head					0636 9730
High-precision humidity/temperature probe with Bluetooth®		0 to 100 %RH -20 to +70 °C	±(0.6 %RH + 0.7% of m.v.) (0 to 90 %RH) <sup>3)</sup> ±(1.0 %RH + 0.7% of m.v.) (90 to 100 %RH) <sup>3)</sup> ±0.3 °C (15 to 30 °C) ±0.5 °C (remaining meas. range)	0.01 %RH 0.1 °C	0636 9771
High-precision humidity/temperature probe, fixed cable					0636 9772
High-precision humidity/temperature probe head					0636 9770
Robust humidity/temperature probe for temperatures up to +180 °C, fixed cable		0 to 100 %RH -20 to +180 °C	±3 %RH (0 to 2 %RH) <sup>3)</sup> ±2 %RH (2.1 to 98 %RH) <sup>3)</sup> ±3 %RH (98.1 to 100 %RH) <sup>3)</sup> ±0.5 °C (-20 to 0 °C) ±0.4 °C (0.1 to +50 °C) ±0.5 °C (+50.1 to +180 °C)	0.1 %RH 0.1 °C	0636 9775
<b>Digital comfort probes</b>					
Turbulence probe, fixed cable		0 to +5 m/s 0 to +50 °C 700 to 1100 hPa	±(0.03 m/s + 4% of m.v.) (0 to 5 m/s) ±0.5 °C ±3 hPa	0.01 m/s 0.1 °C 0.1 hPa	0628 0152
Lux probe, fixed cable			DIN 13032-1 Appendix B F1 = 6 % = V(Lambda) adjustment F2 = 5 % = cos-true evaluation Class C according to DIN 5032-7	0.1 lux (< 10,000 lux) 1 lux (≥ 10,000 lux)	0635 0551
CO <sub>2</sub> probe with Bluetooth®, including temperature and humidity sensor		0 to 10,000 ppm CO <sub>2</sub> 5 to 95 %RH 0 to +50 °C 700 to 1100 hPa	±(50 ppm + 3% of m.v.) (0 to 5,000 ppm) ±(100 ppm + 5% of m.v.) (5,001 to 10,000 ppm) ±3 %RH (10 to 35 %RH) <sup>3)</sup> ±2 %RH (35 to 65 %RH) <sup>3)</sup> ±3 %RH (65 to 90 %RH) <sup>3)</sup> ±5 %RH (remaining meas. range) <sup>3)</sup> ±0.5 °C ±3 hPa	1 ppm 0.1 %RH 0.1 °C 0.1 hPa	0632 1551
CO <sub>2</sub> probe, fixed cable, including temperature and humidity sensor					0632 1552
CO <sub>2</sub> probe head, including temperature and humidity sensor					0632 1550
CO probe with Bluetooth®		0 to 100 ppm  100.1 to 500 ppm	±3 ppm (0 to 30 ppm) ±5 ppm (30.1 to 100 ppm)  ±10 % of m.v. (100.1 ... 500 ppm)	0.1 ppm	0632 1271
CO probe, fixed cable					0632 1272
CO probe head					0632 1270
<b>Probe handles and adapters</b>					
Bluetooth® handle for connecting testo 400 testo 440 probe heads					0554 1111
Cable handle for connecting testo 400 / testo 440 probe heads					0554 2222
Handle adapter for connecting testo 400 / testo 440 flow probes					0554 2160

<sup>2)</sup> For use with cable handle (order no. 0554 2222) or Bluetooth handle (order no. 0554 1111).

<sup>3)</sup> Please see the additional accuracy information for humidity in the instruction manual.

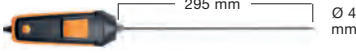
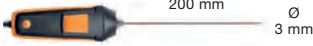



# Testo Smart Probes

Testo Smart Probes		Measuring range	Accuracy $\pm 1$ digit	Resolution	Order no.
<b>Temperature</b>					
<b>testo 115i</b> Clamp thermometer with smartphone operation, for measurements on pipelines with diameters of 6 to maximum 35 mm, incl. batteries and calibration protocol		-40 to +150 °C	$\pm 1.3$ °C (-20 to +85 °C)	0.1 °C	0560 2115 02
<b>testo 905i</b> Thermometer with smartphone operation, including batteries and calibration protocol		-50 to +150 °C	$\pm 1$ °C	0.1 °C	0560 1905
<b>testo 805i</b> Infrared thermometer with smartphone operation, including batteries and calibration protocol		-30 to +250 °C	$\pm 1.5$ °C or $\pm 1.5\%$ of m.v. (0 to +250 °C) $\pm 2.0$ °C (-20 to -0.1 °C) $\pm 2.5$ °C (-30 to -20.1 °C)	0.1 °C	0560 1805
<b>Humidity</b>					
<b>testo 605i</b> Thermohygrometer with smartphone operation, including batteries and calibration protocol		0 to 100 %RH -20 to +60 °C	$\pm 3.0$ %RH (10 to 35 %RH) $\pm 2.0$ %RH (35 to 65 %RH) $\pm 3.0$ %RH (65 to 90 %RH) $\pm 5$ %RH (< 10 %RH or > 90 %RH) <sup>3)</sup> $\pm 0.8$ °C (-20 to 0 °C) $\pm 0.5$ °C (0 to +60 °C)	0.1 %RH 0.1 °C	0560 2605 02
<b>Flow</b>					
<b>testo 405i</b> Thermal anemometer with smartphone operation, telescopic tube extendible to up to 400 mm, incl. batteries and calibration protocol		0 to 30 m/s -20 to +60 °C	$\pm (0.1 \text{ m/s} + 5\% \text{ of m.v.})$ (0 to 2 m/s) $\pm (0.3 \text{ m/s} + 5\% \text{ of m.v.})$ (2 to 15 m/s) $\pm 0.5$ °C	0.01 m/s 0.1 °C	0560 1405
<b>testo 410i</b> Vane anemometer with smartphone operation, including batteries and calibration protocol		0.4 to 30 m/s -20 to +60 °C	$\pm (0.2 \text{ m/s} + 2\% \text{ of m.v.})$ (0.4 to 20 m/s) $\pm 0.5$ °C	0.1 m/s 0.1 °C	0560 1410
<b>Pressure</b>					
<b>testo 510i</b> Differential pressure measuring instrument with smartphone operation, including hose set ( $\varnothing$ 4 mm and 5 mm) with adapter, batteries and calibration protocol		-150 to 150 hPa	$\pm 0.05$ hPa (0 to 1 hPa) $\pm (0.2 \text{ hPa} + 1.5\% \text{ of m.v.})$ (1 to 150 hPa)	0.01 hPa	0560 1510
<b>testo 549i</b> High-pressure measuring instrument with smartphone operation, including batteries and calibration protocol		-1 to 60 bar	0.5% of final value	0.01 bar	0560 2549 02

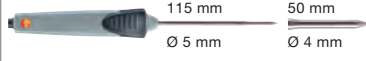
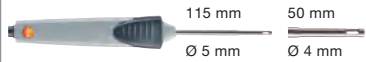


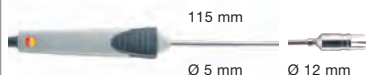
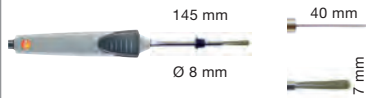


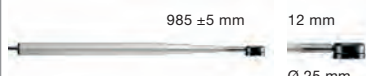


<sup>3)</sup> Please see the additional accuracy information for humidity in the instruction manual.



## Digital temperature probes

Probe type		Measuring range	Accuracy	Resolution	Order no.
<b>Digital temperature probes</b>					
<b>High-precision digital Pt100 penetration probe</b> for measurements in liquids and pastes with an accuracy of up to $\pm 0.05$ °C		-80 to +300 °C	$\pm 0.3$ °C (-80 to -40.001 °C) $\pm (0.1$ °C + 0.05% of m.v.) (-40 to -0.001 °C) $\pm 0.05$ °C (0 to +100 °C) $\pm (0.05$ °C + 0.05% of m.v.) (+100.001 to +300 °C)	0.001 °C	0618 0275
<b>Digital Pt100 penetration probe</b> for measurements in liquids and pastes		-100 to +400 °C	$\pm (0.15$ °C + 0.2% of m.v.) (-100 to -0.01 °C) $\pm (0.15$ °C + 0.05% of m.v.) (0 to +100 °C) $\pm (0.15$ °C + 0.2% of m.v.) (+100.01 to +350 °C) $\pm (0.5$ °C + 0.5% of m.v.) (+350.01 to +400 °C)	0.01 °C	0618 0073
<b>Glass-coated digital Pt100 laboratory probe</b> for measurements in corrosive media		-50 to +400 °C	$\pm (0.3$ °C + 0.3% of m.v.) (-50 to +300 °C) $\pm (0.4$ °C + 0.6% of m.v.) (+300.01 to +400 °C)	0.01 °C	0618 7072
<b>Robust, fast-reaction, digital Pt100 air probe</b>		-100 to +400 °C	$\pm (0.15$ °C + 0.2% of m.v.) (-100 to -0.01 °C) $\pm (0.15$ °C + 0.05% of m.v.) (0 to +100 °C) $\pm (0.15$ °C + 0.2% of m.v.) (+100.01 to +350 °C) $\pm (0.5$ °C + 0.5% of m.v.) (+350.01 to +400 °C)	0.01 °C	0618 0072
<b>Flexible digital Pt100 temperature probe</b> for measurements in locations that are difficult to access and in liquids		-100 to +260 °C	$\pm (0.3$ °C + 0.3% of m.v.)	0.01 °C	0618 0071

# Analogue temperature probes

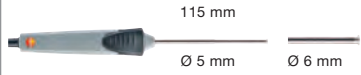
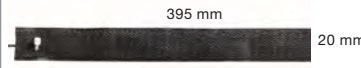




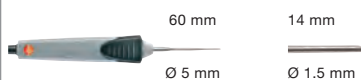

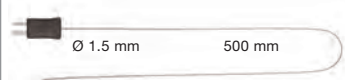

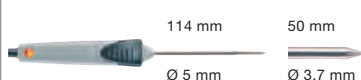
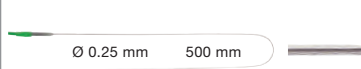

Probe type	Dimensions Probe shaft/probe shaft tip	Measuring range	Accuracy	t <sub>99</sub>	Order no.
Watertight immersion/penetration probe NTC, fixed cable 1.2 m		-50 to +150 °C	±0.5% of m.v. (+100 to +150 °C) ±0.2 °C (-25 to +74.9 °C) ±0.4 °C (remaining meas. range)	10 s	0615 1212
Robust air probe, NTC, fixed cable 1.2 m		-50 to +125 °C	±0.2 °C (-25 to +80 °C) ±0.4 °C (remaining meas. range)	60 s	0615 1712
Clamp probe for measurements on pipes from 6 to 35 mm diameter, NTC, fixed cable 1.5 m		-40 to +125 °C	±1 °C (-20 to +85 °C)	60 s	0615 5505
Robust air probe, TC type K, fixed cable		-60 to +400 °C	Class 2 <sup>1)</sup>	200 s	0602 1793
Fast-reaction surface probe with sprung thermocouple strip, also suitable for non-plane surfaces, measuring range briefly up to +500 °C, TC type K, fixed cable		-60 to +300 °C	Class 2 <sup>1)</sup>	3 s	0602 0393
Fast-reaction paddle surface probe, for measurements in places that are difficult to access, e.g. narrow openings and cracks, TC type K, fixed cable		0 to +300 °C	Class 2 <sup>1)</sup>	5 s	0602 0193
Precise, watertight surface probe with small measuring head for plane surfaces, TC type K, fixed cable		-60 to +1000 °C	Class 1 <sup>1)</sup>	20 s	0602 0693
Fast-reaction surface probe with sprung thermocouple strip, angled for non-plane surfaces as well, measuring range briefly up to +500 °C, TC type K, fixed cable		-60 to +300 °C	Class 2 <sup>1)</sup>	3 s	0602 0993
Surface temperature probe TC type K, with telescope max. 985 mm, for measurements in places that are difficult to access, fixed cable 1.6 m (correspondingly shorter when telescope is extended)		-50 to +250 °C	Class 2 <sup>1)</sup>	3 s	0602 2394
Magnetic probe, adhesive power approx. 20 N, with magnets, for measurements on metal surfaces, TC type K, fixed cable		-50 to +170 °C	Class 2 <sup>1)</sup>	150 s	0602 4792
Magnetic probe, adhesive power approx. 10 N, with magnets, for higher temperatures, for measurements on metal surfaces, TC type K, fixed cable		-50 to +400 °C	Class 2 <sup>1)</sup>		0602 4892

<sup>1)</sup> According to standard EN 60584-2, the accuracy of Class 1 refers to -40 to +1000 °C (type K), Class 2 to -40 to +1200 °C (type K), Class 3 to -200 to +40 °C (type K). A probe only ever complies with one accuracy class.

### Information about surface measurement:

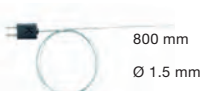
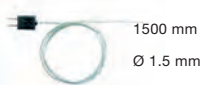
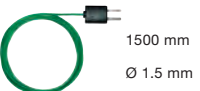

- The specified response times t<sub>99</sub> are measured on polished steel or aluminium plates at +60 °C.
- The specified accuracies are sensor accuracies.
- Accuracy in your application depends on the surface properties (roughness), the material of the measurement object (thermal capacity and heat transfer) and the sensor accuracy. Testo will produce a corresponding calibration certificate for the deviations of your measurement system in your application. For this, Testo uses a surface test bed developed in cooperation with the PTB (Physikalisch Technische Bundesanstalt - National Metrology Institute of Germany).

# Analogue temperature probes

Probe type	Dimensions Probe shaft/probe shaft tip	Measuring range	Accuracy	t <sub>99</sub>	Order no.
Watertight surface probe with wider measuring tip for plane surfaces, TC type K, fixed cable	 115 mm Ø 5 mm Ø 6 mm	-60 to +400 °C	Class 2 <sup>1)</sup>	30 s	0602 1993
Pipe wrap probe with Velcro strip, for measuring temperatures on pipes with diameters up to max. 120 mm, Tmax +120 °C, TC type K, fixed cable	 395 mm 20 mm	-50 to +120 °C	Class 1 <sup>1)</sup>	90 s	0628 0020
Pipe wrap probe for pipe diameters 5 to 65 mm, with interchangeable measuring head, measuring range briefly up to +280 °C, TC type K, fixed cable		-60 to +130 °C	Class 2 <sup>1)</sup>	5 s	0602 4592
Replacement measuring head for pipe wrap probe, TC type K	 35 mm 15 mm	-60 to +130 °C	Class 2 <sup>1)</sup>	5 s	0602 0092
Clamp probe for measurements on pipes, pipe diameters 15 to 25 mm (max. 1"), measuring range briefly up to +130 °C, TC type K, fixed cable		-50 to +100 °C	Class 2 <sup>1)</sup>	5 s	0602 4692
Precise and fast immersion probe, flexible, watertight, TC type K, fixed cable	 Ø 1.5 mm 300 mm	-60 to +1000 °C	Class 1 <sup>1)</sup>	2 s	0602 0593
Ultra-fast, watertight immersion/penetration probe, TC type K, fixed cable	 60 mm 14 mm Ø 5 mm Ø 1.5 mm	-60 to +800 °C	Class 1 <sup>1)</sup>	3 s	0602 2693
Immersion measuring tip, flexible, TC type K	 Ø 1.5 mm 500 mm	-200 to +1000 °C	Class 1 <sup>1)</sup>	5 s	0602 5792
Immersion measuring tip, flexible, TC type K	 Ø 1.5 mm 500 mm	-200 to +40 °C	Class 3 <sup>1)</sup>	5 s	0602 5793
Immersion measuring tip, flexible, for measurements in air/flue gases (not suitable for measurements in smelters), TC type K	 Ø 3 mm 1000 mm	-200 to +1300 °C	Class 1 <sup>1)</sup>	4 s	0602 5693
Watertight immersion/penetration probe, TC type K, fixed cable	 114 mm 50 mm Ø 5 mm Ø 3.7 mm	-60 to +400 °C	Class 2 <sup>1)</sup>	7 s	0602 1293
Flexible, low-mass immersion measuring tip, ideal for measurements in small volumes, such as Petri dishes or for surface measurements (e.g. fixed with adhesive tape)	 Ø 0.25 mm 500 mm	-200 to +1000 °C	Class 1 <sup>1)</sup>	1 s	0602 0493
TC type K, 2 m, FEP-insulated thermal wire, temperature-resistant up to 200 °C, oval cable with dimensions: 2.2 mm x 1.4 mm					
Watertight food probe made of stainless steel (IP 65), TC type K, fixed cable	 125 mm 30 mm Ø 4 mm Ø 3.2 mm	-60 to +400 °C	Class 2 <sup>1)</sup>	7 s	0602 2292

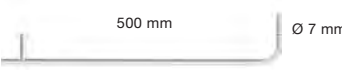
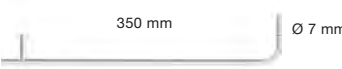
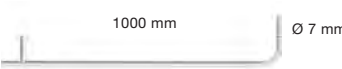



<sup>1)</sup> According to standard EN 60584-2, the accuracy of Class 1 refers to -40 to +1000 °C (type K), Class 2 to -40 to +1200 °C (type K), Class 3 to -200 to +40 °C (type K). A probe only ever complies with one accuracy class.

## Analogue probes

Probe type	Dimensions Probe shaft/probe shaft tip	Measuring range	Accuracy	t <sub>99</sub>	Order no.
<b>Thermoelectric couples</b>					
Thermoelectric couple with TC plug, flexible, length 800 mm, fibreglass, TC type K	 800 mm Ø 1.5 mm	-50 to +400 °C	Class 2 <sup>1)</sup>	5 s	0602 0644
Thermoelectric couple with TC plug, flexible, length 1500 mm, fibreglass, TC type K	 1500 mm Ø 1.5 mm	-50 to +400 °C	Class 2 <sup>1)</sup>	5 s	0602 0645
Thermoelectric couple with TC plug, flexible, length 1500 mm, PTFE, TC type K	 1500 mm Ø 1.5 mm	-50 to +250 °C	Class 2 <sup>1)</sup>	5 s	0602 0646
<b>Comfort probe</b>					
Globe thermometer Ø 150 mm, TC type K, for measuring radiant heat		0 to +120 °C	Class 1 <sup>1)</sup>		0602 0743

<sup>1)</sup> According to standard EN 60584-2, the accuracy of Class 1 refers to -40 to +1000 °C (type K), Class 2 to -40 to +1200 °C (type K), Class 3 to -200 to +40 °C (type K). A probe only ever complies with one accuracy class.


## Pitot tubes

Probe type	Dimensions Probe shaft/probe shaft tip	Measuring range	Order no.
Pitot tube, length 500 mm, Ø 7 mm, stainless steel, for measuring flow velocity*	 500 mm Ø 7 mm	Measuring range 1 to 100 m/s Operating temperature 0 to +600 °C Pitot tube factor 1.0	0635 2045
Pitot tube, length 350 mm, Ø 7 mm, stainless steel, for measuring flow velocity*	 350 mm Ø 7 mm	Measuring range: 1 to 100 m/s Operating temperature: 0 to +600 °C Pitot tube factor: 1.0	0635 2145
Pitot tube, length 1000 mm, stainless steel, for measuring flow velocity*	 1000 mm Ø 7 mm	Measuring range: 1 to 100 m/s Operating temperature: 0 to +600 °C Pitot tube factor: 1.0	0635 2345
Straight Pitot tube with integrated temperature measurement, incl. connection hose, length 360 mm	 360 mm	Measuring range: 1 to 30 m/s Operating temperature: 0 to +600 °C Pitot tube factor: 0.67 Minimum immersion depth: 150 mm	0635 2043
Straight Pitot tube with integrated temperature measurement, incl. connection hose, length 500 mm	 500 mm	Measuring range: 1 to 30 m/s Operating temperature: 0 to +600 °C Pitot tube factor: 0.67 Minimum immersion depth: 150 mm	0635 2143
Straight Pitot tube with integrated temperature measurement, incl. connection hose, length 1000 mm	 1000 mm	Measuring range: 1 to 30 m/s Operating temperature: 0 to +600 °C Pitot tube factor: 0.67 Minimum immersion depth: 150 mm	0635 2243

\*Connection hose required (order no. 0554 0440) or (order no. 0554 0453)

# Accessories

Accessories for digital air velocity probes		Order no.
	Extendible telescope for testo 440 air flow probes (37.5 to 100 cm incl. 90° angle)	0554 0960
	Telescope extension (0.9 m) for testo 440 flow probes	0554 0990
	Telescopic rod with universal joint for testo 400 / testo 440 / testo 480 flow velocity probes (0.6 to 1.8 m)	0430 0946
Other accessories		Order no.
	Measuring stand for comfort level measurements with standard-compliant positioning of probes (incl. case)	0554 1590
	Combi case for testo 440 and multiple probes	0516 4401
	Service case for volume flow measurement	0516 4900
	testovent 417 funnel set comprising funnel for plate outlets (Ø 200 mm) and funnel for fans (330 x 330 mm) for incoming/outgoing air	0563 4170
	Flow straightener testovent 417	0554 4172
	USB mains unit incl. cable	0554 1105

Other accessories		Order no.
	Connection hose, silicone, length 5 m, maximum load capacity 700 hPa (mbar)	0554 0440
	Connection hose silicone-free for differential pressure measurement, length 5 m, maximum load capacity 700 hPa, (mbar)	0554 0453
	Control and calibration set for Testo humidity probes, saline solution with 11.3 %RH and 75.3 %RH, incl. adapter for Testo humidity probes	0554 0660
Printer		Order no.
	BLUETOOTH®/IRDA printer incl. battery and mains unit	0554 0621
	Spare thermal paper for printer (6 rolls), measurement data documentation can be read for up to 10 years	0554 0568
Calibration certificates		Order no.
	ISO calibration certificate (temperature), for air/immersion probe, calibration points -18 °C; 0 °C; +60 °C	0520 0001
	DAkkS calibration certificate (temperature); measuring instruments with air/immersion probe; calibration points -20 °C; 0 °C; +60 °C	0520 0211
	ISO calibration certificate humidity, calibration points 11.3 %RH and 75.3 %RH at +25°C	0520 0006
	DAkkS calibration certificate (humidity); electronic hygrometer; calibration points 11.3 %RH and 75.3 %RH at +25 °C	0520 0206
	ISO calibration certificate (pressure); accuracy > 0.6 (% of f.v.)	0520 0005
	ISO calibration certificate flow, hot wire, vane anemometer, Pitot tube; calibration points 1; 2; 5; 10 m/s	0520 0004
	ISO calibration certificate flow, hot wire, vane anemometer, Pitot tube; calibration points 5; 10; 15; 20 m/s	0520 0034
	ISO calibration certificate (luminance) calibration points 0; 500; 1000; 2000; 4000 lux	0520 0010
	ISO calibration certificate (CO <sub>2</sub> ; CO <sub>2</sub> probes); calibration points 0; 1000; 5000 ppm	0520 0033

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Subject to change without notice.



# testo 440 delta P flow ComboKit 1 with Bluetooth®

Kit for measurement in ducts,  
at outlets and on filters

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Structured, intuitive measurement menus for volume flow

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Parallel measurement of flow, differential pressure, humidity  
and temperature

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Universal Bluetooth® handle for different wireless probe  
heads

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Internal data storage and USB port for data export

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Integrated differential pressure sensor and a large portfolio  
of digital probes

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With the testo 440 delta P flow ComboKit 1 with Bluetooth®, all IAQ-related parameters at air vents, in ducts and at filters can be measured and documented wirelessly. The air velocity & IAQ measuring instrument recognizes probes automatically, and its structured measurement menus simplify the adjustment of air conditioning and ventilation systems. In addition to a Bluetooth® probe, a wired probe and a thermocouple Type K temperature probe can also be connected to the measuring instrument.

The versatile Bluetooth® handle allows the connection of many different wireless probe heads for all applications. The kit also contains a vane probe head, a hot wire probe head, an extendable telescope for flow velocity probes and a storage case.






**Scope of delivery**

- testo 440 dP air velocity & IAQ measuring instrument, incl. differential pressure sensor, connection hose, 3x AA batteries, USB cable and calibration protocol (0560 4402)
- Vane probe (Ø 100 mm) with Bluetooth® incl. temperature sensor (consisting of 100 mm vane probe head, handle adapter and Bluetooth® handle); bracket for testovent measurement funnel; 4x AA batteries and calibration protocol (0635 9431)
- Hot wire probe head (Ø 9 mm) including temperature and humidity sensor and calibration protocol (0635 1570)
- Extendable telescope (length up to 1 m) for flow probes with a universal handle including 90° angle (0554 0960)
- Combi-case for testo 440 and multiple probes (0516 4401)



Order no. 0563 4409

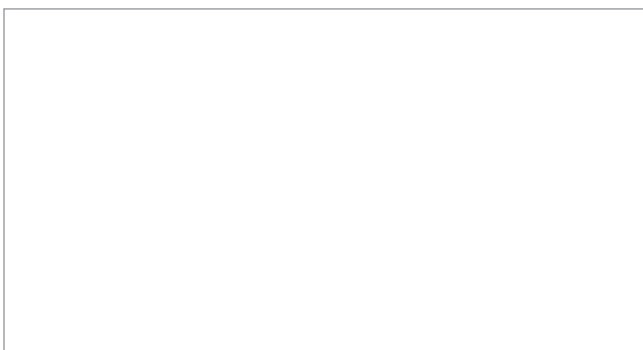
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Technical data	Measuring range	Accuracy	Resolution
<b>Digital probes</b>			
<b>Vane probe (Ø 100 mm) with Bluetooth®</b> , including temperature sensor 	0.3 to 35 m/s -20 to +70 °C	$\pm(0.1 \text{ m/s} + 1.5 \% \text{ of m.v.})$ (0.3 to 20 m/s) $\pm(0.2 \text{ m/s} + 1.5 \% \text{ of m.v.})$ (20.1 to 35 m/s) $\pm 0.5 \text{ °C}$	0.01 m/s 0.1 °C
<b>Hot wire probe head (Ø 9 mm)</b> incl. temperature and humidity sensor 	0 to 50 m/s -20 to +70 °C 5 to 95 %RH 700 to 1100 hPa	$\pm(0.03 \text{ m/s} + 4 \% \text{ of m.v.})$ (0 to 20 m/s) $\pm(0.5 \text{ m/s} + 5 \% \text{ of m.v.})$ (20.01 to 30 m/s) $\pm 0.5 \text{ °C}$ (0 to +70 °C) $\pm 0.8 \text{ °C}$ (-20 to 0 °C) $\pm 3.0 \% \text{RH}$ (10 to 35 %RH) <sup>2)</sup> $\pm 2.0 \% \text{RH}$ (35 to 65 %RH) <sup>2)</sup> $\pm 3.0 \% \text{RH}$ (65 to 90 %RH) <sup>2)</sup> $\pm 5 \% \text{RH}$ (remaining meas. range) <sup>2)</sup> $\pm 3 \text{ hPa}$	0.01 m/s 0.1 °C 0.1 %RH 0.1 hPa
<b>testo 440 dP</b>			
<b>testo 440 dP air velocity &amp; IAQ measuring instrument</b> Connectable probes: 1x digital probe with cable or 1x temperature NTC TUC, 1x digital Bluetooth® probe or Testo Smart Probes, 1x differential pressure (internal), 1x temperature TC Type K 	<b>Differential pressure</b> -150 to +150 hPa		$\pm 0.05 \text{ hPa}$ (0 to +1.00 hPa) $\pm 0.2 \text{ hPa} + 1.5 \% \text{ of m.v.}$ (+1.01 to +150 hPa)

<sup>1)</sup> For use with Bluetooth® handle and adapter included in delivery or with the wired handle (order no. 0554 2222).  
<sup>2)</sup> Please see the additional accuracy information for humidity in the instruction manual.

General technical data	testo 440	Vane probe (Ø 100 mm) with Bluetooth®	Hot wire probe head (Ø 9 mm)	Extendable telescope
Data transmission	Bluetooth®, USB interface	Bluetooth®, Wireless range up to 20 m		
Operating temperature	-20 to +50 °C	-20 to +70 °C	-20 to +70 °C	-5 to +50 °C
Storage temperature	-20 to +50 °C	-20 to +70 °C	-20 to +70 °C	-20 to +60 °C
Dimensions	154 x 65 x 32 mm	375 x 105 x 46 mm	235 x 12 x 12 mm	Telescope: 375 x 17 x 16 mm Angle: 65 x 65 x 15 mm
Probe head diameter		Ø 100 mm	Ø 9 mm	Ø 12 mm
Weight	250 g	360 g	35 g	155 g

You will find the complete selection of probes and accessories for the testo 440 in the testo 440 data sheet or at [www.testo.com](http://www.testo.com).



Subject to change, including technical modifications.

# testo 440 delta P flow ComboKit 2 with Bluetooth®

Kit for measurement in ducts,  
at outlets and on filters

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Structured measurement menu for volume flow

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Parallel recording of flow, differential pressure, air humidity  
and temperature

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The Bluetooth® handle can be combined with probe heads  
and/or the telescope

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Wireless probes, internal data storage and USB port for  
data export

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Incl. differential pressure sensor and extendable with a  
large portfolio of digital probes

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Compatible with a wide  
selection of Bluetooth® and  
wired probes.

With the testo 440 delta P flow ComboKit 2 with Bluetooth®, all IAQ-related parameters at air vents, in ducts and at filters can be measured and documented wirelessly. The testo 440 air velocity & IAQ measuring instrument recognizes probes automatically, and its structured measurement menus simplify the adjustment of air conditioning and ventilation systems. Up to 3 probes can be connected simultaneously to the measuring instrument: a Bluetooth® probe, a wired probe and a temperature probe with Type K thermocouple connector.

The versatile Bluetooth® handle allows the connection of many different wireless probe heads for all applications. The kit also contains two vane probe heads, a temperature/humidity probe head, an extendable telescope for flow velocity probes and a storage case.



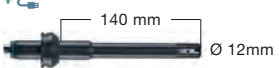

**Scope of delivery**

- testo 440 dP air velocity & IAQ measuring instrument, incl. differential pressure sensor, connection hose, 3x AA batteries, USB cable and calibration protocol (0560 4402)
- Vane probe (Ø 100 mm) with Bluetooth® incl. temperature sensor (consisting of 100 mm vane probe head, handle adapter and Bluetooth® handle); bracket for testovent measurement funnel; 4x AA batteries and calibration protocol (0635 9431)
- Vane probe head (Ø 16 mm) including temperature sensor and calibration protocol (0635 9570)
- Humidity/temperature probe head (Ø 12 mm) including calibration protocol (0636 9730)
- Extendable telescope (length up to 1 m) for flow probes with a universal handle including 90° angle (0554 0960)
- Combi-case for testo 440 and multiple probes (0516 4401)



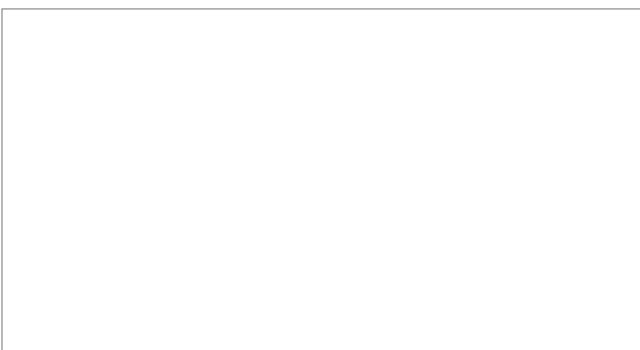
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Technical data		Measuring range	Accuracy	Resolution
<b>Digital probes</b>				
<b>Vane probe (Ø 100 mm) with Bluetooth®,</b> including temperature sensor		0.3 to 35 m/s -20 to +70 °C	±(0.1 m/s + 1.5 % of m.v.) (0.3 to 20 m/s) ±(0.2 m/s + 1.5 % of m.v.) (20.1 to 35 m/s) ±0.5 °C	0.01 m/s 0.1 °C
<b>Vane probe head (Ø 16 mm)</b> incl. temperature sensor		0.6 to 50 m/s -10 to +70 °C	±(0.2 m/s + 1 % of m.v.) (0.6 to 40 m/s) ±(0.2 m/s + 2 % of m.v.) (40.01 to 50 m/s) ±1.8 °C	0.1 m/s 0.1 °C
<b>Humidity/temperature probe head</b>		0 to 100 %RH -20 to +70 °C	±2 %RH (5 to 90 %RH) <sup>2)</sup> ±0.5 °C	0.01 %RH 0.1 °C
<b>testo 440 dP</b>				
<b>testo 440 dP air velocity &amp; IAQ measuring instrument</b> Connectable probes: 1x digital probe with cable or 1x temperature NTC TUC, 1x digital Bluetooth® probe or Testo Smart Probes, 1x differential pressure (internal), 1x temperature TC Type K		<b>Differential pressure</b> -150 to +150 hPa ±0.05 hPa (0 to +1.00 hPa) ±0.2 hPa + 1.5 % of m.v. (+1.01 to +150 hPa)		0.01 hPa
<sup>1)</sup> For use with Bluetooth® handle and adapter included in delivery (relevant for order no. 0635 9570) or with the wired handle (order no. 0554 2222). <sup>2)</sup> Please see the additional accuracy information for humidity in the instruction manual.				

General technical data	testo 440	Vane probe (Ø 100 mm) with Bluetooth®	Vane probe head (Ø 16 mm)	Humidity/temperature probe head	Extendable telescope
Data transmission	Bluetooth®, USB interface	Bluetooth®, Wireless range up to 20 m			
Operating temperature	-20 to +50 °C	-20 to +70 °C	-10 to +70 °C	-20 to +70 °C	-5 to +50 °C
Storage temperature	-20 to +50 °C	-20 to +70 °C	-10 to +70 °C	-20 to +70 °C	-20 to +60 °C
Dimensions	154 x 65 x 32 mm	375 x 105 x 46 mm	245 x 16 x 16 mm	160 x 28 x 28 mm	Telescope: 375 x 17 x 16 mm Angle: 65 x 65 x 15 mm
Probe head diameter		Ø 100 mm	Ø 16 mm	Ø 12 mm	Ø 12 mm
Weight	250 g	360 g	60 g	30 g	155 g

You will find the complete selection of probes and accessories for the testo 440 in the testo 440 data sheet or at [www.testo.com](http://www.testo.com).



# testo 440 Hot wire kit

## Kit for measurements in ventilation ducts

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Structured measurement menu for volume flow

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Parallel determination of flow velocity, volume flow and air temperature

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Integrated telescope that can be extended to 0.85 m, with scaling, makes it easy to carry out measurements

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Absolute pressure compensation, internal data storage and USB port for data export

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Can be extended with a large portfolio of digital probes

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Compatible with a wide selection of Bluetooth® and wired probes.

With the testo 440 hot wire kit, all IAQ-related parameters in ventilation ducts can be measured and documented. The testo 440 air velocity & IAQ measuring instrument recognizes probes automatically, and its structured measurement menus simplify the adjustment of air conditioning and ventilation systems. Up to 3 probes can be connected simultaneously to the measuring instrument: a Bluetooth® probe, a wired probe and a temperature probe with Type K thermocouple connector.

In addition to the measuring instrument, the kit also contains a wired hot wire probe and a storage case.



**Scope of delivery**

- testo 440 air velocity & IAQ measuring instrument, 3x AA batteries, USB cable and calibration protocol (0560 4401)
- Hot wire probe (Ø 9 mm) with fixed cable (length 1.7 m) including temperature sensor, with telescope (can be extended to 0.85 m) and calibration protocol (0635 1032)
- Basic case for testo 440 and 1 probe



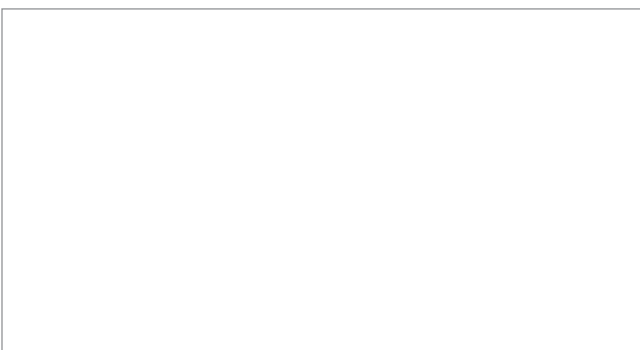
Order no. 0563 4400

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Technical data	Measuring range	Accuracy	Resolution
<b>Digital probe</b>			
<b>Hot wire probe (Ø 9 mm)</b> incl. temperature sensor 	0 to 30 m/s -20 to +70 °C 700 to 1100 hPa	±(0.03 m/s + 4 % of m.v.) (0 to 20 m/s) ±(0.5 m/s + 5 % of m.v.) (20.01 to 30 m/s) ±0.5 °C ±3 hPa	0.01 m/s 0.1 °C 0.1 hPa
<b>testo 440</b> <b>testo 440 air velocity &amp; IAQ measuring instrument</b> Connectable probes: 1x digital probe with cable or 1x temperature NTC TUC, 1x digital Bluetooth® probe or Testo Smart Probes, 1x temperature TE Type K 			

General technical data	testo 440	Hot wire probe (Ø 9 mm)
Data transmission	Bluetooth®, USB interface	
Operating temperature	-20 to +50 °C	-20 to +70 °C
Storage temperature	-20 to +50 °C	-20 to +70 °C
Dimensions	154 x 65 x 32 mm	315 x 12 x 12 mm
Probe head diameter		Ø 9 mm
Weight	250 g	90 g

You will find the complete selection of probes and accessories for the testo 440 in the testo 440 data sheet or at [www.testo.com](http://www.testo.com).



# testo 440

## Humidity kit with Bluetooth®

Kit for measurements in storerooms,  
workrooms and walk-in refrigerators

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Structured measurement menu for long-term measurements

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Parallel determination of air humidity and air temperature

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Calculation of dewpoint, wet bulb temperature and  
absolute humidity

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Wireless probe, internal data storage and USB port for  
data export

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Can be extended with a large portfolio of digital probes

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Compatible with a wide  
selection of Bluetooth® and  
wired probes.

With the testo 440 humidity kit with Bluetooth®, all IAQ-related parameters in storerooms, workrooms and walk-in refrigerators can be measured and documented wirelessly. The testo 440 air velocity & IAQ measuring instrument recognizes probes automatically, and its structured measurement menus simplify the adjustment of air conditioning and ventilation systems. Up to 3 probes can be connected simultaneously to the measuring instrument: a Bluetooth® probe, a wired probe and a temperature probe with Type K thermocouple connector.

The versatile Bluetooth® handle allows the connection of many different wireless probe heads for all applications. In addition to this, the kit contains a humidity/temperature probe head and a storage case.





**Scope of delivery**

- testo 440 air velocity & IAQ measuring instrument, 3x AA batteries, USB cable and calibration protocol (0560 4401)
- Humidity/temperature probe (Ø 12 mm) with Bluetooth® (consisting of humidity/temperature probe head and Bluetooth® handle); 4x AA batteries and calibration protocol (0636 9731)
- Basic case for testo 440 and 1 probe



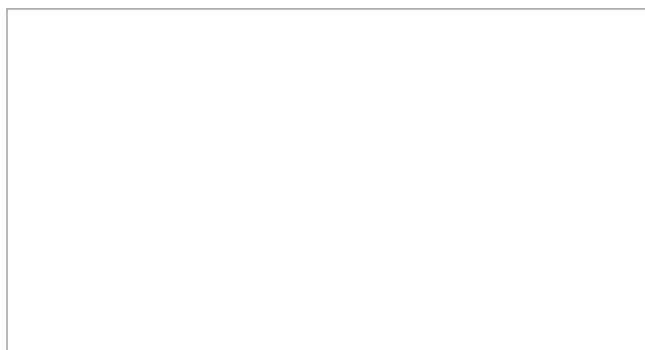
Order no. 0563 4404

1981 0724/msp/1/04.2019

Technical data	Measuring range	Accuracy	Resolution
<b>Digital probe</b>			
<b>Humidity/temperature probe (Ø 12 mm) with Bluetooth®</b> 	0 to 100 %RH -20 to +70 °C	±2 %RH (5 to 90 %RH)* ±0.5 °C	0.1 %RH 0.1 °C
<b>testo 440</b> <b>testo 440 air velocity &amp; IAQ measuring instrument</b> Connectable probes: 1x digital probe with cable or 1x temperature NTC TUC, 1x digital Bluetooth® probe or Testo Smart Probes, 1x temperature TE Type K 			
*Please see the additional accuracy information for humidity in the instruction manual.			

General technical data	testo 440	Humidity/temperature probe (Ø 12 mm) with Bluetooth®
Data transmission	Bluetooth®, USB interface	Bluetooth®, wireless range up to 20 m
Operating temperature	-20 to +50 °C	-20 to +70 °C
Storage temperature	-20 to +50 °C	-20 to +70 °C
Dimensions	154 x 65 x 32 mm	290 x 50 x 40 mm
Probe head diameter		Ø 12 mm
Weight	250 g	165 g

**You will find the complete selection of probes and accessories for the testo 440 in the testo 440 data sheet or at [www.testo.com](http://www.testo.com).**



Subject to change, including technical modifications.

# testo 440 comfort level ComboKit with Bluetooth®

Kit for all relevant measurements  
of indoor air quality

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Structured measurement menu for long-term measurements

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Parallel determination of CO<sub>2</sub> concentration, air humidity,  
air temperature and degree of turbulence

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Calculation of wet bulb temperature, dewpoint and  
absolute humidity

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Determination of degree of turbulence and draught risk  
according to EN ISO 7730 / ASHRAE 55

---

Internal data storage and USB port for data export

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Can be extended with a large portfolio of digital probes

---



With the testo 440 comfort level ComboKit with Bluetooth®, all IAQ-related parameters can be measured and documented wirelessly. The testo 440 air velocity & IAQ measuring instrument recognizes probes automatically, and its structured measurement menus simplify the adjustment of air conditioning and ventilation systems. In addition to a Bluetooth® probe, a wired probe and a thermocouple Type K temperature probe can also be connected to the measuring instrument.

The versatile Bluetooth® handle allows the connection of many different wireless probe heads for all applications. In addition to this, the kit contains a CO<sub>2</sub> probe head, a wired degree of turbulence probe and a storage case.

**Scope of delivery**

- testo 440 air velocity & IAQ measuring instrument, incl. 3x AA batteries, USB cable and calibration protocol (0560 4401)
- CO<sub>2</sub> probe with Bluetooth®, including temperature and humidity sensor (consisting of CO<sub>2</sub> probe head and Bluetooth® handle); 4x AA batteries, table stand and calibration protocol (0632 1551)
- Turbulence probe with fixed cable (cable length 1.4 m) and calibration protocol (0628 0152)
- Combi-case for testo 440 and multiple probes (0516 4401)



Order no. 0563 4408

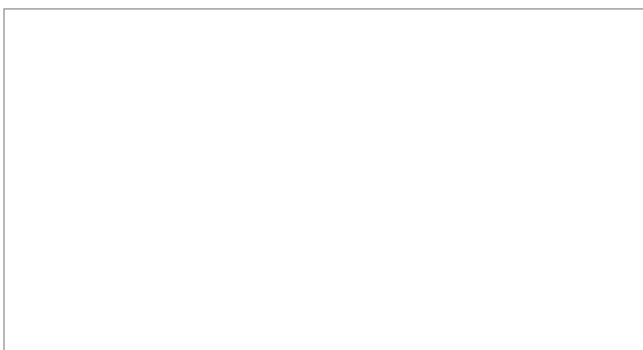
1981 0694/msp/1/04.2019

Technical data	Measuring range	Accuracy	Resolution
<b>Digital probes</b>			
<b>CO<sub>2</sub> probe with Bluetooth®</b> , incl. temperature and humidity sensor 	0 to 10 000 ppm CO <sub>2</sub> 5 to 95 %RH 0 to +50 °C 700 to 1100 hPa	±(50 ppm + 3 % of m.v.) (0 to 5 000 ppm) ±(100 ppm + 5 % of m.v.) (5 001 to 10 000 ppm) ±3 %RH (10 to 35 %RH)* ±2 %RH (35 to 65 %RH)* ±3 %RH (65 to 90 %RH)* ±5 %RH (remaining meas. range)* ±0.5 °C ±3 hPa	1 ppm 0.1 %RH 0.1 °C 0.1 hPa
<b>Turbulence probe</b> 	0 to +5 m/s 0 to +50 °C 700 to 1100 hPa	±(0.03 m/s + 4 % of m.v.) ±0.5 °C ±3 hPa	0.01 m/s 0.1 °C 0.1 hPa
<b>testo 440</b>			
<b>testo 440 air velocity &amp; IAQ measuring instrument</b> Connectable probes: 1x digital probe with cable or 1x temperature NTC TUC, 1x digital Bluetooth® probe or Testo Smart Probes, 1x temperature TE Type K 			

\*Please see the additional accuracy information for humidity in the instruction manual.

General technical data	testo 440	CO <sub>2</sub> probe with Bluetooth®	Turbulence probe
Data transmission	Bluetooth®, USB interface	Bluetooth®, Wireless range up to 20 m	
Operating temperature	-20 to +50 °C	0 to +50 °C	0 to +50 °C
Storage temperature	-20 to +50 °C	0 to +50 °C	-20 to +60 °C
Dimensions	154 x 65 x 32 mm	295 x 50 x 40 mm	400 x 90 x 90 mm
Probe head diameter		Ø 30 mm	Ø 820 mm
Weight	250 g	195 g	250 g

**You will find the complete selection of probes and accessories for the testo 440 in the testo 440 data sheet or at [www.testo.com](http://www.testo.com).**



# testo 440 Laboratory kit

## Measure temperature in aggressive media

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Structured measurement menu for long-term measurements

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Interchangeable probe coating made of laboratory glass  
(Duran) for safe use in aggressive media

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Pt100 sensor for accurate measurement results

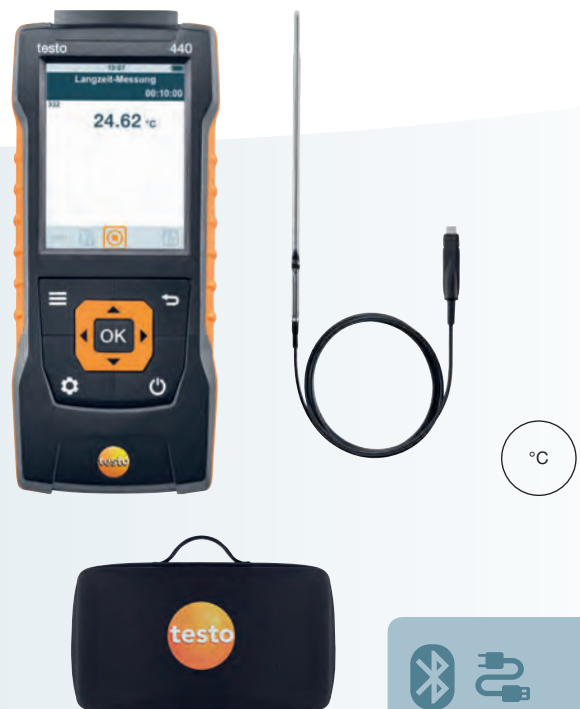
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internal data storage and USB port for flexible data export

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Can be expanded with an extensive portfolio of digital  
probes for versatile applications

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Compatible with a wide  
selection of Bluetooth® and  
wired probes.

Use the testo 440 laboratory kit including Pt100 probe to measure and document temperatures in the lab reliably and precisely. The laboratory probe, whose coating is made of the tried-and-tested Duran laboratory glass, is particularly suitable for use in corrosive media. The testo 440 air velocity & IAQ measuring instrument automatically detects the connected probes, and the stored, structured measurement menus make your work considerably easier in a wide variety of applications. You can also use it to optimally adjust air conditioning and ventilation systems, among other things.

Up to three probes can be connected in parallel to the testo 440: A Bluetooth® probe, a wired probe and a temperature probe with thermocouple type K connection. In addition to the measuring instrument, the laboratory kit also includes a wired Pt100 laboratory probe and a storage case.

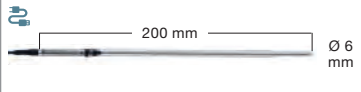

**Scope of delivery**

- testo 440 air velocity & IAQ measuring instrument, 3x AA batteries, USB cable and calibration protocol (0560 4401)
- Glass-coated digital Pt100 laboratory probe (0618 7072)
- Basic case for testo 440 and 1 probe



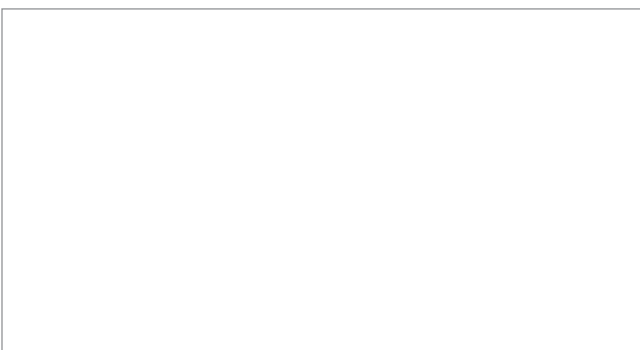
Order no. 0563 4412

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Technical data	Measuring range	Accuracy	Resolution
<b>Digital probe</b>			
<b>Glass-coated digital Pt100 laboratory probe</b> 	-50 to +400 °C	±(0.3 °C + 0.3 % of m.v.) (-50 to +300 °C) ±(0.4 °C + 0.6 % of m.v.) (+300.01 to +400 °C)	0.01 °C
<b>testo 440</b> <b>testo 440 air velocity &amp; IAQ measuring instrument</b> Connectable probes: 1x digital probe with cable or 1x temperature NTC TUC, 1x digital Bluetooth® probe or Testo Smart Probes, 1x temperature TC type K 			

General technical data	testo 440	Pt100 laboratory probe
Data transmission	Bluetooth®, USB port	
Operating temperature	-20 to +50 °C	-5 to +45 °C
Storage temperature	-20 to +50 °C	-20 to +60 °C
Dimensions	154 x 65 x 32 mm	200 x 6 mm
Cable length		1.6 m
Weight	250 g	160 g

You will find the complete selection of probes and accessories for the testo 440 in the testo 440 data sheet or at [www.testo.com](http://www.testo.com).



# testo 440 Lux kit

## Kit for measuring illuminance

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Structured measurement menu for long-term measurements

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Assessment of illuminance according to the V-lambda curve (suitable for all common light sources)

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Standard-compliant accuracy according to DIN EN 13032-1 and class C according to DIN 5032-7

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Non-slip probe contact surface for convenient positioning at the measuring location

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Internal data storage and USB port for data export

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Can be extended with a large portfolio of digital probes

---



With the testo 440 lux kit, illuminance can be measured and documented efficiently. The testo 440 air velocity & IAQ measuring instrument recognizes probes automatically, and its structured measurement menus simplify the adjustment of air conditioning and ventilation systems. Up to 3 probes can be connected simultaneously to the measuring instrument: a Bluetooth® probe, a wired probe and a temperature probe with Type K thermocouple connector.

In addition to the measuring instrument, the kit also contains a wired lux probe and a storage case.





**Scope of delivery**

- testo 440 air velocity & IAQ measuring instrument, 3x AA batteries, USB cable and calibration protocol (0560 4401)
- Lux probe with fixed cable (cable length 1.4 m) and calibration protocol (0635 0551)
- Basic case for testo 440 and 1 probe



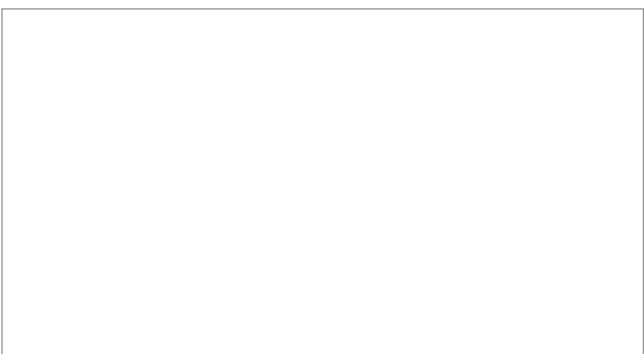
Order no. 0563 4402

1981 0734/msp/1/01.2020

Technical data	Measuring range	Accuracy	Resolution
<b>Digital probe</b>			
<b>Lux probe</b> 	0 to 100,000 lux	DIN 13032-1 Appendix B F1 = 6 % = V(Lambda) adjustment F2 = 5 % = cos-like weighting Class C according to DIN 5032-7	0.1 lux (< 10,000) 1 lux (> 10,000)
<b>testo 440</b> <b>testo 440 air velocity &amp; IAQ measuring instrument</b> Connectable probes: 1x digital probe with cable or 1x temperature NTC TUC, 1x digital Bluetooth® probe or Testo Smart Probes, 1x temperature TE Type K 			

General technical data	testo 440	Lux probe
Data transmission	Bluetooth®, USB interface	
Operating temperature	-20 to +50 °C	0 to +50 °C
Storage temperature	-20 to +50 °C	-20 to +50 °C
Dimensions	154 x 65 x 32 mm	110 x 55 x 22 mm
Cable length		1.4 m
Weight	250 g	110 g

**You will find the complete selection of probes and accessories for the testo 440 in the testo 440 data sheet or at [www.testo.com](http://www.testo.com).**



Subject to change, including technical modifications.

## rpm measuring instrument

testo 460 – Pocket-sized  
non-contact rpm measurement

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Optical rpm measurement with LED measurement spot  
marking

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Min./max. values

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Display illumination

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Protective cap for safe storage

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Incl. wrist strap and belt holder

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Illustration 1.1

The especially handy, pocket-sized rpm measuring instrument testo 460 optically measures rpm, e.g. on ventilators and shafts. The ideal distance to the measurement object is between 10 and 40 cm. Simply attach a reflective marker (optional) to the measurement object, point the visible measurement spot at the reflective marker, and measure. Min./max. values are directly displayed at the press of a button.

The Hold-button allows particularly convenient reading of the measurement values. The illuminated display enables easy read-out of the measurement values even in bad lighting. testo 460 is very small, handy and easy to operate. The clip-on protective cap, wrist strap and a belt holder provide safe storage, ensuring an especially long working life.

## Technical data / Accessories

### testo 460

testo 460 measuring instrument for rpm  
incl. protection cap, batteries, belt holder  
and calibration protocol

Part no. 0560 0460



#### Sensor type **optical**

Measuring range	100 to 29999 rpm
Accuracy ±1 digit	±(0.02 % of m.v.)
Resolution	0.1 rpm (100 to 999.9 rpm) 1 rpm (1000 to 29999 rpm)

#### General technical data

Selectable units	rpm, rps
Measuring rate	0.5 s
Storage temperature	-40 to +70 °C
Operating temperature	0 to +50 °C
Battery type	2 AAA micro batteries
Battery life	20 h (average, without display illumination)
Weight	85 g (incl. battery and protective cap)
Dimensions	119 x 46 x 25 mm (incl. protective cap)
Protection class	IP40

#### Accessories for measuring instrument

#### Part no.

Reflectors, self-adhesive (1 pack = 5 off, each 150 mm long)	0554 0493	
Belt holder	0516 4007	
ISO calibration certificate/rpm, Calibration points freely selectable from 10 to 99500 rpm	0520 0114	

## rpm measuring instrument

testo 465 - Non-contact rpm measurement

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Easy one-hand operation

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Storage of mean/min./max. values as well as last measurement value

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Measurement distance up to 600 mm

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Robust design thanks to SoftCase (protective cover)

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With the testo 465, you can measure rpm easily without contact using only one hand. The measuring instrument is thus suitable for measurements on rotating parts such as ventilators and shafts. Simply attach a reflective marker (optional) to the measurement object, point the visible red beam of light at the reflective marker, and measure. The

distance to the measurement object is up to 600 mm. The measuring instrument stores mean, min. and max. values as well as the last measurement value. The SoftCase included in delivery protects the instrument from impact, ensuring an especially long working life.

## Technical data / Accessories

### testo 465

testo 465 RPM measuring instrument with transport case incl. reflectors and batteries

Part no. 0563 0465



#### Sensor type **Optically with mod. light beam**

Measuring range	+1 to +99999 rpm
Accuracy ±1 digit	±0.02% of m.v.
Resolution	0.01 rpm (+1 to +99.99 rpm) 0.1 rpm (+100 to +999.9 rpm) 1 rpm (+1000 to +99999 rpm)

#### General technical data

Operating temperature	0 to +50 °C
Storage temperature	-20 to +70 °C
Battery type	2 AA batteries or rech. battery
Display	5-figure LCD display, 1-line
Weight	145 g
Dimensions	144 x 58 x 20 mm
Battery life	40 h

0981 9914/msp/I/01.2021

Subject to change without notice.

Accessories for measuring instrument	Part no.
Reflectors, self-adhesive (1 pack = 5 off, each 150 mm long)	0554 0493
ISO calibration certificate/rpm optical and mechanical rpm measuring instruments; cal. points 500; 1000; 3000 rpm	0520 0012
ISO calibration certificate/rpm optical rpm measuring instruments; calibration points 10; 100; 1000; 10000; 99500 rpm	0520 0022
ISO calibration certificate/rpm Calibration points freely selectable from 10 to 99500 rpm	0520 0114
DAkkS calibration certificate/rpm Optical rpm probes, 3 points (500; 1000; 3000 rpm)	0520 0422





## rpm measuring instrument

testo 470 – For non-contact and mechanical measurement

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Easy one-hand operation

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Measurement of rpm, speeds and lengths

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Storage of mean, max. and min. values as well as the last measurement value

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Measurement distance up to 600 mm (optical measurement)

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Battery check „Low Batt“

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Robust design thanks to SoftCase (protective case)

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The rpm measuring instrument testo 470, which can be operated with one hand, offers an optimum combination of optical and mechanical rpm measurement. By simply attaching an adapter for a probe tip or a speed disc, the optical measurement becomes a mechanical one. This allows speeds and lengths to be measured additionally. For optical measurements, simply attach a reflective marker

(optional) to the measurement object, point the visible measurement spot at the reflective marker, and measure. The distance to the measurement object is up to 600 mm. The testo 470 stores mean, min. and max. values as well as the last measurement value. The SoftCase included in delivery protects the instrument from impact, ensuring an especially long working life.



## Technical data / Accessories

### testo 470

testo 470 rpm measuring instrument with SoftCase in transport case incl. probe tip, 0.1 m and 6" wheel, reflectors and batteries

Part no. 0563 0470




#### Sensor types

	Optically with mod. light beam
Measuring range	+1 to +99999 rpm
Accuracy ±1 digit	±0.02% of m.v.
Resolution	0.01 rpm (+1 to +99.99 rpm) 0.1 rpm (+100 to +999.9 rpm) 1 rpm (+1000 to +99999 rpm)
	Mechanical
Measuring range	+0.1 to +19999 rpm
Accuracy ±1 digit	±0.2% of m.v.

#### General technical data

Operating temperature	0 to +50 °C
Storage temperature	-20 to +70 °C
Battery type	2 AA batteries
Battery life	40 h
Display	5-figure LCD display, 1-line
Dimensions	175 x 60 x 28 mm
Weight	190 g

	0.1 m	6"	12"
<b>m/min</b>	0.10-1999	0.10-1524	0.40-609.6
<b>ft/min</b>	0.40-6550	0.40-5000	0.40-2000
<b>in/min</b>	4.00-78700	4.00-60000	4.00-24000
<b>m/sec</b>	0.10-33.30	0.10-25.40	0.10-10.16
<b>ft/sec</b>	0.10-109	0.10-83.33	0.10-33.33
<b>m</b>	0.00-99999	0.00-99999	0.00-99999
<b>ft</b>	0.00-99999	0.00-99999	0.00-99999
<b>in</b>	0.00-99999	0.00-99999	0.00-99999

Units rpm, m/min, ft/min, in/min, m, ft, in

The mechanical tolerance for measurements with a wheel is 0.2 %, the measurement accuracy is dependent on handling, e.g application pressure, angle etc.

#### Accessories for measuring instrument

#### Part no.

Reflectors, self-adhesive (1 pack = 5 off, each 150 mm long)	0554 0493	
Measuring wheel 12"	0554 4755	
Measuring wheel 6"	0554 4754	
Measuring wheel 0.1 m	0554 4751	
Measurement tip	0554 4752	
Hollow cone	0554 4756	
ISO calibration certificate/rpm optical and mechanical rpm measuring instruments; cal. points 500; 1000; 3000 rpm	0520 0012	
ISO calibration certificate/rpm optical rpm measuring instruments; calibration points 10; 100; 1000; 10000; 99500 rpm	0520 0022	
ISO calibration certificate/rpm Calibration points freely selectable from 10 to 99500 rpm	0520 0114	
DAkkS calibration certificate/rpm Optical rpm probes, 3 points (500; 1000; 3000 rpm)	0520 0422	

# Hand stroboscope

## testo 476 – With especially high-intensity light

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High adjustment accuracy and stability thanks to setting wheel with dynamic reaction

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High-intensity light thanks to energy-optimized switching electronics and high-performance xenon flash lamp

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Memory function (last value is stored when instrument is switched off)

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High-performance battery pack for min. 2 hours continuous operation without mains connection over entire frequency range

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Trigger input for synchronizing the flash sequence (long-term inspection)

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Tripod connection on housing

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The high light-intensity hand stroboscope testo 476 is used when it is necessary to make fast-moving objects appear in slow motion. The hand stroboscope Pocket Strobe™ measures and tests rotation and vibration movements. It allows the measurement of very small objects, or in places which are not directly accessible – and it does this without interrupting the production process! The testo 476 is thus optimally suitable for rpm measurements and for the inspection of components moving at high frequencies. The energy-optimized switching electronics and the light-

intensive xenon flash lamp provide a high light intensity (approx. 800 Lux). testo 476 has a memory function which stores the last measurement value when the instrument is switched off. For long-term inspections of measurement objects, a trigger input is available.

The high-performance battery pack allows a continuous operating time of at least 2 hours over the entire frequency range.

## Technical data / Accessories

### testo 476

testo 476 RPM measuring instrument pocket strobe incl. transport case, charger with 4 country adapters and trigger signal connector

Part no. 0563 4760



#### Sensor type Xenon

Measuring range	+30 to +12500 rpm
Accuracy ±1 digit	±0.01% of m.v.
Resolution	1 rpm

#### General technical data

Operating temperature	0 to +40 °C
Dimensions	240 x 65 x 50 mm
Weight	415 g
Display	LCD, 1 line
Display:	5 digit LCD display
Illumination:	800 Lux at distance of approx. 20 cm
Flash energy:	max. 150 mJ
Flash duration:	<20 µs
Light colour:	6000 to 6500 K
Type of operation:	Rechargeable battery
Mains voltage rech. battery:	100 to 240 V, 50/60 Hz
Battery type:	NiMH rech battery pack
Battery charging time:	max. 3.5 h
Total discharge protection:	Yes
Overload protection:	Yes
Trickle charging:	Yes
Connection external trigger:	0 to 5 V DTL/TTL compatible; 3.5 mm / 1/8 Standard plug; Uout=7.2 V unregulated
Housing material:	ABS
Operating time:	1h at 30 to 12,500 rpm and 23°C (typically)
Flash lamp life:	100 mio. flashes

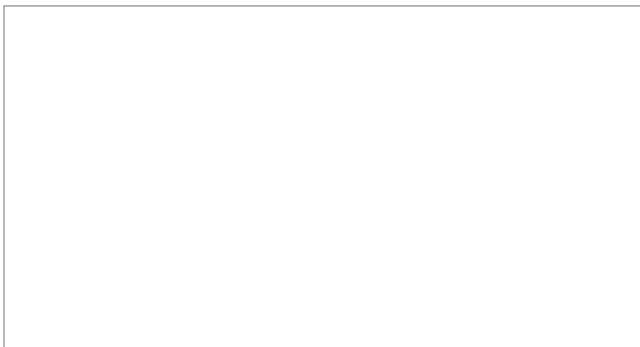
0981 9934/msp/1/01.2020

Subject to change without notice.

#### Accessories for measuring instrument

#### Part no.

Spare xenon flashlamps for hand-held stroboscope, high light intensity	0213 0020	
ISO calibration certificate/rpm optical and mechanical rpm measuring instruments; cal. points 500; 1000; 3000 rpm	0520 0012	



## LED hand stroboscope

### testo 477 – The measuring instrument for high revolutions

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High measuring range: up to 300000 flashes per minute (fpm)

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Very high light intensity of up to 4800 Lux

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Long operating time thanks to battery life up to 5 h

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Ideal for tough applications thanks to impact protection and IP65

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Trigger input and output

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The testo 477 LED hand stroboscope is used when it is necessary to make fast-moving objects appear in slow motion. testo 477 visualizes rotation and vibration movements and allows measurement during continuing operation. The static image allows the inspection and qualitative evaluation of components moving at high frequencies.

Thanks to the trigger input and output, the testo 477 can be connected to external systems and controlled by an external sensor.

The impact protection on the testo 477 and the protection class IP65 additionally guarantee that the instrument can be used under tough conditions. The long battery life enables you to carry out measurements for up to five hours.

## Technical data / Accessories

### testo 477

testo 477 LED strobe for RPM measurement incl. transport case, trigger signal connector, battery and calibration protocol

Part no. 0563 4770



Sensor type	LED
Measuring range	30 to 300000 fpm
Accuracy $\pm 1$ digit	0.02 %
Resolution	$\pm 0.1$ (30 to 999 fpm) $\pm 1$ (1000 to 300000 fpm)

#### General technical data

Protection class	IP65
Display	LCD, multiline
Flash duration	Can be adjusted
Flash intensity	4800 Lux at 6000 FPM / 30 cm
Flash colour	Approx. 6500 K
Service life	NiMH rechargeable battery: Approx. 11 h at 6000 fpm Batteries: approx. 5 h at 6000 fpm (3 x AA)

#### Trigger input

Principle	Optocoupler
Low level	< 1 V
Level	3 to 32 V (square wave voltage), NPN + PNP
Pulse duration	50 $\mu$ s
Reverse battery protection	Yes

#### Trigger output

Principle	Short-circuit and surge-proof transistor output
Level	NPN, max. 32 V
Pulse duration	Can be adjusted
Maximum current	50 mA
Reverse battery protection	Yes

#### Accessories

#### Part no.

ISO calibration certificate/rpm optical and mechanical rpm measuring instruments; cal. points 500; 1000; 3000 rpm	0520 0012	
DAkkS calibration certificate/rpm Optical rpm probes, 3 points (500; 1000; 3000 rpm)	0520 0422	



# Multi-function VAC measuring instrument

testo 480 – Cutting-edge  
technology for professionals

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Measurement of all VAC-relevant parameters: flow velocity, temperature, humidity, pressure, light intensity, radiant heat, degree of turbulence, CO<sub>2</sub>, PMV/PPD and WBGT index

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High-quality, digital probes and intelligent calibration concept

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Highly accurate, integrated differential pressure sensor

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Fast and professional report creation via PC software „EasyClimate“

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Integrated, guided measurement programs:

- VAC grid measurement according to EN 12599
  - PMV/PPD measurement according to ISO 7730
  - degree of turbulence measurement according to EN 13779
  - WBGT-measurement based on ISO 7243 / DIN 33403
- 



With the testo 480, you record, analyze and document all VAC-relevant parameters with only one instrument. The multi-function VAC measuring instrument stands out above all thanks to its accuracy and practice-oriented handling. testo 480 supports assessors, consultants, technical service providers or service technicians in the ventilation and air conditioning field. Measurement tasks such as the standardized adjustment of VAC systems in office, residential and industrial buildings can be carried out quickly and efficiently.

In addition to this, you test the relevant quality parameters for your production and processing systems reliably and precisely – thanks to the measuring instrument's comprehensive probe range specially tailored to industrial requirements.

The multi-function VAC measuring instrument is equipped with intelligent, digital probes which are calibrated independently of the hand-held instrument.



# Technical data

## testo 480

High-end VAC measuring instrument testo 480, including „EasyClimate“ PC software, power supply, USB cable and calibration protocol

Part no. 0563 4800



### Comfort measurement

- High-end VAC measuring instrument testo 480 incl. PMV/PPD measurement (Part no. 0563 4800)
- Comfort probe for degree of turbulence measurement according to EN 13779 (Part no. 0628 0143)\*
- Globe probe Ø 150mm, TC Type K, for measuring radiant heat (Part no. 0602 0743)
- IAQ probe for analyzing Indoor Air Quality, CO<sub>2</sub>, humidity, temperature and absolute pressure measurement, incl. table tripod (Part no. 0632 1543)\*
- Lux probe for measuring light intensity (Part no. 0635 0543)
- 2 x Plug-in head cable for digital probes (Part no. 0430 0100)
- Tripod for workplace evaluation (Part no. 0554 0743)
- System case for comfort level measurement (Part no. 0516 4801)

\*Plug-in head cable required (order no. 0430 0100)

### General technical data

Probe connection	2 x TC Type K, 1 x differential pressure, 3 x digital
Interfaces	USB connection, SD card, mains unit, infrared for fast printer
Operating temperature	0 to +40 °C
Storage temperature	-20 to +60 °C
Power supply	Rechargeable battery, plug-in mains unit for long-term measurements and charging battery
Battery life	approx. 17 hours (hand instrument without probes, with 50 % display brightness)
Display	Colour graphic display
Memory	1.8 GB (approx. 60.000.000 measurement values)

### HVAC measurement












- High-end VAC measuring instrument testo 480 incl. PMV/PPD measurement (Part no. 0563 4800)
- Vane measurement probe Ø 16 mm with telescope (scaling max. 960 mm) and integrated measurement button (Part no. 0635 9542)\*
- Thermal flow velocity probe (hot wire) Ø 10 mm, bendable by 90° (200 mm) with telescope (scaling max. 1100 mm) and integrated measurement button (Part no. 0635 1543)\*
- Humidity and temperature probe Ø 12 mm, highly accurate humidity measurement with 1% accuracy (Part no. 0636 9743)\*
- Vane measurement probe Ø 100 mm, for measurements on ventilation outlets (Part no. 0635 9343)\*
- Plug-in head cable for digital probes (Part no. 0430 0100)
- System case for HVAC measurements (Part no. 0516 4800)

\*Plug-in head cable required (order no. 0430 0100)

### Technical data




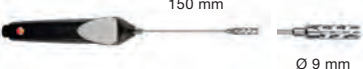

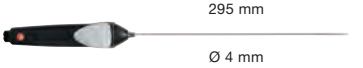


Sensor type	Differential pressure, integrated	Absolute pressure, integrated and external	Type K (NiCr-Ni)
Measuring range	-100 to +100 hPa	700 to 1100 hPa	-200 to +1370 °C
Accuracy ±1 digit	±(0.3 Pa +1% of m.v.) (0 to +25 hPa) ±(0.1 hPa + 1.5% of m.v.) (+25.001 to +100 hPa)	±3 hPa	±(0.3 °C +0.1% of m.v.)
Resolution	0.001 hPa	0.1 hPa	0.1 °C
Sensor type	Radiation temperature, globe	Pt100	Vane, 16 mm
Measuring range	0 to +120 °C	-100 to +400 °C	+0.6 to +50 m/s
Resolution	0.1 °C	0.01 °C	0.1 m/s
Sensor type	Vane, 100 mm	Hot wire, Hot bulb	Comfort probe
Measuring range	+0.1 to +15 m/s	0 to +20 m/s	0 to +5 m/s
Resolution	0.01 m/s	0.01 m/s	0.01 m/s
Sensor type	Testo humid. sensor, cap.	CO <sub>2</sub>	Lux
Measuring range	0 to 100 %RH	0 to 10000 ppm CO <sub>2</sub>	0 to 100000 Lux
Resolution	0.1 %RH	1 ppm CO <sub>2</sub>	1 Lux

# Probes

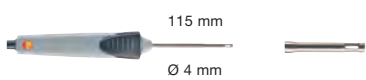
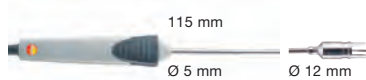

Probe type		Measuring range	Accuracy $\pm 1$ digit	Part no.
<b>Digital flow velocity probes</b>				
Vane measurement probe $\varnothing$ 16 mm with telescope (scaling max. 960 mm) and integrated measurement button*		0.6 to 50 m/s -10 to +70 °C	$\pm(0.2 \text{ m/s} + 1 \% \text{ of m.v.})$ (0.6 to 40 m/s) $\pm(0.2 \text{ m/s} + 2 \% \text{ of m.v.})$ (40.1 to 50 m/s) $\pm 1.8 \text{ }^\circ\text{C}$	0635 9542
High-temperature vane measurement probe $\varnothing$ 16 mm with telescope (scaling max. 960 mm) and integrated measurement button*		0.6 to 50 m/s -30 to +140 °C	$\pm(0.2 \text{ m/s} + 1 \% \text{ of m.v.})$ (0.6 to 40 m/s) $\pm(0.2 \text{ m/s} + 2 \% \text{ of m.v.})$ (40.1 to 50 m/s) $\pm(2.5 \text{ }^\circ\text{C} + 0.8 \% \text{ of m.v.})$	0635 9552
Thermal flow velocity probe (hot wire) $\varnothing$ 10 mm, bendable by 90° (200 mm) with telescope (scaling max. 1100 mm) and integrated measurement button*		0 to +20 m/s -20 to +70 °C 0 to 100 %RH +700 to +1100 hPa	$\pm(0.03 \text{ m/s} + 4 \% \text{ of m.v.})$ $\pm 0.5 \text{ }^\circ\text{C}$ $\pm(1.8 \% \text{RH} + 0.7 \% \text{ of m.v.})$ $\pm 3 \text{ hPa}$	0635 1543
Thermal flow velocity probe (hot wire) $\varnothing$ 7.5 mm, with telescope (max. 820 mm) and fixed plug-in head cable		0 to +20 m/s -20 to +70 °C	$\pm(0.03 \text{ m/s} + 5 \% \text{ of m.v.})$ $\pm 0.5 \text{ }^\circ\text{C}$	0635 1024
Thermal flow velocity probe (robust hot bulb) $\varnothing$ 3 mm, with telescope, (max. 860 mm) and fixed plug-in head cable, for direction-independent flow velocity measurement		0 to +10 m/s -20 to +70 °C	$\pm(0.03 \text{ m/s} + 5 \% \text{ of m.v.})$ $\pm 0.5 \text{ }^\circ\text{C}$	0635 1050
Vane measurement probe $\varnothing$ 100 mm, for measurements on ventilation outlets*		+0.1 to +15 m/s 0 to +60 °C	$\pm(0.1 \text{ m/s} + 1.5 \% \text{ of m.v.})$ $\pm 0.5 \text{ }^\circ\text{C}$	0635 9343
Thermal flow velocity probe (hot wire) $\varnothing$ 10 mm, with telescope, (max. 730 mm) and fixed plug-in head cable, for the measurement of air flow velocity in laboratory extractors according to EN 14175-3/-4		0 to +5 m/s 0 to +50 °C	$\pm(0.02 \text{ m/s} + 5 \% \text{ of m.v.})$ $\pm 0.5 \text{ }^\circ\text{C}$	0635 1048
<b>Digital comfort probes</b>				
Humidity and temperature probe $\varnothing$ 12 mm, highly accurate humidity measurement with 1% accuracy*		0 to 100 %RH -20 to +70 °C	$\pm(1.0 \% \text{RH} + 0.7 \% \text{ of m.v.})$ 0 to 90 %RH $\pm(1.4 \% \text{RH} + 0.7 \% \text{ of m.v.})$ 90 to 100 %RH $\pm 0.03 \% \text{RH/K}$ ( $k=1$ ) Long-term stability: $\pm 1 \% \text{RH} / \text{year}$ The probe accuracy corresponds to the system accuracy. $\pm 0.2 \text{ }^\circ\text{C}$ (+15 to +30 °C) $\pm 0.5 \text{ }^\circ\text{C}$ (remaining range)	0636 9743
IAQ probe for analyzing Indoor Air Quality, CO <sub>2</sub> , humidity, temperature and absolute pressure measurement, incl. table tripod*		0 to +50 °C 0 to 100 %RH 0 to +10000 ppm CO <sub>2</sub> +700 to +1100 hPa	$\pm 0.5 \text{ }^\circ\text{C}$ $\pm(1.8 \% \text{RH} + 0.7 \% \text{ of m.v.})$ $\pm(75 \text{ ppm CO}_2 + 3 \% \text{ of m.v.})$ 0 to +5000 ppm CO <sub>2</sub> $\pm(150 \text{ ppm CO}_2 + 5 \% \text{ of m.v.})$ 5001 to +10000 ppm CO <sub>2</sub> $\pm 3 \text{ hPa}$	0632 1543
Comfort probe for degree of turbulence measurement according to EN 13779*		0 to +50 °C 0 to +5 m/s +700 to +1100 hPa	$\pm 0.5 \text{ }^\circ\text{C}$ $\pm(0.03 \text{ m/s} + 4 \% \text{ of m.v.})$ $\pm 3 \text{ hPa}$	0628 0143
Globe probe $\varnothing$ 150mm, TC Type K, for measuring radiant heat		0 to +120 °C	Class 1	0602 0743

\*Plug-in head cable required (order no. 0430 0100)

# Probes

Probe type	Dimensions Probe shaft/probe shaft tip	Measuring range	Accuracy	t <sub>99</sub>	Part no.
<b>Digital comfort probes</b>					
Lux probe for measuring light intensity		0 to +100000 Lux	Class C according to DIN 5032-7; f1 = 6% V-Lambda; f2 = 5% cos		0635 0543
WBGT set (Wet Bulb Globe Temperature) for the evaluation of heat workplaces affected by heat, based on ISO 7243 / DIN 33403-3, consisting of globe, ambient temperature and wet bulb temperature probes, plug-in head cables, tripod and case		0 to +120 °C +10 to +60 °C +5 to +40 °C	Class 1 ±(0.25 °C +0.3% of m.v.) ±(0.25 °C +0.3% of m.v.)		0635 8888  ID no. 0699 6920/1
<b>Digital humidity probe</b>					
Robust humidity probe		0 to 100 %RH -20 to +180 °C	±3 %RH (0 to 2 %RH) ±2 %RH (2.1 to 98 %RH) ±3 %RH (98.1 to 100 %RH) ±0.03 %RH/K (-20 to +50 °C) (k= 1) ±0.03 %RH/K (+50 to +180 °C) (k= 1) Long-term stability: ±1%RH / year The probe accuracy corresponds to the system accuracy. ±0.5 °C (-20 to 0 °C) ±0.4 °C (0.1 to +50 °C) ±0.5 °C (+50.1 to +180 °C)		0636 9753
Do not use in condensing atmosphere. For continuous use in high-humidity ranges >80 %RH at ≤30 °C for > 12 h >60 %RH at >30 °C for > 12 h please refer to Testo customer service or contact us via the Testo website.					
<b>Digital temperature probe</b>					
Digital precision air probe, Pt100, Plug-in head cable required (Order no. 0430 0100)	 150 mm Ø 9 mm	-100 to +400 °C	±(0.15 °C + 0.2 % of m.v.) (-100 to -0.01 °C) ±(0.15 °C + 0.05 % of m.v.) (0 to +100 °C) ±(0.15 °C + 0.2 % of m.v.) (+100.01 to +350 °C) ±(0.5 °C + 0.5 % of m.v.) (+350.01 to +400 °C)		0614 0072
Fast-reaction digital surface probe with sprung thermocouple Type K, short-term up to +500 °C, Plug-in head cable required (Order no. 0430 0100)	 150 mm Ø 10 mm	-200 to +300 °C	±(2.5 °C + 0.8 % of m.v.) (-40 to +300 °C) Remaining range (-200 to -40.1 °C) is not specified		0614 0195
Highly precise digital immersion/penetration probe, Pt100, Plug-in head cable required (Order no. 0430 0100)	 295 mm Ø 4 mm	-80 to +300 °C	±(0.3 °C -80 to -40.001 °C) ±(0.1 °C + 0.05 % of m.v.) (-40 to -0.001 °C) ±(0.05 °C (0 to +100 °C) ±(0.05 °C + 0.05 % of m.v.) (+100.001 to +300 °C)		0614 0275
Flexible digital precision penetration probe, PTFE cable heat-proof to +300 °C, Plug-in head cable required (Order no. 0430 0100)	 1000 mm Ø 4 mm	-100 to +265 °C	±(0.30 °C + 0.3 % of m.v.) (-100 to -50.01 °C) ±(0.15 °C + 0.2 % of m.v.) (-50 to -0.01 °C) ±(0.15 °C + 0.05 % of m.v.) (0 to +100 °C) ±(0.15 °C + 0.5 % of m.v.) (+100.01 to +265 °C)		0614 0071
High-precision Pt100 immersion and penetration probe, Plug-in head cable required (order no. 0430 0100)	 200 mm Ø 3 mm	-100 to +400 °C	±(0.15 °C + 0.2% of m.v.) (-100 to -0.01 °C) ±(0.15 °C + 0.05% of m.v.) (0 to +100 °C) ±(0.15 °C + 0.2% of m.v.) (+100.01 to +350 °C) ±(0.5 °C + 0.5% of m.v.) (+350.01 to +400 °C)		0614 0073
Special versions of the Pt100 probe on request ( e.g. as a surface probe or air probe, probe shaft extended, strengthened)					
Adapter cable for connecting analog Pt100 probe to testo 480					

# Probes



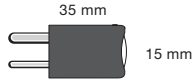


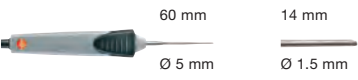



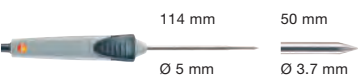

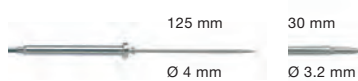
Probe type	Dimensions Probe shaft/probe shaft tip	Measuring range	Accuracy	t <sub>99</sub>	Part no.
<b>Analog temperature probe</b>					
Robust air probe, T/C Type K, Fixed cable		-60 to +400 °C	Class 2 <sup>1)</sup>	200 s	0602 1793
Fast-action surface probe with sprung thermocouple strip, also for uneven surfaces, measurement range short-term to +500°C, TC Type K, Fixed cable		-60 to +300 °C	Class 2 <sup>1)</sup>	3 s	0602 0393
Fast-reaction paddle surface probe, for measurements in inaccessible places, e.g. narrow apertures and slots, TC Type K, Fixed cable		0 to +300 °C	Class 2 <sup>1)</sup>	5 s	0602 0193
Efficient, waterproof surface probe with small measurement head for flat surfaces, TC Type K, Fixed cable		-60 to +1000 °C	Class 1 <sup>1)</sup>	20 s	0602 0693
Fast-action surface probe with sprung thermocouple strip, bent, also for uneven surfaces, measurement range short-term to +500°C, TC Type K, Fixed cable		-60 to +300 °C	Class 2 <sup>1)</sup>	3 s	0602 0993
Flat head surface probe with telescopic handle max. 680 mm for measurements at hard-to-access points, TC Type K, Fixed cable 1.6 m (correspondingly shorter when telescope extended)		-50 to +250 °C	Class 2 <sup>1)</sup>	3 s	0602 2394
Magnetic probe, adhesive force approx. 20 N, with magnets, for measurements on metal surfaces, TC Type K, Fixed cable		-50 to +170 °C	Class 2 <sup>1)</sup>	150 s	0602 4792
Magnetic probe, adhesive force approx. 10 N, with magnets, for higher temp., for measurements on metal surfaces, TC Type K, Fixed cable		-50 to +400 °C	Class 2 <sup>1)</sup>		0602 4892
Waterproof surface probe with widened measurement tip for flat surfaces, T/C Type K, Fixed cable		-60 to +400 °C	Class 2 <sup>1)</sup>	30 s	0602 1993

<sup>1)</sup> According to standard EN 60584-2, the accuracy of Class 1 refers to -40 to +1000 °C (Type K), Class 2 to -40 to +1200 °C (Type K), Class 3 to -200 to +40 °C (Type K). A probe always corresponds to only one accuracy class.

**Information on surface measurement:**



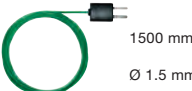
- The response times t<sub>99</sub> stated are measured on ground steel or aluminium plates at +60 °C.
- The stated accuracies are sensor accuracies.
- The accuracy in your application is dependent on the surface structure (roughness), material of the measurement object (heat capacity and heat transfer), as well as sensor accuracy. Testo creates a corresponding calibration certificate for the deviations of your measurement system in your application. For this purpose, Testo uses a surface test bench developed in cooperation with the PTB (Physikalisch Technische Bundesanstalt).

# Probes


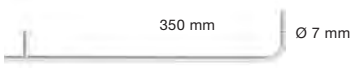
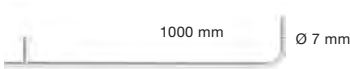

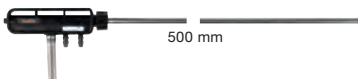

Probe type	Dimensions Probe shaft/probe shaft tip	Measuring range	Accuracy	t <sub>99</sub>	Part no.
<b>Analog temperature probe</b>					
Pipe wrap probe with velcro strip; for temperature measurement on pipes with diameter up to max. 120 mm; Tmax. +120 °C; TC Type K, Fixed cable		-50 to +120 °C	Class 1 <sup>1)</sup>	90 s	0628 0020
Pipe wrap probe for pipe diameter 5 to 65 mm, with exchangeable measuring head. Meas. range short-term up to +280 °C, TC Type K, Fixed cable		-60 to +130 °C	Class 2 <sup>1)</sup>	5 s	0602 4592
Spare meas. head for pipe wrap probe, TC Type K		-60 to +130 °C	Class 2 <sup>1)</sup>	5 s	0602 0092
Clamp probe for measurements on pipes, pipe diameter 15 to 25 mm (max. 1"), meas. range short-term up to +130°C, TC Type K, Fixed cable		-50 to +100 °C	Class 2 <sup>1)</sup>	5 s	0602 4692
Efficient and fast-action immersion probe, waterproof, TC Type K, Fixed cable		-60 to +1000 °C	Class 1 <sup>1)</sup>	2 s	0602 0593
Fast-action, waterproof immersion/penetration probe, TC Type K, Fixed cable		-60 to +800 °C	Class 1 <sup>1)</sup>	3 s	0602 2693
Immersion tip, flexible, TC Type K		-200 to +1000 °C	Class 1 <sup>1)</sup>	5 s	0602 5792
Immersion tip, flexible, TC Type K		-200 to +40 °C	Class 3 <sup>1)</sup>	5 s	0602 5793
Immersion measurement tip, flexible, for measurements in air/exhaust gases (not suitable for measurements in smelters), TC Type K		-200 to +1300 °C	Class 1 <sup>1)</sup>	4 s	0602 5693
Waterproof immersion/penetration probe, TC Type K, Fixed cable		-60 to +400 °C	Class 2 <sup>1)</sup>	7 s	0602 1293
Flexible, low-mass immersion measurement tip, ideal for measurements in small volumes such as petri dishes, or for surface measurements (e.g. attached with adhesive tape), TC Type K, 2 m, FEP insulated thermal wire, temperature proof up to 200 °C, oval wire with dimensions: 2.2 mm x 1.4 mm		-200 to +1000 °C	Class 1 <sup>1)</sup>	1 s	0602 0493
Waterproof food probe made of stainless steel (IP65), TC Type K, Fixed cable		-60 to +400 °C	Class 2 <sup>1)</sup>	7 s	0602 2292

<sup>1)</sup> According to standard EN 60584-2, the accuracy of Class 1 refers to -40 to +1000 °C (Type K), Class 2 to -40 to +1200 °C (Type K), Class 3 to -200 to +40 °C (Type K). A probe always corresponds to only one accuracy class.

# Probes

Probe type	Dimensions Probe shaft/probe shaft tip	Measuring range	Accuracy	t <sub>99</sub>	Part no.
<b>Thermocouples</b>					
Thermocouple with TC adapter, flexible, 800 mm long, fibre glass, TC Type K	 800 mm Ø 1.5 mm	-50 to +400 °C	Class 2 <sup>1)</sup>	5 s	0602 0644
Thermocouple with TC adapter, flexible, length 1500 mm, fibreglass, TC Type K	 1500 mm Ø 1.5 mm	-50 to +400 °C	Class 2 <sup>1)</sup>	5 s	0602 0645
Thermocouple with TC adapter, flexible, 1500 mm long, PTFE, TC Type K	 1500 mm Ø 1.5 mm	-50 to +250 °C	Class 2 <sup>1)</sup>	5 s	0602 0646

<sup>1)</sup> According to standard EN 60584-2, the accuracy of Class 1 refers to -40 to +1000 °C (Type K), Class 2 to -40 to +1200 °C (Type K), Class 3 to -200 to +40 °C (Type K). A probe always corresponds to only one accuracy class.

<b>Pitot tubes</b>					
Pitot tube, 500 mm long, Ø 7 mm, stainless steel, for measuring flow velocity*	 500 mm Ø 7 mm	Measuring range: 1 to 100 m/s Operating temperature: 0 to +600 °C Pitot tube factor: 1.0			0635 2045
Pitot tube, 350 mm long, Ø 7 mm, stainless steel, for measuring flow velocity*	 350 mm Ø 7 mm	Measuring range: 1 to 100 m/s Operating temperature: 0 to +600 °C Pitot tube factor: 1.0			0635 2145
Pitot tube, 1000 mm long, stainless steel, for measuring flow velocity*	 1000 mm Ø 7 mm	Measuring range: 1 to 100 m/s Operating temperature: 0 to +600 °C Pitot tube factor: 1.0			0635 2345
Straight pitot tube with integrated temperature measurement, incl. connection hose, length 360 mm	 360 mm	Measuring range: 1 to 30 m/s Operating temperature: 0 to +600 °C Pitot tube factor: 0.67 Minimum immersion depth: 150 mm			0635 2043
Straight pitot tube with integrated temperature measurement, incl. connection hose, length 500 mm	 500 mm	Measuring range: 1 to 30 m/s Operating temperature: 0 to +600 °C Pitot tube factor: 0.67 Minimum immersion depth: 150 mm			0635 2143
Straight pitot tube with integrated temperature measurement, incl. connection hose, length 1000 mm	 1000 mm	Measuring range: 1 to 30 m/s Operating temperature: 0 to +600 °C Pitot tube factor: 0.67 Minimum immersion depth: 150 mm			0635 2243

\*Connection hose required (order no. 0554 0440) or (order no. 0554 0453)



# Accessories

Accessories for measuring instrument	Part no.
Telescope for digital probes, with ball joint and probe bracket, length 1.8 m. Use 5 m plug-in head cable (order no. 0430 0101).	0430 0946
Tripod for workplace evaluation With holders for hand-held instrument and probe. Can also be used as telescope extension	0554 0743
Plug-in head cable for digital probes	0430 0100
Plug-in head cable for digital probes, length 5 m	0430 0101
testovent 417 funnel set for plate outlets (Ø 200 mm) and funnel for ventilator (330 x 330 mm) for ingoing and outgoing air	0563 4170
Flow straightener testovent 417	0554 4172
Control and adjustment set for Testo humidity probes, salt solution with 11.3% RH and 75.3% RH, incl. adapter for Testo humidity probes	0554 0660
Connection hose; silicone; length 5 m; max. load 700 hPa (mbar)	0554 0440
Connection hose silicone-free for differential pressure measurement, length 5 m, load up to maximum 700 hPa, (mbar)	0554 0453
PC software testo EasyClimate for data analysis	0501 0485

## Transport and Protection

Soft case testo 480 incl. carrying strap	0516 0481
System case for comfort level measurement For instrument, probes and other accessories	0516 4801
System case for HVAC measurements, For instrument, probes and other accessories	0516 4800

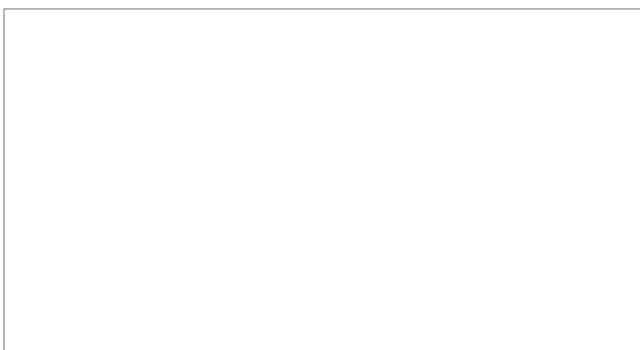
## Printer and Accessories

Testo fast printer IrDA with wireless infrared interface; 1 roll thermal paper; 4 AA batteries for printing out measurements on site	0554 0549
Spare thermal paper for printer (6 rolls), permanent ink, measurement data documentation legible for up to 10 years	0554 0568

## Calibration Certificates

ISO calibration certificate/temperature for air/immersion probes, calibration points -18°C; 0°C; +60°C	0520 0001
DAkkS calibration certificate/temperature; meas. instr. with air/immersion probe; calibration points -20 °C; 0 °C; +60 °C	0520 0211
ISO calibration certificate humidity; Calibration points 11.3 %RH and 75.3 %RH at +25 °C	0520 0006
DAkkS calibration certificate/humidity; electronic hygrometers; calibration points 11.3%RH and 75.3%RH at +25°C	0520 0206
ISO calibration certificate pressure; accuracy 0.1 to 0.6 (% of fsv), 5 points distributed over meas. range	0520 0025
ISO calibration certificate pressure; accuracy > 0.6 (% of fsv)	0520 0005
ISO calibration certificate velocity; hot wire, vane anemometer, Pitot tube; calibration points 1; 2; 5; 10 m/s	0520 0004
ISO calibration certificate velocity; hot wire, vane anemometer, Pitot tube; calibration points 5; 10; 15; 20 m/s	0520 0034
ISO calibration certificate/light; Calibration points 0; 500; 1000; 2000; 4000 Lux	0520 0010
ISO calibration certificate/CO <sub>2</sub> ; CO <sub>2</sub> probes; calibration points 0; 1000; 5000 ppm	0520 0033

More calibration certificates on request



# Differential pressure measuring instrument

## testo 510 – Pocket-sized differential pressure measurement

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Differential pressure measurement 0 to 100 hPa

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Flow velocity measurement possible with Pitot tube

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Temperature and air density compensation

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Display illumination

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10 selectable units

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hPa

m/s

Illustration 1.1

testo 510 measures differential pressure in the range from 0 to 100 hPa. The differential pressure measurement is temperature-compensated for accurate measurement values. The measurement values can be displayed in Pascal over the entire measurement range. Magnets at the rear permit free-hand work. The backlit display allows

the measurement values to be easily read out, even in unfavourable light conditions. The testo 510, in combination with a Pitot tube, measures air flow velocity. For accurate measurement values, the air density can be compensated. testo 510 is very handy, small and easy to operate.

## Technical data / Accessories

### Pressure set testo 510

testo 510 handy measuring instrument for differential pressure, hose set (Ø 4 mm and 5 mm) with adapter, incl. protection cap, batteries, belt holder and calibration protocol

Part no. 0563 0510



#### Sensor type

#### Differential pressure sensor

Measuring range	0 to 100 hPa
Accuracy ±1 digit	±0.03 hPa (0 to 0.30 hPa) ±0.05 hPa (0.31 to 1.00 hPa) ±(0.1 hPa + 1.5 % of m.v.) (1.01 to 100 hPa)
Resolution	0.01 hPa

#### General technical data

Positive pressure	500 mbar
max. static pressure	1.5 bar
Operating temperature	0 to +50 °C
Storage temperature	-40 to +70 °C
Selectable units	hPa, mbar, Pa, mmH <sub>2</sub> O, inH <sub>2</sub> O, inHg, mmHg, psi, m/s, fpm
Protection class	IP40
Battery type	2 AAA micro batteries
Battery life	50 h (average, without display illumination)
Measurement rate	0.5 s
Dimensions	119 x 46 x 25 mm
Weight	90 g (with batteries and protective cap)

0981 9764/msp/l/01.2021

#### Accessories for measuring instrument

#### Part no.

Connection hose, silicone, 2 m long, max. load 700 hPa (mbar)	0554 0448	
Belt holder	0516 4007	
ISO calibration certificate pressure; differential pressure; 3 points distributed over meas. range	0520 0095	
ISO calibration certificate pressure; differential pressure; 5 points distributed over meas. range	0520 0005	

Subject to change without notice.



# Differential pressure gauge operated with smartphone

## testo 510i

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Compact professional measuring instrument from the Testo Smart Probes series, for use with smartphones/tablets

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Measurement of gas flow and static pressure, as well as volume flow

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Measurement menu for pressure-drop test incl. alarms

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Easy configuration and determination of the volume flow

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Measurement data analyzed and sent via testo Smart App

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Magnetic fixture for better attachment

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Space-saving and easy to transport

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hPa

m/s

 Bluetooth  
+ App

testo Smart App  
for free download




The differential pressure measuring instrument testo 510i, in combination with a smartphone or tablet, is suitable for the measurement of gas flow and static pressure, pressure drops on ventilators and filters as well as pressure drop measurement on gas pipes. In addition to this, in combination with a Pitot tube, the compact measuring instrument can be used for determining air flow velocity and volume flow.

Via the testo Smart App installed on the end device, users can comfortably read off their measurement values, configure volume flow measurements quickly and easily, and reliably determine timed and multi-point mean values. The App also includes a measurement menu for the pressure-drop test incl. alarm. All measurement data can be presented either as a diagram or in tabular form. The measurement protocols can then be directly sent as PDF or Excel files.

# Technical data/accessories

**testo 510i**

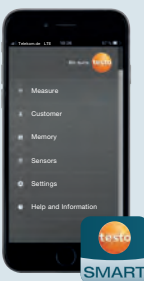
testo 510i, differential pressure gauge operated with smartphone, incl. hose set (Ø 4 mm and 5 mm) with adapter, batteries and calibration protocol



Order no. 0560 1510

**testo Smart App**

The App turns your smartphone/tablet into the display of the testo 510i. The operation of the measuring instrument as well as the display of the measurement values take place by Bluetooth via the testo Smart App on your smartphone or tablet – independently of the measurement location. In addition to this, you can use the App to create measurement reports, add photos and comments to these, and send them by e-mail. For iOS and Android.



Sensor type	Pressure
Measuring range	-150 to 150 hPa
Accuracy ±1 digit	±0.05 hPa (0 to 1 hPa) ±(0.2 hPa + 1.5 % of m.v.) (1 to 150 hPa)
Resolution	0.01 hPa

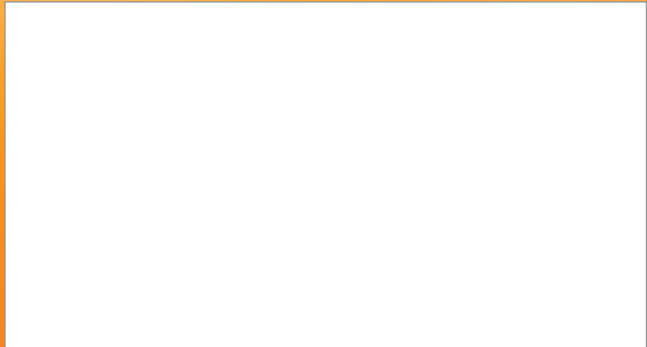
**General technical data**

Compatibility	requires iOS 11.0 or newer / Android 6.0 or newer requires mobile end device with Bluetooth 4.0
Storage temperature	-20 to +60 °C
Operating temperature	-20 to +50 °C
Battery type	3 micro batteries AAA
Battery life	150 hrs
Dimensions	148 x 36 x 23 mm

1981 1744/msp/I/09.2020

Subject to change without notice.

Accessories	Order no.
testo Smart Case (VAC) for the storage and transport of testo 405i, testo 410i, testo 510i, testo 605i, testo 805i and testo 905i, dimensions 270 x 190 x 60 mm	0516 0260
ISO calibration certificate pressure, accuracy > 0.6 % of final value	0520 0005



# Absolute pressure measuring instrument

## testo 511 – Pocket-sized absolute pressure measurement

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Highly accurate absolute pressure measurement to  $\pm 3$  hPa

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Barometric altitude measurement

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Calculation of barometric air pressure

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8 available pressure units

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Display illumination

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Illustration 1:1

testo 511 measures absolute pressure to an accuracy of  $\pm 3$  hPa. The measuring instrument is ideal for absolute pressure compensation during flow velocity measurements with a Pitot tube, for example. By entering the altitude above sea level, this is converted into barometric air pressure. In addition to this, a barometric pressure measurement between two points is also possible. The eight switchable pressure units offer the user highest flexibility in measurement.

The clip-on protective cap, wrist strap and belt holder ensure safekeeping of the instrument. testo 511 is very handy, small and easy to use.



## Technical data / Accessories

### testo 511

testo 511 handy measuring instrument for absolute pressure incl. protection cap, batteries, belt holder and calibration protocol

Part no. 0560 0511



#### Sensor type Absolute pressure probe

Measuring range	300 to 1200 hPa
Accuracy ±1 digit	±3.0 hPa
Resolution	0.1 hPa

#### General technical data

Selectable units	hPa, mbar, Pa, mmH <sub>2</sub> O, mmHg, inH <sub>2</sub> O, inHg, psi, m, ft
Measurement rate	0.5 s
Storage temperature	-40 to +70 °C
Operating temperature	0 to +50 °C
Battery type	2 AAA micro batteries
Battery life	200 h (average, without display illumination)
Protection class	IP40
Weight	90 g (with batteries and protective cap)
Dimensions	119 x 46 x 25 mm (incl. protective cap)

0981 9774/msp/I/01.2020

#### Accessories for measuring instrument

#### Part no.

Connection hose, silicone, 2 m long, max. load 700 hPa (mbar)	0554 0448	
Belt holder	0516 4007	
ISO calibration certificate relative pressure, 3 measurement points distributed over the measurement range	0520 0085	
ISO calibration certificate pressure, accuracy 0.1 to 0.6 (% of fsv), 5 points distributed over meas. range	0520 0025	

Subject to change without notice.

# Differential pressure measuring instrument

testo 512 – Digital differential pressure measuring instrument with App connection

testo 512-1 with position-independent differential pressure sensor with high accuracy up to 200 hPa for checking filters and for Pitot tube measurement in the ventilation duct, incl. volume flow calculation in measuring instrument and App

testo 512-2 with a large measuring range up to 2000 hPa

Fast in-app (duct) configuration, graph history, second screen and measurement data memory in the testo Smart App

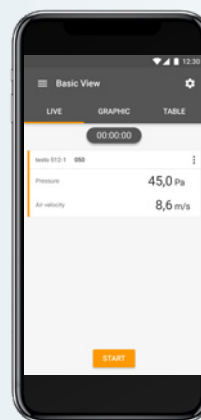
Audible alarm sounds if a limit value is exceeded

Durability through compact design with robust housing



- hPa
- mbar
- Pa
- kPa
- inHg
- inH<sub>2</sub>O
- mmHg
- mmH<sub>2</sub>O
- psi
- m/s\*
- m<sup>3</sup>/h\*

\* testo 512-1 only



Bluetooth 5.0 + App

testo Smart App for free download



Differential pressure measurement fast, easy and precise: This is what the testo 512-1 and testo 512-2 measuring instruments stand for. The two models differ in their measuring range: testo 512-1 measures up to 200 hPa, testo 512-2 up to 2000 hPa.

In practical use, they convince with their flexibility and variety of applications. **Checking the gas pressure on burners** by measuring gas flow pressure and static gas pressure is just as quick and precise as **checking filters** and **Pitot tube measurement** in the ventilation duct.

The position-independent differential pressure sensor ensures reliable and highly accurate measurement results in both instruments. The testo Smart App for smartphones and tablets supports you with these functions:


- Configure measuring instrument
- Display graphical measured value curve
- Save measurement data
- Manage customers and measuring points
- Documentation on site
- E-mail dispatch of the report

## Ordering data / technical data / accessories

**testo 512-1** 0 to 200 hPa

testo 512-1, differential pressure measuring instrument with App connection, measuring range 0 to 200 hPa, audible alarm, incl. transport bag, silicone connection hose, calibration protocol and 3 x AA batteries


Order no. 0563 1512



**testo 512-2** 0 to 2000 hPa

testo 512-2, differential pressure measuring instrument with App connection, measuring range 0 to 2000 hPa, audible alarm, incl. transport bag, silicone connection hose, calibration protocol and 3 x AA batteries

Order no. 0563 2512




**The testo Smart App**

- Simple and fast: Measurement menus for numerous applications provide optimum support in configuring and carrying out the measurement
- Clear graphical presentation of readings, e.g. as a table, for quick interpretation of results
- Create digital measurement reports including photos as PDF/CSV files on site and send via e-mail





Free download for Android and iOS



## Technical data

	testo 512-1	testo 512-2
<b>Differential pressure sensor</b>		
Measuring range	0 to +200 hPa	0 to +2000 hPa
Accuracy ±1 digit	±(0.3 Pa + 1% of m.v.) ±1 digit (0 to 25 hPa) ±(0.1 hPa + 1.5% of m.v.) ±1 digit (25.001 to 200 hPa)	0,5 % of the measurement range
Resolution	0.001 hPa (0 to +2 hPa) 0.01 hPa (2,01 to +20 hPa) 0.1 hPa (20,1 to +200 hPa)	1 hPa
Overload	±500 hPa	±2500 hPa
<b>General technical data</b>		
Operating temperature	-20 to +50 °C	
Storage temperature	-20 to +50 °C	
Battery type	3 x AA	
Battery life	120 h	
Dimensions	146 x 60 x 28 mm	
Weight	190 g	191 g
Protection class	IP40	
Housing material	ABS + PC / TPE	

## Accessories

Accessories	Order no.
testo Bluetooth® printer, incl. 1 roll of thermal paper, rech. battery and mains unit	0554 0621
Spare thermal paper for printer (6 rolls), measurement data documentation can be read for up to 10 years	0554 0568
DAkkS pressure calibration certificate, differential and positive pressure; 11 measuring points spread over the measuring range of the instrument	0520 0215
ISO pressure calibration certificate, > 0.6 (% of f.s.v.), 5 points spread over measuring range	0520 0005
Airflow velocity matrix	Order no.
<p>Air flow velocity matrix, telescope with ball head, length 1.8 m, with 2 x 2 m connection hose, silicon-free, with Velcro attachment on the telescope, for connection to differential pressure measuring instrument</p> 	
Connection hose required (order no. 0554 0440 or order no. 0554 0453)	
Pitot tubes	Order no.
Pitot tube, length 350 mm, Ø 7 mm, stainless steel, for measuring flow velocity	0635 2145
Pitot tube, length 500 mm, Ø 7 mm, stainless steel, for measuring flow velocity	0635 2045
Pitot tube, 1000 mm long, stainless steel, measures flow velocity	0635 2345

# Differential pressure measuring instrument

## testo 521 – Precise Pitot tube measurement

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Temperature-compensated differential pressure sensor in instrument

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Additional 2 probe inputs for the connection of further probes for the measurement of pressure and temperature

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Direct calculation of flow velocity and volume flow

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Direct zeroing of display value from pressure probes

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Display of Hold-, max. and min. values

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Easy data storage by measurement site as well as analysis, archiving and documentation via optional PC software

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Point and timed mean value calculation

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hPa

°C

testo 521-1/-2/-3 are highly accurate differential pressure measuring instruments with an internal sensor. The versionstesto 521-1 and testo 521-2 both have a measuring range from 0 to 100 hPa, however they are available in two accuracy classes:

- testo 521-1: accuracy 0.2 % of final value
- testo 521-2: accuracy 0.1 % of final value

testo 521-1 and testo 521-2 are optimally suited to checks on extraction systems and ventilators and for the monitoring of pressure drop at filters. In combination with a Pitot tube, the internal sensor measures flow velocities from 5 to 100 m/s. The instrument additionally has two probe inputs for the connection of further probes for the measurement of

pressure and temperature. A large selection of probes is available for this purpose.

testo 521-3 has a measuring range of 0 to 2.5 hPa and records even the smallest pressure differences without difficulty. Its high accuracy and a resolution of 0.1 Pa make it ideal for differential pressure measurements in cleanrooms. In combination with the Pitot tube, the internal sensor measures flow velocities from 1 to 20 m/s. The testo 521-3 is also equipped with two probe inputs for the connection of further probes for the measurement of pressure and temperature.



## Differential pressure measuring instrument

### testo 521-1

testo 521, differential pressure measuring instrument with measuring range 0 to 100 hPa and 0.2 hPa accuracy, incl. calibration protocol and batteries

Part no. 0560 5210



### testo 521-2

testo 521, differential pressure measuring instrument with measuring range 0 to 100 hPa and 0.1 hPa accuracy, incl. calibration protocol and batteries

Part no. 0560 5211

### testo 521-3

testo 521, differential pressure measuring instrument with measuring range 0 to 2.5 hPa, incl. calibration protocol and batteries

Part no. 0560 5213

testo 521-1/-2 with internal sensor 0 to 100 hPa / 0.1 %  
 testo 521-1/-2 is equipped for accurate differential pressure measurements in the VAC sector, for example pressure drops in filters, inspections on ventilators and suction systems. Use testo 521-1/-2 for Pitot tube measurements in the range 5 to 100 m/s.

testo 521-3 with internal sensor 0 to 2.5 hPa  
 Even the smallest differential pressures up to 2.5 hPa are measured using testo 521-3. A high accuracy level and a resolution of 0.1 Pa make the instrument ideal for measurements in cleanrooms or for flue draught inspections. Use testo 521-3 for accurate measurements during Pitot tube measurements in the range 1 to 20 m/s.

## Advantages testo 521

- Built-in differential pressure probe
- 2 user defined probe sockets for pressure and temperature
- Wide selection of probes
- Documentation on site
- Easy data management via PC
- 2 line display with text menu guide
- Mains socket/fast battery recharging
- Fast-action coupling connections M8x0.5



Easy data management via PC



Inspection of transmitters with 4 to 20 mA interface



2 user defined probe sockets for pressure and temperature



## Further advantages testo 521

### Wide selection of probes

The differential pressure sensor is integrated into testo 521. Up to two additional probes can be connected through user-defined probe sockets.

- Differential pressure probes to 2000 hPa
- Absolute pressure probes to 2000 hPa
- Relative pressure probes to 400 bar
- Temperature probes from -200 to +1250 °C
- Probes for measuring current/voltage

### Advantages while measuring

- The short-text menu facilitates the handling vastly.
- Two measurement channels are displayed in the large two-lined LED-display; switching between the calculated measurement parameters is done by way of the arrow buttons.
- Zeroing of the relative and differential pressure is done by pressing the P=O button.
- When measuring pressure, the following units can be selected: mbar, hPa, bar, Pa, kPa, inH<sub>2</sub>O, mmH<sub>2</sub>O, torr and psi.
- Button for Hold, max, min and mean values.
- Hands-free: TopSafe (impact protection) including carrier strap and magnet disc as useful accessories.

### Long-term monitoring also during dynamic measurement

- Measurement data can be saved separately or as a measurement series. The measurement rate (0.04 seconds, 1 second to 24 hours) and the number of values to be saved are freely selectable. The maximum memory size is 100 KB (25000 readings).
- Dynamic measurements can be saved in the instrument at a measurement rate of 0.04 seconds. Here you have the option of displaying the values every second. For large quantities of data, activate the online measurement via a PC.

### Documentation on site

- Measurement protocols can be printed on site. No awkward cables required on account of the infrared interface.
- Long-term legible thermal paper ensures that measurement data documentation can be stored for up to 10 years.

### Easy data management via PC

- The saved measurement data can be easily analysed and processed using the software available.
- Readings are taken by the instrument and can be depicted online by the software.

### Pitot tube measurement, Pitot tube factor 1.00

With the built-in pressure sensor with an accuracy of 0.1 % of the full-scale value, the testo 521-2 enables precise measurement results in the range of 5 to 100 m/s:

Accuracy at 5 m/s:	0.32 m/s
Accuracy at 10 m/s:	0.09 m/s
Accuracy at 50 m/s:	0.05 m/s

In the lower flow range of 1 to 12 m/s, high accuracy can be reached by connecting the 100 Pa-probe. The double membrane technology completely eliminates positional dependences. Changes in position do not influence the measurement result:

Accuracy at 2 m/s:	0.1 m/s
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# Technical data

## General technical data testo 521-1/-2/-3

Storage temperature	-20 to +70 °C
Operating temperature	0 to +50 °C
Power supply	Battery/Rechargeable battery, Mains unit 12 V
Battery type	9 V (6LR61)
Battery life	Continuous operation w/ internal pressure sensor: 30 h With rech. battery: 10 h With carbon battery: 18 h
Weight	300 g
Dimensions	219 x 68 x 50 mm
Housing material	ABS
Memory	100 kB (corresponds to approx. 25000 readings)

Connection	Hose: inner Ø 4 mm outer Ø 6 mm
Display	LCD display with symbol, 7 segment display and point matrix
Updating rate in display	2x per second, in fast measurement 4x per second
Measuring rate	from 0.04 seconds
PC	RS232 interface
Other features	Mains connection and battery recharging in instrument Automatic recognition of all connected probes 9 measurement units selectable: mbar, hPa, bar, Pa, kPa, inH <sub>2</sub> O, mmH <sub>2</sub> O, torr, psi

## Sensor types

	<b>Piezoresistive pressure sensor</b>	<b>Piezoresistive pressure sensor For external pressure probes</b>	<b>Ceramic sensor for external pressure probes</b>	<b>NTC</b>	<b>Type K (NiCr-Ni)</b>
Measuring range	0 ... 100 hPa (testo 521-1/-2) 0 to 2.5 hPa (testo 521-3**)	0 to 2000 hPa	-1 to 400 bar	-40 to +150 °C	-200 to +1370 °C
Accuracy ±1 digit*	±0.2 % of fsv (testo 521-1) ±0.1 % of fsv (testo 521-2) ±0.5 Pa (0 to 20 Pa) ±(0.5 Pa ±0.5% of m.v.) (20.1 to 250 Pa) (testo 521-3**)	±0.1 % of m.v.	±0.2 % of fsv	±0.2 °C (-10 to +50 °C) ±0.4 °C (remaining range)	±0.4 °C (-100 to +200 °C) ±1 °C (remaining range)
Resolution	0.01 hPa (testo 521-1/-2) 0.1 Pa (testo 521-3**)	0.1 Pa (0638 1347) 0.001 hPa (0638 1447) 0.01 hPa (0638 1547)	0.01 bar	0.1 °C	0.1 °C
Static pressure	1000 hPa (abs) (testo 521-1/-2) 1000 hPa (abs) (testo 521-3**)				
Overload	300 hPa (testo 521-1/-2) 50 hPa (testo 521-3**)				
Zeroing	to 2.5 hPa (testo 521-1/-2) to 0.5 hPa (testo 521-3**)				




\*Accuracy information applies only to instrument without probes connected

\*\*Sensor is not suitable for long-term measurements



# Accessories

<b>Additional accessories and spare parts</b>	<b>Part no.</b>	
Desk-top power supply with international connection options	0554 1143	
9V rech. battery for instrument, instead of battery	0515 0025	
<b>Printer and Accessories</b>		
Testo fast printer IrDA with wireless infrared interface; 1 roll thermal paper; 4 AA batteries, for printing out measurements on site	0554 0549	
Spare thermal paper for printer (6 rolls), permanent ink, measurement data documentation legible for up to 10 years	0554 0568	
<b>Software and Accessories</b>		
ComSoft Professional, Pro software incl. data archiving	0554 1704	
RS232 cable, connects instrument to PC (1.8 m) for data transfer	0409 0178	
<b>Calibration Certificates</b>		
DAkkS calibration certificate/Pressure, Differential pressure, accuracy < 0.1 (% of full scale value)	0520 0205	
DAkkS calibration certificate/pressure, differential pressure, accuracy 0.1 to 0.6 (% of full-scale value)	0520 0215	
DAkkS calibration certificate/pressure, differential pressure, accuracy > 0.6 (% of full-scale value)	0520 0225	
ISO calibration certificate/Pressure, Differential pressure, accuracy < 0.1 (% of full scale value)	0520 0035	
ISO calibration certificate pressure, accuracy 0.1 to 0.6 (% of fsv), 5 points distributed over meas. range	0520 0025	
ISO calibration certificate pressure, accuracy > 0.6 (% of fsv)	0520 0005	
ISO calibration certificate/Pressure, Differential pressure, accuracy > 0.1 (% of fsv), for testo 521-2	0520 0405	
ISO calibration certificate/temperature, for air/immersion probes, calibration points -18°C; 0°C; +60°C	0520 0001	
ISO calibration certificate/temperature, meas. instr. with air/immersion probe; cal. points 0°C; +150°C; +300°C	0520 0021	
ISO calibration certificate/temperature, meas. instr. with surface probe; calibration points +60°C; +120°C; +180°C	0520 0071	
DAkkS calibration certificate/temperature, meas. instr. with air/immersion probe; calibration points -20 °C; 0 °C; +60 °C	0520 0211	
DAkkS calibration certificate/temperature, contact surface temperature probes; calibration points +100°C; +200°C; +300°C	0520 0271	
ISO calibration certificate/electrical	0520 1000	
<b>Probe accessories</b>		
Connection hose; silicone; length 5 m; max. load 700 hPa (mbar)	0554 0440	
Connection cable, 2.5 m long, for pressure probes 0638 1741/1841/1941/2041/2141	0409 0202	

# Probes

Probe type	Illustration	Measuring range	Accuracy	Overload	Static pressure	Zeroing	Part no.
<b>Differential pressure probe</b>							
Precision pressure probe, 100 Pa, in robust metal housing with impact protection, incl. magnet for fast attachment, to measure differential pressure and flow speeds (in combination with Pitot tube)		0 to +100 Pa	±(0.3 Pa ±0.5% of m.v.)	50 hPa	100 hPa	to 20 Pa	0638 1347
Pressure probe, 10 hPa, in robust metal housing with impact protection incl. magnet for fast attachment, to measure differential pressure and flow speeds (in combination with Pitot tube)		0 to +10 hPa	±0.03 hPa	50 hPa	1000 hPa	to 0.4 hPa	0638 1447
Pressure probe, 100 hPa, in robust metal housing with impact protection, incl. magnet for fast attachment, to measure differential pressure and flow speeds (in combination with Pitot tube)		0 to +100 hPa	±0.5% of m.v. (+20 to +100 hPa) ±0.1 hPa (0 to +20 hPa)	300 hPa	1000 hPa	to 4 hPa	0638 1547

Operating temperature: 0 to +50 °C (compensated)  
 Connection: Plug-in head, connection cable 0430 0143 or 0430 0145 required


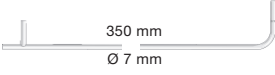
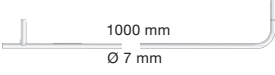
Probe type	Illustration	Measuring range	Accuracy	Overload	Zeroing	Part no.
<b>Relative pressure probe (media compatible)</b>						
Low pressure probe, refrigerant-proof stainless steel, up to 10 bar		-1 to +10 bar	±1% of fsv	25 bar	to 0.1 bar	0638 1741
High pressure probe, refrigerant-proof stainless steel, up to 30 bar		-1 to +30 bar	±1% of fsv	120 bar	to 0.3 bar	0638 1841

Operating temperature: -40 to +100 °C; 0 to +70 °C (compensated)      Connection: Plug-in head, connection cable 0409 0202 required  
 screw-in thread 7/16" UNF

# Probes

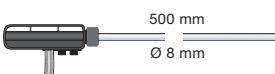
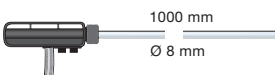
Probe type	Illustration	Operating temperature	Part no.
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### Pitot tubes

Pitot tube, 500 mm long, Ø 7 mm, stainless steel, for measuring flow velocity in conjunction with 0638 1347 / 0638 1447 / 0638 1547 pressure probes or testo 521, testo 435-3, testo 435-4 and testo 480 with internal sensor		0 to +600 °C	0635 2045
Pitot tube, 350 mm long, Ø 7 mm, stainless steel, for measuring flow velocity in conjunction with 0638 1347 / 0638 1447 / 0638 1547 pressure probes or testo 521, testo 435-3, testo 435-4 and testo 480 with internal sensor		0 to +600 °C	0635 2145
Pitot tube, 1000 mm long, stainless steel, for measuring flow velocity		0 to +600 °C	0635 2345

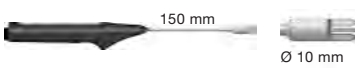
Probe type	Illustration	Measuring range	Probe type	Part no.
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### Straight Pitot tubes

Pitot tube, stainless steel, 500 mm long, measures velocity with temperature, for pressure probes 0638 1345/..1445/..1545		-40 to +600 °C	Type K (NiCr-Ni)	0635 2140
Pitot tube, stainless steel, 1000 mm long, measures velocity with temperature, for pressure probes 0638 1345/..1445/..1545		-40 to +600 °C	Type K (NiCr-Ni)	0635 2240

Probe type	Dimensions Probe shaft/probe shaft tip	Measuring range	Accuracy	t <sub>99</sub>	Part no.
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### Temperature probes

Quick-action surface probe**		-200 to +300 °C	Class 2*	3 s	0604 0194
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\*According to standard EN 60584-2, the accuracy of Class 1/2 refers to -40 to +1000/+1200 °C  
 \*\*Connection: Plug-in head. connection cable 0430 0143 or 0430 0145 required

# Differential pressure measuring instrument

## testo 526 - Pressure measurement for all pressure ranges

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Temperature-compensated differential pressure sensor  
0 to 2000 hPa in instrument

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Additional 2 probe inputs for the connection of further probes for the measurement of pressure and temperature

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Direct zeroing of display value from pressure probes

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Display of Hold-, max. and min. values

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Easy data storage by measurement site as well as analysis, archiving and documentation via optional PC software

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Leakage rate measurement (pressure drop per time)

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Testing of pressure drop in containers, pipelines etc.

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hPa

°C

testo 526-1/-2 is a highly precise differential pressure measuring instrument with an internal sensor. This has a measuring range from 0 to 2000 hPa. The instrument is optimally suited to pressure checks in sensitive industrial processes, and is available in 2 accuracy classes.

- testo 526-1: accuracy 0.1 % of final value
- testo 526-2: accuracy 0.05 % of final value

The testo 526-1/-2 additionally has two probe inputs for the connection of further probes for the measurement of pressure and temperature. A large selection of probes is available for this purpose.

Specially for the purposes of tightness tests on containers, uninterrupted recording is possible via the test menu in testo 526-1 and testo 526-2. The subsequent processing of the measurement data via software or printout via the printer allow the documentation of the pressure test.



## Differential pressure measuring instrument

### testo 526-1

testo 526-1 (0 to 2000hPa 0.1% acc.) incl. battery and calibration protocol

Part no. 0560 5280



### testo 526-2

testo 526-2 (0 to 2000hPa 0.05% acc), fast coupling connection, battery and calibration protocol included

Part no. 0560 5281

testo 526-1 with internal sensor

0 to 2000 hPa / 0.1%

testo 526 is the ideal differential pressure meter for industrial applications. Processes can be accurately measured and monitored with an accuracy of 0.1% of the full-scale value.

testo 526-2 with highly accurate internal sensor 0 to 2000 hPa, 0.05%

testo 526 is the ideal differential pressure meter for sensitive industrial applications. Critical processes can be efficiently measured and monitored at an accuracy of up to 0.05% of the full-scale value.

## Advantages testo 526-1 and testo 526-2

- Built-in differential pressure probe
- 2 user defined probe sockets for pressure and temperature
- Wide selection of probes
- Documentation on site
- Easy data management via PC
- 2 line display with text menu guide
- Mains socket/fast battery recharging
- Fast-action coupling connections M8x0.5



Easy data management via PC



Inspection of transmitters with 4 to 20 mA interface



2 user defined probe sockets for pressure and temperature

## Further advantages testo 526-1 and testo 526-2

### Wide selection of probes

The differential pressure sensor is built into testo 526. Up to two additional probes can be connected via user-defined probe sockets.

- Differential pressure probes to 2000 hPa
- Absolute pressure probes to 2000 hPa
- Relative pressure probes to 400 bar
- Temperature probes from -200 to +1250 °C
- Probes for measuring current/voltage

### Documentation on site

- Measurement protocols can be printed on site. No awkward cables required on account of the infrared interface.
- Long-term legible thermal paper ensures that measurement data documentation can be stored for up to 10 years.

### Easy data management via PC

- The saved measurement data can be easily analysed and processed using the software available.
- Readings are taken by the instrument and can be depicted online by the software.
- Pressure drops can be protocolled online in cycles of 0.05 seconds in the Fast Measurement menu. Since, in most cases, pressure drops cannot be predicted, a rule can be defined via the trigger function; the pressure drops are then filtered out and stored separately for the user in indexed pages.

### Long-term monitoring made easy

- Measurement data can be saved separately or as a measurement series. The measurement rate (0.04 seconds, 1 second to 24 hours) and the number of values to be saved are freely selectable. The maximum memory size is 25000 readings.
- The readings are saved under separate names for the sites (max. 99 sites) - with retracing guarantee.
- Online measurement for large quantities of data can be activated via PC.

# Technical data

## General technical data testo 526-1/-2

Storage temperature	-20 to +70 °C
Operating temperature	0 to +50 °C
Power supply	Battery/Rechargeable battery, Mains unit 12 V
Battery type	9 V (6LR61)
Battery life	Continuous operation w/ internal pressure sensor: 30 h With rech. battery: 10 h With carbon battery: 18 h
Weight	300 g
Dimensions	219 x 68 x 50 mm
Housing material	ABS
Memory	100 kB (corresponds to approx. 25000 readings)

Connection	Hose: inner Ø 4 mm outer Ø 6 mm
Display	LCD display with symbol, 7 segment display and point matrix
Updating rate in display	2x per second, in fast measurement 4x per second
Measuring rate	from 0.04 seconds
PC	RS232 interface
Other features	Mains connection and battery recharging in instrument Automatic recognition of all connected probes 9 measurement units selectable: mbar, hPa, bar, Pa, kPa, inH <sub>2</sub> O, mmH <sub>2</sub> O, torr, psi

## Sensor types




	<b>Piezoresistive pressure sensor</b>	<b>Ceramic sensor for external pressure probes</b>	<b>Piezoresistive pressure sensor For external pressure probes</b>	<b>NTC</b>	<b>Type K (NiCr-Ni)</b>
Measuring range	0 to 2000 hPa	-1 to 400 bar	0 to 2000 hPa	-40 to +150 °C	-200 to +1370 °C
Accuracy ±1 digit*	±0.1 % of fsv (testo 526-1) ±0.05 % of fsv (testo 526-2)	±0.2 % of fsv	±0.1 % of m.v.	±0.2 °C (-10 to +50 °C) ±0.4 °C (remaining range)	±0.4 °C (-100 to +200 °C) ±1 °C (remaining range)
Resolution	0.1 hPa	0.01 bar	0.1 Pa (0638 1347) 0.001 hPa (0638 1447) 0.01 hPa (0638 1547)	0.1 °C	0.1 °C
Static pressure	2000 hPa (abs)				
Overload	3000 hPa				
Zeroing	to 50 hPa				

\*Accuracy information applies only to instrument without probes connected

# Accessories

<b>Additional accessories and spare parts</b>	<b>Part no.</b>	
Desk-top power supply with international connection options	0554 1143	
9V rech. battery for instrument, instead of battery	0515 0025	
<b>Printer and Accessories</b>		
Testo fast printer IrDA with wireless infrared interface; 1 roll thermal paper; 4 AA batteries, for printing out measurements on site	0554 0549	
Spare thermal paper for printer (6 rolls), permanent ink, measurement data documentation legible for up to 10 years	0554 0568	
<b>Software and Accessories</b>		
ComSoft Professional, Pro software incl. data archiving	0554 1704	
RS232 cable, connects instrument to PC (1.8 m) for data transfer	0409 0178	
<b>Calibration Certificates</b>		
DAkkS calibration certificate/Pressure, Differential pressure, accuracy < 0.1 (% of full scale value)	0520 0205	
DAkkS calibration certificate/pressure, differential pressure, accuracy 0.1 to 0.6 (% of full-scale value)	0520 0215	
DAkkS calibration certificate/pressure, differential pressure, accuracy > 0.6 (% of full-scale value)	0520 0225	
ISO calibration certificate/Pressure, Differential pressure, accuracy < 0.1 (% of full scale value)	0520 0035	
ISO calibration certificate pressure, accuracy 0.1 to 0.6 (% of fsv), 5 points distributed over meas. range	0520 0025	
ISO calibration certificate pressure, accuracy > 0.6 (% of fsv)	0520 0005	
ISO calibration certificate/Pressure, Differential pressure, accuracy > 0.1 (% of fsv), for testo 521-2	0520 0405	
ISO calibration certificate/temperature, for air/immersion probes, calibration points -18°C; 0°C; +60°C	0520 0001	
ISO calibration certificate/temperature, meas. instr. with air/immersion probe; cal. points 0°C; +150°C; +300°C	0520 0021	
ISO calibration certificate/temperature, meas. instr. with surface probe; calibration points +60°C; +120°C; +180°C	0520 0071	
DAkkS calibration certificate/temperature, meas. instr. with air/immersion probe; calibration points -20 °C; 0 °C; +60 °C	0520 0211	
DAkkS calibration certificate/temperature, contact surface temperature probes; calibration points +100°C; +200°C; +300°C	0520 0271	
ISO calibration certificate/electrical	0520 1000	
<b>Probe accessories</b>		
Connection hose; silicone; length 5 m; max. load 700 hPa (mbar)	0554 0440	
Connection cable, 2.5 m long, for pressure probes 0638 1741/1841/1941/2041/2141	0409 0202	



# Probes

Probe type	Illustration	Measuring range	Accuracy	Overload	Static pressure	Zeroing	Part no.
<b>Differential pressure probe</b>							
Precision pressure probe, 100 Pa, in robust metal housing with impact protection, incl. magnet for fast attachment, to measure differential pressure and flow speeds (in combination with Pitot tube)		0 to +100 Pa	$\pm(0.3 \text{ Pa} \pm 0.5\% \text{ of m.v.})$	50 hPa	100 hPa	to 20 Pa	0638 1347
Pressure probe, 10 hPa, in robust metal housing with impact protection incl. magnet for fast attachment, to measure differential pressure and flow speeds (in combination with Pitot tube)		0 to +10 hPa	$\pm 0.03 \text{ hPa}$	50 hPa	1000 hPa	to 0.4 hPa	0638 1447
Pressure probe, 100 hPa, in robust metal housing with impact protection, incl. magnet for fast attachment, to measure differential pressure and flow speeds (in combination with Pitot tube)		0 to +100 hPa	$\pm 0.5\% \text{ of m.v. (+20 to +100 hPa)}$ $\pm 0.1 \text{ hPa (0 to +20 hPa)}$	300 hPa	1000 hPa	to 4 hPa	0638 1547

Operating temperature: 0 to +50 °C (compensated)

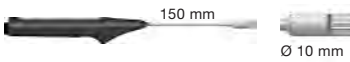
Connection: Plug-in head. connection cable 0430 0143 or 0430 0145 required

# Probes

Probe type	Illustration	Measuring range	Accuracy	Overload	Zeroing	Part no.
<b>Relative pressure probe (media compatible)</b>						
Low pressure probe, refrigerant-proof stainless steel, up to 10 bar		-1 to +10 bar	±1% of fsv	25 bar	to 0.1 bar	0638 1741
High pressure probe, refrigerant-proof stainless steel, up to 30 bar		-1 to +30 bar	±1% of fsv	120 bar	to 0.3 bar	0638 1841

Operating temperature: -40 to +100 °C; 0 to +70 °C (compensated)

Connection: Plug-in head, connection cable 0409 0202 required  
screw-in thread 7/16" UNF

Probe type	Dimensions Probe shaft/probe shaft tip	Measuring range	Accuracy	t <sub>99</sub>	Part no.
<b>Temperature probes</b>					
Quick-action surface probe**		-200 to +300 °C	Class 2*	3 s	0604 0194

\*According to standard EN 60584-2, the accuracy of Class 1/2 refers to -40 to +1000/+1200 °C  
\*\*Connection: Plug-in head, connection cable 0430 0143 or 0430 0145 required



# CO<sub>2</sub> measuring instrument

## testo 535 – Digital CO<sub>2</sub> measuring instrument with App connection

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Simple, fast and precise measurement of CO<sub>2</sub> concentration

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Audible alarm sounds if a limit value is exceeded

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Fast in-app configuration, graph history, second screen and measurement data memory in the testo Smart App

---

High reproducibility of measurement results due to long-term stable infrared sensor technology

---

Timed and point mean value calculation

---



For **indoor air quality and comfort**, the measurement of the carbon dioxide content in the room air is crucial. To obtain precise results quickly, you need a suitable measuring instrument.

The compact CO<sub>2</sub> measuring instrument testo 535 with practical App connection allows you to carry out this important measurement easily and efficiently - and thus ensure comfort and a healthy indoor climate.

Thanks to the long-term stable infrared sensor technology, the measured values are reproducible and comparable even

over longer periods of time. Ideal for recurring comparative measurements. Here, you are also supported by the time and point averaging directly in the measuring instrument.


By the way, the testo Smart App displays the measured values as a table or graph, stores the results and documents them. This not only makes it easy to configure the measuring instrument individually - the App also turns your smartphone into a second display!

# Ordering data / technical data / accessories

**testo 535**

testo 535, CO<sub>2</sub> measuring instrument with App connection, audible alarm, incl. transport bag, calibration protocol and 3 x AA batteries

Order no. 0563 0535




**The testo Smart App**

- Simple and fast: Measurement menus for numerous applications provide optimum support in configuring and carrying out the measurement
- Clear graphical presentation of readings, e.g. as a table, for quick interpretation of results
- Create digital measurement reports including photos as PDF/CSV files on site and send via e-mail




Free download for Android and iOS



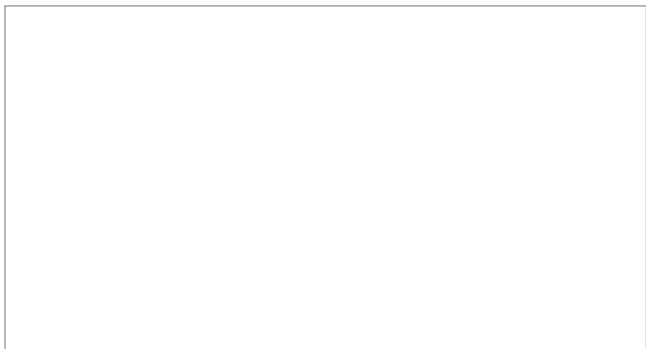
Sensor type	CO <sub>2</sub> sensor
Measuring range	0 to 10,000 ppm
Accuracy ±1 digit	±100 ppm +5 % of mv
Resolution	1 ppm

General technical data	
Operating temperature	0 to +50 °C
Storage temperature	0 to +50 °C
Battery type	3 x AA
Battery life	30 h
Dimensions	229 x 60 x 28 mm
Weight	229 g
Protection class	Measuring instrument: IP 40 Probe: IP20
Housing material	ABS + PC / TPE

Accessories	Order no.
testo Bluetooth® printer, incl. 1 roll of thermal paper, rech. battery and mains unit	0554 0621
Spare thermal paper for printer (6 rolls), measurement data documentation can be read for up to 10 years	0554 0568
ISO CO <sub>2</sub> calibration certificate; CO <sub>2</sub> probes; calibration points 0; 1000; 5000 ppm	0520 0033

1981 2264/msp/09.2022

Subject to change, including technical modifications.



# Light intensity measuring instrument

testo 540 - Pocket-sized Lux meter

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Sensor adapted to spectral sensitivity of the eye

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Hold-function and max./min. values

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Display illumination

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Illustration 1.1

The sensor in the testo 540 is adapted to the spectral sensitivity of the eye. This makes the testo 540 ideally suited to the measurement of light intensity at workplaces.

The hold-function allows the comfortable readout of the measurement values. Max. and min. values are displayed at the press of a button. The clip-on protective cap, wrist strap and belt holder ensure safekeeping of the instrument. testo 540 is very handy, small and easy to operate.

## Technical data / Accessories

### testo 540

testo 540 handy Lux meter incl. protection cap, batteries and calibration protocol

Part no. 0560 0540



#### Sensor type **Silicone photodiode**

Measuring range	0 to 99999 Lux
Accuracy ±1 digit	±3 lux or ±3 % of m.v. (Compared to reference instrument at 90° light irradiation)
Resolution	1 Lux (0 to 19999 Lux) 10 Lux (remaining range)

#### General technical data

Measurement rate	0.5 s
Storage temperature	-40 to +70 °C
Protection class	IP40
Operating temperature	0 to +50 °C
Battery type	2 AAA micro batteries
Battery life	200 h (average, without display illumination)
Dimensions	133 x 46 x 25 mm
Weight	95 g (incl. batteries and protective cap)

0981 9794/msp/I/01.2020

#### Accessories for measuring instrument

#### Part no.

ISO calibration certificate/light  
Calibration points 0; 500; 1000; 2000; 4000 Lux

0520 0010

Subject to change without notice.

## Lux meter

### testo 545 – Digital Lux measuring instrument with App connection

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Simple, fast and precise measurement of illuminance (Lux) according to the V-lambda curve for all common light sources

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Wide range of applications due to LED compatibility (except single-colour blue LED)

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Fast in-app configuration, graph history, second screen and measurement data memory in the testo Smart App

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Audible alarm sounds if a limit value is exceeded

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Timed and point mean value calculation

---



Bluetooth 5.0 + App 

testo Smart App for free download

GET IT ON  
Google Play

Download on the  
App Store



Illuminance is a decisive factor for productivity, well-being and health, especially in workplaces. Light sources that are too bright dazzle, while those that are too dark can lead to concentration problems and headaches.

With the Lux meter testo 545 you can measure the **illuminance of all common light sources** - quickly, easily and precisely. The measuring instrument is compatible with almost all commercially available LEDs and thus ensures you a wide range of applications.

By automatically calculating the time and point average value, the Lux meter shows you all relevant information at a glance.

The testo 545 is perfectly complemented by the testo Smart App. This not only allows you to configure the measuring instrument, display and store the measured values, and document them in a particularly convenient way. The App also turns your smartphone into a second display.




# Ordering data / technical data / accessories

**testo 545**

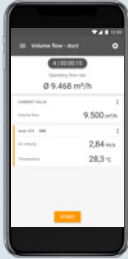
testo 545, Lux measuring instrument with App connection and audible alarm, incl. transport bag, calibration protocol and 3 x AA batteries

Order no. 0563 1545




**The testo Smart App**

- Simple and fast: Measurement menus for numerous applications provide optimum support in configuring and carrying out the measurement
- Clear graphical presentation of readings, e.g. as a table, for quick interpretation of results
- Create digital measurement reports including photos as PDF/CSV files on site and send via e-mail




Free download for Android and iOS

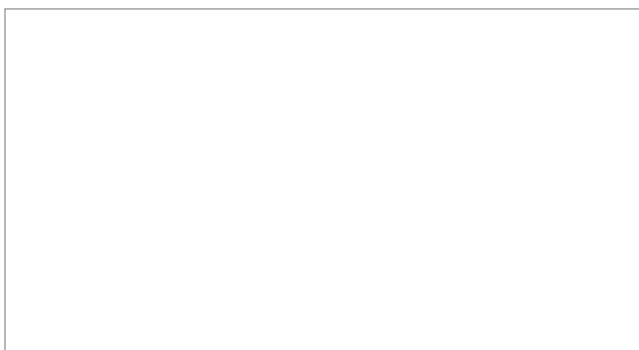


Sensor type	Silicon photodiode
Measuring range	0 to 100,000 lux
Accuracy ±1 digit	Class C, corresponding to DIN 5032-7 / EN 13032-1, Appendix B f1 = 6% = V(Lambda) adjustment f2 = 5% = cos-true evaluation Total ≤15% ±3% of m.v. ±1 digit
Resolution	0.1 Lux (< 10,000 Lux) 1 Lux (≥ 10,000 Lux)
General technical data	
Operating temperature	Measuring instrument: -10 to +50 °C Probe: 0 to +50 °C
Storage temperature	-20 to +50 °C
Battery type	3 x AA
Battery life	70 h
Dimensions	Measuring instrument: 149 x 60 x 28 mm Probe: 134 x 54 x 23 mm Cable length 1.4 m
Weight	288 g
Protection class	Measuring instrument: IP 40 Probe: IP20
Housing material	ABS + PC / TPE

Accessories	Order no.
testo Bluetooth® printer, incl. 1 roll of thermal paper, rech. battery and mains unit	0554 0621
Spare thermal paper for printer (6 rolls), measurement data documentation can be read for up to 10 years	0554 0568
ISO illuminance calibration certificate Calibration points 0; 500; 1000; 2000; 4000 lux	0520 0010

1981 2274/msp/09.2022

Subject to change, including technical modifications.





# High-pressure measuring instrument operated with smartphone

testo 549i

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Compact professional measuring instrument from the Testo Smart Probes series for use with smartphones/tablets

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Measurement of high and low pressure

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Low refrigerant loss thanks to hoseless application

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Quick and easy installation at the pressure connection thanks to 45° angle

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Measurement data analyzed and sent via testo Smart App

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Problem-free use at measuring points that are a long distance apart – Bluetooth® range up to 100 m

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 Bluetooth®  
+ App

testo Smart App  
for free download



In conjunction with a smartphone or tablet, the handy testo 549i high-pressure measuring instrument is suitable for servicing and troubleshooting on air conditioning and refrigeration systems, as well as for their installation. The measuring instrument can be quickly and easily attached directly to the pressure connection. The testo 549i makes it considerably easier to work on pressure connections that are a long distance apart, thanks to wireless connection to a smartphone or tablet. Also practical: since no hoses are needed for the measurements, no refrigerant is lost, or only a very small quantity.

And simultaneous use of the testo 115i clamp thermometer also enables calculation of individual refrigeration system parameters, such as superheating. Users can read off their measuring values conveniently via the testo Smart App installed on the terminal device. In addition, the testo Smart App enables automatic calculation of evaporation and condensation temperatures. All measurement data are presented either as a diagram or a table. Finally, the measurement data reports can be sent directly as pdf or Excel files.

## Technical data/accessories

### testo 549i

testo 549i, high-pressure measuring instrument operated with smartphone, including batteries and calibration protocol

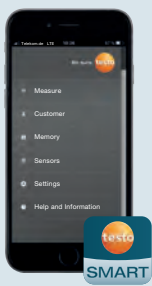
Order no. 0560 2549 02



Sensor type	Pressure
Measuring range	-1 to 60 bar
Accuracy ±1 digit	0.5% of full scale value
Resolution	0.01 bar
Connection	7/16" – UNF
Overload rel.	65 bar

### General technical data

Compatibility	requires iOS 11.0 or newer / Android 6.0 or newer requires mobile terminal device with Bluetooth® 4.0
Storage temperature	-20 to +60 °C
Operating temperature	-20 to +50 °C
Battery type	3 micro batteries AAA
Battery life	130 hrs
Measurable media	CFC, HFC, HCFC, N, H <sub>2</sub> O, CO <sub>2</sub>
Dimensions	150 x 32 x 31 mm
Bluetooth® range	up to 100 m



### testo Smart App

The App turns your smartphone/tablet into the display for the testo 549i. Both the operation of the measuring instrument and the display of the readings are achieved by Bluetooth® via the testo Smart App on your smartphone or tablet – irrespective of the measuring location. In addition, you can use the App to create measurement reports, add photos and comments to these and send them by e-mail. For iOS and Android.

### Accessories

### Order no.

testo Smart Case (refrigeration) for the storage and transport of 2 x testo 115i and 2 x testo 549i, dimensions 250 x 180 x 70 mm	0516 0240	
ISO relative pressure calibration certificate, 3 measuring points distributed over the measuring range	0520 0085	

## Digital manifold

**testo 550s – the manifold with Bluetooth and 2-way valve block for commissioning, servicing and maintenance of refrigeration systems and heat pumps**



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All results at a glance thanks to the large graphic display

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Exceptionally compact and reliable thanks to the easy-to-handle, robust housing with IP 54 protection class

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Simple, wireless measurement of vacuum and temperature via automatic Bluetooth connection

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Even greater flexibility for your measurements and documentation with the testo Smart App

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Even easier to get results, thanks to guided measurement menus for target superheat, vacuum and pressure loss

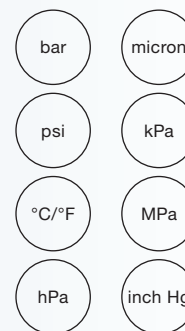
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Convenient refrigerant management in the App with favourites and automatic updates

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Can be used for applications with A2L refrigerant, taking into account the relevant legislation, norms and guidelines for refrigeration systems

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 **Bluetooth 5.0**  
+ App

testo Smart App  
for free download



The testo 550s digital manifold with 2-way valve block enables you to carry out your measurements on refrigeration and air conditioning systems and heat pumps particularly fast. The large display also helps you to evaluate the results in graphic form. Stored programs guide you through the measurement and enable the automatic determination of numerous important system parameters such as superheat, pressure drop test or evacuation.

Bluetooth probes for temperature, pressure and humidity can be easily connected directly to the instrument and offer maximum flexibility in their application. In conjunction with the testo Smart App, you can take care of digital documentation directly on site. In addition to this, you always have the current refrigerants available to you, and can set your favourites and transfer them to the instrument. Its proven quality and great durability guarantee the continuously high performance of your manifold in all conditions.

# Technical data/accessories/kits

### Sensor types

	Pressure	Temperature
Measuring range	-1 to 60 bar	-50 to +150 °C
Accuracy (at 22 °C)	±0.5% fs	±0.5 °C
Resolution	0.01 bar	0.1 °C
Probe connections	3 x 7/16" – UNF	2 x plug-in (NTC)
Overload	65 bar	–

### General technical data

Operating temperature	-20 to +50 °C
Storage temperature	-20 to +60 °C
Battery type	4 AA microcells
Battery life	250 h with no illumination, no Bluetooth® 100 h with illumination and Bluetooth®
Auto power off	After 10 minutes when not connected via Bluetooth
Dimensions	210 x 121 x 60 mm
Weight	826 g
Protection class	IP54
Bluetooth technology/range	Bluetooth® 5.0/150 m
Compatibility	requires iOS 11.0 or newer/Android 6.0 or newer requires mobile terminal device with Bluetooth® 4.0



### The testo Smart App

- For all applications of the testo 550s – from measurement to documentation
- Compatible with all Bluetooth-enabled Testo measuring instruments for air conditioning/refrigeration systems and heat pumps
- Measurement errors are easily prevented thanks to menus that offer optimum support, e.g. for superheating and subcooling
- Quick analysis thanks to clear presentation of the values, e.g. in a table
- Create digital measurement reports including photos as PDF/CSV files on site and email them straight away

### Measuring instrument accessories

	Order no.
Magnetic belt for digital manifolds for flexible use of the magnet or hook thanks to a simple exchange system, compatible with all digital manifolds from Testo	0564 1001
Valve spare parts kit; exchange of 2 valve positioners with 4 valve positioner covers (red, blue and 2 x black), compatible with all digital manifolds from Testo.	0554 5570

## testo 550s kits

	testo 550s Basic Kit Smart digital manifold with fixed cable temperature probes	testo 550s Smart Kit Smart digital manifold with wireless temperature probes	testo 550s Smart Kit with filling hoses Smart digital manifold with wireless temperature probes and hose filling set (3 pcs.)
Order no.	0564 5501	0564 5502	0564 5503

### Kit components

testo 550s Smart digital manifold	✓	✓	✓
Calibration protocol	✓	✓	✓
Clamp temperature probe kit	✓		
testo 115i Wireless clamp temperature probe (Smart Probe)		✓ 2 x	✓ 2 x
Hose filling set (3 hoses)			✓
Instrument case	✓	✓	✓

# Testo Smart Probes

## testo 115i

testo 115i, clamp thermometer operated with smartphone, for measurement on pipelines with diameters of 6 to max. 35 mm, including batteries and calibration protocol



Order no. 0560 2115 02

Sensor type	NTC
Measuring range	-40 to +150 °C
Accuracy ±1 digit	±1.3 °C (-20 to +85 °C)
Resolution	0.1 °C
<b>General technical data</b>	
Compatibility	requires iOS 11.0 or newer/Android 6.0 or newer requires mobile terminal device with Bluetooth® 4.0
Storage temperature	-20 to +60 °C
Operating temperature	-20 to +50 °C
Battery type	3 AAA microcells
Battery life	150 h
Dimensions	183 x 90 x 30 mm
Bluetooth® range	up to 100 m

## testo 605i

testo 605i, thermohygrometer operated with smartphone, including batteries and calibration protocol



Order no. 0560 2605 02

Sensor type	Humidity – capacitive
Measuring range	0 to 100 %RH
Accuracy (at +25 °C) ±1 digit	±3.0 %RH (10 to 35 %RH) ±2.0 %RH (35 to 65 %RH) ±3.0 %RH (65 to 90 %RH) ±5 %RH (< 10 %RH or > 90 %RH)
Resolution	0.1 %RH
<b>Sensor type</b>	<b>NTC</b>
Measuring range	-20 to +60 °C
Accuracy ±1 digit	±0.8 °C (-20 to 0 °C) ±0.5 °C (0 to +60 °C)
Resolution	0.1 °C
<b>General technical data</b>	
Compatibility	requires iOS 11.0 or newer/Android 6.0 or newer requires mobile terminal device with Bluetooth® 4.0
Storage temperature	-20 to +60 °C
Operating temperature	-20 to +50 °C
Battery type	3 AAA microcells
Battery life	150 h
Dimensions	218 x 30 x 25 mm 73 mm probe shaft
Bluetooth® range	up to 100 m

## testo 552i

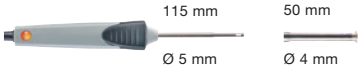




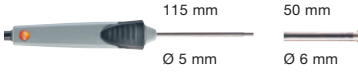
testo 552i, app-controlled wireless vacuum probe, including batteries and calibration protocol



Order no. 0564 2552

Sensor type	Pressure
Measuring range	0 to 26.66 mbar/0 to 20000 microns
Accuracy ±1 digit	±10 microns + 10% of m.v. (100 to 1000 microns)
Resolution	1 micron (0 to 1000 microns) 10 microns (1000 to 2000 microns) 100 microns (2000 to 5000 microns)
Connection	7/16" – UNF
Overload	6.0 bar/87 psi (relative: 5.0 bar/72 psi)
<b>General technical data</b>	
Connection	Bluetooth 4.2
Bluetooth® range	150 m
Storage temperature	-20 °C to +50 °C
Operating temperature	-10 °C to +50 °C
Battery type	3 AAA microcells
Battery life	39 h
Auto power off	After 10 minutes when not connected via Bluetooth
Protection class	IP54
Dimensions	150 x 32 x 31 mm
Weight	142 g

# Probes

Probe type	Dimensions Probe shaft/probe shaft tip	Measuring range	Accuracy	Order no.
<b>Air probe</b>				
Precise, robust NTC air probe		-50 to +125 °C	±0.2 °C (-25 to +80 °C) ±0.4 °C (remaining meas. range)	0613 1712
<b>Surface probe</b>				
Clamp probe for temperature in kit for measurements on pipes from 6 to 35 mm diameter, NTC, fixed cable 1.5 m		-40 to +125 °C	±1 °C (-20 to +85 °C)	0613 5507
Clamp probe for temperature measurements on pipes from 6 to 35 mm diameter, NTC, fixed cable 5.0 m		-40 to +125 °C	±1 °C (-20 to +85 °C)	0613 5506
Pipe wrap probe with Velcro tape for pipe diameters of up to max. 75 mm, Tmax +75 °C, NTC, fixed cable 1.5 m		-50 to +70 °C	±0.2 °C (-25 to +70 °C) ±0.4 °C (-50 to -25.1 °C)	0613 4611
Pipe wrap probe (NTC) for pipe diameters of 5 to 65 mm, fixed cable 2.8 m		-50 to +120 °C	±0.2 °C (-25 to +80 °C)	0613 5605
Watertight NTC surface probe for flat surfaces, fixed cable 1.2 m		-50 to +150 °C Long-term measuring range +125°C, briefly +150 °C (2 minutes)	±0.5% of measured value (+100 to +150 °C) ±0.2 °C (-25 to +74.9 °C) ±0.4 °C (remaining meas. range)	0613 1912

1981 0884/msp/I/02.2021

Subject to change, including technical modifications.





## Digital manifold

**testo 550i – the manifold with Bluetooth and 2-way valve block for commissioning, servicing and maintenance of refrigeration systems and heat pumps**

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All activities, from measurement through to documentation, using the App on your Smartphone

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The smallest digital manifold on the market

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Maximum reliability thanks to the extremely robust housing with IP54 protection class

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Automatic refrigerant-specific calculation of evaporation and condensation temperature in the App

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Optionally expandable with testo Smart Probes for temperature, humidity and vacuum

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Convenient refrigerant management in the App with favourites and automatic updates

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Can be used for applications with A2L refrigerant, taking into account the relevant legislation, norms and guidelines for refrigeration systems

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bar



Bluetooth 5.0  
+ App

testo Smart App  
for free download



The testo 550i digital manifold enables digitally versed technicians to control their daily servicing and maintenance work on refrigeration and air conditioning systems and heat pumps entirely via App and smartphone/tablet. Equipped with a 2-way valve block and robust hook, the testo 550i saves you time with its fast and easy measurements, clearly presented results and digital documentation.

In addition, this compact instrument, designed with the most essential features, automatically connects via the testo Smart App to various Bluetooth probes for temperature, pressure and humidity, thus ensuring maximum flexibility for wireless working.

Its proven quality and great durability guarantee the continuously high performance of your manifold in all conditions.

# Technical data/accessories/kits

Sensor type		Pressure
Measuring range		-1 to 60 bar
Accuracy (at 22 °C)		±0.5% fs
Resolution		0.01 bar
Overload		65 bar
General technical data		
Operating temperature		-20 to +50 °C
Storage temperature		-20 to +60 °C
Battery type		3 AAA microcells
Battery life		130 h
Auto power off		After 10 minutes when not connected via Bluetooth
Dimensions		77 x 109 x 60 mm
Weight		592 g
Protection class		IP54
Bluetooth technology/range		Bluetooth® 5.0/150 m
Compatibility		requires iOS 11.0 or newer/Android 6.0 or newer requires mobile terminal device with Bluetooth® 4.0



**The testo Smart App**

- For all applications of the testo 550i – from measurement to documentation
- Compatible with all Bluetooth-enabled Testo measuring instruments for air conditioning/refrigeration systems and heat pumps
- Measurement errors are easily prevented thanks to menus that offer optimum support, e.g. for superheating and subcooling
- Quick analysis thanks to clear presentation of the values, e.g. in a table
- Create digital measurement reports including photos as PDF/CSV files on site and email them straight away

Measuring instrument accessories	Order no.
Magnetic belt for digital manifolds for flexible use of the magnet or hook thanks to a simple exchange system, compatible with all digital manifolds from Testo	0564 1001
Valve spare parts kit; exchange of 2 valve positioners with 4 valve positioner covers (red, blue and 2 x black), compatible with all digital manifolds from Testo.	0554 5570

## testo 550i kits

	<b>testo 550i App-controlled manifold</b>	<b>testo 550i Smart Kit App-controlled manifold with wireless temperature probes</b>
		
Order no.	0564 2550	0564 3550
Kit components		
testo 550i App-controlled manifold	✓	✓
Calibration protocol	✓	✓
testo 115i Wireless clamp temperature probe (Smart Probe)		✓ 2 x
Instrument case		✓

## Testo Smart Probes

### testo 115i

testo 115i, clamp thermometer operated with smartphone, for measurement on pipelines with diameters of 6 to max. 35 mm, including batteries and calibration protocol



Order no. 0560 2115 02

Sensor type	NTC
Measuring range	-40 to +150 °C
Accuracy ±1 digit	±1.3 °C (-20 to +85 °C)
Resolution	0.1 °C
General technical data	
Compatibility	requires iOS 11.0 or newer/Android 6.0 or newer requires mobile terminal device with Bluetooth® 4.0
Storage temperature	-20 to +60 °C
Operating temperature	-20 to +50 °C
Battery type	3 AAA microcells
Battery life	150 h
Dimensions	183 x 90 x 30 mm
Bluetooth® range	up to 100 m

### testo 605i

testo 605i, thermohygrometer operated with smartphone, including batteries and calibration protocol



Order no. 0560 2605 02

Sensor type	Humidity – capacitive
Measuring range	0 to 100 %RH
Accuracy (at +25 °C) ±1 digit	±3.0 %RH (10 to 35 %RH) ±2.0 %RH (35 to 65 %RH) ±3.0 %RH (65 to 90 %RH) ±5 %RH (< 10 %RH or > 90 %RH)
Resolution	0.1 %RH
Sensor type	NTC
Measuring range	-20 to +60 °C
Accuracy ±1 digit	±0.8 °C (-20 to 0 °C) ±0.5 °C (0 to +60 °C)
Resolution	0.1 °C
General technical data	
Compatibility	requires iOS 11.0 or newer/Android 6.0 or newer requires mobile terminal device with Bluetooth® 4.0
Storage temperature	-20 to +60 °C
Operating temperature	-20 to +50 °C
Battery type	3 AAA microcells
Battery life	150 h
Dimensions	218 x 30 x 25 mm 73 mm probe shaft
Bluetooth® range	up to 100 m

### testo 552i

testo 552i, app-controlled wireless vacuum probe, including batteries and calibration protocol



Order no. 0564 2552

Sensor type	Pressure
Measuring range	0 to 26.66 mbar/0 to 20000 microns
Accuracy ±1 digit	±10 microns + 10% of m.v. (100 to 1000 microns)
Resolution	1 micron (0 to 1000 microns) 10 microns (1000 to 2000 microns) 100 microns (2000 to 5000 microns)
Connection	7/16" – UNF
Overload	6.0 bar/87 psi (relative: 5.0 bar/72 psi)
General technical data	
Connection	Bluetooth 4.2
Bluetooth® range	150 m
Storage temperature	-20 °C to +50 °C
Operating temperature	-10 °C to +50 °C
Battery type	3 AAA microcells
Battery life	39 h
Auto power off	After 10 minutes when not connected via Bluetooth
Protection class	IP54
Dimensions	150 x 32 x 31 mm
Weight	142 g

## Digital manifold

testo 570s - the digital manifold with 4-way valve block, Bluetooth and large data memory

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Long-term measurement with intelligent error analysis in the testo Smart App

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World's longest battery life of up to 360 hours with rechargeable battery (USB-C) and batteries

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Suitable for use with A3 and A2L refrigerants

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Highest precision even at low pressure values due to measuring accuracy of 0.25% fs

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All measurement data at a glance and graphical progress display thanks to large display

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High durability with IP54 protection class

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 **Bluetooth 5.0**  
+ App

testo Smart App  
for free download



 **JETZT BEI Google Play**  **Laden im App Store**

With the new testo 570s, we are opening up the future of intelligent long-term measurement on refrigeration and air conditioning systems as well as heat pumps. Digital fault analysis in the testo Smart App allows anomalies to be detected quickly and reliably. And with the world's longest runtime of up to 360 hours and large data memory, testo 570s is ideal for long-term measurements. Behind it is the hybrid system of rechargeable battery (USB-C) and 3 batteries.

The large screen of the testo 570s provides a quick overview of all measured values as well as a graphical progress display.

For uncomplicated measurement of temperature, vacuum and current, all probes automatically connect to the manifold via Bluetooth. To make measurement even easier, stored programs guide you through the measurement process and enable automatic determination of numerous plant parameters. The subsequent documentation and sending of data is also possible with just a few clicks in the testo Smart App.

Thanks to high robustness with protection class IP54, testo 570s continuously delivers high performance even under the most difficult conditions.





## Technical data / accessories / order data

General technical data	
Operating temperature	-20 to +50 °C
Storage temperature	-20 to +60 °C
Battery type	Built-in rechargeable battery: LI battery 18650 Replaceable battery: 3 alkaline batteries AA
Battery life	With built-in rechargeable battery: ≥220 h without Bluetooth®, without illumination ≥120 h with Bluetooth® and illumination With 3 AA batteries: ≥145 h without Bluetooth®, without illumination ≥75 h with Bluetooth® and illumination
Auto power off	after 10 minutes when not connected via Bluetooth®
Dimensions	229 x 112.5 x 71 mm
Weight	1.3 kg
Protection class	IP54
Bluetooth® technology/range	Bluetooth® 5.0 / 150 m
Compatibility	Requires iOS 11.0 or newer / Android 6.0 or newer requires mobile terminal device with Bluetooth® 4.0

Sensor types		
	Pressure	Temperature
Measuring range	-1 to 60 bar	-50 to +150 °C
Accuracy (at 22 °C)	±0.25 % fs	±0.5 °C
Resolution	0.01 bar	0.1 °C
Probe connections	3 x 7/16" – UNF + 1 x 5/8" – UNF	2 x plug-in (NTC)
Overload	65 bar	–

Measuring instrument accessories	Order no.
Magnetic belt for digital manifolds for flexible use of the magnet or hook thanks to a simple exchange system, compatible with all digital manifolds from Testo	0564 1001
Valve spare parts kit; exchange of 2 valve positioners with 4 valve positioner covers (red, blue and 2 x black), compatible with all digital manifolds from Testo.	0554 5570

### Order data testo 570s

	testo 570s Smart digital manifold	testo 570s Smart Vacuum Kit Manifold with 2 clamp thermometers, 1 vacuum probe and case	testo 570s Smart Vacuum Kit with filling hoses incl. filling hose set (4 off)	testo 570s Smart Vacuum Kit with clamp meter incl. TRMS clamp meter
				
Kit components				
testo 570s smart digital manifold	✓	✓	✓	✓
2x testo 115i wireless clamp temperature probe		✓	✓	✓
testo 552i vacuum probe		✓	✓	✓
Hose filling set (4 hoses)			✓	
testo 770-3 TRMS clamp meter				✓
Calibration protocol for testo 570s	✓	✓	✓	✓
Instrument case		✓	✓	✓
<b>Order no.</b>	<b>0564 5701</b>	<b>0564 5702</b>	<b>0564 5703</b>	<b>0564 5704</b>



# testo Smart Probes / clamp meter testo 770-3

## testo 115i

testo 115i, clamp thermometer operated with smartphone, for measurement on pipelines with diameters of 6 to max. 35 mm, including batteries and calibration protocol

Order no. 0560 2115 02




## testo 552i

testo 552i, app-controlled wireless vacuum probe, including batteries and calibration protocol

Order no. 0564 2552




## testo 605i

testo 605i, thermohygrometer operated with smartphone, including batteries and calibration protocol

Order no. 0560 2605 02







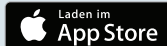

Sensor type NTC	
Measuring range	-40 to +150 °C
Accuracy ±1 digit	±1.3 °C (-20 to +85 °C)
Resolution	0.1 °C
General technical data	
Compatibility	requires iOS 11.0 or newer, Android 6.0 or newer, requires mobile terminal device with Bluetooth® 4.0
Storage temperature	-20 to +60 °C
Operating temperature	-20 to +50 °C
Battery type	3 AAA batteries
Battery life	150 h
Dimensions	183 x 90 x 30 mm
Bluetooth® range	up to 100 m

Sensor type pressure	
Measuring range	0 to 26.66 mbar/ 0 to 20000 microns
Accuracy ±1 digit	±10 microns + 10% of m.v. (100 to 1000 microns)
Resolution	1 micron (0 to 1000 microns) 10 micron (1000 to 2000 microns) 100 micron (2000 to 5000 microns)
Connection	7/16" – UNF
Overload	6.0 bar / 87 psi relative 5.0 bar / 72 psi)

Sensor type humidity – capacitive	
Measuring range	0 to 100 %RH
Accuracy (at +25 °C) ±1 digit	±3.0 %RH (10 to 35 %RH) ±2.0 %RH (35 to 65 %RH) ±3.0 %RH (65 to 90 %RH) ±5 %RH (<10 %RH or >90 %RH)
Resolution	0.1 %RH

General technical data	
Connection	Bluetooth 4.2
Storage temp.	-20 °C to +50 °C
Operating temp.	-10 °C to +50 °C
Battery type	3 AAA batteries
Battery life	39 h
Auto power off	After 10 minutes when not connected via Bluetooth
Protection class	IP54
Dimensions	150 x 32 x 31 mm
Weight	142 g
Bluetooth® range	150 m

Sensor type NTC	
Measuring range	-20 to +60 °C
Accuracy ±1 digit	±0.8 °C (-20 to 0 °C) ±0.5 °C (0 to +60 °C)
Resolution	0.1 °C
General technical data	
Compatibility	requires iOS 11.0 or newer, Android 6.0 or newer, requires mobile terminal device with Bluetooth® 4.0
Storage temp.	-20 to +60 °C
Operating temp.	-20 to +50 °C
Battery type	3 AAA batteries
Battery life	150 h
Dimensions	218 x 30 x 25 mm 73 mm probe shaft
Bluetooth® range	up to 100 m



### The testo Smart App

- For all applications of the testo 570s – from measurement to documentation
- Remote operation of the measuring instrument or use as second screen
- Quick evaluation with all results at a glance, tabular view and graphical progress display
- Guided menus for all measuring tasks
- Create digital measurement reports including photos as PDF/CSV files on site and email them straight away
- Compatible with all Bluetooth®-enabled Testo measuring instruments for air conditioning/refrigeration systems and heat pumps

## testo 770-3

testo 770-3 TRMS clamp meter, incl. batteries and 1 set of measuring cables

Order no. 0590 7703










Measuring ranges	
Voltage	1 mV to 600 V AC/DC
Power	0.1 to 600 A AC/DC
µA	0,1 to 400 µA AC/DC
Resistance	0.1 Ω to 60 MΩ
Frequency	0.001 Hz to 10 kHz
Capacity	0.001 µF to 60,000 µF
Temperature	-20 to +500 °C
General technical data	
Basic accuracy	0.1 %
Display (counts)	6000
Measurement category	CAT IV 600 V CAT III 1000 V

Compatibility	requires iOS 11.0 or newer/ Android 6.0 or newer, requires mobile terminal device with Bluetooth® 4.0
Operating temperature	-10 to +50 °C
Storage temperature	-15 to +60 °C
Dimensions	243 x 96 x 43 mm
Weight	378 g
Approvals	CSA, CE
Standards	EN 61326-1, EN 61140
Other	True RMS, continuity test, power measurement, diode test, Bluetooth®, testo Smart App



# Probe

Probe type	Dimensions Probe shaft/probe shaft tip	Measuring range	Accuracy	Order no.
<b>Air probe</b>				
Precise, robust NTC air probe		-50 to +125 °C	±0.2 °C (-25 to +80 °C) ±0.4 °C (remaining meas. range)	0613 1712
<b>Surface probe</b>				
Clamp probe for temperature in kit for measurements on pipes from 6 to 35 mm diameter, NTC, fixed cable 1.5 m		-40 to +125 °C	±1 °C (-20 to +85 °C)	0613 5507
Clamp probe for temperature measurements on pipes from 6 to 35 mm diameter, NTC, fixed cable 5.0 m		-40 to +125 °C	±1 °C (-20 to +85 °C)	0613 5506
Pipe wrap probe with Velcro tape for pipe diameters of up to max. 75 mm, Tmax +75 °C, NTC, fixed cable 1.5 m		-50 to +70 °C	±0.2 °C (-25 to +70 °C) ±0.4 °C (-50 to -25.1 °C)	0613 4611
Pipe wrap probe (NTC) for pipe diameters of 5 to 65 mm, fixed cable 2.8 m		-50 to +120 °C	±0.2 °C (-25 to +80 °C)	0613 5605
Watertight NTC surface probe for flat surfaces, fixed cable 1.2 m		-50 to +150 °C Long-term measuring range +125°C, briefly +150°C (2 minutes)	±0.5% of m.v. (+100 to +150 °C) ±0.2 °C (-25 to +74.9 °C) ±0.4 °C (remaining meas. range)	0613 1912

## Digital manifold

**testo 557s – the manifold with Bluetooth and 4-way valve block for commissioning, servicing and maintenance of refrigeration systems and heat pumps**

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All results at a glance thanks to the large graphic display

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Exceptionally compact and reliable thanks to the easy-to-handle, robust housing with IP 54 protection class

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Simple, wireless measurement of vacuum and temperature via automatic Bluetooth connection

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Even greater flexibility for your measurements and documentation with the testo Smart App

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Even easier to get results, thanks to guided measurement menus for target superheat, vacuum and pressure loss

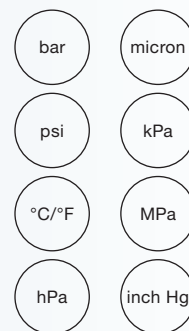
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Convenient refrigerant management in the App with favourites and automatic updates

---

Can be used for applications with A2L refrigerant, taking into account the relevant legislation, norms and guidelines for refrigeration systems

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Bluetooth 5.0  
+ App

testo Smart App  
for free download



The testo 557s digital manifold with 4-way valve block enables you to carry out your measurements on refrigeration and air conditioning systems and heat pumps particularly fast. The large display also helps you to evaluate the results in graphic form. Stored programs guide you through the measurement and enable the automatic determination of numerous important system parameters such as superheat, pressure drop test or evacuation.

Thanks to the testo 552i Bluetooth vacuum probe included in the kit, the testo 557, as the first manifold ever, makes wireless vacuum measurement possible.

Bluetooth probes for temperature, pressure and humidity can be easily connected directly to the instrument and offer maximum flexibility in their application. In conjunction with the testo Smart App, you can take care of digital documentation directly on site. In addition to this, you always have the current refrigerants available to you, and can set your favourites and transfer them to the instrument. Its proven quality and great durability guarantee the continuously high performance of your manifold in all conditions.

# Technical data/accessories/kits

### Sensor types

	Pressure	Temperature
Measuring range	-1 to 60 bar	-50 to +150 °C
Accuracy (at 22 °C)	±0.5% fs	±0.5 °C
Resolution	0.01 bar	0.1 °C
Probe connections	3 x 7/16" – UNF + 1 x 5/8" – UNF	2 x plug-in (NTC)
Overload	65 bar	–

### General technical data

Operating temperature	-20 to +50 °C
Storage temperature	-20 to +60 °C
Battery type	4 AA microcells
Battery life	250 h with no illumination, no Bluetooth® 100 h with illumination and Bluetooth®
Auto power off	After 10 minutes when not connected via Bluetooth
Dimensions	229 x 112.5 x 71 mm
Weight	1243 g
Protection class	IP54
Bluetooth technology/range	Bluetooth® 5.0/150 m
Compatibility	requires iOS 11.0 or newer/Android 6.0 or newer requires mobile terminal device with Bluetooth® 4.0



### The testo Smart App

- For all applications of the testo 557s – from measurement to documentation
- Compatible with all Bluetooth-enabled Testo measuring instruments for air conditioning/refrigeration systems and heat pumps
- Measurement errors are easily prevented thanks to menus that offer optimum support, e.g. for superheating and subcooling
- Quick analysis thanks to clear presentation of the values, e.g. in a table
- Create digital measurement reports including photos as PDF/CSV files on site and email them straight away

Measuring instrument accessories	Order no.
Magnetic belt for digital manifolds for flexible use of the magnet or hook thanks to a simple exchange system, compatible with all digital manifolds from Testo	0564 1001
Valve spare parts kit; exchange of 2 valve positioners with 4 valve positioner covers (red, blue and 2 x black), compatible with all digital manifolds from Testo.	0554 5570

## testo 557s kits

**testo 557s Smart Vacuum Kit**  
Smart digital manifold with wireless vacuum and temperature probes



**testo 557s Smart Vacuum Kit with filling hoses**  
Smart digital manifold with wireless vacuum and temperature probes and hose filling set (4 pcs.)



Order no.	0564 5571	0564 5572
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### Kit components

testo 557s Smart digital manifold	✓	✓
Calibration protocol	✓	✓
testo 552i Vacuum probe (Smart Probe)	✓	✓
testo 115i Wireless clamp temperature probe (Smart Probe)	✓ 2 x	✓ 2 x
Hose filling set (4 hoses)		✓
Instrument case	✓	✓

# Testo Smart Probes

## testo 115i

testo 115i, clamp thermometer operated with smartphone, for measurement on pipelines with diameters of 6 to max. 35 mm, including batteries and calibration protocol



Order no. 0560 2115 02

Sensor type	NTC
Measuring range	-40 to +150 °C
Accuracy ±1 digit	±1.3 °C (-20 to +85 °C)
Resolution	0.1 °C
<b>General technical data</b>	
Compatibility	requires iOS 11.0 or newer/Android 6.0 or newer requires mobile terminal device with Bluetooth® 4.0
Storage temperature	-20 to +60 °C
Operating temperature	-20 to +50 °C
Battery type	3 AAA microcells
Battery life	150 h
Dimensions	183 x 90 x 30 mm
Bluetooth® range	up to 100 m

## testo 605i

testo 605i, thermohygrometer operated with smartphone, including batteries and calibration protocol



Order no. 0560 2605 02

Sensor type	Humidity – capacitive
Measuring range	0 to 100 %RH
Accuracy (at +25 °C) ±1 digit	±3.0 %RH (10 to 35 %RH) ±2.0 %RH (35 to 65 %RH) ±3.0 %RH (65 to 90 %RH) ±5 %RH (< 10 %RH or > 90 %RH)
Resolution	0.1 %RH
<b>Sensor type</b>	<b>NTC</b>
Measuring range	-20 to +60 °C
Accuracy ±1 digit	±0.8 °C (-20 to 0 °C) ±0.5 °C (0 to +60 °C)
Resolution	0.1 °C
<b>General technical data</b>	
Compatibility	requires iOS 11.0 or newer/Android 6.0 or newer requires mobile terminal device with Bluetooth® 4.0
Storage temperature	-20 to +60 °C
Operating temperature	-20 to +50 °C
Battery type	3 AAA microcells
Battery life	150 h
Dimensions	218 x 30 x 25 mm 73 mm probe shaft
Bluetooth® range	up to 100 m

## testo 552i

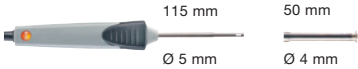




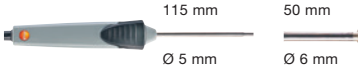
testo 552i, app-controlled wireless vacuum probe, including batteries and calibration protocol



Order no. 0564 2552

Sensor type	Pressure
Measuring range	0 to 26.66 mbar/0 to 20000 microns
Accuracy ±1 digit	±10 microns + 10% of m.v. (100 to 1000 microns)
Resolution	1 micron (0 to 1000 microns) 10 microns (1000 to 2000 microns) 100 microns (2000 to 5000 microns)
Connection	7/16" – UNF
Overload	6.0 bar/87 psi (relative: 5.0 bar/72 psi)
<b>General technical data</b>	
Connection	Bluetooth 4.2
Bluetooth® range	150 m
Storage temperature	-20 °C to +50 °C
Operating temperature	-10 °C to +50 °C
Battery type	3 AAA microcells
Battery life	39 h
Auto power off	After 10 minutes when not connected via Bluetooth
Protection class	IP54
Dimensions	150 x 32 x 31 mm
Weight	142 g

# Probes

Probe type	Dimensions Probe shaft/probe shaft tip	Measuring range	Accuracy	Order no.
<b>Air probe</b>				
Precise, robust NTC air probe		-50 to +125 °C	±0.2 °C (-25 to +80 °C) ±0.4 °C (remaining meas. range)	0613 1712
<b>Surface probe</b>				
Clamp probe for temperature in kit for measurements on pipes from 6 to 35 mm diameter, NTC, fixed cable 1.5 m		-40 to +125 °C	±1 °C (-20 to +85 °C)	0613 5507
Clamp probe for temperature measurements on pipes from 6 to 35 mm diameter, NTC, fixed cable 5.0 m		-40 to +125 °C	±1 °C (-20 to +85 °C)	0613 5506
Pipe wrap probe with Velcro tape for pipe diameters of up to max. 75 mm, Tmax +75 °C, NTC, fixed cable 1.5 m		-50 to +70 °C	±0.2 °C (-25 to +70 °C) ±0.4 °C (-50 to -25.1 °C)	0613 4611
Pipe wrap probe (NTC) for pipe diameters of 5 to 65 mm, fixed cable 2.8 m		-50 to +120 °C	±0.2 °C (-25 to +80 °C)	0613 5605
Watertight NTC surface probe for flat surfaces, fixed cable 1.2 m		-50 to +150 °C Long-term measuring range +125°C, briefly +150 °C (2 minutes)	±0.5% of measured value (+100 to +150 °C) ±0.2 °C (-25 to +74.9 °C) ±0.4 °C (remaining meas. range)	0613 1912



## Digital Vacuum Gauge with Bluetooth®

testo 552 - For evacuating  
refrigeration/air conditioning  
systems and heat pumps

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Highly accurate and reliable measurement results

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Measurement data monitoring via testo Smart App

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Measurement data dispatch via testo Smart App

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Measurement of the evaporation temperature of H<sub>2</sub>O

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Optical alarm when a limit value is exceeded

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Extremely robust and water/dirt resistant (IP 42)

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Bluetooth  
+ App

testo Smart App  
for free download



testo 552 is a digital vacuum gauge for the evacuation of refrigeration systems and heat pumps. It measures even the smallest absolute pressures, and delivers highly accurate information about a system's status of dehumidification (removal of foreign matter, incl. oils, foreign gases, etc.).

Via a Bluetooth interface, the testo 552 connects with the testo Smart App on your smartphone or tablet. This allows you to monitor the absolute pressure reached during the evacuation conveniently and wirelessly. In addition to this, the measurement results can be quickly documented in the App and sent by e-mail.

Its robust construction makes it ideal for everyday use, protected against dirt and water.




# Technical data/accessories

**testo 552**

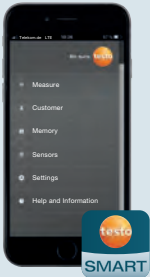
testo 552, digital vacuum gauge with Bluetooth connection for wireless monitoring of measurement results

Order no. 0560 5522



**testo Smart App**

The App turns your smartphone/tablet into the display of the testo 552. The operation of the measuring instrument as well as the display of the measurement values take place by Bluetooth via the testo Smart App on your smartphone or tablet – independently of the measurement location. In addition to this, you can use the App to create measurement reports, add photos and comments, and send them by e-mail. For iOS and Android.



Accessories	Order no.
Connection cable with MiniDin plug for connecting testo 552 to the digital manifold testo 570	0554 5520

Sensor type	Pirani sensor
Vacuum measuring range	0 to +26.66 mbar / 0 to 20 000 microns
Accuracy vacuum ±1 digit (at +22 °C)	±10 microns + 10 % of m.v. (100 to 1 000 microns)
Vacuum resolution	1 micron (0 to 1 000 microns) 10 microns (1 000 to 2 000 microns) 100 microns (2 000 to 5 000 microns) 500 microns (5 000 to 10 000 microns) 5 000 microns (10 000 to 20 000 microns)
Overload vacuum	absolute: 6 bar / 87 psi relative: 5 bar / 72 psi

**General technical data**

Storage temperature	-20 to +50 °C
Operating temperature	-10 to +50 °C
Dimensions	160 x 110 x 50 mm
Weight	Approx. 500 g
Protection class	IP42
Battery type	2 AA batteries
Battery life	50 hrs (without Bluetooth/backlighting)
Connection	2 x 1/4" SAE (7/16" UNF) 1 x mini - DIN (connection to testo 570)
Measurement value sensor	Pirani sensor
Parameters	mmHg, Torr, mbar, hPa, micron, inH <sub>2</sub> O, inHg, Pa
Measurement rate	0.5 s
Compatibility App connection	requires iOS 11.0 or newer / Android 6.0 or newer requires mobile end device with Bluetooth 4.0

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Subject to change without notice.



# Humidity/temperature measuring instrument

testo 605-H1

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Precise measurement of air humidity, air temperature and dewpoint

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Ideally suited for measurements in ducts

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Easy read-out of measurement values thanks to bendable joint

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%RH

°C

°C td

The thermal hygrometer testo 605-H1 is particularly versatile and convenient to use thanks to its joint. The display can be rotated into different positions, allowing optimum read-out of the measurement values. The long-term stable sensor guarantees correct measurement results even after years. The small, compact testo 605-H1 measures air humidity and air temperature and additionally calculates the dewpoint temperature.

testo 605-H1 is suitable for monitoring air humidity in ducts. The probe shaft has a length of 125 mm and can be ideally positioned in the duct using the holder included in delivery. The rotatable protective cap protects the sensor from dirt and impact.

## Technical data / Accessories

### testo 605-H1

testo 605-H1 thermohygrometer with duct holder and dewpoint calculation incl. attachment clip and battery

Part no. 0560 6053



#### General technical data

Operating temperature	0 to +50 °C
Storage temperature	-20 to +70 °C
Battery type	3 AAA micro batteries
Battery life	Approx. 1000 h
Weight	75 g (with batteries, without packaging)

#### Sensor types

	NTC	Testo humid. sensor, cap.
Measuring range	0 to +50 °C -20 to +50 °C td	5 to 95 %RH
Accuracy ±1 digit	±0.5 °C	±3 %RH*
Resolution	0.1 °C	0.1 %RH

\*Please see the additional accuracy information for humidity in the instruction manual.

#### Accessories for measuring instrument

#### Part no.

ISO calibration certificate humidity Calibration points 11.3 %RH and 75.3 %RH at +25 °C	0520 0006	
ISO calibration certificate humidity Calibration point 75.3%RH at +25 °C	0520 0096	

# Thermohygrometer operated with smartphone

## testo 605i

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Compact professional measuring instrument from the Testo Smart Probes series for use with smartphones/tablets

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Measurement of air humidity and temperature in rooms and ducts

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Automatic calculation of dewpoint and wet bulb temperature via testo Smart App

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Measurement data analyzed and sent via testo Smart App

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Problem-free use at measuring points that are a long distance apart – Bluetooth® range up to 100 m

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Bendable probe head for particularly convenient measurements

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 Bluetooth®  
+ App

testo Smart App  
for free download




In conjunction with a smartphone or tablet, the compact testo 605i humidity measuring instrument is suitable for the measurement of air temperature and relative humidity in rooms and ducts. Cooling and heating output can also be determined in conjunction with the testo 405i thermal anemometer.

Users can read off their measuring values conveniently via the testo Smart App installed on the terminal device. The App also enables the automatic determination of dewpoint and wet bulb temperature. All measurement data are presented either as a diagram or a table. Finally, the measurement data reports can be sent directly as pdf or Excel files.

# Technical data/accessories

**testo 605i**

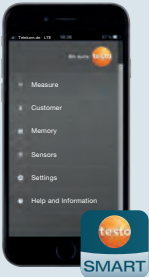
testo 605i, thermohygrometer operated with smartphone, including batteries and calibration protocol



Order no. 0560 2605 02

**testo Smart App**

The App turns your smartphone/tablet into the display for the testo 605i. Both the operation of the measuring instrument and the display of the readings are achieved by Bluetooth® via the testo Smart App on your smartphone or tablet – irrespective of the measuring location. In addition, you can use the App to create measurement reports, add photos and comments to these and send them by e-mail. For iOS and Android.



Sensor type	Humidity – capacitive
Measuring range	0 to 100 %RH
Accuracy (at +25 °C) ±1 digit	±3.0 %RH (10 to 35 %RH) ±2.0 %RH (35 to 65 %RH) ±3.0 %RH (65 to 90 %RH) ±5 %RH (< 10 %RH or > 90 %RH)
Resolution	0.1 %RH

Sensor type	NTC
Measuring range	-20 to +60 °C
Accuracy ±1 digit	±0.8 °C (-20 to 0 °C) ±0.5 °C (0 to +60 °C)
Resolution	0.1 °C

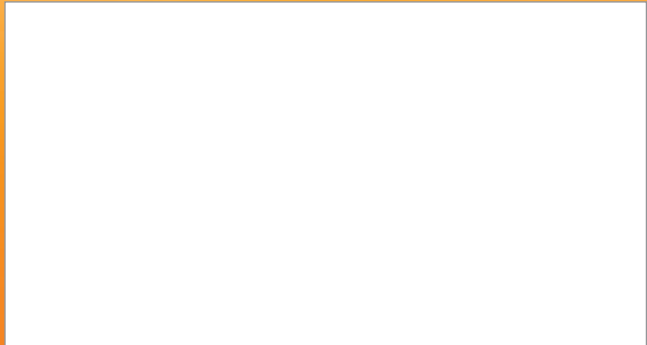
**General technical data**

Compatibility	requires iOS 11.0 or newer / Android 6.0 or newer requires mobile terminal device with Bluetooth® 4.0
Storage temperature	-20 to +60 °C
Operating temperature	-20 to +50 °C
Battery type	3 micro batteries AAA
Battery life	150 hrs
Dimensions	218 x 30 x 25 mm 73 mm probe shaft
Bluetooth® range	up to 100 m

Accessories	Order no.
testo Smart Case (VAC) for the storage and transport of testo 405i, testo 410i, testo 510i, testo 605i, testo 805i and testo 905i, dimensions 270 x 190 x 60 mm	0516 0260
ISO humidity calibration certificate, calibration points 11.3 %RH and 75.3 %RH at +25 °C	0520 0006
ISO humidity calibration certificate, calibration point 75.3 %RH at +25 °C	0520 0096

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Subject to change, including technical modifications.



# Wood/material moisture measuring instrument

## testo 606 - Pocket-sized material moisture measurement

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Precise measurement of wood moisture

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Further characteristics curves for locating wet spots in building materials

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Hold-function for convenient read-out of measurement values

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Display illumination

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Additional advantages of testo 606-2:

Measurement of temperature and humidity in ambient air  
Incl. dewpoint calculation and Wet Bulb.

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Illustration 1.1

The testo 606-1/-2 is a particularly convenient and easy-to-operate pocket-sized material moisture measuring instrument. The material moisture is directly displayed in percentage by weight via stored material characteristic curves. For the measurement of wood moisture, characteristic curves are available for beech, spruce, larch, oak, pine and maple. In order to locate wet spots in building materials, curves are additionally stored for cement screed, plaster, anhydrite screed, cement mortar, lime mortar, and brick.


The testo 606-2 measures air humidity and temperature in addition to material moisture. This enables drying conditions to be determined quickly and reliably on site, for example. The clip-on protective cap, wrist strap and a belt holder allow the safe storage of the testo 606-1/-2



# Technical data / Accessories

**testo 606-1**


testo 606-1 moisture meter incl. protection cap, batteries, belt holder and calibration protocol, TÜV permit according to VDI 4206 page 4



Part no. 0560 6060

**testo 606-2**

testo 606-2 wood and material humidity meter with integrated humidity measurement and NTC air thermometer incl. protection cap, batteries, belt holder and calibration protocol, TÜV permit according to VDI 4206 page 4



Part no. 0560 6062

**Technical data testo 606-1/-2**

Sensor types	Material moisture (based on conductivity)
Measuring range	8.8 to 54.8 % by weight beech, spruce, larch, birch, cherry, walnut 7.0 to 47.9 % by weight oak, pine, maple, ash-tree, douglas fir, meranti 0.9 to 22.1 % by weight cement screed, concrete 0.0 to 11.0 % by weight anhydrite screed 0.7 to 8.6 % by weight cement mortar 0.6 to 9.9 % by weight lime mortar, plaster 0.1 to 16.5 % by weight bricks
Accuracy ±1 digit	±1 %
Resolution	0.1
Battery life	200 h (average, without display illumination)

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**General technical data**

Operating temperature	-10 to +50 °C
Storage temperature	-40 to +70 °C
Dimensions	119 x 46 x 25 mm (incl. protective cap)
Battery type	2 AAA micro batteries
Measuring rate	1 s
Weight	90 g (protective cap and batteries included)
Protection class	IP20

**Technical data testo 606-2**

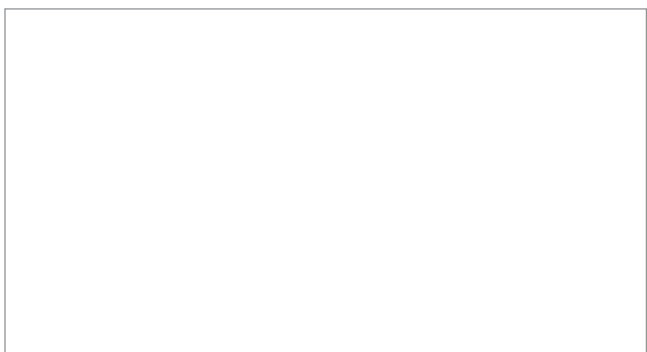
Sensor types	NTC	Testo humid. sensor, cap.
Measuring range	-10 to +50 °C	0 to 100 %RH
Accuracy ±1 digit	±0.5 °C	±2.5 %RH* (5 to 95 %RH)
Resolution	0.1 °C	0.1 %RH
Battery life	130 h (average, without display illumination)	

\*Please see the additional accuracy information for humidity in the instruction manual.

Subject to change without notice.

**Accessories for measuring instrument**

	Part no.
For testo 606-1: Spare electrodes (1 pair)	0192 5358
For testo 606-2: Spare electrodes (1 pair)	0192 5348
Belt holder	0516 4007
For testo 606-2: ISO calibration certificate humidity, calibration points 11.3 %RH and 75.3 %RH at +25 °C/+77 °F; per channel/instrument	0520 0076
For testo 606-2: ISO calibration certificate/temperature; temp. data logger; calibration points -8°C; 0°C; +40°C per channel/instrument	0520 0181
ISO calibration certificate wood moisture	0520 0406



# Thermal hygrometer

## testo 608 – Continuous indoor climate monitoring

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Continuous display of temperature, humidity and dewpoint

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Max. and min. value display

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Battery monitor

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Additional advantages testo 608-H2:

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LED alarm reports limit value violations

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High accuracy  $\pm 2$  %RH

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The low-budget hygrometer testo 608-H1 continuously measures humidity, temperature and dewpoint. The large display is easily legible even at a distance, the suspension and standing fixtures allow flexible positioning on a table or the wall.


testo 608 has a max./min. value display and a battery monitor. Thanks to the long-term stable sensor, you can rely on correct measurement results even after years.

testo 608-H2, the precise alarm hygrometer, reliably reports humidity and temperature limit value violations, e.g. in garden centres, storerooms, cleanrooms, museums, laboratories etc.

# Technical data / Accessories

## testo 608-H1


testo 608-H1 thermohygrometer humidity/dewpoint/temperature incl. battery and calibration protocol



Part no. 0560 6081

## testo 608-H2

testo 608-H2 hygrometer, humidity/dewpoint/temperature, with LED alarm, battery and calibration protocol



Part no. 0560 6082

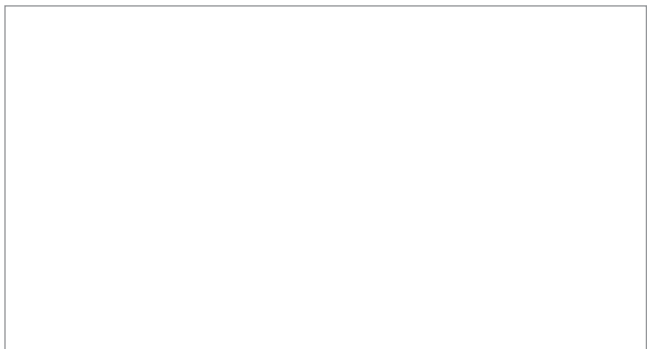
### General technical data

Measuring rate	18 s
Storage temperature	-40 to +70 °C
Battery type	9V block battery
	approx. 1 year
Weight	168 g
Dimensions	111 x 90 x 40 mm
Housing material	ABS
Display	LCD, 2 lines

Technical data	testo 608-H1		testo 608-H2	
	NTC	Testo humid. sensor, cap.	NTC	Testo humid. sensor, cap.
Measuring range	0 to +50 °C -20 to +50 °C td	+10 to +95 %RH	-10 to +70 °C -40 to +70 °C td	+2 to +98 %RH
Accuracy ±1 digit	±0.5 °C (at +25 °C)	±3 %RH* (+10 to +95 %RH)	±0.5 °C (at +25 °C)	±2 %RH* (+2 to +98 %RH)
Resolution	0.1 °C	0.1 %RH	0.1 °C	0.1 %RH
Operating temperature	0 to +50 °C		-10 to +70 °C	

\*Please see the additional accuracy information for humidity in the instruction manual.

Accessories for measuring instrument	Part no.
ISO calibration certificate humidity, calibration points 11.3 %RH and 75.3 %RH at +25 °C/+77 °F; per channel/instrument	0520 0076



# Humidity/temperature measuring instrument

testo 610 – Pocket-sized air  
humidity measurements

---

Measurement of air humidity and temperature

---

Incl. dewpoint calculation and Wet Bulb

---

Long-term stable Testo humidity sensor

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Hold-function and max./min. values

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Display illumination

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Illustration 1:1

The testo 610 simultaneously measures relative air humidity and temperature. It is thus ideally suitable for fast checks on ambient conditions, e.g. in offices, production rooms or in warehouses.

The patented humidity sensor developed by Testo guarantees reliable measurement result. The accuracy of  $\pm 2.5$  %RH is confirmed by a calibration protocol which is included in delivery. Dewpoint calculation and the

calculation of Wet Bulb as well as a hold-function and the display of max. and min. values are possible with the testo 610.

The clip-on protective cap, wrist strap and belt holder ensure safekeeping of the instrument. testo 610 is very handy, small and easy to operate.

## Technical data / Accessories

### testo 610

testo 610 handy humidity/temperature meter  
incl. protection cap, batteries, belt holder and  
calibration protocol

Part no. 0560 0610



#### General technical data

Measuring rate	1 s
Weight	90 g (batteries and protective cap included)
Operating temperature	-10 to +50 °C
Storage temperature	-40 to +70 °C
Battery type	2 AAA micro batteries
Battery life	200 h (average, without display illumination)
Dimensions	119 x 46 x 25 mm (incl. protective cap)
Protection class	IP20

#### Sensor types

	NTC	Testo humid. sensor, cap.
Measuring range	-10 to +50 °C	0 to 100 %RH
Accuracy ±1 digit	±0.5 °C	±2.5 %RH* (5 to 95 %RH)
Resolution	0.1 °C	0.1 %RH

\*Please see the additional accuracy information for humidity in the instruction manual.

#### Accessories for measuring instrument

#### Part no.

Accessories for measuring instrument	Part no.
Belt holder	0516 4007
ISO calibration certificate humidity calibration points 11.3 %RH and 75.3 %RH at +25 °C/+77 °F; per channel/instrument	0520 0076
ISO calibration certificate/temperature temp. data logger; calibration points -8°C; 0°C; +40°C per channel/instrument	0520 0181

# Material moisture measuring instrument

**testo 616 – measure material moisture quickly and damage-free**

---

Precise measurement of the material moisture in building materials and woods

---

Equipped with 10 characteristic curves

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Ergonomic shape for optimum contact pressure

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Hold, max. and min. functions

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Illuminated digital display

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The test 616 allows fast and damage-free examination of material moisture curves in building materials and woods. It also facilitates your work in observing the drying process of floors walls and surfaces.

For especially fast and easy handling, characteristic curves are stored for anhydrite screed, cement screed, lime sand brick, aerated concrete, concrete, vertical hole brick and solid brick for detecting wet spots in building materials. For the measurement of wood moisture, characteristic curves are available for soft woods, hard woods and chipboard. These characteristic curves were developed in cooperation with the LPI institute.

The measurement results are recorded to a depth of up to 5 cm and can be frozen at the press of a button.

The display is in percentage by weight related to the dry mass of the material.

The testo 616 also reliably supports you in the determination of the point in time and the place for any necessary destructive measurements.



## Technical data / Accessories

### testo 616

testo 616 moisture meter for non-destructive measurement incl. battery

Part no. 0560 6160



#### Sensor type capacitive measurement

Measuring range wood:	< 50 %
Measuring range building materials:	< 20 %
Resolution	0.1

#### General technical data

Unit:	Water content in percent by weight based on dry mass (%)
Measurement depth:	up to 5 cm
Measuring rate	0.5 s
Display refresh	0.5 s
Protection class	IP30
Operating temperature	+5 to +40 °C / 10 to 80 %RH
Storage temperature	-20 to +70 °C
Battery type	9V block battery, 6F22
Battery life	60 h
Weight	260 g
Housing material	ABS/TPE/Metal
Dimensions	70 x 58 x 234 mm

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#### Accessories for measuring instrument

#### Part no.

Case for measuring instrument and probes	0516 0191	
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Subject to change without notice.



# Humidity/temperature/pressure measuring instrument

testo 622 – Fast and precise ambient climate monitoring

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Precise measurement of temperature, humidity and pressure

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All important values directly at a glance

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Large, easily legible display

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Adjustable calibration reminder function (optional)

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In addition to temperature and humidity, the testo 622 also measures pressure, making it ideal for indoor climate monitoring. It shows the current measurement values as well as date and time in a large, clear display. It thus provides all important values at a glance. Especially in laboratories, the testo 622 is suitable for monitoring ambient conditions during calibrations or when setting up experiments.

Thanks to the long-term stable sensor, the measuring instrument provides reliable and correct measurement results even after years. The hanging and standing bracket allows flexible positioning of the instrument on a table or wall.

## Technical data / Accessories

### testo 622

testo 622 hygrometer with pressure indication, calibration protocol, batteries and attachment material included

Part no. 0560 6220



#### General technical data

Measuring rate	10 s
Storage temperature	-20 to +60 °C
Operating temperature	-10 to +60 °C
Battery life	12 months
Weight	240 g (without batteries)
Dimensions	185 x 105 x 36 mm

#### Sensor types

	NTC	Testo humid. sensor, cap.	Piezoresistive pressure sensor
Measuring range	-10 to +60 °C	0 to 100 %RH*	300 to 1200 hPa
Accuracy ±1 digit	±0.4 °C	±2 %RH** at +25 °C (10 to 90 %RH) ±3 %RH** (remaining range)	±3 hPa
Resolution	0.1 °C	0.1 %RH	0.1 hPa

\* Not for condensing atmospheres. For continuous use in high humidity (>80 %RH at ≤30 °C for >12 h, >60 %RH at >30 °C for >12 h), please contact us via our website.

\*\* Please see the additional accuracy information for humidity in the instruction manual.

#### Accessories for measuring instrument

#### Part no.

ISO calibration certificate humidity, calibration points 11.3 %RH and 75.3 %RH at +25 °C/+77 °F; per channel/instrument	0520 0076	
DAkkS calibration certificate humidity	0520 0246	

# Temperature/humidity measuring instrument

## testo 623 - Ambient climate measurement with history function

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Analysis of past temperature and humidity measurement values directly on site

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Histogram shows measurement values of last 90 days

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All important values at a glance

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Large, easily legible display

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The temperature and humidity measuring instrument testo 623 shows current and past temperature and humidity values as well as date and time, simultaneously in a large, clear display. This way, you have all important values constantly in view.

The displayed curve analysis offers optimum evaluation of the measurement results of the past 90 days. The testo 623 is thus ideal for fast on-site checks of ambient conditions without complicated analysis on a PC.

Thanks to the long-term stable sensor, the measuring instrument provides reliable and correct measurement results even after years. The hanging and standing bracket allows flexible positioning of the instrument on a table or wall.

## Technical data / Accessories

### testo 623

testo 623 hygrometer with history function of measurement values, calibration protocol, batteries and attachment material included

Part no. 0560 6230



#### General technical data

Measuring rate	20 s
Storage temperature	-20 to +60 °C
Operating temperature	-10 to +60 °C
Battery life	12 months
Weight	240 g
Dimensions	185 x 105 x 36 mm

#### Sensor types

	NTC	Testo humid. sensor, cap.
Measuring range	-10 to +60 °C	0 to 100 %RH*
Accuracy ±1 digit	±0.4 °C	±2 %RH** at +25 °C (10 to 90 %RH) ±3 %RH** (remaining range)
Resolution	0.1 °C	0.1 %RH

\* Not for condensing atmospheres. For continuous use in high humidity (>80 %RH at ≤30 °C for >12 h, >60 %RH at >30 °C for >12 h), please contact us via our website.

\*\* Please see the additional accuracy information for humidity in the instruction manual.

#### Accessories for measuring instrument

#### Part no.

ISO calibration certificate humidity, calibration points 11.3 %RH and 75.3 %RH at +25 °C/+77 °F; per channel/instrument	0520 0076	
DAkkS calibration certificate humidity	0520 0246	

# Humidity/temperature measuring instrument

## testo 625 - Digital thermohygrometer with App connection

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Simple, fast and precise measurement of air temperature and relative humidity

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Calculation of dewpoint and wet bulb temperature

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Fast in-app configuration, graph history, second screen and measurement data memory in the testo Smart App

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Audible alarm sounds if a limit value is exceeded

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Timed and point mean value calculation

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Bluetooth 5.0 + App 

testo Smart App for free download



Relative humidity and air temperature are two decisive factors e.g. for the assessment of **indoor air quality and comfort**. So if you want to ensure that people are comfortable indoors or that optimum conditions prevail in **storage rooms**, the compact testo 625 thermohygrometer is the ideal choice.

To obtain precise results as quickly and easily as possible, the testo 625 not only calculates dewpoint and wet bulb temperature automatically. The time and the point averages are also displayed immediately.

And with the testo Smart App, you get the most out of the thermohygrometer:

- Configure measuring instrument
- Display graphical measured value curve
- Save measurement data
- Manage customers and measuring points
- Documentation on site
- E-mail dispatch of the report



# Ordering data / technical data / accessories

**testo 625**

testo 625, humidity/temperature measuring instrument with App connection and audible alarm, incl. transport bag, calibration protocol and 3 x AA batteries

Order no. 0563 1625

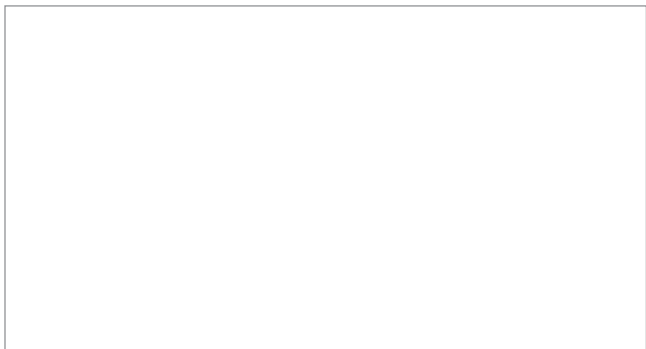



**The testo Smart App**

- Simple and fast: Measurement menus for numerous applications provide optimum support in configuring and carrying out the measurement
- Clear graphical presentation of readings, e.g. as a table, for quick interpretation of results
- Create digital measurement reports including photos as PDF/CSV files on site and send via e-mail




Free download for Android and iOS

**Sensor types**

Testo humidity sensor, capacitive	
Measuring range	0 to 100 %RH
Accuracy ±1 digit	2.5 %RH (5 to 95 %RH)
Resolution	0.1 %RH

NTC	
Measuring range	-20 to +60 °C
Accuracy ±1 digit	±0.5 °C
Resolution	0.1 °C

General technical data	
Operating temperature	Measuring instrument: -20 to +50 °C Probe: -20 to +70 °C
Storage temperature	-20 to +50 °C
Battery type	3 x AA
Battery life	100 h
Dimensions	Measuring instrument: 208 x 60 x 28 mm Probe: 12 x 15 mm
Weight	199 g
Protection class	Measuring instrument: IP40 / probe: IP20
Housing material	ABS + PC / TPE

Accessories	Order no.
testo Bluetooth® printer, incl. 1 roll of thermal paper, rech. battery and mains unit	0554 0621
Spare thermal paper for printer (6 rolls), measurement data documentation can be read for up to 10 years	0554 0568
ISO calibration certificate humidity, calibration points 11.3 %RH and 75.3 %RH at +25°C	0520 0006
ISO humidity calibration certificate, saturated saline solutions; calibration point 11.3 %RH	0520 0013
ISO humidity calibration certificate, saturated saline solutions; calibration point 75.3 %RH	0520 0083
DAkKS humidity calibration certificate; electronic hygrometer; calibration points 11.3% RH and 75.3% RH at +25 °C	0520 0206

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Subject to change, including technical modifications.

# Humidity/temperature measuring instrument

## testo 635 – Measurement technology for humidity measurement

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Connection of 2 plug-in probes and 3 wireless probes

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Measurement of temperature, air humidity, material equilibrium moisture, pressure dewpoint, absolute pressure and U-value

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Display of dewpoint distance, min., max. and mean values

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Illuminated display

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Protection class IP 54

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Instrument store for 10000 measurement values (testo 635-2 only)

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PC software for archiving and documenting measurement data (testo 635-2)

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The testo 635 offers the possibility of testing and analyzing air humidity, material moisture, U-value and the dewpoint in compressed air systems.

In addition to measurement with classical probes, a wireless measurement over up to 20 m distance is also possible with the testo 635. This eliminates damage to the cable or difficulties in handling. The wireless probes are available for the measurement parameters temperature and humidity, up to three wireless probes can be recorded and displayed by the testo 635. The optional plug-in radio module can be retrofitted at any time.


The testo 635 stands out thanks to its intuitive operation and clear menu structure. For example, for measurements at different measurement sites, the testo 635-2 provides the advantage that the measurement values can be allocated to the respective measurement site. For long-term measurements and material moisture measurements, the instrument can be switched between different user profiles. The testo 635 is available in two versions. The version testo 635-2 has extended instrument functions such as an instrument store, PC software, direct display of material humidity and the possibility of connecting a U-value probe

## Technical data

**testo 635-1**

testo 635-1 thermohygrometer incl. battery and calibration protocol

Part no. 0560 6351



**testo 635-2**

testo 635-2 humidity/temperature measuring instrument with measurement value store, PC software and USB-cable incl. battery and calibration protocol

Part no. 0563 6352

## Common advantages

- Connection of 3 radio probes
- Measurement of air humidity, material equilibrium moisture and pressure dew point in compressed air systems
- Display of dew point difference, min, max and mean values
- Print data on Testo printer (optional)
- Backlit display
- Protection type IP 54

## Advantage testo 635-1

- Cyclic printing of readings on testo printer, e.g. once per minute

## Advantages testo 635-2

- Instrument store for 10000 readings
- PC software for filing and documenting measurement data
- Direct display of material moisture due to storable characteristics curves (Basis: material equilibrium moisture)
- U-value probe connection possible
- Storage of single measurements or measurement series by measurement site
- Quick access to the most important functions via user profiles

### General technical data

Operating temperature	-20 to +50 °C
Storage temperature	-30 to +70 °C
Battery type	Alkali manganese, mignon, Type AA
Battery life	200 h
Dimensions	220 x 74 x 46 mm
Weight	428 g
Housing material	ABS/TPE/Metal





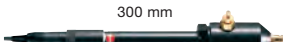
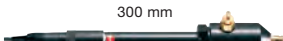

### Sensor types

	Type K (NiCr-Ni)	NTC (humidity probe)	Testo humid. sensor, cap.	Absolute pressure probe
Measuring range	-200 to +1370 °C	-40 to +150 °C	0 to +100 %RH	0 to 2000 hPa
Accuracy ±1 digit	±0.3 °C (-60 to +60 °C) ±(0.2 °C + 0.5% of m.v.) (remaining range)	±0.2 °C (-25 to +74.9 °C) ±0.4 °C (-40 to -25.1 °C) ±0.4 °C (+75 to +99.9 °C) ±0.5% of m.v. (remaining range)	See probe data	See probe data
Resolution	0.1 °C	0.1 °C	0.1 %RH	0.1 hPa

# Accessories

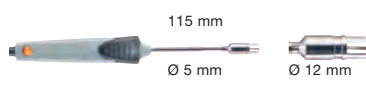

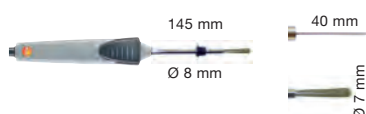

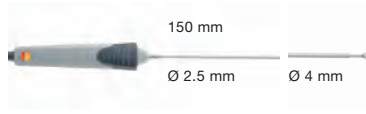
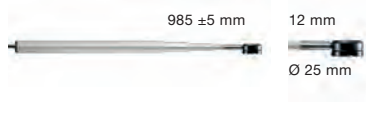

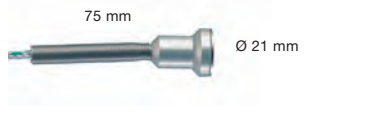
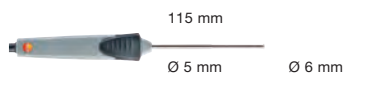
Transport and Protection	Part no.
Service case for measuring instrument, probe and accessories, dimensions 454 x 319 x 135 mm	0516 1035
<b>Additional accessories and spare parts</b>	
Control and adjustment set for Testo humidity probes, salt solution with 11.3% RH and 75.3% RH, incl. adapter for Testo humidity probes	0554 0660
Sintered PTFE filter, Ø 12 mm, for corrosive media High humidity range (long-term measurements), high flow velocities.	0554 0756
Stainless steel sintered filter, pore size 100 µm, probe protection in dusty atmospheres or higher flow velocities	0554 0641
Cap for bore holes, for humidity probe Ø 12 mm Measures equilibrium moisture in bore holes	0554 2140
Plug-in mains adapter, 5 VDC 500 mA with European adapter, 100-250 VAC, 50-60 Hz	0554 0447
Lithium battery button cell, CR2032 AA batteries for radio handle	0515 5028
Adhesive material for fixing and sealing	0554 0761
<b>Printer and Accessories</b>	
Testo fast printer IrDA with wireless infrared interface; 1 roll thermal paper; 4 AA batteries	0554 0549
Spare thermal paper for printer (6 rolls), permanent ink	0554 0568
<b>Calibration Certificates</b>	
ISO calibration certificate humidity, Calibration points 11.3 %RH and 75.3 %RH at +25 °C	0520 0006
ISO calibration certificate/temperature, meas. instr. with surface probe; calibration points +60°C; +120°C; +180°C	0520 0071
ISO calibration certificate dewpoint, two adjustment points -10/-40 °Ctd at 6 bar	0520 0136
ISO calibration certificate/humidity cal. points freely selectable from 5 to 95%RH at +15 to +35°C or at -18 to +80°C	0520 0106
ISO calibration certificate/humidity, saturated saline solutions: calibration point 11.3%RH	0520 0013
ISO calibration certificate/humidity, saturated saline solutions, calibration point 75.3%RH	0520 0083
DAkkS calibration certificate/humidity, electronic hygrometers; calibration points 11.3%RH and 75.3%RH at +25°C	0520 0206
ISO calibration certificate/U-value probe	0520 0481
DAkkS calibration certificate/U-value probe	0520 0981

# Probes

Probe type	Dimensions Probe shaft/probe shaft tip	Measuring range	Accuracy	t <sub>99</sub>	Part no.
<b>Humidity probes</b>					
Humidity/temperature probe	 Ø 12 mm	0 to +100 %RH -20 to +70 °C	±2 %RH at +25 °C (2 to 98 %RH) ±0.03 %RH/K (k=1) Long-term stability: ±1 %RH / year The probe accuracy corresponds to the system accuracy. ±0.3 °C		0636 9735
Robust humidity probe for meas. up to +125 °C, short-term up to +140 °C, Ø 12 mm, e.g. exhaust ducts, and for meas. of material equilibrium moisture, e.g. bulk goods	 300 mm Ø 12 mm	0 to +100 %RH -20 to +125 °C	±2 %RH at +25 °C (2 to 98 %RH) ±0.1 %RH/K (k=1) Long-term stability: ±1 %RH / year The probe accuracy corresponds to the system accuracy. ±0.2 °C		0636 2161
Thin humidity probe with built-in electronics, incl. 4 attachable PTFE protection caps for material moisture equilibrium measurement	 60 mm Ø 4 mm	0 to +100 %RH 0 to +40 °C	±2 %RH at +25 °C (2 to 98 %RH) ±0.15 %RH/K (k=1) Long-term stability: ±1 %RH / year The probe accuracy corresponds to the system accuracy. ±0.2 °C		0636 2135
Scatter field probe for fast and damage-free material moisture measurement, with probe cable 1.2 m		Woods: <50 % Building materials: <20 %			0636 6160
<b>Pressure dewpoint probes</b>					
Pressure dewpoint probe for measurements in compressed air systems, Fixed cable	 300 mm	0 to +100 %RH -20 to +50 °C tpd	±0.9 °C tpd (+5 to +50 °C tpd) ±1 °C tpd (0 to +4.9 °C tpd) ±2 °C tpd (-5 to -0.1 °C tpd) ±3 °C tpd (-10 to -5.1 °C tpd) ±4 °C tpd (-20 to -10.1 °C tpd)	300 s	0636 9835
Precision pressure dewpoint probe for measurements in compressed air systems, including certificate with test point -40 °C tpd, Fixed cable	 300 mm	0 to +100 %RH -40 to +50 °C tpd	±0.8 °C tpd (-4.9 to +50 °C tpd) ±1 °C tpd (-9.9 to -5 °C tpd) ±2 °C tpd (-19.9 to -10 °C tpd) ±3 °C tpd (-29.9 to -20 °C tpd) ±4 °C tpd (-40 to -30 °C tpd)	300 s	0636 9836
<b>Air probes</b>					
Robust air probe, T/C Type K, Fixed cable	 115 mm Ø 4 mm	-60 to +400 °C	Class 2 <sup>1)</sup>	200 s	0602 1793

1) According to standard EN 60584-2, the accuracy of Class 1 refers to -40 to +1000 °C (Type K), Class 2 to -40 to +1200 °C (Type K), Class 3 to -200 to +40 °C (Type K).

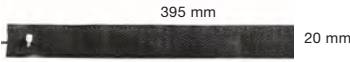




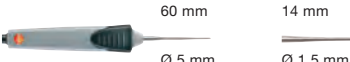
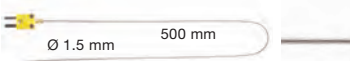

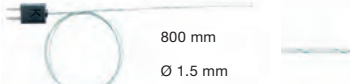
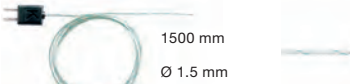
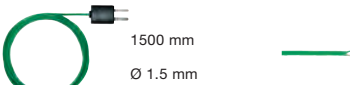
# Probes

Probe type	Dimensions Probe shaft/probe shaft tip	Measuring range	Accuracy	t <sub>99</sub>	Part no.
<b>Surface probes</b>					
Fast-action surface probe with sprung thermocouple strip, also for uneven surfaces, measurement range short-term to +500°C, TC Type K, Fixed cable		-60 to +300 °C	Class 2 <sup>1)</sup>	3 s	0602 0393
Temperature probe to determine U-value, triple sensor system for measuring wall temperature, modelling clay included		-20 to +70 °C	Class 1 <sup>1)</sup> U-value: ±0.1 ±2% of fsv*		0614 1635
		An additional probe for measuring outer temperatures is required when determining the U-value e.g. 0602 1793 or 0613 1002. *when used with an NTC or wireless humidity probe for measuring outside temperature and 20 K difference between the air inside and outside			
Fast-reaction paddle surface probe, for measurements in inaccessible places, e.g. narrow apertures and slots, TC Type K, Fixed cable		0 to +300 °C	Class 2 <sup>1)</sup>	5 s	0602 0193
Fast-action surface probe with sprung thermocouple strip, bent, also for uneven surfaces, measurement range short-term to +500°C, TC Type K, Fixed cable 1.2 m		-60 to +300 °C	Class 2 <sup>1)</sup>	3 s	0602 0993
Efficient, waterproof surface probe with small measurement head for flat surfaces, TC Type K, Fixed cable 1.2 m		-60 to +1000 °C	Class 1 <sup>1)</sup>	20 s	0602 0693
Flat head surface probe with telescopic handle max. 680 mm for measurements at hard-to-access points, TC Type K, Fixed cable 1.6 m (correspondingly shorter when telescope extended)		-50 to +250 °C	Class 2 <sup>1)</sup>	3 s	0602 2394
Magnetic probe, adhesive force approx. 20 N, with magnets, for measurements on metal surfaces, TC Type K, Fixed cable 1.6 m		-50 to +170 °C	Class 2 <sup>1)</sup>	150 s	0602 4792
Magnetic probe, adhesive force approx. 10 N, with magnets, for higher temp., for measurements on metal surfaces, TC Type K, Fixed cable		-50 to +400 °C	Class 2 <sup>1)</sup>		0602 4892
Waterproof surface probe with widened measurement tip for flat surfaces, T/C Type K, Fixed cable 1.2 m		-60 to +400 °C	Class 2 <sup>1)</sup>	30 s	0602 1993

1) According to standard EN 60584-2, the accuracy of Class 1 refers to -40 to +1000 °C (Type K), Class 2 to -40 to +1200 °C (Type K), Class 3 to -200 to +40 °C (Type K).

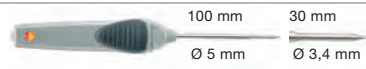


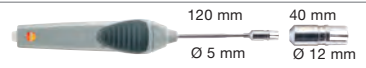
# Probes


Probe type	Dimensions Probe shaft/probe shaft tip	Measuring range	Accuracy	t <sub>99</sub>	Part no.
<b>Surface probes</b>					
Pipe wrap probe with velcro strip; for temperature measurement on pipes with diameter up to max. 120 mm; Tmax. +120 °C; TC Type K , Fixed cable		-50 to +120 °C	Class 1 <sup>1)</sup>	90 s	0628 0020
Pipe wrap probe for pipe diameter 5 to 65 mm, with exchangeable measuring head. Meas. range short-term up to +280 °C, TC Type K, Fixed cable		-60 to +130 °C	Class 2 <sup>1)</sup>	5 s	0602 4592
Spare meas. head for pipe wrap probe, TC Type K		-60 to +130 °C	Class 2 <sup>1)</sup>	5 s	0602 0092
Clamp probe for measurements on pipes, pipe diameter 15 to 25 mm (max. 1 <sup>1/4</sup> ), meas. range short-term up to +130°C, TC Type K, Fixed cable		-50 to +100 °C	Class 2 <sup>1)</sup>	5 s	0602 4692
<b>Immers./penetr. probes</b>					
Efficient and fast-action immersion probe, waterproof, TC Type K, Fixed cable 1.2 m		-60 to +1000 °C	Class 1 <sup>1)</sup>	2 s	0602 0593
Fast-action, waterproof immersion/penetration probe, TC Type K, Fixed cable 1.2 m		-60 to +800 °C	Class 1 <sup>1)</sup>	3 s	0602 2693
Immersion tip, flexible, TC Type K		-200 to +1000 °C	Class 1 <sup>1)</sup>	5 s	0602 5792
Waterproof immersion/penetration probe, TC Type K, Fixed cable 1.2 m		-60 to +400 °C	Class 2 <sup>1)</sup>	7 s	0602 1293
<b>Thermocouples</b>					
Thermocouple with TC adapter, flexible, 800 mm long, fibre glass, TC Type K		-50 to +400 °C	Class 2 <sup>1)</sup>	5 s	0602 0644
Thermocouple with TC adapter, flexible, length 1500 mm , fibreglass, TC Type K		-50 to +400 °C	Class 2 <sup>1)</sup>	5 s	0602 0645
Thermocouple with TC adapter, flexible, 1500 mm long, PTFE, TC Type K		-50 to +250 °C	Class 2 <sup>1)</sup>	5 s	0602 0646


1) According to standard EN 60584-2, the accuracy of Class 1 refers to -40 to +1000 °C (Type K), Class 2 to -40 to +1200 °C (Type K), Class 3 to -200 to +40 °C (Type K).

# Radio probes

Radio handles and probe head for air-/ immersion-penetration-meas.				Part no.
Radio handle for plug-in probe heads, incl. T/C adapter, approval for the countries: DE, FR, UK, BE, NL, ES, IT, SE, AT, DK, FI, HU, CZ, PL, GR, CH, PT, SI, MT, CY, SK, LU, EE, LT, IE, LV, NO; Radio freq. 869.85 MHz FSK				0554 0189
T/C probe head for air/immersion/penetration measurement (T/C Type K)				0602 0293
Radio handle for plug-in probe heads, incl. T/C adapter, approval for USA, CA, CL; Radio freq. 915.00 MHz FSK				0554 0191
T/C probe head for air/immersion/penetration measurement (T/C Type K)				0602 0293
Dimensions Probe shaft/probe shaft tip	Measuring range	Accuracy	Resolution	t <sub>99</sub>
 100 mm 30 mm Ø 5 mm Ø 3,4 mm	-50 to +350 °C Short-term to +500 °C	Radio handle: ±(0.5 °C +0.3% of m.v.) (-40 to +500 °C) ±(0.7 °C +0.5% of m.v.) (remaining range) T/C probe head: Class 2	0.1 °C (-50 to +199.9 °C) 1.0 °C (remaining range)	t <sub>99</sub> (in water) 10 s

Radio handles and probe head for surface measurement				Part no.
Radio handle for plug-in probe heads, incl. T/C adapter, approval for the countries: DE, FR, UK, BE, NL, ES, IT, SE, AT, DK, FI, HU, CZ, PL, GR, CH, PT, SI, MT, CY, SK, LU, EE, LT, IE, LV, NO; Radio freq. 869.85 MHz FSK				0554 0189
T/C probe head for surface measurement (T/C Type K)				0602 0394
Radio handle for plug-in probe heads, incl. T/C adapter, approval for USA, CA, CL; Radio freq. 915.00 MHz FSK				0554 0191
T/C probe head for surface measurement (T/C Type K)				0602 0394
Dimensions Probe shaft/probe shaft tip	Measuring range	Accuracy	Resolution	t <sub>99</sub>
 120 mm 40 mm Ø 5 mm Ø 12 mm	-50 to +350 °C Short-term to +500 °C	Radio handle: ±(0.5 °C +0.3% of m.v.) (-40 to +500 °C) ±(0.7 °C +0.5% of m.v.) (remaining range) T/C probe head: Class 2	0.1 °C (-50 to +199.9 °C) 1.0 °C (remaining range)	5 s

Radio probes and humidity probe head				Part no.
Radio handle for plug-in probe heads, incl. T/C adapter, approval for the countries: DE, FR, UK, BE, NL, ES, IT, SE, AT, DK, FI, HU, CZ, PL, GR, CH, PT, SI, MT, CY, SK, LU, EE, LT, IE, LV, NO; Radio freq. 869.85 MHz FSK				0554 0189
Humidity probe head				0636 9736
Radio handle for plug-in probe heads, incl. T/C adapter, approval for USA, CA, CL; Radio freq. 915.00 MHz FSK				0554 0191
Humidity probe head				0636 9736
Dimensions Probe shaft/probe shaft tip	Measuring range	Accuracy	Resolution	
	0 to +100 %RH -20 to +70 °C	±2 %RH (+2 to +98 %RH) ±0.3 °C	0.1 %RH 0.1 °C	

Radio handles for attachable T/C probes				Part no.
Radio handle for plug-in probe heads, incl. T/C adapter, approval for the countries: DE, FR, UK, BE, NL, ES, IT, SE, AT, DK, FI, HU, CZ, PL, GR, CH, PT, SI, MT, CY, SK, LU, EE, LT, IE, LV, NO ; Radio freq. 869.85 MHz FSK				0554 0189
Radio handle for plug-in probe heads, incl. T/C adapter, approval for USA, CA, CL; Radio freq. 915.00 MHz FSK				0554 0191
Illustration	Measuring range	Accuracy	Resolution	
	-50 to +1000 °C	±(0.7 °C +0.3% of m.v.) (-40 to +900 °C) ±(0.9 °C +0.5% of m.v.) (remaining range)	0.1 °C (-50 to +199.9 °C) 1.0 °C (remaining range)	

# Radio probes

Accessories Radio probes	Part no.
Radio module for measuring instrument, 869.85 MHz, approval for the countries: DE, FR, UK, BE, NL, ES, IT, SE, AT, DK, FI, HU, CZ, PL, GR, CH, PT, SI, MT, CY, SK, LU, EE, LT, IE, LV, NO	0554 0188
Radio module for measuring instrument, 915.00 MHz FSK, approval for USA, CA, CL	0554 0190

## Technical data Radio probes

### Radio immersion/penetration probe, NTC

Battery type	2 x 3V button cell (CR 2032)
Battery life	150 h (meas. rate 0.5 s) 2 months (meas. rate 10 s)

### Radio handle

Battery type	2 AAA micro batteries
Battery life	215 h (meas. rate 0.5 s) 6 months (meas. rate 10 s)

### Common Technical Data

Measuring rate	0.5 s or 10 s, adjustable on handle
Radio coverage	Up to 20 m (without obstructions)
Radio transmission	Unidirectional
Operating temperature	-20 to +50 °C
Storage temperature	-40 to +70 °C
Protection class	IP54



# Temperature measuring instrument (1-channel)

testo 720

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Ideally suitable for applications in laboratories and industry

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Continuous display of min./max. values

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Audible alarm (adjustable limit values)

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Resistant to aggressive media with TopSafe

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Hold-button for freezing measurement display

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Large illuminated display

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Measurement data printout on site with Testo fast printer

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The testo 720 is a robust temperature measuring instrument for precise air, surface and immersion measurements in the measuring range from -100 to +800 °C. It is possible to connect Pt100 probes as well as NTC probes to the one-channel measuring instrument.

In combination with the TopSafe, the testo 720 is resistant to aggressive media – as is the glass-coated probe, which has proven its worth in daily laboratory work.

You, as the user, can store limit values in the instrument yourself; as soon as these upper or lower limits are violated, an audible alarm sounds. The instrument also continuously shows all minimum and maximum values in its large backlit display. Using the optional Testo report printer, the measurement results can be directly printed out on site as required.

## Technical data / Accessories

### testo 720

testo 720, 1 channel temperature measuring instrument Pt100/NTC, with battery and calibration protocol

Part no. 0560 7207



#### General technical data

Operating temperature	-20 to +50 °C
Storage temperature	-30 to +70 °C
Battery type	9V block battery
Battery life	70 h
Dimensions	182 x 64 x 40 mm
Weight	171 g
Housing material	ABS

#### Sensor types


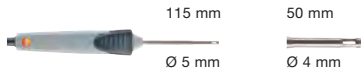

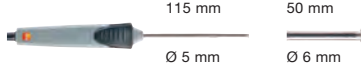
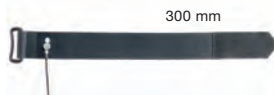
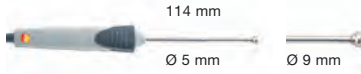
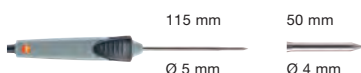
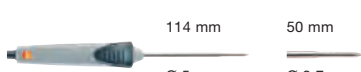
	Pt100	NTC
Measuring range	-100 to +800 °C	-50 to +150 °C
Accuracy ±1 digit	±0.2% of m.v. (+200 to +800 °C) ±0.2 °C (remaining range)	±0.2 °C (-25 to +40 °C) ±0.3 °C (+40.1 to +80 °C) ±0.4 °C (+80.1 to +125 °C) ±0.5 °C (remaining range)
Resolution	0.1 °C	0.1 °C

#### Accessories for measuring instrument

#### Part no.

9V rech. battery for instrument, instead of battery	0515 0025
Testo fast printer IrDA with wireless infrared interface; 1 roll thermal paper; 4 AA batteries	0554 0549
Spare thermal paper for printer (6 rolls), permanent ink	0554 0568
TopSafe, protects from impact and dirt (incl. 2 attachment magnets)	0516 0221
Case for measuring instrument and probes	0516 0191
Service case for measuring instrument, probe and accessories, dimensions 454 x 316 x 111 mm	0516 1200
Service case for measuring instrument and probe, dimensions 454 x 316 x 111 mm	0516 1201
Silicone heat paste (14g), Tmax = +260°C improves heat transfer in surface probes	0554 0004
ISO calibration certificate/temperature for air/immersion probes, calibration points -18°C; 0°C; +60°C	0520 0001
ISO calibration certificate/temperature meas. instr. with air/immersion probe; cal. points 0°C; +150°C; +300°C	0520 0021
ISO calibration certificate/temperature meas. instr. with air/immersion probe; calibration points 0°C; +300°C; +600°C	0520 0031
DAkkS calibration certificate/temperature meas. instr. with air/immersion probe; calibration points -20 °C; 0 °C; +60 °C	0520 0211
ISO calibration certificate/temperature meas. instr. with surface probe; calibration points +60°C; +120°C; +180°C	0520 0071
DAkkS calibration certificate/temperature contact surface temperature probes; calibration points +100°C; +200°C; +300°C	0520 0271

# Probes

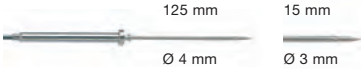
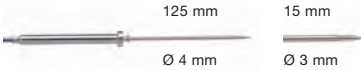
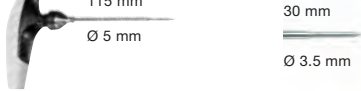


Probe type	Dimensions Probe shaft/probe shaft tip	Measuring range	Accuracy	t <sub>99</sub>	Part no.
<b>Laboratory probes</b>					
Laboratory probe Pt100, glass-coated, exchangeable glass pipe (Duran 50), resistant to corrosive substances, Fixed cable		-50 to +400 °C	Class A (-50 to +300 °C), Class B (remaining range) <sup>1)</sup>	45 s 12 s <sup>1)</sup>	0609 7072
Spare glass tube for laboratory probes					0554 7072
<b>Air probes</b>					
◆ Efficient, robust NTC air probe, Fixed cable 1.2 m		-50 to +125 °C	±0.2 °C (-25 to +80 °C) ±0.4 °C (remaining range)	60 s	0613 1712
◆ Efficient, robust air probe, Pt100, Fixed cable		-50 to +400 °C	Class A (-50 to +300 °C), Class B (remaining range) <sup>1)</sup>	70 s	0609 1773
<b>Surface probes</b>					
◆ Waterproof NTC surface probe for flat surfaces, Fixed cable 1.2 m		-50 to +150 °C	±0.5% of m.v. (+100 to +150 °C) ±0.2 °C (-25 to +74.9 °C) ±0.4 °C (remaining range)	35 s	0613 1912
Pipe wrap probe with Velcro for pipe diameter to max. 75 mm, Tmax. +75 °C, NTC		-50 to +70 °C	±0.2 °C (-25 to +70 °C) ±0.4 °C (-50 to -25.1 °C)	60 s	0613 4611
◆ Robust, waterproof surface temperature probe, Pt100, Fixed cable		-50 to +400 °C	Class B <sup>1)</sup>	40 s	0609 1973
<b>Immers./penetr. probes</b>					
◆ Waterproof NTC immersion/penetration probe, Fixed cable		-50 to +150 °C	±0.5% of m.v. (+100 to +150 °C) ±0.2 °C (-25 to +74.9 °C) ±0.4 °C (remaining range)	10 s	0613 1212
◆ Robust, waterproof Pt100 immersion/penetration probe, Fixed cable		-50 to +400 °C	Class A (-50 to +300 °C), Class B (remaining range) <sup>1)</sup>	12 s	0609 1273

◆ The measuring instrument inside TopSafe is waterproof with this probe.

1) According to standard 60751, the accuracies of Class A and B refer to -200 to +600 °C (Pt100)



# Probes

Probe type	Dimensions Probe shaft/probe shaft tip	Measuring range	Accuracy	t <sub>99</sub>	Part no.
<b>Food probes</b>					
◆ Stainless steel NTC food probe (IP65) with PUR cable, Fixed cable		-50 to +150 °C <sup>2)</sup>	±0.5% of m.v. (+100 to +150 °C) ±0.2 °C (-25 to +74.9 °C) ±0.4 °C (remaining range)	8 s	0613 2211
◆ Stainless steel NTC food probe (IP67) with PTFE cable to +250°C, Fixed cable		-50 to +150 °C	±0.5% of m.v. (+100 to +150 °C) ±0.2 °C (-25 to +74.9 °C) ±0.4 °C (remaining range)	8 s	0613 3311
◆ Robust NTC food penetration probe with special handle, reinforced PUR cable, Fixed cable		-25 to +150 °C <sup>2)</sup>	±0.5% of m.v. (+100 to +150 °C) ±0.2 °C (-25 to +74.9 °C) ±0.4 °C (remaining range)	7 s	0613 2411
◆ Frozen food probe NTC, corkscrew design (incl. plug-in wire), Plug-in cable		-50 to +140 °C <sup>2)</sup>	±0.5% of m.v. (+100 to +140 °C) ±0.2 °C (-25 to +74.9 °C) ±0.4 °C (remaining range)	20 s	0613 3211
◆ Robust, Pt100 stainless steel food probe (IP65), Fixed cable		-50 to +400 °C	Class A (-50 to +300 °C), Class B (remaining range) <sup>1)</sup>	10 s	0609 2272

◆ The measuring instrument inside TopSafe is waterproof with this probe.  
 1) According to standard 60751, the accuracies of Class A and B refer to -200 to +600 °C (Pt100)  
 2) Long-term measurement range +125 °C, short-term +150 °C or +140 °C (2 minutes)

0981 9334/msp/1/01\_2020

Subject to change without notice.



# Temperature measuring instrument (3-channel)

testo 735 - Highest accuracy thanks to system adjustment



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Highest precision over the entire measuring range thanks to system adjustment

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System accuracy up to 0.05 °C

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Display, storage and print-out of Delta T, min., max. and mean values

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Audible alarm (adjustable limit values)

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Cyclic printing of measurement values, e.g. once per minute

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Protection class IP65

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Certified according to EN 13485

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The robust and compact measuring instrument testo 735 is universally applicable and is available in two versions:

testo 735-1: Precise temperature measuring instrument without measurement value store

testo 735-2: Precise temperature measuring instrument with measurement value store (10,000 values) PC software and USB data transfer cable

The instrument has a probe input for highly accurate Pt100 probes and two inputs for fast thermocouple probes. The measurement values from up to three further temperature probes can be shown in the clear measuring instrument display wirelessly, i. e. using measurement data transfer by

radio. A system accuracy of 0.05 °C at a resolution of 0.001 °C is achieved using the highly accurate plug-in Pt100 immersion/penetration probe.

The measurement system is thus ideal for use as a working standard. Selectable user profiles, i.e. programming of the buttons adapted to the application, enable intuitive and fast operation.

# Technical data

## testo 735-1

testo 735-1, 3 channel temperature measuring instrument T/C Type K/T/J/S/Pt100, audible alarm, connection for max. 3 optional radio probes, incl. battery and calibration protocol

Part no. 0560 7351



### General technical data

Operating temperature	-20 to +50 °C
Storage temperature	-30 to +70 °C
Battery type	Alkali manganese, mignon, Type AA
Protection class	IP65
Dimensions	220 x 74 x 46 mm
Weight	428 g
Housing material	ABS/TPE/Metal
Standard	EN 13485

## testo 735-2

testo 735-2, 3 channel temp. meas. instr. T/C Type K/T/J/S/Pt100, audible alarm, connection for max. 3 optional radio probes, with readings memory, PC software and USB data transmission cable, with battery and calibration protocol

Part no. 0563 7352



Wireless measurement with radio probes for air/immersion/penetration measurement



Analyze and document measurement values by measurement site with PC software (included in delivery of testo 735-2)

Sensor type	Measuring range	Accuracy ±1 digit	Resolution	Battery life
Pt100 with probe 0614 0235	-80 to +300 °C	±0.3 °C (-80 °C to -40 °C) ±(0.1 °C + 0.05 % of m.v.) (-40 °C to 0 °C) ±0.05 °C (0 to +100 °C) ±(0.05 °C + 0.05 % of m.v.) (+100 °C to +300 °C)	0.001 °C (-40 to +199.999 °C) 0.01 °C (remaining range)	Approx. 60 h
Pt100	-200 to +800 °C	±0.2 °C (-100 to +199.9 °C) ±0.2% of m.v. (remaining range)	0.05 °C	Approx. 250 h
Type K (NiCr-Ni)	-200 to +1370 °C	±0.3 °C (-60 to +60 °C) ±(0.2 °C + 0.3% of m.v.) (remaining range)	0.1 °C	Approx. 300 h
Type T (Cu-CuNi)	-200 to +400 °C	±0.3 °C (-60 to +60 °C) ±(0.2 °C + 0.3% of m.v.) (remaining range)	0.1 °C	Approx. 300 h
Type J (Fe-CuNi)	-200 to +1000 °C	±0.3 °C (-60 to +60 °C) ±(0.2 °C + 0.3% of m.v.) (remaining range)	0.1 °C	Approx. 300 h
Type S (Pt10Rh-Pt)	0 to +1760 °C	±1 °C (0 to +1760 °C)	1 °C	Approx. 300 h

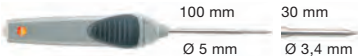
# Accessories

<b>Accessories for measuring instrument</b>	<b>Part no.</b>	
Plug-in mains adapter, 5 VDC 500 mA with European adapter, 100-250 VAC, 50-60 Hz	0554 0447	
<b>Radio module for upgrading measuring instrument with radio option</b>		
Radio module for measuring instrument, 869.85 MHz, approval for the countries: DE, FR, UK, BE, NL, ES, IT, SE, AT, DK, FI, HU, CZ, PL, GR, CH, PT, SI, MT, CY, SK, LU, EE, LT, IE, LV, NO	0554 0188	
Radio module for measuring instrument, 915.00 MHz FSK, approval for USA, CA, CL	0554 0190	
<b>Printer and Accessories</b>		
Testo fast printer IrDA with wireless infrared interface; 1 roll thermal paper; 4 AA batteries	0554 0549	
Spare thermal paper for printer (6 rolls), permanent ink measurement data documentation legible for up to 10 years	0554 0568	
<b>Transport and Protection</b>		
Service case for measuring instrument, probe and accessories, dimensions 454 x 319 x 135 mm	0516 1035	
<b>Other features</b>		
Extension cable, 5m, for thermocouple probe Type K	0554 0592	
Silicone heat paste (14g), Tmax = +260°C, improves heat transfer in surface probes	0554 0004	
<b>Calibration Certificates</b>		
ISO calibration certificate/temperature for air/immersion probes, calibration points -18°C; 0°C; +60°C	0520 0001	
ISO calibration certificate/temperature meas. instr. with air/immersion probe; cal. points 0°C; +150°C; +300°C	0520 0021	
ISO calibration certificate/temperature meas. instr. with surface probe; calibration points +60°C; +120°C; +180°C	0520 0071	
DAkkS calibration certificate/temperature meas. instr. with air/immersion probe; calibration points -20 °C; 0 °C; +60 °C	0520 0211	
DAkkS calibration certificate/temperature contact surface temperature probes; calibration points +100°C; +200°C; +300°C	0520 0271	
4-point adjustment incl. ISO calibration certificate , calibration points freely selectable for probe 0614 0235	0520 0142	
4-point adjustment incl. DAkkS calibration certificate, calibration points freely selectable for probe 0614 0235	0520 0241	
<b>Calibration certificates incl. adjustment for testo 735-2</b>		
2-point adjustment incl. ISO calibration certificate, calibration points freely selectable	0520 0178	
4-point adjustment incl. ISO calibration certificate , calibration points freely selectable	0520 0142	
2-point adjustment incl. DAkkS calibration certificate, calibration points freely selectable	0520 0278	
4-point adjustment incl. DAkkS calibration certificate, calibration points freely selectable	0520 0241	

# Radio probes

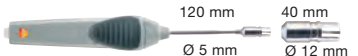
## Radio handles and probe head for air-/ immersion-penetration-meas.

Part no.

Radio handle for plug-in probe heads, incl. T/C adapter, approval for the countries: DE, FR, UK, BE, NL, ES, IT, SE, AT, DK, FI, HU, CZ, PL, GR, CH, PT, SI, MT, CY, SK, LU, EE, LT, IE, LV, NO; Radio freq. 869.85 MHz FSK					0554 0189	
T/C probe head for air/immersion/penetration measurement (T/C Type K)					0602 0293	
Radio handle for plug-in probe heads, incl. T/C adapter, approval for USA, CA, CL; Radio freq. 915.00 MHz FSK					0554 0191	
T/C probe head for air/immersion/penetration measurement (T/C Type K)					0602 0293	
Dimensions Probe shaft/probe shaft tip		Measuring range	Accuracy	Resolution	t <sub>99</sub>	
		-50 to +350 °C Short-term to +500 °C	Radio handle: ±(0.5 °C +0.3% of m.v.) (-40 to +500 °C) ±(0.7 °C +0.5% of m.v.) (remaining range) T/C probe head: Class 2	0.1 °C (-50 to +199.9 °C) 1.0 °C (remaining range)	t <sub>99</sub> (in water) 10 s	


## Radio handles and probe head for surface measurement

Part no.

Radio handle for plug-in probe heads, incl. T/C adapter, approval for the countries: DE, FR, UK, BE, NL, ES, IT, SE, AT, DK, FI, HU, CZ, PL, GR, CH, PT, SI, MT, CY, SK, LU, EE, LT, IE, LV, NO; Radio freq. 869.85 MHz FSK					0554 0189	
T/C probe head for surface measurement (T/C Type K)					0602 0394	
Radio handle for plug-in probe heads, incl. T/C adapter, approval for USA, CA, CL; Radio freq. 915.00 MHz FSK					0554 0191	
T/C probe head for surface measurement (T/C Type K)					0602 0394	
Dimensions Probe shaft/probe shaft tip		Measuring range	Accuracy	Resolution	t <sub>99</sub>	
		-50 to +350 °C Short-term to +500 °C	Radio handle: ±(0.5 °C +0.3% of m.v.) (-40 to +500 °C) ±(0.7 °C +0.5% of m.v.) (remaining range) T/C probe head: Class 2	0.1 °C (-50 to +199.9 °C) 1.0 °C (remaining range)	5 s	

## Radio handles for attachable T/C probes

Part no.

Radio handle for plug-in probe heads, incl. T/C adapter, approval for the countries: DE, FR, UK, BE, NL, ES, IT, SE, AT, DK, FI, HU, CZ, PL, GR, CH, PT, SI, MT, CY, SK, LU, EE, LT, IE, LV, NO ; Radio freq. 869.85 MHz FSK					0554 0189	
Radio handle for plug-in probe heads, incl. T/C adapter, approval for USA, CA, CL; Radio freq. 915.00 MHz FSK					0554 0191	
Illustration	Measuring range	Accuracy	Resolution			
	-50 to +1000 °C	±(0.7 °C +0.3% of m.v.) (-40 to +900 °C) ±(0.9 °C +0.5% of m.v.) (remaining range)	0.1 °C (-50 to +199.9 °C) 1.0 °C (remaining range)			

## Technical data Radio probes

### Radio immersion/penetration probe, NTC

Battery type	2 x 3V button cell (CR 2032)
Battery life	150 h (meas. rate 0.5 s) 2 months (meas. rate 10 s)

### Radio handle

Battery type	2 x 3V button cell (CR 2032)
Battery life	215 h (meas. rate 0.5 s) 6 months (meas. rate 10 s)

### Common Technical Data

Measuring rate	0.5 s or 10 s, adjustable on handle
Radio coverage	Up to 20 m (without obstructions)
Radio transmission	Unidirectional
Operating temperature	-20 to +50 °C
Storage temperature	-40 to +70 °C

# Probes

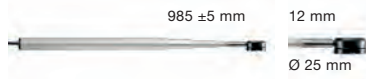

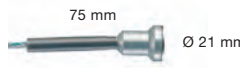
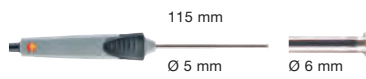
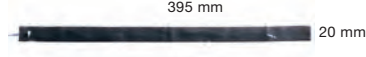

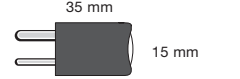

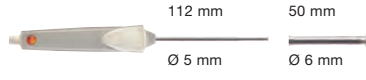
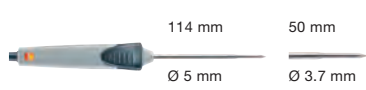
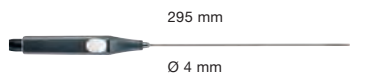
Probe type	Dimensions Probe shaft/probe shaft tip	Measuring range	Accuracy	t <sub>99</sub>	Part no.
<b>Laboratory probes</b>					
Laboratory probe Pt100, glass-coated, exchangeable glass pipe (Duran 50), resistant to corrosive substances, Fixed cable		-50 to +400 °C	Class A (-50 to +300 °C), Class B (remaining range) <sup>1)</sup>	45 s 12 s Without protective glass	0609 7072
<b>Air probes</b>					
Robust air probe, T/C Type K, Fixed cable		-60 to +400 °C	Class 2 <sup>2)</sup>	200 s	0602 1793
Efficient, robust air probe, Pt100, Fixed cable		-50 to +400 °C	Class A (-50 to +300 °C), Class B (remaining range) <sup>1)</sup>	70 s	0609 1773
Robust, affordable air probe, T/C Type T, Fixed cable 1.2 m		-50 to +350 °C	±0.2 °C (-20 to +70 °C) Class 1 (remaining range) <sup>2)</sup>	25 s	0603 1793
<b>Surface probes</b>					
Robust, waterproof surface temperature probe, Pt100, Fixed cable		-50 to +400 °C	Class B <sup>1)</sup>	40 s	0609 1973
Fast-action surface probe with sprung thermocouple strip, also for uneven surfaces, measurement range short-term to +500°C, TC Type K, Fixed cable		-60 to +300 °C	Class 2 <sup>2)</sup>	3 s	0602 0393
Fast-reaction paddle surface probe, for measurements in inaccessible places, e.g. narrow apertures and slots, TC Type K, Fixed cable		0 to +300 °C	Class 2 <sup>2)</sup>	5 s	0602 0193
Efficient, waterproof surface probe with small measurement head for flat surfaces, TC Type K, Fixed cable		-60 to +1000 °C	Class 1 <sup>2)</sup>	20 s	0602 0693
Fast-action surface probe with sprung thermocouple strip, bent, also for uneven surfaces, measurement range short-term to +500°C, TC Type K, Fixed cable		-60 to +300 °C	Class 2 <sup>2)</sup>	3 s	0602 0993

1) According to standard 60751, the accuracies of Class A and B refer to -200 to +600 °C (Pt100)

2) According to standard EN 60584-2, the accuracy of Class 1 refers to -40 to +1000 °C (Type K), Class 2 to -40 to +1200 °C (Type K), Class 3 to -200 to +40 °C (Type K). A probe always corresponds to only one accuracy class.



# Probes

Probe type	Dimensions Probe shaft/probe shaft tip	Measuring range	Accuracy	t <sub>99</sub>	Part no.
<b>Surface probes</b>					
Flat head surface probe with telescopic handle max. 680 mm for measurements at hard-to-access points, TC Type K, Fixed cable 1.6 m (correspondingly shorter when telescope extended)		-50 to +250 °C	Class 2 <sup>2)</sup>	3 s	0602 2394
Magnetic probe, adhesive force approx. 20 N, with magnets, for measurements on metal surfaces, TC Type K, Fixed cable		-50 to +170 °C	Class 2 <sup>2)</sup>	150 s	0602 4792
Magnetic probe, adhesive force approx. 10 N, with magnets, for higher temp., for measurements on metal surfaces, TC Type K, Fixed cable		-50 to +400 °C	Class 2 <sup>2)</sup>		0602 4892
Waterproof surface probe with widened measurement tip for flat surfaces, T/C Type K, Fixed cable		-60 to +400 °C	Class 2 <sup>2)</sup>	30 s	0602 1993
Pipe wrap probe with velcro strip; for temperature measurement on pipes with diameter up to max. 120 mm; Tmax. +120 °C; TC Type K, Fixed cable		-50 to +120 °C	Class 1 <sup>2)</sup>	90 s	0628 0020
Pipe wrap probe for pipe diameter 5 to 65 mm, with exchangeable measuring head. Meas. range short-term up to +280 °C, TC Type K, Fixed cable		-60 to +130 °C	Class 2 <sup>2)</sup>	5 s	0602 4592
Spare meas. head for pipe wrap probe, TC Type K		-60 to +130 °C	Class 2 <sup>2)</sup>	5 s	0602 0092
Clamp probe for measurements on pipes, pipe diameter 15 to 25 mm (max. 1"), meas. range short-term up to +130 °C, TC Type K, Fixed cable		-50 to +100 °C	Class 2 <sup>2)</sup>	5 s	0602 4692
Waterproof surface probe with widened measurement tip for flat surfaces, T/C Type T, Fixed cable 1.2 m		-50 to +350 °C	±0.2 °C (-20 to +70 °C) Class 1 (remaining range) <sup>2)</sup>	30 s	0603 1993
<b>Immers./penetr. probes</b>					
Robust, waterproof Pt100 immersion/penetration probe, Fixed cable		-50 to +400 °C	Class A (-50 to +300 °C), Class B (remaining range) <sup>1)</sup>	12 s	0609 1273
Highly accurate Pt100 immersion/penetration probe incl. calibration protocol (test points 0 °C and +157 °C), Fixed cable		-80 to +300 °C	±0.3 °C (-80 °C to -40 °C) ±(0.1 °C + 0.05 % of m.v.) (-40 °C to 0 °C) ±0.05 °C (0 to +100 °C) ±(0.05 °C + 0.05 % of m.v.) (+100 °C to +300 °C)	60 s	0614 0235


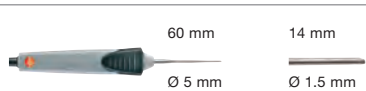
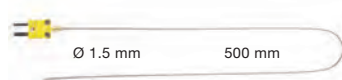
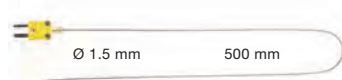

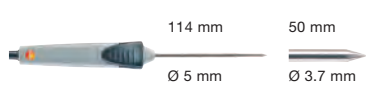

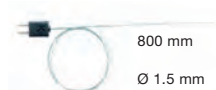

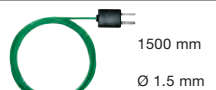
1) According to standard 60751, the accuracies of Class A and B refer to -200 to +600 °C (Pt100)

2) According to standard EN 60584-2, the accuracy of Class 1 refers to -40 to +1000 °C (Type K), Class 2 to -40 to +1200 °C (Type K), Class 3 to -200 to +40 °C (Type K). A probe always corresponds to only one accuracy class.

**Information on surface measurement:**

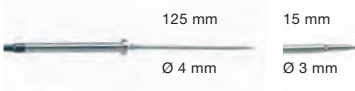

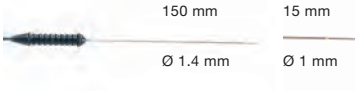
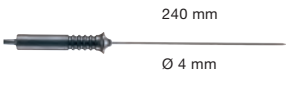

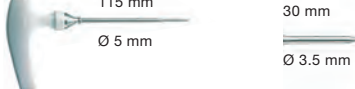
- The response times t<sub>99</sub> stated are measured on ground steel or aluminium plates at +60 °C.
- The stated accuracies are sensor accuracies.
- The accuracy in your application is dependent on the surface structure (roughness), material of the measurement object (heat capacity and heat transfer), as well as sensor accuracy. Testo creates a corresponding calibration certificate for the deviations of your measurement system in your application. For this purpose, Testo uses a surface test bench developed in cooperation with the PTB (Physikalisch Technische Bundesanstalt).

# Probes

Probe type	Dimensions Probe shaft/probe shaft tip	Measuring range	Accuracy	t <sub>99</sub>	Part no.
<b>Immers./penetr. probes</b>					
Efficient and fast-action immersion probe, waterproof, TC Type K, Fixed cable		-60 to +1000 °C	Class 1 <sup>2)</sup>	2 s	0602 0593
Fast-action, waterproof immersion/penetration probe, TC Type K, Fixed cable		-60 to +800 °C	Class 1 <sup>2)</sup>	3 s	0602 2693
Immersion tip, flexible, TC Type K		-200 to +1000 °C	Class 1 <sup>2)</sup>	5 s	0602 5792
Immersion tip, flexible, TC Type K		-200 to +40 °C	Class 3 <sup>2)</sup>	5 s	0602 5793
Immersion measurement tip, flexible, for measurements in air/exhaust gases (not suitable for measurements in smelters), TC Type K		-200 to +1300 °C	Class 1 <sup>2)</sup>	4 s	0602 5693
Waterproof immersion/penetration probe, TC Type K, Fixed cable		-60 to +400 °C	Class 2 <sup>2)</sup>	7 s	0602 1293
Flexible, low-mass immersion measurement tip, ideal for measurements in small volumes such as petri dishes, or for surface measurements (e.g. attached with adhesive tape), TC Type K, 2 m, FEP insulated thermal wire, temperature proof up to 200 °C, oval wire with dimensions: 2.2 mm x 1.4 mm		-200 to +1000 °C	Class 1 <sup>2)</sup>	1 s	0602 0493
<b>Thermocouples</b>					
Thermocouple with TC adapter, flexible, 800 mm long, fibre glass, TC Type K		-50 to +400 °C	Class 2 <sup>2)</sup>	5 s	0602 0644
Thermocouple with TC adapter, flexible, length 1500 mm, fibreglass, TC Type K		-50 to +400 °C	Class 2 <sup>2)</sup>	5 s	0602 0645
Thermocouple with TC adapter, flexible, 1500 mm long, PTFE, TC Type K		-50 to +250 °C	Class 2 <sup>2)</sup>	5 s	0602 0646

2) According to standard EN 60584-2, the accuracy of Class 1 refers to -40 to +1000 °C (Type K), Class 2 to -40 to +1200 °C (Type K), Class 3 to -200 to +40 °C (Type K). A probe always corresponds to only one accuracy class.

# Probes

Probe type	Dimensions Probe shaft/probe shaft tip	Measuring range	Accuracy	t <sub>99</sub>	Part no.
<b>Food probes</b>					
Robust, Pt100 stainless steel food probe (IP65), Fixed cable	 125 mm 15 mm Ø 4 mm Ø 3 mm	-50 to +400 °C	Class A (-50 to +300 °C), Class B (remaining range) <sup>1)</sup>	10 s	0609 2272
Waterproof food probe made of stainless steel (IP65), TC Type K, Fixed cable	 125 mm 30 mm Ø 4 mm Ø 3.2 mm	-60 to +400 °C	Class 2 <sup>2)</sup>	7 s	0602 2292
Waterproof super-fast needle probe, highly accurate measurements without visible penetration hole. Specially for food, ideal for hamburgers, steaks, pizza, eggs etc., T/C Type K, Fixed cable	 150 mm 15 mm Ø 1.4 mm Ø 1 mm	-60 to +250 °C	Class 1 <sup>2)</sup>	1s	0628 0026
Waterproof robust immersion/penetration probe with metal protection hose Tmax +230°C, e.g. for monitoring temp. in cooking oil, T/C Type K, Fixed cable	 240 mm Ø 4 mm	-50 to +230 °C	Class 1 <sup>2)</sup>	15 s	0628 1292
Stable, robust surface probe with PTFE standing area and metal protection hose Tmax +230 °C for cooking surfaces, heating and baking trays, T/C Type K, Fixed cable	 120 mm Ø 60 mm	-50 to +230 °C	Class 2 <sup>2)</sup>	45 s	0628 9992
Robust food penetration probe with special handle, reinforced cable (PVC), T/C Type T, Fixed cable	 115 mm 30 mm Ø 5 mm Ø 3.5 mm	-50 to +350 °C	±0.2 °C (-20 to +70 °C) Class 1 (remaining range) <sup>2)</sup>	6 s	0603 2492

1) According to standard 60751, the accuracies of Class A and B refer to -200 to +600 °C (Pt100)  
 2) According to standard EN 60584-2, the accuracy of Class 1 refers to -40 to +1000 °C (Type K), Class 2 to -40 to +1200 °C (Type K), Class 3 to -200 to +40 °C (Type K).  
 A probe always corresponds to only one accuracy class.

0981 9354/msp/1/01\_2020

Subject to change without notice.

# Non-contact voltage tester

testo 745

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Filter for high-frequency interference signals

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Adjustable sensitivity

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Visual and acoustic signal

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Waterproof and dustproof according to IP 67

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Measuring point illumination

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The testo 745 non-contact voltage tester with a voltage range of up to 1,000 V AC is particularly well-suited to fast initial checking of any suspected fault sources. When the presence of alternating current is determined, the testo 745 gives a warning via a clear visual and acoustic signal.

In order to increase reliability, the voltage tester has a filter for high-frequency interference signals and is also waterproof and dustproof according to IP 67.

## Technical data/accessories

### testo 745

testo 745, non-contact voltage tester  
including batteries

Order no. 0590 7450



#### Technical data

Voltage testing	12 to 1,000 V AC
Measuring point illumination	✓
Measurement category	CAT IV 600 V CAT III 1,000 V
Protection class	IP 67
Operating temperature	-10 to +50 °C
Storage temperature	-15 to +60 °C
Dimensions	155 x 25 x 23 mm (L x W x H)
Weight	63 g
Authorizations	CSA, CE
Standards	EN 61326-1, EN 61010-1

1981 1514/msp/I/01.2018

#### Accessories

#### Order no.

ISO calibration certificate voltage tester	0520 0750	
DAkkS calibration certificate voltage tester	0520 0751	

Subject to change without notice.



# Voltage tester

testo 750-1  
testo 750-2  
testo 750-3

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Clear, patented all-round LED display

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Fibre-optic technology for optimum voltage indication

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Anti-slip ring for secure grip

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Ergonomic handle shape

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Measuring point illumination

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The three models in the testo 750 voltage tester family are the first instruments with an all-round LED display. The display can be seen from any position and guarantees an ideal voltage indication thanks to its unique fibre optics. All three models meet the latest voltage tester standard EN 61243-3:2011 and have a safety specification according to CAT IV. They have the most important functions for voltage testing, continuity testing and rotating magnetic field measurement.

The testo 750-2 is also suitable for single pole voltage testing and has a torch along with an RC trigger function. Vibrating load buttons ensure that the trigger test cannot be carried out accidentally. In addition, the testo 750-3 is fitted with an LC display to show the current reading.




# Technical data/accessories

**testo 750-1**

testo 750-1, voltage tester including batteries, measuring tip protector and measuring tip caps


Order no. 0590 7501



**testo 750-2**

testo 750-2, voltage tester including batteries, measuring tip protector and measuring tip caps


Order no. 0590 7502



**testo 750-3**

testo 750-3, voltage tester including batteries, measuring tip protector and measuring tip caps

Order no. 0590 7503



Technical data	testo 750-1	testo 750-2	testo 750-3
Voltage testing	12 to 690 V AC/DC		
Continuity testing	< 500 kΩ		
Rotating magnetic field testing	100 to 690 V AC at 50/60 Hz		
Single pole phase testing	-	100 to 690 V AC at 50/60 Hz	
RCD/RC trigger function	-	✓	✓
LC display	-	-	✓
Measuring point illumination	-	✓	✓
Measurement category	CAT IV 600 V CAT III 1,000 V		
Protection class	IP 64		
Operating temperature	-10 to +50 °C		
Storage temperature	-15 to +60 °C		
Dimensions (L x W x H)	270 x 65 x 35 mm	270 x 70 x 35 mm	
Weight	230 g	295 g	
Authorizations	TÜV, CSA, CE		
Standard	EN 61243-3:2011		

1981 1524/msp/I/08.2020

Subject to change without notice.

Accessories	Order no.
testo 750 transport bag	0590 0018
ISO calibration certificate voltage tester	0520 0750
DAkkS calibration certificate voltage tester	0520 0751



# Current/voltage tester

testo 755-1  
testo 755-2

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Automatic measurement parameter detection

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Certified according to voltage tester standard  
DIN EN 61243-3:2014

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Measurement result without any switching on or selection

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Measuring point illumination

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Exchangeable measuring tips

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Both instruments in the testo 755 current/voltage tester family are the first of their kind: voltage testers which meet the latest standard and which can also measure current. This means they are suitable for virtually all daily electrical measuring tasks. Each time they are used they automatically select the right settings and therefore prevent dangerous incorrect settings. Both instruments have all the important functions for determining voltage/de-energization, for measuring current and resistance, as well as for continuity tests.


In addition, the integrated torch enables dark spots to be illuminated. The measuring tips can be changed easily, so that the whole instrument does not need to be replaced in the event of damage. The testo 755-2 model is differentiated by the larger current range of up to 1,000 V and special functions, such as the single pole phase testing and rotating magnetic field measurement.

## Technical data/accessories

**testo 755-1**

testo 755-1, current/voltage tester including batteries and measuring tips


Order no. 0590 7551



**testo 755-2**

testo 755-2, current/voltage tester including batteries and measuring tips

Order no. 0590 7552



Technical data	testo 755-1	testo 755-2
Voltage measuring range	6 to 600 V AC/DC	6 to 1,000 V AC/DC
Current measuring range	0.1 to 200 A AC	
Resistance measuring range	1 Ω to 100 kΩ	
Continuity testing	< 50 Ω	
Rotating magnetic field testing	-	100 to 690 V AC at 50/60 Hz
Single pole phase testing	-	100 to 690 V AC at 50/60 Hz
Display (counts)	4,000	
Measuring point illumination	✓	
Measurement category	CAT IV 600 V CAT III 1,000 V	
Protection class	IP 64	
Operating temperature	-10 to +50 °C	
Storage temperature	-15 to +60 °C	
Dimensions	199 x 62 x 40 mm (L x W x H)	
Weight	306 g	
Authorizations	TÜV, CSA, CE	
Standards	EN 61243-3:2014, EN 61010-1	

1981 1534/msp/I/10.2018

Subject to change without notice.

Accessories	Order no.
testo 755 / testo 770 transport bag	0590 0017
Set of replacement measuring tips	0590 0015
ISO calibration certificate current/voltage tester	0520 0755
DAkkS calibration certificate current/voltage tester	0520 0756



## Digital multimeter

testo 760-1  
testo 760-2  
testo 760-3

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Easy, modern operation with function keys instead of a dial

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Measurement parameter detection and selection via the socket assignment

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Prevents incorrect settings

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True root mean square measurement - TRMS

---

Large, backlit display

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The testo 760 digital multimeter family comprises three models for all important electrical measuring tasks. Function keys replace the traditional dial on all three instruments, which means easier operation and greater reliability. Incorrect settings are now impossible, because the measurement parameters are detected automatically via the assignment of the measuring sockets and also shown by the illumination of the appropriate function keys.


The testo 760-1 model is the standard version for virtually all daily measuring tasks. The testo 760-2 is differentiated by a larger current measurement range, the true root mean square measurement - TRMS - and a low-pass filter. The testo 760-3 is the model with the highest specification and, in addition to the features of the other two models, it has a voltage range of up to 1,000 V, along with higher measuring ranges for frequency and capacitance.

# Technical data/accessories

## testo 760-1

testo 760-1, multimeter, including batteries and 1 set of measuring cables


Order no. 0590 7601



## testo 760-2

testo 760-2, TRMS multimeter, including batteries, 1 set of measuring cables and 1 x adapter for type K thermocouples


Order no. 0590 7602



## testo 760-3

testo 760-3, TRMS multimeter, including batteries and 1 set of measuring cables

Order no. 0590 7603



Technical data	testo 760-1	testo 760-2	testo 760-3
True RMS	-		✓
Basic accuracy	0.8 %	0.1 %	
Voltage measuring range	0.1 mV to 600 V AC/DC		0.1 mV to 1,000 V AC/DC
Current measuring range	1 mA to 10 A AC/DC	0.1 µA to 10 A AC/DC	
Resistance measuring range	0.1 to 40 MΩ	0.1 to 60 MΩ	
Frequency measuring range	0.001 Hz to 512 kHz	0.001 Hz to 30 MHz	0.001 Hz to 60 MHz
Capacitance measuring range	0.001 nF to 100 µF	0.001 nF to 30,000 µF	0.001 nF to 60,000 µF
Temperature measuring range	-	-20 to +500°C	
Continuity testing		✓	
Diode test		✓	
Display (counts)	4,000	6,000	
Measurement category	CAT IV 300 V CAT III 600 V	CAT IV 600 V CAT III 1,000 V	
Protection class	IP 64		
Operating temperature	-10 to +50 °C		
Storage temperature	-15 to +60 °C		
Dimensions	167 x 84 x 45 mm (L x W x H)		
Weight	340 g		
Authorizations	CSA, CE		
Standards	EN 61326-1		

testo 760-1/-2/-3 accessories	Order no.
Magnetic hook	0590 0001
Set of safety crocodile clips, suitable for 0590 0011 and 0590 0012	0590 0008
Set of crocodile clips, suitable for 0590 0010	0590 0009
Set of 2 mm measuring cables (angled plug), suitable for 0590 0009	0590 0010
Set of 4 mm standard measuring cables (angled plug), suitable for 0590 0008	0590 0011
Set of 4 mm standard measuring cables (straight plug), suitable for 0590 0008	0590 0012
Set of measuring cable extensions (straight plug)	0590 0013
Set of measuring cable extensions (angled plug)	0590 0014
testo 760 transport bag	0590 0016
ISO calibration certificate multimeter	0520 0760
DAkkS calibration certificate multimeter	0520 0761

testo 760-1/-2 accessories	Order no.
Set of 5 x 10 A/600 V spare fuses	0590 0005
Set of 5 x 630 mA/600 V spare fuses	0590 0007

testo 760-2/-3 accessories	
Type K thermocouple adapter	0590 0002
Current probe adapter	0590 0003

testo 760-3 accessories	
Set of 5 x 10 A/1,000 V spare fuses	0590 0004
Set of 5 x 630 mA/1,000 V spare fuses	0590 0006

1981 1544/msp/I/03.2018

Subject to change without notice.



# Clamp meter

testo 770-1  
testo 770-2  
testo 770-3

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Unique grab mechanism makes it easier to work at tight measuring points

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Auto AC/DC for current and voltage

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Large two-line display

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True root mean square measurement - TRMS

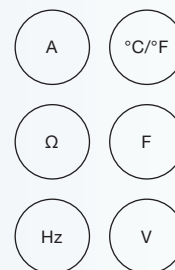
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With additional functions, such as starting current, power and  $\mu\text{A}$  measurement

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Bluetooth and testo Smart App

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 Bluetooth®  
+ App

testo Smart App  
for free download



The three instruments in the testo 770 clamp meter family are ideally suited for current measurement in switching cabinets. One of the two pincer arms can be fully retracted into the instrument. This unique grab mechanism means that cables in tight switching cabinets can be easily grabbed. The automatic measurement parameter detection also ensures reliable work: in the current and voltage area, all three instruments detect direct and alternating current and select other parameters such as resistance, continuity, diode and capacitance automatically.


The testo 770-1 model is the standard version for daily measuring tasks, including starting current measurement. In addition, the testo 770-2 contains both a  $\mu\text{A}$  area as well as a temperature measurement by means of an optional thermocouple adapter type K. The testo 770-3 also calculates all output ratings, has a Bluetooth interface and the possibility of connecting to the testo Smart App to show the measuring profile as a graph or to document it directly in a report.



# Technical data/accessories

## testo 770-1


testo 770-1, TRMS clamp meter, including batteries and 1 set of measuring cables



Order no. 0590 7701

## testo 770-2


testo 770-2, TRMS clamp meter, including batteries, 1 set of measuring cables and 1 x adapter for type K thermocouples



Order no. 0590 7702

## testo 770-3

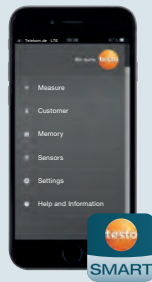
testo 770-3, TRMS clamp meter, including batteries and 1 set of measuring cables



Order no. 0590 7703

Accessories	Order no.
Type K thermocouple adapter (for testo 770-2/-3 only)	0590 0021
Set of safety crocodile clips, suitable for 0590 0011 and 0590 0012	0590 0008
Set of crocodile clips, suitable for 0590 0010	0590 0009
Set of 2 mm measuring cables (angled plug), suitable for 0590 0009	0590 0010
Set of 4 mm standard measuring cables (angled plug), suitable for 0590 0008	0590 0011
Set of 4 mm standard measuring cables (straight plug), suitable for 0590 0008	0590 0012
Set of measuring cable extensions (straight plug)	0590 0013
Set of measuring cable extensions (angled plug)	0590 0014
testo 755 / testo 770 transport bag	0590 0017
ISO calibration certificate clamp meter	0520 0770
DAkkS calibration clamp meter	0520 0771

Technical data	testo 770-1	testo 770-2	testo 770-3
True RMS	✓		
Basic accuracy	0.8 %		0.1 %
Voltage measuring range	1 mV to 600 V AC/DC		
Current measuring range	0.1 to 400 A AC/DC		0.1 to 600 A AC/DC
Power measurement	-		✓
µA measuring range	-	0.1 to 400 µA AC/DC	
Resistance measuring range	0.1 Ω to 40 MΩ		0.1 Ω to 60 MΩ
Frequency measuring range	0.001 Hz to 10 kHz		
Capacitance measuring range	0.001 µF to 100 µF		0.001 µF to 60,000 µF
Temperature measuring range	-	-20 to +500 °C	
Bluetooth and testo Smart App	-		✓
Continuity testing	✓		
Diode test	✓		
Display (counts)	4,000		6,000
Measurement category	CAT IV 600 V CAT III 1,000 V		
Compatibility	requires iOS 11.0 or newer / Android 6.0 or newer		
	requires mobile terminal device with Bluetooth® 4.0		
Operating temperature	-10 to +50 °C		
Storage temperature	-15 to +60 °C		
Dimensions	243 x 96 x 43 mm (L x W x H)		
Weight	378 g		
Authorizations	CSA, CE		
Standards	EN 61326-1, EN 61140		



### testo Smart App

The App turns your smartphone/tablet into the display for the testo 770. Both the operation of the measuring instrument and the display of the readings are achieved by Bluetooth® via the testo Smart App on your smartphone or tablet – irrespective of the measuring location. In addition, you can use the App to create measurement reports, add photos and comments to these and send them by e-mail. For iOS and Android.

# Infrared temperature measuring instrument

## testo 805 – The infrared thermometer in mini format

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Non-contact measurement of surface temperature, ideally suitable for the food sector

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Waterproof and robust thanks to dishwasher-safe protective cover TopSafe, according to protection class IP65

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1:1 optics for fast, easy measurements at close range

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Small and handy: fits in any jacket or trouser pocket

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Hold-function and display of min./max. values

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Scan mode for long-term measurement

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Illustration 1:1



The infrared thermometer, measuring only 80 mm, fits in any jacket pocket, and is always ready to hand for fast measurements. The testo 805 is used, for example, for measurements in Incoming Goods and in temperature checks in supermarket shelves. It is also optimally suited to fast measurements in the food sector and in facility technology.

The testo 805, with the TopSafe (optional), is waterproof and protected from impact and dirt according to IP 65. It has a scan mode for long-term measurement, and a Hold-function for freezing the measurement values. In addition to this, minimum and maximum values are reliably displayed.

## Technical data / Accessories

### testo 805

testo 805, Mini infrared thermometer, practical and compact, high accuracy, with battery



Part no. 0560 8051

### Set for fast inspections

testo 805 Mini infrared thermometer, TopSafe and battery

Best.-Nr. 0563 8051

#### Sensor type Integrated infrared sensor

Measuring range	-25 to +250 °C
Accuracy ±1 digit	±3 °C (-25 to -21 °C) ±2 °C (-20 to -2.1 °C) ±1 °C (-2 to +40 °C) ±1.5 °C (+40.1 to +150 °C) ±2% of m.v. (+150.1 to +250 °C)
Resolution	0.1 °C (-9.9 to +199.9 °C) 1 °C (remaining range)

#### General technical data

Distance to measurement spot	1:1
Operating temperature	0 to +50 °C
Storage temperature	-20 to +65 °C
Housing material	ABS, PMMA
Battery type	1 x Lithium type: CR 2032 (button cell)
Battery life	40 h (typical)
Reaction time	< 1.0 s
Emissivity	0.95 fixed
Dimensions	80 x 31 x 19 mm (without TopSafe)
Weight	28 g

#### Accessories for measuring instrument

#### Part no.

TopSafe, robust, waterproof protection case (IP65)	0516 8051	
ISO calibration certificate temperature, Infrared thermometers, calibration points 0°C, +60°C	0520 0452	

# Infrared thermometer operated with smartphone

## testo 805i

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Compact professional measuring instrument from the Testo Smart Probes series, for use with smartphones/tablets

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Non-contact IR measurement of surface temperature

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Measurement data analyzed and sent  
via testo Smart App

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Measurement spot marking with easily visible  
8-point laser circle

---

Space-saving and easy to transport

---



Bluetooth  
+ App

testo Smart App  
for free download




In combination with a smartphone or tablet, the infrared thermometer testo 805i functions as a compact measuring instrument for wall temperatures as well as for fuse and component temperatures in air conditioning systems. The measurement location is clearly marked with a multi-point laser circle.

Users can read off their measurement values comfortably in the testo Smart App installed on the end device. The detection of mould-risk areas is simplified by a separate measurement menu with laser marking and image documentation. The measurement protocols can then be directly sent as PDF or Excel files.

# Technical data/accessories

**testo 805i**

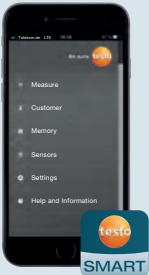
testo 605i, infrared thermometer operated with smartphone, incl. batteries and calibration protocol



Order no. 0560 1805

**testo Smart App**

The App turns your smartphone/tablet into the display of the testo 805i. The operation of the measuring instrument as well as the display of the measurement values take place by Bluetooth via the testo Smart App on your smartphone or tablet – independently of the measurement location. In addition to this, you can use the App to create measurement reports, add photos and comments to these, and send them by e-mail. For iOS and Android.



Sensor type	Infrared
Measuring range	-30 to +250 °C
Accuracy ±1 digit	±1.5 °C or ±1.5 % of reading (0 to +250 °C) ±2.0 °C (-20 to -0.1 °C) ±2.5 °C (-30 to -20.1 °C)
Resolution	0.1 °C

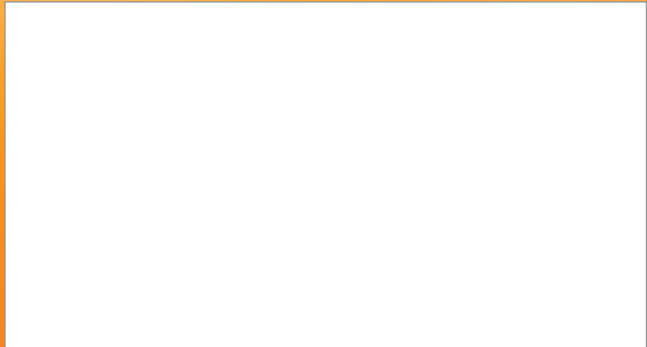
**General technical data**

Compatibility	requires iOS 11.0 or newer / Android 6.0 or newer requires mobile end device with Bluetooth 4.0
Storage temperature	-20 to +60 °C
Operating temperature	-10 to +50 °C
Battery type	3 micro batteries AAA
Battery life	30 hrs
Optics	10:1
Laser marking	Diffraction optics (laser circle)
Dimensions	140 x 36 x 25 mm
Emissivity	0.1 to 1.0 adjustable

1981 1774/msp/1/09.2020

Subject to change without notice.

Accessories	Order no.
testo Smart Case (VAC) for the storage and transport of testo 405i, testo 410i, testo 510i, testo 605i, testo 805i and testo 905i, dimensions 270 x 190 x 60 mm	0516 0260
ISO calibration certificate temperature, infrared thermometer, calibration points +60 °C; +120 °C, +180 °C	0520 0002





# Infrared temperature measuring instrument (2-channel)

testo 810

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Handy pocket-sized combi instrument for non-contact measurement of the surface temperature and air temperature measurement

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1-point laser measurement point marking and 6:1 optics

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Hold-function, display of max./min. values and the difference between air and surface temperature

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Settable emissivity

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Display illumination

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Incl. protective cap for safe storage, wrist strap and beltholder

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Illustration 1:1

The testo 810 is a handy temperature measuring instrument which measures air temperature, and simultaneously surface temperature by infrared. For example, the temperature of a radiator, an air outlet or a window can be easily and conveniently compared to the air temperature in the room. The difference between air and surface temperature is automatically displayed.

Thanks to its handy design, the testo 810 is quickly to hand and easy to stow, for example in a trouser pocket. The infrared measurement is carried out with a 1-point laser measurement spot marking and 6:1 optics. The emissivity can be individually set depending on the application, and with the help of the min./max. function, the minimum and maximum values are shown in the display.



## Technical data / Accessories

### testo 810

testo 810, 2-channel temperature measuring instrument with infrared thermometer with laser spot marking and integrated NTC air thermometer incl. protective cap, Batteries, belt holder and calibration protocol

Part no. 0560 0810



#### General technical data

Distance to measurement spot	6:1
Meas. spot marking	1-point laser
Emissivity	Adjustable 0.2 to 0.99
Spectral range	8 to 14 $\mu\text{m}$
Operating temperature	-10 to +50 °C
Battery type	2 AAA micro batteries
Battery life	50 h (average, without display illumination)
Dimensions	119 x 46 x 25 mm (incl. protective cap)
Weight	90 g (incl. battery and protective cap)
Protection class	IP40

#### Sensor types

	Infrared	NTC
Measuring range	-30 to +300 °C	-10 to +50 °C
Accuracy $\pm 1$ digit	$\pm 2.0$ °C (-30 to +100 °C) $\pm 2\%$ of m.v. (remaining range)	$\pm 0.5$ °C
Measurement rate	0.5 s	0.5 s
Resolution	0.1 °C	0.1 °C

#### Accessories for measuring instrument

#### Part no.

Adhesive tape, e.g. for reflective surfaces (roll, L.: 10 m, W.: 25 mm), $\epsilon = 0.95$ , temperature resistant to +250 °C	0554 0051	
Belt holder	0516 4007	
ISO calibration certificate/temperature, infrared thermometers, calibration points -18°C, 0°C, +60°C	0520 0401	
ISO calibration certificate/temperature, infrared thermometer; calibration points +60°C; +120°C; +180°C	0520 0002	
ISO calibration certificate/temperature; for air/immersion probes, calibration points -8°C; 0°C; +40°C	0520 0181	

# Sound level measuring instrument

testo 815

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Frequency evaluation according to characteristic curves A and C

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Easy to adjust

---

Maximum and minimum store

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Switchable time evaluation Fast/Slow

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dB

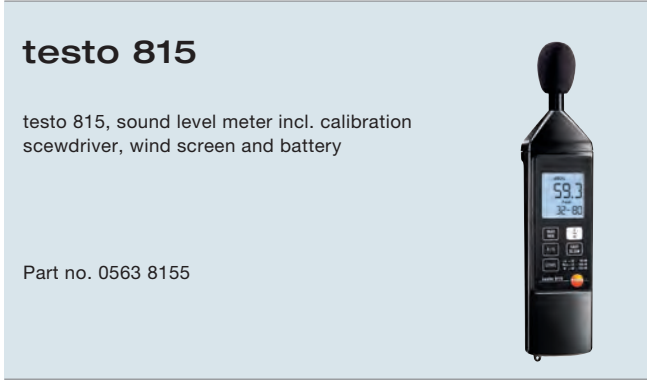
The testo 815 is the ideal instrument for the evaluation of sound level in everyday work. The instrument can be used for monitoring measurements in the areas of air conditioning or heating, on combustion plants or at workplaces, however machine or discotheque noise can also be evaluated quickly and precisely.

Using the Fast/slow button, the measurement time can be set from 1 s to 125 ms, in order to better evaluate the noise source. The frequency analysis can also be switched from characteristic curve A to C. The characteristic curve A corresponds to the sound pressure perception of the human

ear, whereas characteristic curve C can also evaluate the low-frequency components of a sound.

With the help of the optional calibrator, the measuring instrument can be recalibrated directly on site with the screwdriver provided. The wind protection cap included in delivery ensures correct measurement results when measuring outdoors, and if required can protect the microphone from dirt and dust.

# Technical data / Accessories



## testo 815

testo 815, sound level meter incl. calibration  
screwdriver, wind screen and battery

Part no. 0563 8155

### Technical data testo 815

Measuring range	+32 to +130 dB
Frequency range	31.5 Hz to 8 kHz
Accuracy ±1 digit	±1.0 dB
Resolution	0.1 dB
Operating temperature	0 to +40 °C
Storage temperature	-10 to +60 °C
Battery type	9V block battery
Battery life	70 h
Weight	195 g
Dimensions	255 x 55 x 43 mm

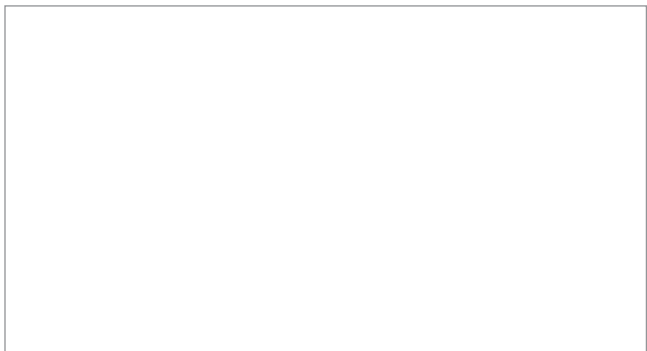
Section meas. ranges: 30 to 80 dB; 50 to 100 dB; 80 to 130 dB  
Time weighting: FAST 125 ms setting / SLOW 1 s setting  
Pressure dependency: -0.0016 dB/hPa

### Technical data sound level calibrator

Battery type	9V block battery
Battery life	40 h
Accuracy	±0.5 dB in accordance with Class 2 to IEC 60942

Sound pressure level: 94 dB/104 dB, switchable  
Frequency: 1000 Hz  
Also suitable for ½ and 1 inch microphones by other manufacturers

Accessories for measuring instrument	Part no.
Calibrator, for regular calibration of testo 815, testo 816-1	0554 0452
ISO calibration certificate; sound level calibrators and pistonphones on two fixed sound pressure values	0520 2810
ISO calibration certificate pressure	
<b>Pressure chamber calibration</b> – calibration at the measuring points 94 dB/1000 Hz and 114 dB/1000 Hz for up to three frequency evaluations (A, C and Z)	0520 2812
<b>Free-field calibration</b> – calibration of the amplitude frequency response in the free field at fixed frequencies in third interval. Possible frequency range 125 Hz to 20 kHz.	0520 2812
<b>Free-field and pressure chamber calibration</b> – calibration of the amplitude frequency response at fixed frequencies in third interval. Possible frequency range 31.5 Hz up to 20 kHz.	0520 2812



# Sound level meter

## testo 816-1 – Sound level measurement with integrated data storage

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Sound level measurement acc. to IEC 61672-1 class 2 and ANSI S1.4 Type 2

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Frequency weighting A and C

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Integrated data storage for up to 31000 measurement values

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Software for data management and long-term measurement

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Switchable time weighting Fast/Slow

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Bar graph display

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Backlit display

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AC and DC output for the connection of other instruments

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dB

The testo 816-1 is ideal for sound level measurements at workplaces, in industrial and production halls, and in public places. With the touch of a button, the measuring instrument can be switched from Slow (1 sec.) to Fast (125 ms). It is also possible to switch between the frequency weighting characteristic curves A and C and vice versa, also at the touch of a button. Characteristic curve A corresponds to the sound pressure sensitivity of the human ear, while characteristic curve C can evaluate low-frequency components of a noise.

The integrated data store allows the storage of over 30000 measurement values in the instrument, these can be administered using the software included in delivery. In addition to this, the software allows online measurements over a longer period to be carried out. With the optional sound calibrator and the adjustment accessory included with it, the testo 816-1 can be re-calibrated on site.

# Technical data / Accessories

**testo 816-1**

testo 816-1, sound level meter incl. microphone, wind protection, PC software (in English), connection cable, manual on CD and batteries in system case

Part no. 0563 8170



**Technical data testo 816-1**

Measuring range	30 to 130 dB
Frequency range	20 Hz to 8 kHz
Accuracy ±1 digit	±1.4 dB (under reference conditions: 94 dB, 1 kHz)
Resolution	0.1 dB
Frequency weighting	A / C
Microphone	½ inch
Measuring rate	0.5 s
Dynamic range	100 dB
Data storage	Internal (in instrument): Single value memory: 99 data sets Measurement series memory: 31,000 data sets External (via PC software): Online measurement: max. 99,999 data sets
Recording rate	Offline measurement: min: 1 sec, max: 1 min Online measurement: min: 0.1 sec, max: 30 sec
Operating temperature	0 to +40 °C
Storage temperature	-10 to +60 °C
Battery type	4 x Type AA batteries
Weight	390 g
Dimensions	272 x 83 x 42 mm
Time weighting	FAST 125 ms / SLOW 1 sec
AC/DC output	AC: 1 V RMS at full scale DC: 10 mV/dB

0981 8974/msp/I/01.2019

Subject to change without notice.

**Technical data sound level calibrator**

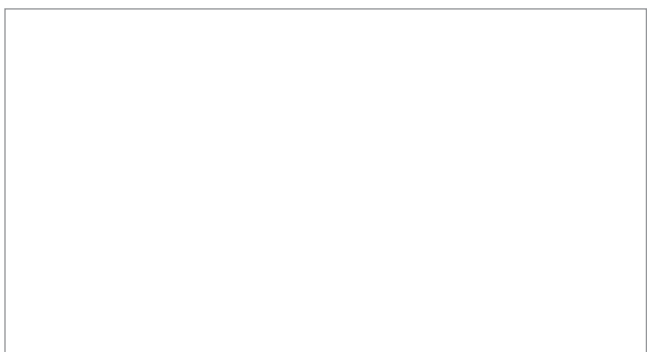
Battery type	9V block battery
Battery life	40 h
Accuracy	±0.5 dB in accordance with Class 2 to IEC 60942

Sound pressure level: 94 dB/104 dB, switchable  
Frequency: 1000 Hz  
Also suitable for ½ and 1 inch microphones by other manufacturers

**Accessories for measuring instrument**

**Part no.**

Calibrator, for regular calibration of testo 815, testo 816-1	0554 0452	
ISO calibration certificate; sound level calibrators and pistonphones on two fixed sound pressure values	0520 2810	
ISO calibration certificate pressure		
<b>Pressure chamber calibration</b> – calibration at the measuring points 94 dB/1000 Hz and 114 dB/1000 Hz for up to three frequency evaluations (A, C and Z)	0520 2812	
<b>Free-field calibration</b> – calibration of the amplitude frequency response in the free field at fixed frequencies in third interval. Possible frequency range 125 Hz to 20 kHz.	0520 2812	
<b>Free-field and pressure chamber calibration</b> – calibration of the amplitude frequency response at fixed frequencies in third interval. Possible frequency range 31.5 Hz up to 20 kHz.	0520 2812	



# Infrared temperature measuring instrument

testo 826

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Non-contact measurement of surface temperature, ideally suitable for the food sector

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6:1 optics for fast and accurate measurement

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1-point laser measurement spot marking

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Combined instrument with infrared and penetration measurement

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Two adjustable limit values

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Waterproof and robust thanks to dishwasher-safe protective cover TopSafe, according to protection class IP65

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Hold function and display of min./max. values

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**HACCP from every point of view:** the testo 826 series has just been optimized. A higher resolution thanks to the new processor ensures even more accurate measurement results. This allows the temperature to be recorded to an accuracy of 0.1 °C. The min./max. display shows the limit values of the last measurement. You can measure and monitor the temperature of the goods reliably and safely.

## The advantages:

- Always monitor, measure and document temperature accurately, cleanly and quickly.
- Fulfil HACCP regulations, and be able to provide proof at any time.
- Maintain the cold chain in storage and transport.
- Reduce the quantities of spoiled goods and use resources efficiently.
- Measuring instruments calibrated according to strict regulations.
- Conform to HACCP as well as EN 13485.





## Technical data

### testo 826-T2

testo 826-T2, infrared thermometer with 1 point laser sighting, alarm function, incl. TopSafe and wall/belt holder

Part no. 0563 8282



### testo 826-T4

testo 826-T4, infrared thermometer with penetration probe, 1 point laser sighting, alarm function, incl. TopSafe, wall/belt holder, probe protection cap and frozen food drill

Part no. 0563 8284



#### General technical data

Spectral range	8 to 14 $\mu\text{m}$	
	0,5 s	
Distance to measurement spot	6:1	
Emissivity	0,1 to 1	
Meas. spot marking	1-point laser	
Operating temperature	-20 to +50 °C	
Storage temperature	-40 to +70 °C	
Battery type	2 AAA micro batteries	
Battery life	Approx. 20 h	
Dimensions	148 x 34.4 x 19 mm	
Probe length	55 mm (testo 826-T4)	
Display	LCD, 1 line	
Weight	80 g	
Standard	EN 13485	
<b>Sensor types</b>	<b>Infrared</b>	<b>NTC (testo 826-T4)</b>
Measuring range	-50 to +300 °C	-50 to +230 °C
Accuracy $\pm 1$ digit	$\pm 1.5$ °C (-20 to +100 °C) $\pm 2$ °C or 2% of m.v. (remaining range)	$\pm 0.5$ °C (-20 to +99.9 °C) $\pm 1$ °C or 1% of m.v. (remaining range)
Resolution	0.1 °C	0.1 °C
Spectral range	8 to 14 $\mu\text{m}$	
Measurement rate	0,5 s	1,25 s

## Accessories

#### Accessories for measuring instrument testo 826-T2 + testo 826-T4

#### Part no.

ISO calibration certificate/temperature for air/immersion probes, calibration point -18°C	0520 0061	
ISO calibration certificate/temperature for air/immersion probes, calibration point 0°C	0520 0062	
ISO calibration certificate/temperature For air/immersion probes, calibration points -18°C; +60°C	0520 0043	
ISO calibration certificate/temperature for air/immersion probes, calibration points -18°C; 0°C; +60°C	0520 0001	
ISO calibration certificate/temperature infrared thermometers, calibration points -18°C, 0°C, +60°C	0520 0401	
ISO calibration certificate temperature Infrared thermometers, calibration points 0°C, +60°C	0520 0452	

# Infrared temperature measuring instrument

testo 830 – Fast, non-contact measurement of surface temperature

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Laser measurement point marker and large optics for exact measurement even at greater distances

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Fast recording of measurement values at two measurements per second

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Adjustable emissivity

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Two adjustable alarm limit values

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Good handling thanks to ergonomic „pistol design“

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Hold function and display of min./max. values

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The testo 830 is a universally applicable infrared thermometer for non-contact measurement of surface temperatures in trade and industry. Thanks to a new processor, and therefore better resolution, even more precise measurements are now possible. Temperature can now be recorded to an accuracy of 0.1 °C. Thanks to the min./max. function, the limit values of the last measurement can be displayed and even better monitored.

The testo 830 infrared thermometer in brief:  
testo 830-T1 with 1-point laser measurement spot marking and 10:1 optics.  
testo 830-T2 with 2-point laser measurement spot marking and 12:1 optics.  
testo 830-T4 with 2-point laser measurement spot marking and 30:1 optics. This instrument measures the surface temperature even of smaller objects at a safe distance. External temperature probes can be connected.

# Infrared temperature measuring instruments

## testo 830

### Infrared thermometer with 1-point laser sighting

#### testo 830-T1

testo 830-T1, infrared thermometer, 1 point laser sighting, 10:1 optics, adjustable limit values, alarm function, incl. Batteries and calibration protocol

Part no. 0560 8311



### Infrared thermometer with 2-point laser sighting and connection for external probes

#### testo 830-T2

testo 830-T2, infrared thermometer, 2-point laser sighting, 12:1 optics, adjustable limit values, alarm function, connection of external probes, incl. Batteries and calibration protocol

Part no. 0560 8312



The fast and universal infrared thermometer with 1-point laser sighting and 10:1 optics in ergonomic „pistol design“.

- Fast readings
- Laser sighting
- Adjustable alarm limits
- Audible and visual alarm if limits are exceeded
- User-friendly thanks to „pistol design“
- Backlit display
- Adjustable emission factor (0.1 to 1.0)

#### testo 830-T2 Set

Set testo 830-T2, infrared thermometer with protective leather case, incl. cross-band surface probe (0602 0393), Batteries and calibration protocol

Part no. 0563 8312

This universal infrared thermometer is designed to perform fast and accurate surface temperature measurements in the HVAC area and industry. The new high resolution processor enables measurement results of unbelievable accuracy. Thanks to the min./max. function you can define your temperature limit values according to your needs. To control the limits with the help of an audible and visual alarm has never been easier.

In addition to the benefits of testo 830-T1:

- 2-point laser sighting
- Contact measurement with connectable temperature probe
- Emissivity determination with external TC probe

# Infrared temperature measuring instruments

## testo 830

Infrared thermometer with 30:1 optics for exact measurement at a distance

### testo 830-T4

testo 830-T4, infrared thermometer, 2-point laser sighting, 30:1 optic, adjustable limit values, alarm function, connection of external probes, incl. Batteries and calibration protocol

Part no. 0560 8314



### Set testo 830-T4

Set testo 830-T4, infrared thermometer with protective leather case, incl. cross-band surface probe (0602 0393), battery and calibration protocol

Part no. 0563 8314

This universal infrared thermometer is designed to perform fast and accurate surface temperature measurements in the HVAC area and industry. At a distance of 1 m the point diameter is only 3.6 cm. From a secure distance even smaller, difficult to access or dangerous targets can be measured without any problems. The new high resolution processor enables measurement results of unbelievable accuracy. And due to the min./max. function you can define your temperature limit values according to your needs. To control the limits with the help of an audible and visual alarm has never been easier.

- 30:1 optics for measuring temperature at a distance, even on small objects
- °C contact measurement with connectable TC probe
- Emissivity determination with external temperature probe
- Input of upper and lower limit value
- Audible and optical alarm when limit values are exceeded
- Display illumination

## Technical data

### Common technical data for all versions

Spectral range	8 to 14 $\mu\text{m}$	Battery type	9V block battery
Emissivity	Adjustable 0.1 to 1.0	Battery life	15 h
Storage temperature	-40 to +70 °C	Weight	200 g
Operating temperature	-20 to +50 °C	Dimensions	190 x 75 x 38 mm
		Housing material	ABS

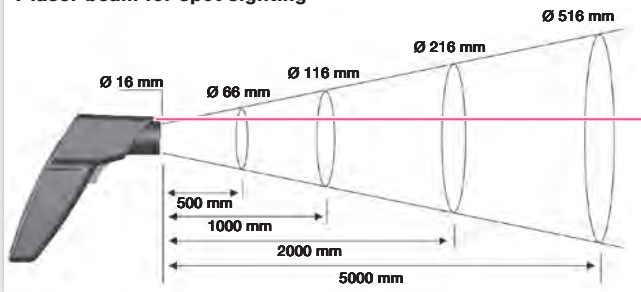
### Varying technical data

	testo 830-T1	testo 830-T2	testo 830-T4
Measuring range			
Infrared	-30 to +400 °C	-30 to +400 °C	-30 to +400 °C
Type K (NiCr-Ni)	-	-50 to +500 °C	-50 to +500 °C
Accuracy $\pm 1$ digit			
Infrared	$\pm 1.5$ °C or 1.5 % of m.v. (+0.1 to +400 °C) $\pm 2$ °C or $\pm 2$ % of m.v. (-30 to 0 °C) the higher value applies	$\pm 1.5$ °C or $\pm 1.5$ % of m.v. (+0.1 to +400 °C) $\pm 2$ °C or $\pm 2$ % of m.v. (-30 to 0 °C) the higher value applies	$\pm 1.5$ °C (-20 to 0 °C) $\pm 2$ °C (-30 to -20,1 °C) $\pm 1$ °C or 1 % of m.v. (remaining range)
Type K (NiCr-Ni)	-	$\pm 0.5$ °C +0.5% of m.v.	$\pm 0.5$ °C +0.5% of m.v.
Resolution	0.1 °C	0.1 °C	0.1 °C
Measurement rate			
Infrared	0.5 s	0.5 s	0,5 s
Type K (NiCr-Ni)	-	1.75 s	1.75 s
Meas. spot marking	1-point laser	2-point laser	2-point laser
Distance to measurement spot	10:1	12:1	30:1 (typical at a distance of 0.7 m to the measurement object 24 mm @ 700 mm (90%))

# Optics

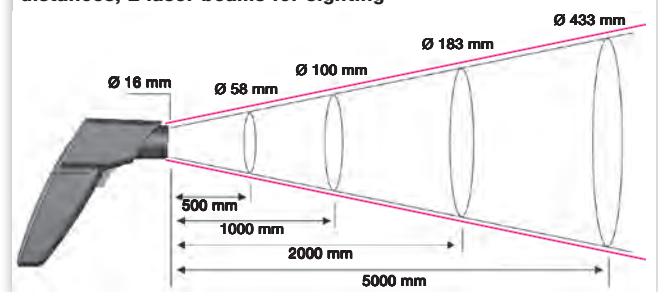
testo 830-T1

**10:1 standard optics,  
1 laser beam for spot sighting**



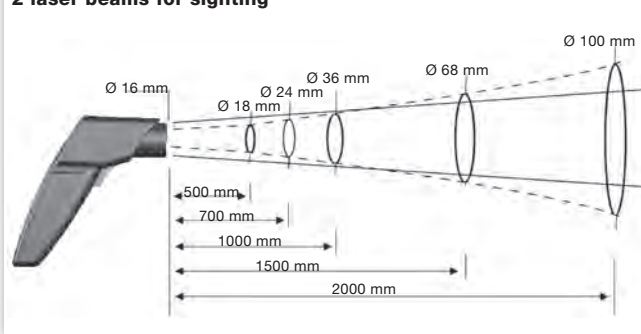
testo 830-T2

**Accurate 12:1 optics enable accurate measurements over great distances, 2 laser beams for sighting**



testo 830-T4

**Distance to measurement spot 30:1,  
2 laser beams for sighting**



# Accessories

**Accessories for all testo 830 versions**

**Part no.**



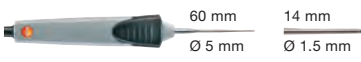
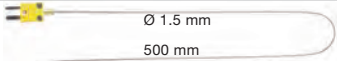
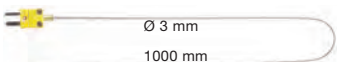
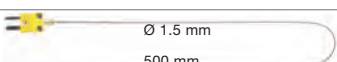
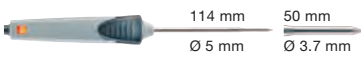
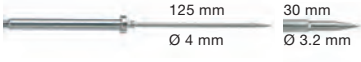

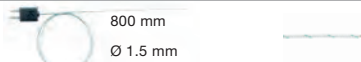
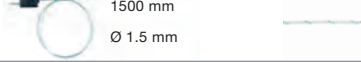

Adhesive tape, e.g. for reflective surfaces (roll, L.: 10 m, W.: 25 mm), $\epsilon = 0.95$ , temperature resistant to +250 °C	0554 0051	
Leather case to protect measuring instrument, including belt holder	0516 8302	
9V rech. battery for instrument, instead of battery	0515 0025	
ISO calibration certificate/temperature, infrared thermometer; calibration points +60°C; +120°C; +180°C	0520 0002	

**Accessories for testo 830-T2 / -T4**

ISO calibration certificate/temperature, meas. instr. with surface probe; calibration points +60°C; +120°C; +180°C	0520 0071	
ISO calibration certificate/temperature, for air/immersion probes, calibration point +60°C	0520 0063	
ISO calibration certificate/temperature, for air/immersion probes, calibration points -18°C; 0°C; +60°C	0520 0001	
ISO calibration certificate/temperature, meas. instr. with air/immersion probe; cal. points 0°C; +150°C; +300°C (Applies only to immersion/penetration probe 0602 2693)	0520 0021	

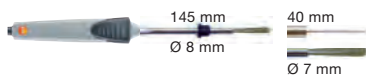
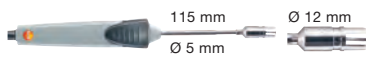
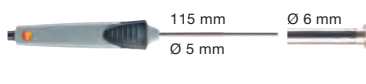


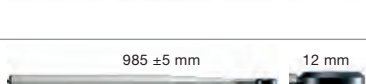
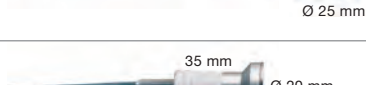
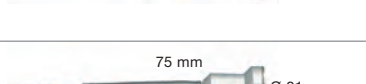
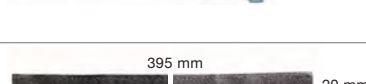





# Probes testo 830-T2 / -T4

Probe type	Dimensions Probe shaft/probe shaft tip	Measuring range	Accuracy	t <sub>99</sub>	Part no.
<b>Air probes</b>					
Robust air probe, T/C Type K, Fixed cable 1.2 m		-60 to +400 °C	Class 2*	200 s	0602 1793
<b>Immersion/penetration probes</b>					
Efficient and fast-action immersion probe, waterproof, TC Type K, Fixed cable 1.2 m		-60 to +1000 °C	Class 1*	2 s	0602 0593
Fast-action, waterproof immersion/penetration probe, TC Type K (Calibration not possible over +300 °C), Fixed cable 1.2 m		-60 to +800 °C	Class 1*	3 s	0602 2693
Immersion tip, flexible, TC Type K		-200 to +1000 °C	Class 1*	5 s	0602 5792
Immersion measurement tip, flexible, for measurements in air/exhaust gases (not suitable for measurements in smelters), TC Type K		-200 to +1300 °C	Class 1*	4 s	0602 5693
Immersion tip, flexible, TC Type K		-200 to +40 °C	Class 3*	5 s	0602 5793
Waterproof immersion/penetration probe, TC Type K, Fixed cable 1.2 m		-60 to +400 °C	Class 2*	7 s	0602 1293
<b>Food probes</b>					
Waterproof food probe made of stainless steel (IP65), TC Type K, Fixed cable		-60 to +400 °C	Class 2*	7 s	0602 2292
Waterproof robust immersion/penetration probe with metal protection hose Tmax +230°C, e.g. for monitoring temp. in cooking oil, T/C Type K, Fixed cable		-50 to +230 °C	Class 1*	15 s	0628 1292
<b>Thermocouples</b>					
Thermocouple with TC adapter, flexible, 800 mm long, fibre glass, TC Type K		-50 to +400 °C	Class 2*	5 s	0602 0644
Thermocouple with TC adapter, flexible, length 1500 mm, fibreglass, TC Type K		-50 to +400 °C	Class 2*	5 s	0602 0645
Thermocouple with TC adapter, flexible, 1500 mm long, PTFE, TC Type K		-50 to +250 °C	Class 2*	5 s	0602 0646

\*According to standard EN 60584-2, the accuracy of Class 1 refers to -40 to +1000 °C (Type K), Class 2 to -40 to +1200 °C (Type K), Class 3 to -200 to +40 °C (Type K)

# Probes testo 830-T2 / -T4

Probe type	Dimensions Probe shaft/probe shaft tip	Measuring range	Accuracy	t <sub>99</sub>	Part no.
<b>Surface probes</b>					
Fast-reaction paddle surface probe, for measurements in inaccessible places, e.g. narrow apertures and slots, TC Type K, Fixed cable		0 to +300 °C	Class 2*	5 s	0602 0193
Fast-action surface probe with sprung thermocouple strip, also for uneven surfaces, measurement range short-term to +500°C, TC Type K, Fixed cable 1.2 m		-60 to +300 °C	Class 2*	3 s	0602 0393
Waterproof surface probe with widened measurement tip for flat surfaces, T/C Type K, Fixed cable 1.2 m		-60 to +400 °C	Class 2*	30 s	0602 1993
Fast-action surface probe with sprung thermocouple strip, bent, also for uneven surfaces, measurement range short-term to +500°C, TC Type K, Fixed cable 1.2 m		-60 to +300 °C	Class 2*	3 s	0602 0993
Efficient, waterproof surface probe with small measurement head for flat surfaces, TC Type K, Fixed cable 1.2 m		-60 to +1000 °C	Class 1*	20 s	0602 0693
Flat head surface probe with telescopic handle max. 680 mm for measurements at hard-to-access points, TC Type K, Fixed cable, 1.6 m (correspondingly shorter when telescope extended)		-50 to +250 °C	Class 2*	3 s	0602 2394
Magnetic probe, adhesive force approx. 20 N, with magnets, for measurements on metal surfaces, TC Type K, Fixed cable		-50 to +170 °C	Class 2*	150 s	0602 4792
Magnetic probe, adhesive force approx. 10 N, with magnets, for higher temp., for measurements on metal surfaces, TC Type K, Fixed cable		-50 to +400 °C	Class 2*		0602 4892
Pipe wrap probe with velcro strip; for temperature measurement on pipes with diameter up to max. 120 mm; Tmax. +120 °C; TC Type K, Fixed cable		-50 to +120 °C	Class 1*	90 s	0628 0020
Pipe wrap probe for pipe diameter 5 to 65 mm, with exchangeable measuring head. Meas. range short-term up to +280 °C, TC Type K, Fixed cable		-60 to +130 °C	Class 2*	5 s	0602 4592
Spare meas. head for pipe wrap probe, TC Type K		-60 to +130 °C	Class 2*	5 s	0602 0092
Clamp probe for measurements on pipes, pipe diameter 15 to 25 mm (max. 1"), meas. range short-term up to +130°C, TC Type K, Fixed cable		-50 to +100 °C	Class 2*	5 s	0602 4692

\*According to standard EN 60584-2, the accuracy of Class 1 refers to -40 to +1000 °C (Type K), Class 2 to -40 to +1200 °C (Type K), Class 3 to -200 to +40 °C (Type K)

# Infrared temperature measuring instrument

testo 831 – Infrared thermometer for distance measurements



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Non-contact measurement of surface temperature, ideally suitable for the food sector

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2-point laser measurement point marker and 30:1 optics

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Exact measurements even at greater distances

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Large measuring range from -30 to +210 °C

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Hold-function and display of min./max. values

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Two adjustable alarm limit values

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Also available as a set with the core thermometer testo 106

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The testo 831 is an infrared thermometer for distance measurement. Thanks to its 30:1 optics, the measurement point diameter is only 3.6 cm at a distance of 1 m. This allows smaller objects such as yoghurt pots to be conveniently measured at a distance. Thanks to a 2-point laser marker, the diameter of the measurement point is displayed exactly, avoiding measurement errors. At two measurements per second, the testo 831 is so fast that scans of palettes or refrigerated shelving can be carried out.

## Set testo 831 and testo 106

For certain temperature measurements in the food sector, it is necessary to carry out an additional core temperature measurement. For this purpose, Testo offers an economic set consisting of the testo 831 and the proven core thermometer testo 106.

## Technical data / Accessories

### testo 831

testo 831, infrared thermometer, 2-point laser sighting, 30:1 optics, leather case incl. belt holder, batteries and calibration protocol



Part no. 0560 8316

### Set with testo 831 and testo 106

Set with testo 831 and testo 106: infrared thermometer, leather case incl. belt holder, batteries and calibration protocol.

testo 106 penetration thermometer, incl. TopSafe, belt holder, incl. batteries



Part no. 0563 8315

#### Sensor type Infrared

Measurement parameter	°C / °F
Measuring range	-30 to +210 °C
Accuracy ±1 digit	±1,5 °C or ±1,5% of m.v. (-20 to +210 °C) ± 2 °C or ±2% of m.v. (remaining range)
Resolution	0,1 °C
Spectral range	8 to 14 µm

#### General technical data

Measurement rate	0,5 s
Distance to measurement spot Laser type 2-point laser	30:1 (typically at distance of 1.0 m from measurement object)
Emissivity	Adjustable 0.1 to 1.0
Operating temperature	-20 to +50 °C
Storage temperature	-40 to +70 °C
Battery type	9V block battery
Battery life	15 h
Display	Illuminated LCD
Protection class	IP30
Dimensions	190 x 75 x 38 mm
Weight	200 g
Standard	DIN EN 60825-1:2001-11 CE guideline 2004/108/EC
Housing	ABS

#### Accessories for measuring instrument

#### Part no.

ISO calibration certificate/temperature, infrared thermometers, calibration points -18°C, 0°C, +60°C	0520 0401	
ISO calibration certificate temperature, Infrared thermometers, calibration points 0°C, +60°C	0520 0452	
9V rech. battery for instrument, instead of battery	0515 0025	
Leather case to protect measuring instrument, including belt holder	0516 8302	

# Infrared thermometer

**testo 835 - fast, accurate  
infrared measuring instruments  
for trade and industry**

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Measure safely and accurately even at high temperatures

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4-point laser shows the exact measuring range, preventing incorrect measurements

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Safe measurements from a long distance, thanks to 50:1 optics

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Integrated emissivity measurement for absolute measuring reliability

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Patented surface moisture measurement (testo 835-H1)

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Convenient menu guidance with icons and joystick

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Measuring value and location memory, and data analysis on the PC with free PC software „EasyClimate“

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°C

%RH

Take advantage of the benefits the testo 835 series has to offer, in virtually all sectors of trade and industry: e.g. monitoring wall temperature and humidity, inspecting air conditioning and ventilation systems, the maintenance of industrial systems or the quality control of industrially manufactured products.

Testo infrared measuring technology, which delivers first-class results even at long distance, is particularly helpful when monitoring the temperature of objects that are small, moving, difficult to access or extremely hot. The many features increase the room for manoeuvre, for example in the building trade when carrying out surface moisture measurement via infrared, or in the metal, glass and ceramics industry when measuring temperatures up to 1500 °C. So you can be certain of having everything under control and of safeguarding your standards of quality at all times.

## Ordering data

### testo 835-T1 Get started in the field of intelligent infrared measuring technology

Maximum safety and precision when measuring the temperature of smaller objects from a reasonable distance, e.g. monitoring wall temperature, troubleshooting in heating and air conditioning systems, or the quality control of industrially manufactured products.

#### testo 835-T1

testo 835-T1, infrared temperature measuring instrument, 4-point laser marking, measurement data administration, incl. free download of PC software, batteries and calibration protocol

Part no. 0560 8351



### testo 835-T2 The pro when it comes to high temperatures

Measure precise temperatures of up to 1500 °C from a safe distance thanks to its extended temperature measuring range, e.g. when monitoring product temperature in the glass, ceramics and metal industry.

#### testo 835-T2

testo 835-T2, infrared high temperature measuring instrument, 4-point laser marking, measurement data administration, incl. free download of PC software, batteries and calibration protocol

Part no. 0560 8352



### testo 835-H1 Special instrument with integrated humidity module

Use its unique, patented infrared surface moisture measurement feature to detect the risk of mould in building fabrics early enough, measure humidity or check the dew point distance, for example.

#### testo 835-H1

testo 835-H1, infrared temperature measuring instrument, 4-point laser marking, measurement data administration, incl. free download of PC software, humidity module, batteries and calibration protocol

Part no. 0560 8353





# Technical data

	testo 835-T1	testo 835-T2	testo 835-H1
<b>Sensor type Infrared</b>			
Optics	50:1 (regarding the distance of 2.0 m to measuring object typically) + opening diameter of the sensor (24 mm)		
Meas. spot marking	4 point laser		
Spectral range	8 to 14 $\mu\text{m}$		
Measuring range	-30 to +600 °C	-10 to +1500 °C	-30 to +600 °C
Accuracy $\pm 1$ digit	$\pm 2,5$ °C (-30,0 to -20,1 °C) $\pm 1,5$ °C (-20,0 to -0,1 °C) $\pm 1,0$ °C (+0,0 to +99,9 °C) $\pm 1\%$ of m.v. (remaining range)	$\pm 2,0$ °C or $\pm 1\%$ of m.v.	$\pm 2,5$ °C (-30,0 to -20,1 °C) $\pm 1,5$ °C (-20,0 to -0,1 °C) $\pm 1,0$ °C (+0,0 to +99,9 °C) $\pm 1\%$ of m.v. (remaining range)
Resolution	0,1 °C	0,1 °C (-10,0 to +999,9 °C) 1 °C (+1000,0 to +1500,0 °C)	0,1 °C
<b>Sensor type Type K (NiCr-Ni)</b>			
Measuring range	-50 to +600 °C	-50 to +1000 °C	-50 to +600 °C
Accuracy $\pm 1$ digit	$\pm (-0.5$ °C +0.5% of m.v.)		
Resolution	0.1 °C		
<b>Sensor type Testo humid. sensor, cap.</b>			
Measuring range	-	-	0 to 100 %RH
Accuracy $\pm 1$ digit	-	-	$\pm 2$ %RH $\pm 0.5$ °C
Resolution	-	-	0.1 °C 0.1 %RH 0.1 °Ctd

## General technical data

Emissivity	0.10 to 1.00 (steps 0.01)
Emissivity table	20 values storable
Laser spot	On / off
Memory	200 values storable
Alarm (upper/lower limit)	IR temperature, TC temperature
Alarm signal	audible, optical
Operating temperature	-20 to +50 °C
Storage temperature	-30 to +50 °C
Housing material	ABS + PC
Dimensions	193 x 166 x 63 mm
Weight	514 g
Battery type	3 batteries Type AA (or USB operating with PC-Software)
Battery life	25 h (typical 25°C without laser and backlight) 10 h (typical 25°C without backlight)
Display	Dot matrix
Auto-Off (disabled for continuous measurement and USB connection)	Backlight: 30 s Instrument: 120 s
Standards	EN 61326-1:2006

# Accessories

Accessories	Part no.	
Bracket	0440 0950	
USB connection cable instrument to PC	0449 0047	
Adhesive tape, e.g. for reflective surfaces (roll, L.: 10 m, W.: 25 mm)	0554 0051	
Silicone heat paste (14g), Tmax = +260°C	0554 0004	
ISO calibration certificate/temperature; infrared thermometer; calibration points +60°C; +120°C; +180°C	0520 0002	
ISO calibration certificate/temperature; infrared thermometers, calibration points -18°C, 0°C, +60°C	0520 0401	
ISO calibration certificate/temperature; meas. instr. with air/immersion probe; cal. points 0°C; +150°C; +300°C	0520 0021	
Service case for measuring instrument, probe and accessories, dimensions 454 x 316 x 111 mm	0516 8451	
PC software testo EasyClimate for data analysis	0501 0485	

## Information on contact measurement

- Observe the minimum penetration depth for immersion/penetration probes: 10x probe diameter
- Avoid using in aggressive acids or alkalis

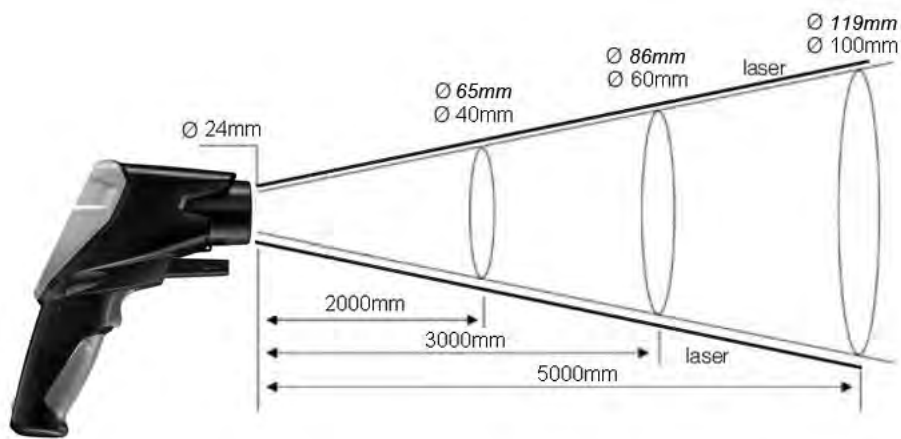
### Measuring range, distance

Depending on the distance of the measuring instrument from the measurement object, a specific measuring range is recorded.


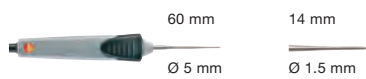
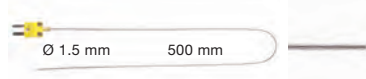
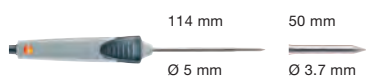
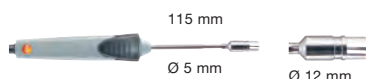

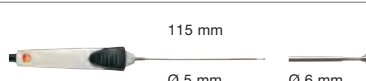

### Measuring lens (ratio of distance : measuring range)

In italics = laser

Not in italics = measuring range




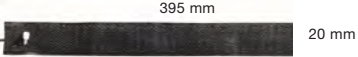



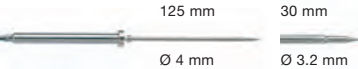


# Probes

Probe type	Dimensions Probe shaft/probe shaft tip	Measuring range	Accuracy	t <sub>99</sub>	Part no.
<b>Air probes</b>					
Robust air probe, T/C Type K, Fixed cable 1.2 m		-60 to +400 °C	Class 2 <sup>1)</sup>	200 s	0602 1793
<b>Immers./penetr. probes</b>					
Efficient and fast-action immersion probe, waterproof, TC Type K, Fixed cable 1.2 m		-60 to +1000 °C	Class 1 <sup>1)</sup>	2 s	0602 0593
Fast-action, waterproof immersion/penetration probe, TC Type K, Fixed cable 1.2 m		-60 to +800 °C	Class 1 <sup>1)</sup>	3 s	0602 2693
Immersion tip, flexible, TC Type K		-200 to +1000 °C	Class 1 <sup>1)</sup>	5 s	0602 5792
Waterproof immersion/penetration probe, TC Type K, Fixed cable 1.2 m		-60 to +400 °C	Class 2 <sup>1)</sup>	7 s	0602 1293
<b>Surface probes</b>					
Fast-action surface probe with sprung thermocouple strip, also for uneven surfaces, measurement range short-term to +500°C, TC Type K, Fixed cable 1.2 m		-60 to +300 °C	Class 2 <sup>1)</sup>	3 s	0602 0393
Fast-reaction paddle surface probe, for measurements in inaccessible places, e.g. narrow apertures and slots, TC Type K, Fixed cable		0 to +300 °C	Class 2 <sup>1)</sup>	5 s	0602 0193
Waterproof surface probe with widened measurement tip for flat surfaces, T/C Type K, Fixed cable 1.2 m		-60 to +400 °C	Class 2 <sup>1)</sup>	30 s	0602 1993
Fast-action surface probe with sprung thermocouple strip, bent, also for uneven surfaces, measurement range short-term to +500°C, TC Type K, Fixed cable 1.2 m		-60 to +300 °C	Class 2 <sup>1)</sup>	3 s	0602 0993
Efficient, waterproof surface probe with small measurement head for flat surfaces, TC Type K, Fixed cable 1.2 m		-60 to +1000 °C	Class 1 <sup>1)</sup>	20 s	0602 0693

1) According to norm EN 60751, the accuracy of Classes 1 / 2 refers to -40 to +1000/+1200 °C.

# Probes

Probe type	Dimensions Probe shaft/probe shaft tip	Measuring range	Accuracy	t <sub>99</sub>	Part no.
<b>Surface probes</b>					
Flat head surface probe with telescopic handle max. 680 mm for measurements at hard-to-access points, TC Type K, Fixed cable 1.6 m (correspondingly shorter when telescope extended)		-50 to +250 °C	Class 2 <sup>1)</sup>	3 s	0602 2394
Magnetic probe, adhesive force approx. 20 N, with magnets, for measurements on metal surfaces, TC Type K, Fixed cable 1.6 m		-50 to +170 °C	Class 2 <sup>1)</sup>		0602 4792
Magnetic probe, adhesive force approx. 10 N, with magnets, for higher temp., for measurements on metal surfaces, TC Type K, Fixed cable 1.6 m		-50 to +400 °C	Class 2 <sup>1)</sup>		0602 4892
Pipe wrap probe with velcro strip; for temperature measurement on pipes with diameter up to max. 120 mm; Tmax. +120 °C; TC Type K, Fixed cable 1.5 m		-50 to +120 °C	Class 1 <sup>1)</sup>	90 s	0628 0020
Pipe wrap probe for pipe diameter 5 to 65 mm, with exchangeable measuring head. Meas. range short-term up to +280 °C, TC Type K, Fixed cable 1.2 m		-60 to +130 °C	Class 2 <sup>1)</sup>	5 s	0602 4592
Spare meas. head for pipe wrap probe, TC Type K		-60 to +130 °C	Class 2 <sup>1)</sup>	5 s	0602 0092
Clamp probe for measurements on pipes, pipe diameter 15 to 25 mm (max. 1 <sup>1/4</sup> "), meas. range short-term up to +130°C, TC Type K, Fixed cable 1.2 m		-50 to +100 °C	Class 2 <sup>1)</sup>	5 s	0602 4692
<b>Food probes</b>					
Waterproof food probe made of stainless steel (IP65), TC Type K, Fixed cable 1.2 m		-60 to +400 °C	Class 2 <sup>1)</sup>	7 s	0602 2292

1) According to norm EN 60751, the accuracy of Classes 1 / 2 refers to -40 to +1000/+1200 °C.

## Thermal imager

**testo 865 –  
Switch on, aim, know more.**

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Infrared resolution 160 x 120 pixels  
testo SuperResolution to 320 x 240 pixels

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Automatic recognition of hot-cold spots

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The thermal imager testo 865 is the ideal entry into the world of thermography. It stands out thanks to the best image quality in its class and handy operation, is robust enough to withstand tough daily use, and has useful functions for even better thermal images.

And all this at a ground-breaking price-performance ratio. Switch on, aim, know more.



## Ordering data

**testo 865**

Thermal imager testo 865 with integrated testo SuperResolution, USB cable, mains unit, Lithium ion rechargeable battery, pro software (free download), quick-start guide, short instructions, calibration certificate and case

Order no. 0560 8650



Accessories	Order no.
Spare battery, additional Lithium ion rechargeable battery for extending the operating time.	0515 5107
Battery charger, desktop charging station for optimizing the charge time.	0554 1103
Emissivity tape, adhesive tape e.g. for bare surfaces (roll, L.: 10 m, W.: 25 mm), $\epsilon = 0.95$ , temperature-proof up to +250 °C.	0554 0051
Holster case	0554 7808
PC software testo IRSof for data analysis and reporting	0501 8809

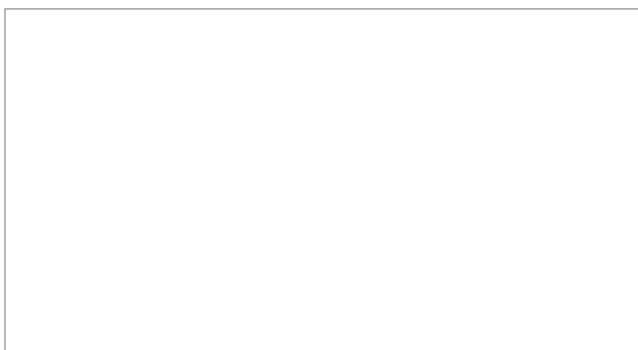
## Technical data

Infrared image output	
Infrared resolution	160 x 120 pixels
Thermal sensitivity (NETD)	120 mK
Field of view/min. focusing distance	31° x 23° / < 0.5 m
Geometric resolution (IFOV)	3.4 mrad
testo SuperResolution (Pixel/IFOV)	320 x 240 pixels / 2.1 mrad
Image refresh rate	9 Hz
Focus	Fixed focus
Spectral range	7.5 to 14 µm
Image presentation	
Image display	8.9 cm (3.5") TFT, QVGA (320 x 240 pixels)
Display options	IR image
Colour palettes	iron, rainbow HC, cold-hot, grey
Data interfaces	
USB 2.0 Micro B	✓
Measurement	
Measuring range	-20 to +280 °C
Accuracy	±2 °C, ±2 % of measurement value (larger value applies)
Emissivity / reflected temperature compensation	0.01 to 1 / manual
Measurement functions	
Analysis functions	Mean point measurement, hot/cold-spot recognition, Delta T,
testo ScaleAssist	✓
IFOV warner	✓

Imager equipment	
Lens	31° x 23°
Video streaming	via USB
Storage as JPG	✓
Fullscreen mode	✓
Image storage	
File format	.bmt and .jpg; export options in .bmp, .jpg, .png, .csv, .xls
Memory	Internal memory (2.8 GB)
Power supply	
Battery type	Li-ion battery can be changed on-site
Operating time	4 hours
Charging options	In instrument/in charging station (optional)
Mains operation	✓
Ambient conditions	
Operating temperature range	-15 to +50 °C
Storage temperature range	-30 to +60 °C
Air humidity	20 to 80 %RH, not condensing
Housing protection class (IEC 60529)	IP54
Vibration (IEC 60068-2-6)	2G
Physical features	
Weight	510 g
Dimensions (LxWxH)	219 x 96 x 95 mm
Housing	PC - ABS
PC software	
System requirements	Windows 10, Windows 8, Windows 7
Standards, tests	
EU directive	2014/30/EU

1981 4024/msp/1/08.2020

Subject to change without notice.



# Thermal imager

**testo 868 – smart and networked thermography.**

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Infrared resolution 160 x 120 pixels  
testo SuperResolution technology 320 x 240 pixels

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With testo Thermography App

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Integrated digital camera

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Automatic recognition of hot-cold spots

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testo ScaleAssist for comparable images in building thermography

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testo  $\epsilon$ -Assist for the automatic determination of emissivity

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testo Thermography App  
for free download



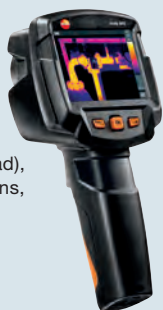
Thermography connected – with the thermal imager testo 868. It has the best thermal image quality in its class, an integrated digital camera, and stands out thanks to smart new features.

The testo Thermography App wirelessly integrates measurement values, turning your smartphone or tablet into a second display. In addition to this, you can operate the imager with the App as well as creating and sending reports on site.

## Ordering data

### testo 868

Thermal imager testo 868 with integrated testo SuperResolution, wireless LAN module, USB cable, mains unit, Lithium ion rechargeable battery, pro software (free download), 3 x  $\epsilon$ -markers, quick-start guide, short instructions, calibration certificate and case



Order no. 0560 8681

### testo Thermography App

With the testo Thermography App, your smartphone/tablet becomes a second display, and a remote control for your thermal imager. In addition to this, you can use the App to create and send compact reports on site, and to save them online. Download for Android or iOS now free of charge.



### Accessories

### Order no.

Spare battery, additional Lithium ion rechargeable battery for extending the operating time.	0515 5107	
Battery charger, desktop charging station for optimizing the charge time.	0554 1103	
testo $\epsilon$ -marker (10 off), markers for the testo $\epsilon$ -Assist function for the automatic determination of emissivity and reflected temperature.	0554 0872	
Holster case	0554 7808	
PC software testo IRSofT for data analysis and reporting	0501 8809	

### testo $\epsilon$ -Assist

For precise thermal images, it is important to set the emissivity ( $\epsilon$ ) and the reflected temperature of the object being examined in the imager. Previously, this was complicated, and with regard to the reflected temperature, less than accurate. This changes with testo  $\epsilon$ -Assist: Simply attach one of the reference stickers included in delivery to the measurement object. Via the integrated digital camera, the thermal imager recognizes the sticker, determines the emissivity and reflected temperature and sets both values automatically.

### testo ScaleAssist

Since the temperature scale and colouring of thermal images can be adapted individually, it is possible that the thermal behaviour of a building, for example, can be wrongly interpreted. The testo ScaleAssist function solves this problem by adjusting the colour distribution of the scale to the interior and exterior temperature of the measurement object and the difference between them. This ensures objectively comparable and error-free thermal images.



Thermal image without ScaleAssist



Thermal image with ScaleAssist

## Technical data

Infrared image output	
Infrared resolution	160 x 120 pixels
Thermal sensitivity (NETD)	100 mK
Field of view/min. focusing distance	31° x 23° / < 0.5 m
Geometric resolution (IFOV)	3.4 mrad
testo SuperResolution (Pixel/IFOV)	320 x 240 pixels 2.1 mrad
Image refresh rate	9 Hz
Focus	Fixed focus
Spectral range	7.5 to 14 µm
Visual image output	
Image size / min. focusing distance	at least 3.1 MP / 0.5 m
Image presentation	
Image display	8.9 cm (3.5") TFT, QVGA (320 x 240 pixels)
Display options	IR image / real image
Colour palettes	iron, rainbow HC, cold-hot, grey
Data interfaces	
WLAN Connectivity	Communication with the testo Thermography App wireless module WLAN (EU, EFTA, USA, AUS, CDN, TR)
USB 2.0 Micro B	✓
Measurement	
Measuring ranges	Measuring range 1: -30 to +100 °C Measuring range 2: 0 to +650 °C
Accuracy	±2 °C, ±2 % of measurement value (larger value applies)
Emissivity / reflected temperature compensation	0.01 to 1 / manual
testo e-Assist	Automatic recognition of emissivity and determination of reflected temperature (RTC)
Measurement functions	
Analysis functions	Mean point measurement, hot/cold-spot recognition, Delta T,
testo ScaleAssist	✓
IFOV warner	✓
Imager equipment	
Digital camera	✓
Lens	31° x 23°
Video streaming	via USB, via wireless LAN with testo Thermography App
Storage as JPG	✓
Fullscreen mode	✓

Image storage	
File format	.bmt and .jpg; export options in .bmp, .jpg, .png, .csv, .xls
Memory	Internal memory (2.8 GB)
Power supply	
Battery type	Li-ion battery can be changed on-site
Operating time	4 hours
Charging options	In instrument/in charging station (optional)
Mains operation	✓
Ambient conditions	
Operating temperature range	-15 to +50 °C
Storage temperature range	-30 to +60 °C
Air humidity	20 to 80 %RH, not condensing
Housing protection class (IEC 60529)	IP54
Vibration (IEC 60068-2-6)	2G
Physical features	
Weight	510 g
Dimensions (LxWxH)	219 x 96 x 95 mm
Housing	PC - ABS
PC software	
System requirements	Windows 10, Windows 8, Windows 7
Standards, tests	
EU directive	EMC: 2014/30/EU RED: 2014/53/EU

# Thermal imager

**testo 871 – smart thermography for professional demands.**

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Infrared resolution 240 x 180 pixels  
testo SuperResolution technology 480 x 360 pixels

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Thermal sensitivity 90 mK

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With testo Thermography App

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Integrated digital camera

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Wireless measurement data transfer from clamp meter  
testo 770-3 and humidity measuring instrument testo 605i

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testo ScaleAssist and testo  $\epsilon$ -Assist

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The thermal imager testo 871 offers a high-quality 240 x 180-pixel detector, connectivity via the testo Thermography App, as well as the innovative functions testo ScaleAssist and testo  $\epsilon$ -Assist, which enables objectively comparable and error-free thermal images to be recorded.

For even more meaningful thermal images, the thermal imager also wirelessly integrates the measurement values of the clamp probe testo 770-3 as well as the thermohygrometer testo 605i (both available as an option).



# Ordering data

**testo 871**





Thermal imager testo 871 with integrated testo SuperResolution, wireless module BT/wireless LAN, USB cable, mains unit, Lithium ion rechargeable battery, pro software (free download), 3 x  $\epsilon$ -markers, quick-start guide, short instructions, calibration certificate and case



Order no. 0560 8712

**testo Thermography App**

With the testo Thermography App, your smartphone/tablet becomes a second display, and a remote control for your thermal imager. In addition to this, you can use the App to create and send compact reports on site, and to save them online. Download for Android or iOS now free of charge.

Accessories	Order no.
Spare battery, additional Lithium ion rechargeable battery for extending the operating time.	0515 5107
Battery charger, desktop charging station for optimizing the charge time.	0554 1103
testo $\epsilon$ -marker (10 off), markers for the testo $\epsilon$ -Assist function for the automatic determination of emissivity and reflected temperature.	0554 0872
Holster case	0554 7808
PC software testo IRSofT for data analysis and reporting	0501 8809
ISO calibration certificate, calibration points at 0 °C, +25 °C, +50 °C	0520 0489
ISO calibration certificate, calibration points at 0 °C, +100 °C, +200 °C	0520 0490
ISO calibration certificate, freely selectable calibration points in the range -18 to +250 °C	0520 0495

Compatible measuring instruments for more meaningful thermal images	Order no.
<p><b>testo 605i thermohygrometer</b> with smartphone operation, including batteries and calibration protocol</p> <ul style="list-style-type: none"> <li>• Measurement of air humidity and air temperature</li> <li>• Transmission of measurement values to the testo 871 thermal imager via Bluetooth, and identification of mould-risk areas using a traffic-light system</li> </ul>	0560 2605 02
<p><b>testo 770-3 clamp meter</b> including batteries and 1 set of measuring cables</p> <ul style="list-style-type: none"> <li>• Easy to operate thanks to the fully retractable pincer arm</li> <li>• Auto AC/DC and large two-line display</li> <li>• Transmission of measurement values to the testo 871 thermal imager via Bluetooth</li> </ul>	0590 7703

### testo $\epsilon$ -Assist

For precise thermal images, it is important to set the emissivity ( $\epsilon$ ) and the reflected temperature of the object being examined in the imager. Previously, this was complicated, and with regard to the reflected temperature, less than accurate. This changes with testo  $\epsilon$ -Assist: Simply attach one of the reference stickers included in delivery to the measurement object. Via the integrated digital camera, the thermal imager recognizes the sticker, determines the emissivity and reflected temperature and sets both values automatically.

### testo ScaleAssist

Since the temperature scale and colouring of thermal images can be adapted individually, it is possible that the thermal behaviour of a building, for example, can be wrongly interpreted. The testo ScaleAssist function solves this problem by adjusting the colour distribution of the scale to the interior and exterior temperature of the measurement object and the difference between them. This ensures objectively comparable and error-free thermal images.



Thermal image without ScaleAssist



Thermal image with ScaleAssist



## Technical data

Infrared image output	
Infrared resolution	240 x 180 pixels
Thermal sensitivity (NETD)	90 mK
Field of view/min. focusing distance	35° x 26° / < 0.5 m
Geometric resolution (IFOV)	2.6 mrad
testo SuperResolution (Pixel/IFOV)	480 x 360 pixels 1.6 mrad
Image refresh rate	9 Hz
Focus	Fixed focus
Spectral range	7.5 to 14 µm
Visual image output	
Image size / min. focusing distance	at least 3.1 MP / 0.5 m
Image presentation	
Image display	8.9 cm (3.5") TFT, QVGA (320 x 240 pixels)
Display options	IR image / real image
Colour palettes	iron, rainbow HC, cold-hot, grey
Data interfaces	
WLAN Connectivity	Communication with the testo Thermography App
Bluetooth <sup>1)</sup>	Measurement value transfer from thermohygrometer testo 605i, clamp meter testo 770-3 (optional)
USB 2.0 Micro B	✓
Measurement	
Measuring ranges	Measuring range 1: -30 to +100 °C Measuring range 2: 0 to +650 °C
Accuracy	±2 °C, ±2 % of measurement value (larger value applies)
Emissivity / reflected temperature compensation	0.01 to 1 / manual
testo e-Assist	Automatic recognition of emissivity and determination of reflected temperature (RTC)
Measurement functions	
Analysis functions	Mean point measurement, hot/cold-spot recognition, Delta T,
testo ScaleAssist	✓
IFOV warner	✓
Humidity mode – manual	✓
Humidity measurement with humidity measuring instrument <sup>1)</sup>	Automatic measurement value transfer of thermohygrometer testo 605i via Bluetooth (instrument must be ordered separately)
Solar mode – manual	Input of solar radiation value
Electrical mode – manual	Input of current, voltage or power
Electrical measurement with clamp meter <sup>1)</sup>	Automatic measurement value transfer of clamp meter testo 770-3 via Bluetooth (instrument must be ordered separately)

Imager equipment	
Digital camera	✓
Lens	35° x 26°
Video streaming	via USB, via wireless LAN with testo Thermography App
Storage as JPG	✓
Fullscreen mode	✓
Image storage	
File format	.bmt and .jpg; export options in .bmp, .jpg, .png, .csv, .xls
Memory	Internal memory (2.8 GB)
Power supply	
Battery type	Li-ion battery can be changed on-site
Operating time	4 hours
Charging options	In instrument/in charging station (optional)
Mains operation	✓
Ambient conditions	
Operating temperature range	-15 to +50 °C
Storage temperature range	-30 to +60 °C
Air humidity	20 to 80 %RH, not condensing
Housing protection class (IEC 60529)	IP54
Vibration (IEC 60068-2-6)	2G
Physical features	
Weight	510 g
Dimensions (LxWxH)	219 x 96 x 95 mm
Housing	PC - ABS
PC software	
System requirements	Windows 10, Windows 8, Windows 7
Standards, tests	
EU directive	EMC: 2014/30/EU RED: 2014/53/EU

<sup>1)</sup> Wireless permit in EU, EFTA, USA, Canada, Australia, Turkey

# Thermal imager

**testo 872 – Smart thermography with the highest image quality.**

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Infrared resolution 320 x 240 pixels  
testo SuperResolution technology 640 x 480 pixels

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Thermal sensitivity 60 mK

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With testo Thermography App

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Integrated digital laser marker

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Wireless measurement data transfer from clamp meter  
testo 770-3 and humidity measuring instrument testo 605i

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testo ScaleAssist and testo  $\epsilon$ -Assist

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The testo 872 thermal imager stands out thanks to its resolution of 320 x 240 pixels, an excellent thermal sensitivity, numerous innovative functions, smartphone connection via the testo Thermography App and the best price-performance ratio of its class.

For even more meaningful thermal images, the thermal imager testo 872 also wirelessly integrates the measurement values of the clamp probe testo 770-3 as well as the thermohygrometer testo 605i (both available as an option).

# Ordering data

**testo 872**





Thermal imager testo 872 with integrated testo SuperResolution, wireless module BT/wireless LAN, USB cable, mains unit, Lithium ion rechargeable battery, pro software (free download), 3 x  $\epsilon$ -markers, quick-start guide, short instructions, calibration certificate and case



Order no. 0560 8721

**testo Thermography App**

With the testo Thermography App, your smartphone/tablet becomes a second display, and a remote control for your thermal imager. In addition to this, you can use the App to create and send compact reports on site, and to save them online. Download for Android or iOS now free of charge.

Accessories	Order no.
Spare battery, additional Lithium ion rechargeable battery for extending the operating time.	0515 5107
Battery charger, desktop charging station for optimizing the charge time.	0554 1103
testo $\epsilon$ -marker (10 off), markers for the testo $\epsilon$ -Assist function for the automatic determination of emissivity and reflected temperature.	0554 0872
Holster case	0554 7808
PC software testo IRSoft for data analysis and reporting	0501 8809
ISO calibration certificate, calibration points at 0 °C, +25 °C, +50 °C	0520 0489
ISO calibration certificate, calibration points at 0 °C, +100 °C, +200 °C	0520 0490
ISO calibration certificate, freely selectable calibration points in the range -18 to +250 °C	0520 0495

Compatible measuring instruments for more meaningful thermal images	Order no.
<p><b>testo 605i thermohygrometer</b> with smartphone operation, including batteries and calibration protocol</p> <ul style="list-style-type: none"> <li>• Measurement of air humidity and air temperature</li> <li>• Transmission of measurement values to the testo 872 thermal imager via Bluetooth, and identification of mould-risk areas using a traffic-light system</li> </ul>	0560 2605 02
<p><b>testo 770-3 clamp meter</b> including batteries and 1 set of measuring cables</p> <ul style="list-style-type: none"> <li>• Easy to operate thanks to the fully retractable pincer arm</li> <li>• Auto AC/DC and large two-line display</li> <li>• Transmission of measurement values to the testo 872 thermal imager via Bluetooth</li> </ul>	0590 7703

## testo $\epsilon$ -Assist

For precise thermal images, it is important to set the emissivity ( $\epsilon$ ) and the reflected temperature of the object being examined in the imager. Previously, this was complicated, and with regard to the reflected temperature, less than accurate. This changes with testo  $\epsilon$ -Assist: Simply attach one of the reference stickers included in delivery to the measurement object. Via the integrated digital camera, the thermal imager recognizes the sticker, determines the emissivity and reflected temperature and sets both values automatically.

## testo ScaleAssist

Since the temperature scale and colouring of thermal images can be adapted individually, it is possible that the thermal behaviour of a building, for example, can be wrongly interpreted. The testo ScaleAssist function solves this problem by adjusting the colour distribution of the scale to the interior and exterior temperature of the measurement object and the difference between them. This ensures objectively comparable and error-free thermal images.



Thermal image without ScaleAssist



Thermal image with ScaleAssist

# Technical data

Infrared image output	
Infrared resolution	320 x 240 pixels
Thermal sensitivity (NETD)	60 mK
Field of view/min. focusing distance	42° x 30° / < 0.5 m
Geometric resolution (IFOV)	2.3 mrad
testo SuperResolution (pixels/IFOV)	640 x 480 pixels 1.3 mrad
Image refresh rate	9 Hz
Focus	Fixed focus
Spectral range	7.5 to 14 µm
Visual image output	
Image size / min. focusing distance	at least 3.1 MP / 0.5 m
Image presentation	
Image display	8.9 cm (3.5") TFT, QVGA (320 x 240 pixels)
Digital zoom	2x, 4x
Display options	IR image / real image
Colour palettes	iron, rainbow, rainbow HC, cold-hot, blue-red, grey, inverted grey, sepia, Testo, iron HT
Data interfaces	
WLAN Connectivity	Communication with the testo Thermography App
Bluetooth <sup>1)</sup>	Measurement value transfer from thermohygrometer testo 605i, clamp meter testo 770-3 (optional)
USB 2.0 Micro B	✓
Measurement	
Measuring ranges	Measuring range 1: -30 to +100 °C Measuring range 2: 0 to +650 °C
Accuracy	±2 °C, ±2 % of measurement value (larger value applies)
Emissivity / reflected temperature compensation	0.01 to 1 / manual
testo ε-Assist	Automatic recognition of emissivity and determination of reflected temperature (RTC)
Measurement functions	
Analysis functions	Mean point measurement, hot/cold-spot recognition, Delta T, area measurement (min-max on area)
testo ScaleAssist	✓
IFOV warner	✓
Humidity mode – manual	✓
Humidity measurement with humidity measuring instrument <sup>1)</sup>	Automatic measurement value transfer of thermohygrometer testo 605i via Bluetooth (instrument must be ordered separately)
Solar mode – manual	Input of solar radiation value
Electrical mode – manual	Input of current, voltage or power
Electrical measurement with clamp meter <sup>1)</sup>	Automatic measurement value transfer of clamp meter testo 770-3 via Bluetooth (instrument must be ordered separately)

Imager equipment	
Digital camera	✓
Lens	42° x 30°
Laser <sup>2)</sup>	Laser class 2
Video streaming	via USB, via wireless LAN with testo Thermography App
Storage as JPG	✓
Fullscreen mode	✓
Image storage	
File format	.bmt and .jpg; export options in .bmp, .jpg, .png, .csv, .xls
Memory	Internal memory (2.8 GB)
Power supply	
Battery type	Li-ion battery can be changed on-site
Operating time	4 hours
Charging options	In instrument/in charging station (optional)
Mains operation	✓
Ambient conditions	
Operating temperature range	-15 to +50 °C
Storage temperature range	-30 to +60 °C
Air humidity	20 to 80 %RH, not condensing
Housing protection class (IEC 60529)	IP54
Vibration (IEC 60068-2-6)	2G
Physical features	
Weight	510 g
Dimensions (LxWxH)	219 x 96 x 95 mm
Housing	PC - ABS
PC software	
System requirements	Windows 10, Windows 8, Windows 7
Standards, tests	
EU directive	EMC: 2014/30/EU RED: 2014/53/EU

<sup>1)</sup> Wireless permit in EU, EFTA, USA, Canada, Australia, Turkey

<sup>2)</sup> excepting USA, China and Japan

# Thermal imager

Your helping hand:  
The testo 883 thermal imager.

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Best image quality: IR resolution of 320 x 240 pixels  
(with SuperResolution 640 x 480 pixels); NETD < 40 mK

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Helpful features: testo SiteRecognition intelligent image  
management and testo ScaleAssist automatic contrast  
adjustment

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Extensive analysis and documentation:  
With the intuitive professional software testo IRSoft

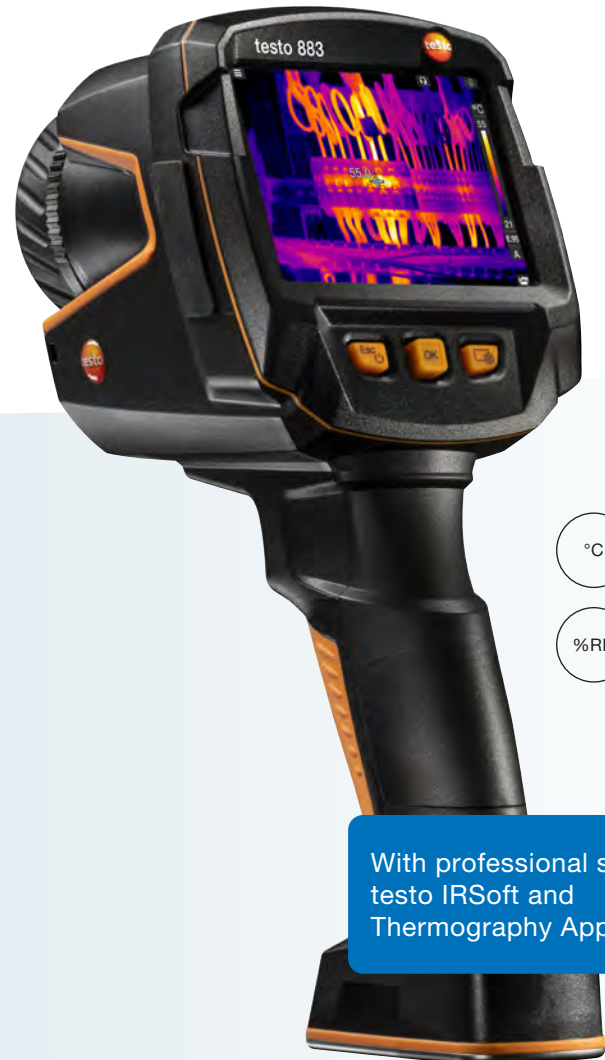
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Full control: Manual focus and interchangeable lenses

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Wireless transmission: Integrate readings from clamp meter  
or humidity probe directly into the thermal image

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With professional software  
testo IRSoft and  
Thermography App included

The testo 883 thermal imager was developed especially for maintenance staff, facility managers and building energy consultants who wish to rely on the best thermal image quality and helpful features for their thermal measuring tasks. This saves time and ensures flawless work results.

**In facility management and maintenance,** testo SiteRecognition technology really pays off. This feature automatically assigns thermal images (e.g. of switching cabinets) to the correct measurement object, thus eliminating the need for tedious manual image management.

**In building energy consulting,** many experts appreciate the professional software testo IRSoft, which is included with the testo 883. With this, not only can thermal images be comprehensively analyzed, they can also be summarized in impressive-looking reports. This reduces the time required and makes it easier to impress customers over the long term.



## Order data

**testo 883**

testo 883 thermal imager with standard lens 30° x 23°, USB-C cable, USB mains unit, Li-ion rechargeable battery, carrying strap, Bluetooth® headset (depending on the country), short instructions, calibration protocol, professional software IRSoft (free download), in a case



Order no. 0560 8830

**testo 883 kit**

testo 883 thermal imager with standard lens 30° x 23°, telephoto lens 12° x 9°, USB-C cable, USB mains unit, Li-ion rechargeable battery, spare battery, battery-charging station with USB cable, carrying strap, Bluetooth® headset (depending on the country), short instructions, calibration protocol, professional software IRSoft (free download), in a case



Order no. 0563 8830

Compatible measuring instruments for more meaningful thermal images	Order no.
testo 605i thermohygrometer with smartphone operation, including batteries and calibration protocol	0560 2605 02
testo 770-3 clamp meter including batteries and 1 set of measuring cables	0590 7703
Accessories	Order no.
Telephoto lens 12° x 9°	*
Spare battery, additional Li-ion rechargeable battery for extending the operating time.	0554 8831
Battery-charging station, desktop charging station for optimizing the charge time.	0554 8801
Lens protection glass, Special germanium protective glass for optimum protection of the lens against dust or scratching	0554 8805
testo ε-marker (10 off), markers for the testo ε-Assist function for the automatic determination of emissivity and reflected temperature.	0554 0872
Emission tape. Adhesive tape e.g. for bare surfaces (roll, L.: 10 m, W.: 25 mm), ε = 0.95, temperature-resistant up to +250 °C	0554 0051
PC software testo IRSoft for analysis and reporting (free download)	
ISO calibration certificate, calibration points at 0 °C, +25 °C, +50 °C	0520 0489
ISO calibration certificate, calibration points at 0 °C, +100 °C, +200 °C	0520 0490
ISO calibration certificate, freely selectable calibration points in the range -18 to +250 °C	0520 0495

\* Please contact our customer service.


**PC software testo IRSoft**

With testo IRSoft, you can conveniently process and analyze infrared images on your PC. Extensive investigative functions are available for professional thermal image processing.

The software can be downloaded free of charge from [www.testo.com/irsoft](http://www.testo.com/irsoft).

**testo Thermography App**

With the testo Thermography App, your smartphone/tablet becomes a second display, and a remote control for your thermal imager. In addition to this, you can use the App to create and send compact reports on site, and to save them online. Download for Android or iOS now free of charge.



### testo SiteRecognition

The testo SiteRecognition technology ensures fully automatic measuring location recognition, along with storage and management of thermal images resulting from measurements or inspections. This saves you a lot of time and stress, particularly if you take a lot of pictures of similar measurement objects.

### testo ScaleAssist

With testo ScaleAssist, the correct evaluation of construction errors and thermal bridges is easier than ever before. The function automatically sets the optimum thermal image scale. This prevents interpretation errors and makes infrared images comparable in spite of altered ambient conditions.



## Technical data

Infrared image output	
Infrared resolution	320 x 240 pixels
Thermal sensitivity (NETD)	< 40 mK
Field of view/min. focusing distance	30° x 23° (standard lens) 12° x 9° (telephoto lens) < 0.1 m (standard lens)
Geometric resolution (IFOV)	1.7 mrad (standard lens) 0.7 mrad (telephoto lens)
testo SuperResolution (pixels/IFOV)	640 x 480 pixels 1.3 mrad
Image refresh rate	27 Hz <sup>1)</sup>
Focus	Manual
Spectral range	7.5 to 14 µm
Visual image output	
Image size / min. focusing distance	3 MP / < 0.4 m
Image presentation	
Image display	8.9 cm (3.5") TFT, QVGA (320 x 240 pixels)
Digital zoom	2x, 4x
Display options	IR image / real image
Colour palettes	iron, rainbow, rainbow HC, cold-hot, blue-red, grey, inverted grey, sepia, Testo, iron HT, humidity palette
Data interface	
WLAN Connectivity	Communication with the testo Thermography App; Wireless module BT <sup>2)</sup> /WLAN
Bluetooth <sup>2)</sup>	Headset for voice annotations; transfer of readings from testo 605i thermohygrometer, testo 770-3 clamp meter (optional)
USB	USB-C, USB 2.0
Measurement	
Measuring range	-30 to +650 °C
Accuracy	±2 °C, ±2% of the reading (higher value applies)
Emissivity/reflected temperature adjustment	0.01 to 1 / manual
testo e-Assist	Automatic recognition of emissivity and determination of reflected temperature (RTC)
Measuring functions	
Analysis functions	Up to 5 selectable individual measuring points, hot/cold spot detection, Delta T, area measurement (min/max on area), alarms, isotherm
testo SiteRecognition	✓
testo ScaleAssist	✓
IFOV warner	✓
Humidity mode – manual	✓
Humidity measurement with humidity measuring instrument <sup>2)</sup>	Automatic data transfer of testo 605i thermohygrometer via Bluetooth (instrument must be ordered separately)
Solar mode – manual	Input of solar radiation value
Electrical mode – manual	Input of current, voltage or power
Electrical measurement with clamp meter <sup>2)</sup>	Automatic data transfer of testo 770-3 clamp meter via Bluetooth (instrument must be ordered separately)

Imager features	
Touch operation	capacitive touch display
Digital camera	✓
Laser <sup>3)</sup>	Laser marker (laser class 2, 635 nm)
Video streaming	via USB, via WLAN with testo Thermography App
Storage as JPG	✓
Fullscreen mode	✓
Tripod socket	for wrist strap or a photo tripod with UNC thread
Image storage	
File format	.bmt and .jpg; export options in .bmp, .jpg, .png, .csv, .xls
Memory	internal memory (2.8 GB)
Voice annotation	
	✓ <sup>2)</sup>
Power supply	
Battery type	Fast-charging, Li-ion battery can be changed on site
Operating time	≥ 5 hours
Charging options	In instrument/in charging station (optional)
Mains operation	✓
Ambient conditions	
Operating temperature range	-15 to +50 °C
Storage temperature range	-30 to +60 °C
Air humidity	20 to 80 %RH, non-condensing
Housing protection class (IEC 60529)	IP54
Vibration (IEC 60068-2-6)	2G
Physical features	
Weight	827 g
Dimensions (LxWxH)	171 x 95 x 236 mm
Housing	PC - ABS
PC software	
System requirements	Windows 10, Windows 8, Windows 7
Standards, tests	
EU guidelines	EMC: 2014/30/EU RED: 2014/53/EU WEEE: 2012/19/EU RoHS: 2011/65/EU + 2015/863 REACH: 1907/2006

<sup>1)</sup> Inside the EU, outside 9 Hz

<sup>2)</sup> An overview of radio authorizations in the different countries can be found in the download section of the respective product page ([www.testo.com](http://www.testo.com)).

<sup>3)</sup> excepting USA, China and Japan

# Thermal imager

## testo 890 – Thermography for the highest demands

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Infrared resolution 640 x 480 pixels  
testo SuperResolution technology to 1280 x 960 pixels

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Thermal sensitivity < 40 mK

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Flexibility thanks to rotatable handle and fold-out, rotatable display

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Exchangeable lenses

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Special measurement mode for mould-risk areas

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High temperature measurement up to 1,200 °C

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Panorama image assistant

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SiteRecognition technology

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Fully radiometric video measurement and image sequence capturing

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°C

%RH

The thermal imager testo 890 offers outstanding image quality for the highest thermographic demands. Thanks to the high-quality infrared measurement system with a 640 x 480-pixel detector, thermal images can be recorded in megapixel quality (1290 x 960) using the SuperResolution technology. This means that even the smallest measurement objects such as electronic components or far distant

measurement objects, e.g. on industrial plants, can be safely recorded thermographically in best image quality and high resolution. Even thermal processes can be precisely analyzed over time using the fully radiometric video measurement: all measurement points of the thermal image are available, accurate to the pixel, at all times.

## Ordering data

testo 890 thermal imagers	Part no.
testo 890 thermal imager with integrated testo SuperResolution and one lens (choice between 42° standard lens, 25° lens and 15° telephoto lens) in a robust case, including pro software (free download), SD card, USB cable, carrying strap, lens-cleaning cloth, mains unit, Li-ion rechargeable battery and headset	0563 0890 X1
Thermal imager testo 890 with integrated testo SuperResolution and super-telephoto lens in a robust case incl. pro software (free download), SD card, USB cable, carrying strap, lens-cleaning cloth, mains unit, Li ion rech. battery, headset	0563 0890 X4

testo 890 sets with your selection of lenses	Part no.
testo 890 thermal imager with integrated testo SuperResolution in a robust case, including pro software (free download), SD card, USB cable, carrying strap, lens-cleaning cloth, mains unit, Li-ion rechargeable battery, lens protection glass, spare rechargeable battery, fast charger, headset and lens case. Choice between 42° standard lens, 25° lens and/or 15° telephoto lens	
testo 890 set with two lenses – see above for further set components	0563 0890 X2
testo 890 set with three lenses – see above for further set components	0563 0890 X3
testo 890 set with SuperTele and one lens – see above for further set components	0563 0890 X5
testo 890 set with SuperTele and two lenses – see above for further set components	0563 0890 X6



## Accessories

	Code <sup>1)</sup> (Initial equipment)	Part no. (Retrofit)
SuperResolution. Four times more measurement values for even more detailed analysis of the thermal images	included in delivery	0554 7806
Lens protection glass. Special Germanium protection glass for optimum protection of the lens from dust and scratching	F1	0554 0289
Additional battery. Additional lithium-ion rechargeable battery for extending the operating time.	G1	0554 8852
Fast battery charger. Desktop charging station for two rechargeable batteries for the optimization of the charging time.	H1	0554 8851
High temperature measurement up to +1,200 °C	I1	<sup>2)</sup>
Humidity measurement <sup>3)</sup>	E1	<sup>2)</sup>
Telephoto lens 15° x 11°	D1	<sup>2)</sup>
25° Lens	O1	<sup>2)</sup>
Super-telephoto lens 6.6° x 5°	T2	<sup>2)</sup>
Process analysis package: image sequence capturing in instrument and fully radiometric video measurement	V1	0554 8902
FeverDetection	J1	–
Emission adhesive tape. Adhesive tape, e.g. for reflective surfaces (roll, L.: 10 m, W.: 25 mm), ε = 0.95, temperature resistant to +250 °C		0554 0051
PC software testo IRSof for data analysis and reporting		0501 8809
ISO calibration certificates; Calibration points at 0 °C, +25 °C, +50 °C		0520 0489 <sup>4)</sup>
ISO calibration certificates; Calibration points at 0 °C, +100 °C, +200 °C		0520 0490 <sup>4)</sup>
ISO calibration certificates; Freely selectable calibration points in the range -18 to +250 °C		0520 0495 <sup>4)</sup>

<sup>1)</sup> When ordering as first equipment, you receive the accessories directly in the case.  
Example: testo 890 incl. lens protection glass and SuperResolution:  
Order no. 0563 0890 X1 F1 S1

<sup>2)</sup> Please contact our customer service

<sup>3)</sup> Wireless humidity probes only in the EU, Norway, Switzerland, USA, Canada, Colombia, Turkey, Brazil, Chile, Mexico, New Zealand, Indonesia.

<sup>4)</sup> Per lens

<sup>5)</sup> Plus installation

# Technical data

Infrared image output	
Infrared resolution	640 x 480 pixels
Thermal sensitivity (NETD)	< 40 mK at +30 °C
Field of view/min. focus distance (Lens version)	42° x 32° / 0.1 m (Standard) 25° x 19° / 0.2 m (25° Lens) 15° x 11° / 0.5 m (Telephoto) 6.6° x 5° / 2 m (Super-telephoto)
Geometric resolution (IFOV) (Lens version)	1.13 mrad (Standard) 0.68 mrad (25° Lens) 0.42 mrad (Telephoto) 0.18 mrad (Super-telephoto)
SuperResolution (pixel / IFOV) (Lens version)	1280 x 960 pixels / 0.71 mrad (Standard) 1280 x 960 pixels / 0.43 mrad (25° Lens) 1280 x 960 pixels / 0.26 mrad (Telephoto) 1280 x 960 pixels / 0.11 mrad (Super-telephoto)
Image refresh rate	33 Hz*
Focus	auto / manual
Spectral range	7.5 to 14 µm
Image output visual	
Image size / min. focus distance	3.1 MP / 0.5 m
Image presentation	
Image display	4.3" LCD touchscreen with 480 x 272 pixels
Digital zoom	1- to 3-fold
Display options	IR / real image
Video output	USB 2.0, Micro HDMI
Colour palettes	9 (iron, rainbow, rainbow HC, cold-hot, blue-red, grey, inverted grey, sepia, Testo)
Measurement	
Measuring range	-30 to +100 °C / 0 to +350 °C (switchable) 0 to +650 °C (switchable)
Accuracy	±2 °C, ±2 % of measurement value (larger value applies) (±3 °C of m.v. at -30 to -22 °C)
High temperature measurement - optional Accuracy	+350 to +1200 °C (not in connection with the super-telephoto lens) ±2 °C, ±2 % of m.v.
Emissivity / reflected temperature	0.01 to 1 / manual
Transmission correction (atmosphere)	✓
Measuring functions	
Display of surface moisture distribution (using manual input)	✓
Humidity measurement with radio humidity probe (automatic measurement value transfer in real time)**	(✓)
Solar mode	✓
Analysis function	up to 10 measurement points, Hot/Cold Spot Recognition, up to 5 x area measurement (min/max & average), Isotherm and alarm values

\* inside the EU, outside 9 Hz

\*\* Wireless humidity probes only in the EU, Norway, Switzerland, USA, Canada, Colombia, Turkey, Brazil, Chile, Mexico, New Zealand, Indonesia

\*\*\* excepting USA, China and Japan

\*\*\*\* Bluetooth only in the EU, Norway, Switzerland, USA, Canada, Colombia, Turkey, Japan, Russia, Ukraine, India, Australia

Imager equipment	
Digital camera	✓
Lens version	42° x 32° (Standard) 25° x 19° (25° Lens) 15° x 11° (Telephoto) 6.6° x 5° (Super-telephoto)
SiteRecognition (measurement site recognition with image management)	✓
Panorama image assistant	✓
Laser (laser classification 635 nm, Class 2)***	Laser marker
Voice recording	Bluetooth****/wired headset
Video measurement (via USB)	up to 3 measurement points
Process analysis package: image sequence capturing in instrument and fully radiometric video measurement	(✓)
FeverDetection	(✓)
Interface	LabVIEW, interface description download on the Testo homepage
Image storage	
File format single image	.bmt; Exportmöglichkeit in .bmp, .jpg, .png, .csv, .xls
File format video (via USB)	.wmv, .mpeg-1 / Testo format (fully radiometric video)
Storage device	SD cart 2GB (approx. 1500 - 2000 images)
Power supply	
Battery type	Fast-charging, Li-ion battery can be changed on-site
Operating time	4.5 hours
Charging options	in instrument / in charger (optional)
Mains operation	✓
Ambient conditions	
Operating temperature range	-15 °C to +50 °C
Storage temperature range	-30 to +60 °C
Air humidity	20 to 80 % RH non-condensing
Housing protection class (IEC 60529)	IP54
Vibration (IEC 60068-2-6)	2G
Physical specifications	
Weight	1630 g
Dimensions (L x W x H)	253 x 132 x 111 mm
Tripod mounting	1/4" - 20UNC
Housing	ABS
PC software	
System requirements	Windows 10, Windows Vista, Windows 7 (Service Pack 1), Windows 8, interface USB 2.0
Standards, tests	
EU Directive	2004 / 108 / EC
✓ included in delivery	(✓) optional

## Overview of variants

Features	testo 890	testo 890 Set
Infrared resolution	640 x 480 pixels	
Thermal sensitivity (NETD)	< 40 mK	
Measuring range	-30 to +650 °C	
Image refresh rate	33 Hz*	
SuperResolution	✓	✓
25° x 19° Lens	(✓)	(✓)
Telephoto lens 15° x 11° *****	(✓)	✓
Super-telephoto lens 6.6° x 5° *****	(✓)	✓
Auto focus	✓	✓
High temperature measurement up to 1,200 °C	(✓)	(✓)
Panorama image assistant	✓	✓
SiteRecognition (measurement site recognition with image management)	✓	✓
Laser marker**	✓	✓
Display of surface moisture distribution (by manual input)	✓	✓
Humidity measurement with wireless humidity probe*** (automatic measurement value transfer in real time)	(✓)	(✓)
HDMI interface	✓	✓
FeverDetection	(✓)	(✓)
Process analysis package: image sequence capturing in instrument and fully radiometric video measurement	(✓)	(✓)
Voice recording using the headset*****	✓	✓
Solar mode	✓	✓
Lens protection glass	(✓)	✓
Additional battery	(✓)	✓
Fast battery charger	(✓)	✓

✓ included in delivery  
(✓) optional

\* inside the EU, outside 9 Hz  
 \*\* excepting USA, China and Japan  
 \*\*\* Wireless humidity probes only in the EU, Norway, Switzerland, USA, Canada, Colombia, Turkey, Brazil, Chile, Mexico, New Zealand, Indonesia  
 \*\*\*\* Bluetooth only in the EU, Norway, Switzerland, USA, Canada, Colombia, Turkey, Japan, Russia, Ukraine, India, Australia  
 \*\*\*\*\* depending on the selected set

# Thermal imager

## testo 890 FeverDetection kit

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testo FeverDetection function for identifying increased surface temperatures on faces

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Infrared resolution 640 x 480 pixels

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Very good thermal sensitivity of  $< 40 \text{ mK}$  ( $< 0.04 \text{ }^\circ\text{C}$ )

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Optical and audible alarms

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HDMI interface for transmission to an external monitor

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$^\circ\text{C}$

With the thermal imager testo 890, body surface temperatures of individual persons can be measured quickly and reliably at heavily frequented facilities such as airports, railway stations or shopping centres.

The testo FeverDetection function in the thermal imager testo 890 can identify the relative body surface temperature of persons, or more accurately the temperature difference between “healthy” people (with a normal body temperature) and “potentially ill” people (with increased body temperature).

The surface temperature of the face is automatically recorded at the warmest spot in the face (usually the inner corner of the eye), and an alarm is triggered if it exceeds a certain threshold value. This allows those with an elevated body surface temperature to be identified quickly and reliably, and to be isolated for a precise medical examination.



# Order data / Technical data

## testo 890 FeverDetection kit

testo 890 thermal imager with testo FeverDetection function in a robust case, including professional software (free download), SD card, USB cable, carrying strap, lens-cleaning cloth, mains unit, Li-ion rechargeable battery and headset

Order no. 0563 0890 X7



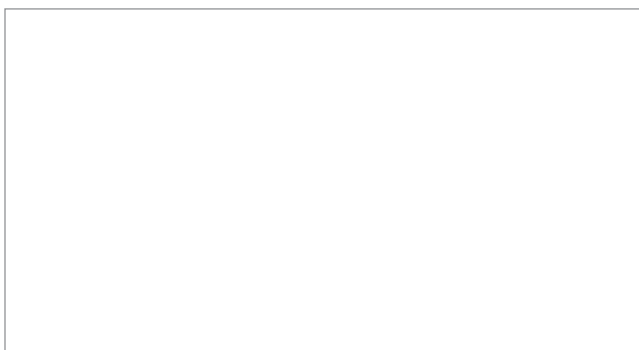
1981 4064/msp/1/06.2020

Infrared image output	
Infrared resolution	640 x 480 pixels
Thermal sensitivity (NETD)	< 40 mK at +30 °C
Field of view / min. focusing distance	42° x 32° / 0.1 m
Geometric resolution (IFOV)	1.13 mrad
Image refresh rate	33 Hz*
Focus	Automatic/manual
Spectral range	7.5 to 14 µm
Visual image output	
Image size / min. focusing distance	3.1 MP / 0.5 m
Image presentation	
Image display	4.3" LCD touchscreen with 480 x 272 pixels
Digital zoom	1 to 3 x
Display options	IR image / real image
Video output	USB 2.0, Micro HDMI
Colour palettes	9 (iron, rainbow, rainbow HC, cold-hot, blue-red, grey, inverted grey, sepia, Testo)
Measurement	
Measuring range	-30 to +100 °C / 0 to +350 °C (switchable)
Accuracy	±2 °C, ±2 % of reading (higher value applies) (±3°C of m.v. at -30 to -22°C)
Emissivity/reflected temperature settings	0.01 to 1 / manual
Transmission correction (atmosphere)	✓

\* Inside the EU, outside 9 Hz  
 \*\* Excepting USA, China and Japan  
 \*\*\* Bluetooth only in the EU, Norway, Switzerland, USA, Canada, Colombia, Turkey, Japan, Russia, Ukraine, India, Australia

Imager equipment	
Digital camera	✓
Lens	42° x 32°
Laser (laser classification 635 nm, Class 2)**	Laser marker (not available when FeverDetection is activated)
Voice recording	Bluetooth*** / wired headset
testo FeverDetection	✓
Image storage	
File format individual image	.bmt; export options in .bmp, .jpg, .png, .csv, .xls
Removable storage device	SD card 2 GB (approx. 1,500 to 2,000 images)
Power supply	
Battery type	Fast-charging, Li-ion battery can be changed on-site
Operating time	4.5 hours
Charging options	In instrument/in charging station (optional)
Mains operation	✓
Ambient conditions	
Operating temperature range	-15 to +50 °C
Storage temperature range	-30 to +60 °C
Air humidity	20 to 80% RH, non-condensing
Housing protection class (IEC 60529)	IP54
Vibration (IEC 60068-2-6)	2G
Physical features	
Weight	1630 g
Dimensions (L x W x H)	253 x 132 x 111 mm
Tripod mounting	1/4" - 20 UNC
Housing	ABS
PC software	
System requirements	Windows 10, Windows Vista, Windows 7 (Service Pack 1), Windows 8, USB 2.0 interface
Standards, tests	
EU Directive	2004 / 108 / EC

Subject to change, including technical modifications.



# Penetration/surface temperature measuring instrument

## testo 905

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Easy read-out of measurement values due to rotatable display

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Broad measuring range

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High temperature measurement, short-term up to +500 °C

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Very fast reaction time

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Easy to operate

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Large display

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Auto-off function

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The testo 905-T1 is a particularly fast penetration thermometer with a broad measuring range of -50 to +350 °C, in the short term even up to +500 °C (1 to 2 minutes). The measuring instrument has a professional industrial sensor (thermocouple Type K). It has an excellent level of accuracy, especially in the upper measuring range. The testo 905-T2 is a surface thermometer with a broad measuring range of -50 to +350 °C, in the short term

even up to +500 °C (1 to 2 minutes). The sprung, broad thermocouple measurement head guarantees a very fast reaction time and high accuracy thanks to the ability to adapt to rough surfaces.

Both instruments have a rotatable display with whose help the measurement values can be read off optimally from different perspectives.

# Technical data / Accessories

## testo 905-T1



testo 905-T1: penetration thermometer, broad measuring range up to 350 °C, high accuracy, incl. attachment clip, battery

Part no. 0560 9055

## testo 905-T2



testo 905-T2: surface thermometer with cross-band probe, extremely fast response time, high accuracy, incl. attachment clip and battery

Part no. 0560 9056

**Technical data**

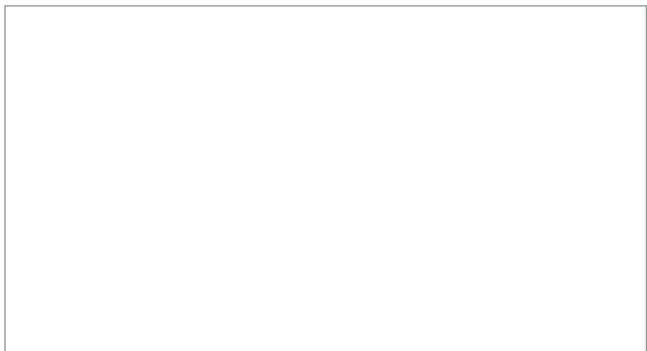
	testo 905-T1	testo 905-T2
Measuring range	-50 to +350 °C (Short-term to +500 °C)	-50 to +350 °C (Short-term to +500 °C)
Accuracy ±1 digit	(ref. to adjustment temperature of +25 °C) ±1 °C (-50 to +99.9 °C) ±1% of m.v. (remaining range)	(ref. to adjustment temperature of +25 °C) ±(1 °C ±1% of m.v.)
Resolution	0.1 °C	0.1 °C
Operating temperature	0 to +40 °C	0 to +40 °C
Storage temperature	-20 to +70 °C	-20 to +70 °C
Battery type	3 AAA micro batteries	3 AAA micro batteries
Battery life	1000 h	1000 h
Reaction time	approx. 10 s	approx. 5 s
Reaction type	t <sub>99</sub> (in water)	t <sub>99</sub>
Display	LCD, 1 line	LCD, 1 line
Weight	80 g	80 g

**Accessories for measuring instrument Part no. testo 905-T1**

Accessories for measuring instrument	Part no.
ISO calibration certificate/temperature for air/immersion probes, calibration point 0°C	0520 0062
ISO calibration certificate/temperature for air/immersion probes, calibration point -18°C	0520 0061
ISO calibration certificate/temperature for air/immersion probes, calibration point +60°C	0520 0063
ISO calibration certificate/temperature for air/immersion probes, calibration points -18°C; 0°C; +60°C	0520 0001

**Accessories for measuring instrument Part no. testo 905-T2**

Accessories for measuring instrument	Part no.
ISO calibration certificate/temperature single point calibration for surface thermometer; calibration point +120°C	0520 0073
ISO calibration certificate/temperature single point calibration for surface thermometer; calibration point +60°C	0520 0072
ISO calibration certificate/temperature meas. instr. with surface probe; calibration points +60°C; +120°C; +180°C	0520 0071
ISO calibration certificate/temperature meas. instruments with surface probe; calibration points selectable from -15 to +480°C	0520 0121



0981 9284/msp/I/01.2018

Subject to change without notice.

# Thermometer operated with smartphone

## testo 905i

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Compact professional measuring instrument from the Testo Smart Probes series, for use with smartphones/tablets

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Measurement of temperature in rooms, ducts and at air outlets

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Fast identification of temperature changes by graph curve display

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Measurement data analyzed and sent via testo Smart App

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Space-saving and easy to transport

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 Bluetooth  
+ App

testo Smart App  
for free download



The compact thermometer testo 905i, in combination with a smartphone or tablet, is suitable for the measurement of ambient temperature as well as the temperature in ducts and air outlets. Users can read off their measurement values comfortably in the testo Smart App installed on the end device.

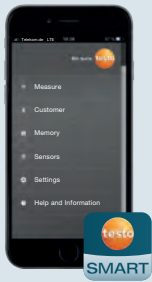
All measurement data are presented either as a diagram or in tabular form, can be made into a report and then transmitted as PDF or Excel files.

## Technical data/accessories

### testo 905i

testo 905i, thermometer operated with smartphone, incl. batteries and calibration protocol

Order no. 0560 1905



#### testo Smart App

The App turns your smartphone/tablet into the display of the testo 905i. The operation of the measuring instrument as well as the display of the measurement values take place by Bluetooth via the testo Smart App on your smartphone or tablet – independently of the measurement location. In addition to this, you can use the App to create measurement reports, add photos and comments to these, and send them by e-mail. For iOS and Android.

Sensor type	Type K (NiCr-Ni)
Measuring range	-50 to +150 °C
Accuracy ±1 digit	±1 °C
Resolution	0.1 °C

#### General technical data

Compatibility	requires iOS 11.0 or newer / Android 6.0 or newer
	requires mobile end device with Bluetooth 4.0
Storage temperature	-20 to +60 °C
Operating temperature	-20 to +50 °C
Battery type	3 micro batteries AAA
Battery life	150 hrs
Dimensions	222 x 30 x 24 mm
	100 mm probe shaft

1981 1784/msp/1/09.2020

#### Accessories

#### Order no.

testo Smart Case (VAC) for the storage and transport of testo 405i, testo 410i, testo 510i, testo 605i, testo 805i and testo 905i, dimensions 270 x 190 x 60 mm	0516 0260	
ISO calibration certificate (temperature), for air/immersion probe, calibration points -18 °C; 0 °C, +60 °C	0520 0001	
ISO calibration certificate temperature, for air/immersion probe, calibration point -18 °C	0520 0061	
ISO calibration certificate temperature, for air/immersion probe, calibration point 0 °C	0520 0062	
ISO calibration certificate temperature, for air/immersion probe, calibration point +60 °C	0520 0063	

Subject to change without notice.

# Temperature measuring instrument (2-channel)

testo 922 - Differential temperature measuring instrument for TC Type K with App connection

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Easy, fast and precise differential temperature measurement with dual thermocouple Type K probes (2 TC Type K probes included)

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Fast in-app configuration, graph history, second screen and measurement data memory in the testo Smart App

---

Wide range of applications due to large measuring range from -50 °C to 1000 °C

---

Large probe selection optional and compatible with commercially available TC Type K sensors

---

Audible alarm sounds if a limit value is exceeded

---



Professionals in **industry and trade** value the compact differential temperature measuring instrument testo 922 for its versatility: it not only determines temperatures quickly and accurately, but also does a direct calculation of the differential temperature. And that in a wide measuring range from -50 °C to 1000 °C. This means that measurements can be completed just as quickly as documentation with the practical testo Smart App for smartphones and tablets. A typical application for the testo 922 is, for example, the control of the supply/return temperature on heating circuit manifolds.

Two Type K thermocouple probes are included, but the testo 922 is also compatible with other commercially available TC Type K probes. Incidentally: The testo Smart App not only supports you with the documentation of your measurement results. The smart assistant also takes care of configuring the testo 922 and displaying and storing the measured values for you. A particularly practical feature: The App also turns your smartphone into a second display.



# Ordering data / technical data / accessories

**testo 922**

testo 922, 2-channel temperature measuring instrument TC Type K with App connection and audible alarm, incl. transport bag, 2 x TC Type K probes\*, calibration protocol and 3 x AA batteries

Order no. 0563 0922



\* Versatile flexible and fast-reaction probes (TC Type K, Class 1) with glass silk sheathed cable (cable length 800 mm)

**TopSafe**

TopSafe, protects against impact and dirt, with attachment magnets and stand-up bracket

Order no. 0516 0224




Sensor type	TC Type K
Measuring range	-50 to +1000 °C
Accuracy ±1 digit	±(0.5 °C + 0.3% of m.v.) (-50 to +1000 °C)
Resolution	0.1 °C (-50 to +499.9 °C) 1 °C (rem. measuring range)
General technical data	
Operating temperature	-20 to +50 °C
Storage temperature	-20 to +50 °C
Battery type	3 x AA
Battery life	120 h
Dimensions	135 x 60 x 28 mm
Weight	191 g
Protection class	IP40 with TopSafe: IP65
Housing material	ABS + PC / TPE

Accessories	Order no.
TopSafe, protects against impact and dirt, with attachment magnets and stand-up bracket	0516 0224
testo Bluetooth® printer, incl. 1 roll of thermal paper, rech. battery and mains unit	0554 0621
Spare thermal paper for printer (6 rolls), measurement data documentation can be read for up to 10 years	0554 0568
ISO temperature calibration certificate, for air/immersion probe, calibration points -18 °C; 0 °C; +60 °C	0520 0001
ISO temperature calibration certificate (only valid for immersion/penetration probe 0602 2693) Measuring instruments with air/immersion probe, calibration points 0 °C; +150 °C; +300 °C	0520 0021
ISO temperature calibration certificate Measuring instruments with air/immersion probe, calibration points 0 °C; +300 °C; +600 °C	0520 0031
ISO temperature calibration certificate Measuring units with surface probe, calibration points +60 °C; +120 °C; +180 °C	0520 0071
DAkkS temperature calibration certificate Measuring instruments with air/immersion probe, calibration points -20 °C; 0 °C; +60 °C	0520 0211
DAkkS temperature calibration certificate Surface temperature sensor touching, calibration points +100 °C; +200 °C; +300 °C	0520 0271

**The testo Smart App**

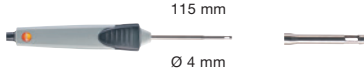
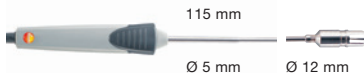
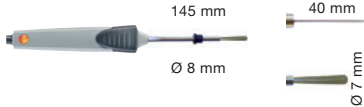
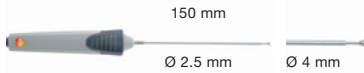

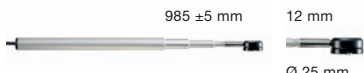

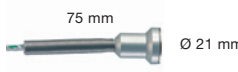




- Simple and fast: Measurement menus for numerous applications provide optimum support in configuring and carrying out the measurement
- Clear graphical presentation of readings, e.g. as a table, for quick interpretation of results
- Create digital measurement reports including photos as PDF/CSV files on site and send via e-mail




Free download for Android and iOS



# Temperature probes

Probe type	Probe shaft/probe shaft tip dimensions	Measuring range	Accuracy	Response time	Order no.
Robust air probe, TC Type K, fixed cable		-60 to +400 °C	Class 2 <sup>1)</sup>	200 sec	0602 1793
Very fast-reaction surface probe with sprung thermocouple strip, also suitable for uneven surfaces, measuring range briefly up to +500 °C, TC Type K, fixed cable		-60 to +300 °C	Class 2 <sup>1)</sup>	3 sec	0602 0393
Fast-reaction paddle surface probe, for measurements in places that are difficult to access (e.g. narrow openings and cracks), thanks to flat, flexible tip, TC Type K, fixed cable		0 to +300 °C	Class 2 <sup>1)</sup>	5 sec	0602 0193
Precise, watertight surface probe with small measuring head for even surfaces, TC Type K, fixed cable		-60 to +1000 °C	Class 1 <sup>1)</sup>	20 sec	0602 0693
Very fast-reaction surface probe with sprung thermocouple strip, angled for uneven surfaces, measuring range briefly up to +500 °C, TC Type K, fixed cable		-60 to +300 °C	Class 2 <sup>1)</sup>	3 sec	0602 0993
Surface temperature probe TC Type K, with telescope max. 985 mm, for measurements in locations that are difficult to access, fixed cable 1.6 m (correspondingly shorter when telescope is extended)		-50 to +250 °C	Class 2 <sup>1)</sup>	3 sec	0602 2394
Magnetic probe, adhesive power approx. 20 N, with adhesive magnets, for measurements on metal surfaces, TC Type K, fixed cable		-50 to +170 °C	Class 2 <sup>1)</sup>	150 sec	0602 4792
Magnetic probe, adhesive power approx. 10 N, with adhesive magnets, for higher temperatures, for measurements on metal surfaces, TC Type K, fixed cable		-50 to +400 °C	Class 2 <sup>1)</sup>		0602 4892
Watertight surface probe with wider measuring tip for even surfaces, TC Type K, fixed cable		-60 to +400 °C	Class 2 <sup>1)</sup>	30 sec	0602 1993
Pipe wrap probe with Velcro strip, for measuring temperatures on pipes with diameters up to max. 120 mm, Tmax +120 °C, TC Type K, fixed cable		-50 to +120 °C	Class 1 <sup>1)</sup>	90 sec	0628 0020
Pipe wrap probe for pipe diameters 5 to 65 mm, with interchangeable measuring head, measuring range briefly up to +280 °C, TC Type K, fixed cable		-60 to +130 °C	Class 2 <sup>1)</sup>	5 sec	0602 4592
Replacement measuring head for pipe wrap probe, TC Type K		-60 to +130 °C	Class 2 <sup>1)</sup>	5 sec	0602 0092

<sup>1)</sup> According to standard EN 60584-1, the accuracy of Class 1 refers to -40 to +1000 °C (Type K), of Class 2 to -40 to +1200 °C (Type K) and of Class 3 to -200 to +40 °C (Type K). A probe only ever complies with one accuracy class.

# Temperature probes

Probe type	Dimensions Probe shaft/probe shaft tip	Measuring range	Accuracy	t <sub>99</sub>	Order no.
Clamp probe for measurements on pipes, pipe diameters 15 to 25 mm (max. 1"), measuring range briefly up to +130 °C, TC Type K, fixed cable		-50 to +100 °C	Class 2 <sup>1)</sup>	5 sec	0602 4692
Precise and fast immersion probe, flexible, watertight, TC Type K, fixed cable		-60 to +1000 °C	Class 1 <sup>1)</sup>	2 sec	0602 0593
Ultra-fast, watertight immersion/penetration probe, TC Type K, fixed cable		-60 to +800 °C	Class 1 <sup>1)</sup>	3 sec	0602 2693
Immersion measuring tip, flexible, TC Type K		-40 to +1000 °C	Class 1 <sup>1)</sup>	5 sec	0602 5792
Immersion measuring tip, flexible, TC Type K		-200 to +40 °C	Class 3 <sup>1)</sup>	5 sec	0602 5793
Immersion measuring tip, flexible, for measurements in air/flue gases (not suitable for measurements in smelters), TC Type K		-40 to +1000 °C	Class 1 <sup>1)</sup>	4 sec	0602 5693
Watertight immersion/penetration probe, TC Type K, fixed cable		-60 to +400 °C	Class 2 <sup>1)</sup>	7 sec	0602 1293
Flexible, low-mass immersion measuring tip, ideal for measurements in small volumes, such as Petri dishes, or for surface measurements (e.g. fixed with adhesive tape)	 <small>TC Type K, 2 m, FEP-insulated thermal wire, temperature-resistant up to 200 °C, oval cable with dimensions: 2.2 mm x 1.4 mm</small>	-40 to +1000 °C	Class 1 <sup>1)</sup>	1 sec	0602 0493
Watertight stainless steel food probe (IP65), TC Type K, fixed cable		-60 to +400 °C	Class 2 <sup>1)</sup>	7 sec	0602 2292
Thermocouple with TC plug, flexible, length 800 mm, fibreglass, TC Type K		-50 to +400 °C	Class 2 <sup>1)</sup>	5 sec	0602 0644
Thermocouple with TC plug, flexible, length 1500 mm, fibreglass, TC Type K		-50 to +400 °C	Class 2 <sup>1)</sup>	5 sec	0602 0645
Thermocouple with TC plug, flexible, length 1500 mm, PTFE, TC Type K		-50 to +250 °C	Class 2 <sup>1)</sup>	5 sec	0602 0646
Globe thermometer Ø 150 mm, TC Type K, for measuring radiant heat		0 to +120 °C	Class 1 <sup>1)</sup>		0602 0743

<sup>1)</sup> According to standard EN 60584-1, the accuracy of Class 1 refers to -40 to +1000 °C (Type K), of Class 2 to -40 to +1200 °C (Type K) and of Class 3 to -200 to +40 °C (Type K). A probe only ever complies with one accuracy class.

**Information about surface measurement:**

- The specified response times  $t_{99}$  are measured on polished steel or aluminium plates at +60 °C.
- The specified accuracies are sensor accuracies.
- Their accuracy in your application depends on the surface properties (roughness), the material of the measurement object (thermal capacity and heat transfer) and the sensor accuracy. Testo will produce a corresponding calibration certificate for the deviations of your measurement system in your application. For this, Testo uses a surface test bed developed in cooperation with the PTB (Physikalisch Technische Bundesanstalt - National Metrology Institute of Germany).

# Temperature measuring instrument (1-channel)

testo 925 - Temperature  
measuring instrument for  
TC Type K with App connection

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Easy, fast and precise temperature measurement with thermocouple Type K probe (1 TC Type K probe included)

---

Fast in-app configuration, graph history, second screen and measurement data memory in the testo Smart App

---

Wide range of applications due to large measuring range from -50 °C to 1000 °C

---

Large probe selection optional and compatible with commercially available TC Type K sensors

---

Audible alarm sounds if a limit value is exceeded

---



Hardly any measurement value is measured more often every day than temperature. The **quality of products, processes or raw materials** depends on it, as does the **efficiency of plants**.

This makes it all the more important that you have a compact measuring instrument to hand for temperature measurement that shows you what you need to know simply, quickly and precisely. A measuring instrument like the testo 925. It convinces not only by the large measuring range (-50 to +1000 °C), its handling, robustness and the smart support via App will also inspire you.

One Type K thermocouple probe is included in delivery. However, the testo 925 is also compatible with other commercially available TC Type K probes.

The testo Smart App supports you in your work with the testo 925 with these practical functions:

- Configure measuring instrument
- Display graphical measured value curve
- Save measurement data
- Manage customers and measuring points
- Documentation on site
- E-mail dispatch of the report

Bluetooth 5.0  
+ App

testo SMART

testo Smart App  
for free download

GET IT ON  
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Download on the  
App Store



# Ordering data / technical data / accessories

**testo 925**

testo 925, 1-channel temperature measuring instrument TC Type K with App connection and audible alarm, incl. transport bag, 1 x TC Type K probe, calibration protocol and 3 x AA batteries



Order no. 0563 0925

\* Versatile flexible and fast-reaction probe (TC Type K, Class 1) with glass silk sheathed cable (cable length 800 mm)

**TopSafe**

TopSafe, protects against impact and dirt, with attachment magnets and stand-up bracket



Order no. 0516 0224



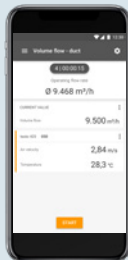
Sensor type	TC Type K
Measuring range	-50 to +1000 °C
Accuracy*	±(0.5 °C + 0.3% of m.v.) (-50 to +1000 °C)
Resolution	0.1 °C (-50 to +499.9 °C) 1 °C (rem. measuring range)
General technical data	
Operating temperature	-20 to +50 °C
Storage temperature	-20 to +50 °C
Battery type	3 x AA
Battery life	150 h
Dimensions	135 x 60 x 28 mm
Weight	188 g
Protection class	IP40 with TopSafe: IP65
Housing material	ABS + PC / TPE

\*Accuracy of instrument without accuracy of probe

Accessories	Order no.
TopSafe, protects against impact and dirt, with attachment magnets and stand-up bracket	0516 0224
testo Bluetooth® printer, incl. 1 roll of thermal paper, rech. battery and mains unit	0554 0621
Spare thermal paper for printer (6 rolls), measurement data documentation can be read for up to 10 years	0554 0568
ISO temperature calibration certificate, for air/immersion probe, calibration points -18 °C; 0 °C; +60 °C	0520 0001
ISO temperature calibration certificate (only valid for immersion/penetration probe 0602 2693) Measuring instruments with air/immersion probe, calibration points 0 °C; +150 °C; +300 °C	0520 0021
ISO temperature calibration certificate Measuring instruments with air/immersion probe, calibration points 0 °C; +300 °C; +600 °C	0520 0031
ISO temperature calibration certificate Measuring units with surface probe, calibration points +60 °C; +120 °C; +180 °C	0520 0071
DAkkS temperature calibration certificate Measuring instruments with air/immersion probe, calibration points -20 °C; 0 °C; +60 °C	0520 0211
DAkkS temperature calibration certificate Surface temperature sensor touching, calibration points +100 °C; +200 °C; +300 °C	0520 0271

**The testo Smart App**

- Simple and fast: Measurement menus for numerous applications provide optimum support in configuring and carrying out the measurement
- Clear graphical presentation of readings, e.g. as a table, for quick interpretation of results
- Create digital measurement reports including photos as PDF/CSV files on site and send via e-mail

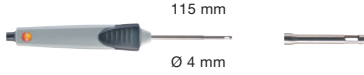

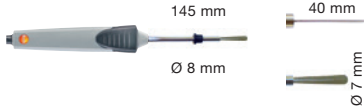





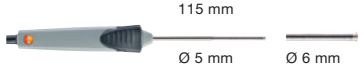






Free download for Android and iOS





# Temperature probes

Probe type	Probe shaft/probe shaft tip dimensions	Measuring range	Accuracy	Response time	Order no.
Robust air probe, TC Type K, fixed cable		-60 to +400 °C	Class 2 <sup>1)</sup>	200 sec	0602 1793
Very fast-reaction surface probe with sprung thermocouple strip, also suitable for uneven surfaces, measuring range briefly up to +500°C, TC Type K, fixed cable		-60 to +300 °C	Class 2 <sup>1)</sup>	3 sec	0602 0393
Fast-reaction paddle surface probe, for measurements in places that are difficult to access (e.g. narrow openings and cracks), thanks to flat, flexible tip, TC Type K, fixed cable		0 to +300 °C	Class 2 <sup>1)</sup>	5 sec	0602 0193
Precise, watertight surface probe with small measuring head for even surfaces, TC Type K, fixed cable		-60 to +1000 °C	Class 1 <sup>1)</sup>	20 sec	0602 0693
Very fast-reaction surface probe with sprung thermocouple strip, angled for uneven surfaces, measuring range briefly up to +500 °C, TC Type K, fixed cable		-60 to +300 °C	Class 2 <sup>1)</sup>	3 sec	0602 0993
Surface temperature probe TC Type K, with telescope max. 985 mm, for measurements in locations that are difficult to access, fixed cable 1.6 m (correspondingly shorter when telescope is extended)		-50 to +250 °C	Class 2 <sup>1)</sup>	3 sec	0602 2394
Magnetic probe, adhesive power approx. 20 N, with adhesive magnets, for measurements on metal surfaces, TC Type K, fixed cable		-50 to +170 °C	Class 2 <sup>1)</sup>	150 sec	0602 4792
Magnetic probe, adhesive power approx. 10 N, with adhesive magnets, for higher temperatures, for measurements on metal surfaces, TC Type K, fixed cable		-50 to +400 °C	Class 2 <sup>1)</sup>		0602 4892
Watertight surface probe with wider measuring tip for even surfaces, TC Type K, fixed cable		-60 to +400 °C	Class 2 <sup>1)</sup>	30 sec	0602 1993
Pipe wrap probe with Velcro strip, for measuring temperatures on pipes with diameters up to max. 120 mm, Tmax +120 °C, TC Type K, fixed cable		-50 to +120 °C	Class 1 <sup>1)</sup>	90 sec	0628 0020
Pipe wrap probe for pipe diameters 5 to 65 mm, with interchangeable measuring head, measuring range briefly up to +280 °C, TC Type K, fixed cable		-60 to +130 °C	Class 2 <sup>1)</sup>	5 sec	0602 4592
Replacement measuring head for pipe wrap probe, TC Type K		-60 to +130 °C	Class 2 <sup>1)</sup>	5 sec	0602 0092

<sup>1)</sup> According to standard EN 60584-1, the accuracy of Class 1 refers to -40 to +1000 °C (Type K), of Class 2 to -40 to +1200 °C (Type K) and of Class 3 to -200 to +40 °C (Type K). A probe only ever complies with one accuracy class.

# Temperature probes

Probe type	Probe shaft/probe shaft tip dimensions	Measuring range	Accuracy	t <sub>99</sub>	Order no.
Clamp probe for measurements on pipes, pipe diameters 15 to 25 mm (max. 1"), measuring range briefly up to +130°C, TC Type K, fixed cable		-50 to +100 °C	Class 2 <sup>1)</sup>	5 sec	0602 4692
Precise and fast immersion probe, flexible, watertight, TC Type K, fixed cable		-60 to +1000 °C	Class 1 <sup>1)</sup>	2 sec	0602 0593
Ultra-fast, watertight immersion/penetration probe, TC Type K, fixed cable		-60 to +800 °C	Class 1 <sup>1)</sup>	3 sec	0602 2693
Immersion measuring tip, flexible, TC Type K		-40 to +1000 °C	Class 1 <sup>1)</sup>	5 sec	0602 5792
Immersion measuring tip, flexible, TC Type K		-200 to +40 °C	Class 3 <sup>1)</sup>	5 sec	0602 5793
Immersion measuring tip, flexible, for measurements in air/flue gases (not suitable for measurements in smelters), TC Type K		-40 to +1000 °C	Class 1 <sup>1)</sup>	4 sec	0602 5693
Watertight immersion/penetration probe, TC Type K, fixed cable		-60 to +400 °C	Class 2 <sup>1)</sup>	7 sec	0602 1293
Flexible, low-mass immersion measuring tip, ideal for measurements in small volumes, such as Petri dishes, or for surface measurements (e.g. fixed with adhesive tape)	 <small>TC Type K, 2 m, FEP-insulated thermal wire, temperature-resistant up to 200 °C, oval cable with dimensions: 2.2 mm x 1.4 mm</small>	-40 to +1000 °C	Class 1 <sup>1)</sup>	1 sec	0602 0493
Watertight stainless steel food probe (IP65), TC Type K, fixed cable		-60 to +400 °C	Class 2 <sup>1)</sup>	7 sec	0602 2292
Thermocouple with TC plug, flexible, length 800 mm, fibreglass, TC Type K		-50 to +400 °C	Class 2 <sup>1)</sup>	5 sec	0602 0644
Thermocouple with TC plug, flexible, length 1500 mm, fibreglass, TC Type K		-50 to +400 °C	Class 2 <sup>1)</sup>	5 sec	0602 0645
Thermocouple with TC plug, flexible, length 1500 mm, PTFE, TC Type K		-50 to +250 °C	Class 2 <sup>1)</sup>	5 sec	0602 0646
Globe thermometer Ø 150 mm, TC Type K, for measuring radiant heat		0 to +120 °C	Class 1 <sup>1)</sup>		0602 0743

<sup>1)</sup> According to standard EN 60584-1, the accuracy of Class 1 refers to -40 to +1000 °C (Type K), of Class 2 to -40 to +1200 °C (Type K) and of Class 3 to -200 to +40 °C (Type K). A probe only ever complies with one accuracy class.

**Information about surface measurement:**

- The specified response times  $t_{99}$  are measured on polished steel or aluminium plates at +60 °C.
- The specified accuracies are sensor accuracies.
- Their accuracy in your application depends on the surface properties (roughness), the material of the measurement object (thermal capacity and heat transfer) and the sensor accuracy. Testo will produce a corresponding calibration certificate for the deviations of your measurement system in your application. For this, Testo uses a surface test bed developed in cooperation with the PTB (Physikalisch Technische Bundesanstalt - National Metrology Institute of Germany).

# Temperature measuring instrument (1-channel)

testo 926 – The allrounder in temperature measurement

- Ideally suited to applications in the food sector
- Wireless measurement with radio probes possible
- Audible alarm (adjustable limit values)
- TopSafe, the indestructible protective cover, protects from dirt and impact
- Min./max. value store
- Automatic recognition of final value (Auto-hold)
- Certified according to EN 13485



The testo 926 is an exact temperature measuring instrument which is particularly suited to applications in the food sector. In addition to the broad selection of classical probes with a cable, a wireless radio probe can also be connected if required. The dishwasher-safe TopSafe protects the instrument from dirt, water and impact.

As the user, you can store limit values in the instrument yourself; as soon as these upper and lower values are violated, an audible warning signal sounds. This alarm function and the automatic final value recognition simplify

measurement, and support you in recognizing and interpreting the measurement values correctly. In addition to this, the instrument reliably stores the minimum and maximum measurement values.

testo 926 conforms to HACCP as well as EN 13485.

This makes it the ideal partner for large kitchens, hotels, restaurants or in the food industry.

## Technical data

### testo 926

testo 926-1, 1 channel food temperature measuring instrument T/C Type T, audible alarm, connection to an optional radio probe, with battery and calibration protocol

Part no. 0560 9261



### testo 926, Starter set

testo 926, Starter set, 1 channel food temperature measuring instrument T/C Type T, incl. TopSafe, standard immersion/penetration probes, battery and calibration protocol

Part no. 0563 9262

**Sensor type** Type T (Cu-CuNi) or NTC and Type K if radio immersion/penetration probes are used

Measuring range	-50 to +400 °C
Accuracy ±1 digit	±0.3 °C (-20 to +70 °C) ±(0.7 °C ±0.5% of m.v.) (remaining range)
Resolution	0.1 °C (-50 to +199.9 °C) 1 °C (remaining range)

#### General technical data

Operating temperature	-20 to +50 °C
Storage temperature	-40 to +70 °C
Battery type	9V block battery, 6F22
Battery life	200 h (connected probe, backlight off) 45 h (radio mode, backlight off) 68 h (connected probe, backlight always on) 33 h (radio mode, backlight always on)
Dimensions	182 x 64 x 40 mm
Housing material	ABS
Weight	171 g
Standard	EN 13485



TopSafe, protection of the measuring instrument against impact, dirt and water, dishwasher-proof (optional)



Wireless measurement with radio probes possible (optional)



Measurement data printout on site on the Testo fast printer



Connection for external probes and charger

# Accessories

<b>Accessories for measuring instrument</b>	<b>Part no.</b>	
9V rech. battery for instrument, instead of battery	0515 0025	
<b>Radio module for upgrading measuring instrument with radio option</b>		
Radio module for measuring instrument, 869.85 MHz, approval for the countries: DE, FR, UK, BE, NL, ES, IT, SE, AT, DK, FI, HU, CZ, PL, GR, CH, PT, SI, MT, CY, SK, LU, EE, LT, IE, LV, NO	0554 0188	
Radio module for measuring instrument, 915.00 MHz FSK, approval for USA, CA, CL	0554 0190	
<b>Printer and Accessories</b>		
Testo fast printer IrDA with wireless infrared interface; 1 roll thermal paper; 4 AA batteries	0554 0549	
Spare thermal paper for printer (6 rolls), permanent ink measurement data documentation legible for up to 10 years	0554 0568	
<b>Transport and Protection</b>		
TopSafe, protects from impact and dirt	0516 0220	
Service case for measuring instrument, probe and accessories, dimensions 454 x 316 x 111 mm	0516 1200	
Service case for measuring instrument and probe, dimensions 454 x 316 x 111 mm	0516 1201	
Case for measuring instrument and probes	0516 0191	
<b>Calibration Certificates</b>		
ISO calibration certificate/temperature for air/immersion probes, calibration points -18°C; 0°C; +60°C	0520 0001	
ISO calibration certificate/temperature for air/immersion probes, calibration point -18°C	0520 0061	
ISO calibration certificate/temperature for air/immersion probes, calibration point 0°C	0520 0062	
ISO calibration certificate/temperature for air/immersion probes, calibration point +60°C	0520 0063	
ISO calibration certificate/temperature for air/immersion probes, calibration points -8°C; 0°C; +40°C	0520 0181	
ISO calibration certificate/temperature meas. instr. with surface probe; calibration points +60°C; +120°C; +180°C	0520 0071	
ISO calibration certificate/temperature single point calibration for surface thermometer; calibration point +60°C	0520 0072	
ISO calibration certificate/temperature single point calibration for surface thermometer; calibration point +120°C	0520 0073	

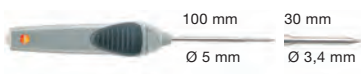


# Radio probes

## Radio handles and probe head for air-/ immersion-penetration-meas.

## Part no.

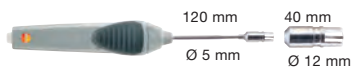
Radio handle for plug-in probe heads, incl. T/C adapter, approval for the countries: DE, FR, UK, BE, NL, ES, IT, SE, AT, DK, FI, HU, CZ, PL, GR, CH, PT, SI, MT, CY, SK, LU, EE, LT, IE, LV, NO; Radio freq. 869.85 MHz FSK	0554 0189	
T/C probe head for air/immersion/penetration measurement (T/C Type K)	0602 0293	
Radio handle for plug-in probe heads, incl. T/C adapter, approval for USA, CA, CL; Radio freq. 915.00 MHz FSK	0554 0191	
T/C probe head for air/immersion/penetration measurement (T/C Type K)	0602 0293	

Dimensions Probe shaft/probe shaft tip	Measuring range	Accuracy	Resolution	t <sub>99</sub>
	-50 to +350 °C Short-term to +500 °C	Radio handle: ±(0.5 °C +0.3% of m.v.) (-40 to +500 °C) ±(0.7 °C +0.5% of m.v.) (remaining range) T/C probe head: Class 2	0.1 °C (-50 to +199.9 °C) 1.0 °C (remaining range)	t <sub>99</sub> (in water) 10 s


## Radio handles and probe head for surface measurement

## Part no.

Radio handle for plug-in probe heads, incl. T/C adapter, approval for the countries: DE, FR, UK, BE, NL, ES, IT, SE, AT, DK, FI, HU, CZ, PL, GR, CH, PT, SI, MT, CY, SK, LU, EE, LT, IE, LV, NO; Radio freq. 869.85 MHz FSK	0554 0189	
T/C probe head for surface measurement (T/C Type K)	0602 0394	
Radio handle for plug-in probe heads, incl. T/C adapter, approval for USA, CA, CL; Radio freq. 915.00 MHz FSK	0554 0191	
T/C probe head for surface measurement (T/C Type K)	0602 0394	

Dimensions Probe shaft/probe shaft tip	Measuring range	Accuracy	Resolution	t <sub>99</sub>
	-50 to +350 °C Short-term to +500 °C	Radio handle: ±(0.5 °C +0.3% of m.v.) (-40 to +500 °C) ±(0.7 °C +0.5% of m.v.) (remaining range) T/C probe head: Class 2	0.1 °C (-50 to +199.9 °C) 1.0 °C (remaining range)	5 s

# Radio probes

Radio handles for attachable T/C probes			Part no.
Radio handle for plug-in probe heads, incl. T/C adapter, approval for the countries: DE, FR, UK, BE, NL, ES, IT, SE, AT, DK, FI, HU, CZ, PL, GR, CH, PT, SI, MT, CY, SK, LU, EE, LT, IE, LV, NO ; Radio freq. 869.85 MHz FSK			0554 0189
Radio handle for plug-in probe heads, incl. T/C adapter, approval for USA, CA, CL; Radio freq. 915.00 MHz FSK			0554 0191
Illustration	Measuring range	Accuracy	Resolution
	-50 to +1000 °C	±(0.7 °C +0.3% of m.v.) (-40 to +900 °C) ±(0.9 °C +0.5% of m.v.) (remaining range)	0.1 °C (-50 to +199.9 °C) 1.0 °C (remaining range)

## Technical data Radio probes

### Radio immersion/penetration probe, NTC

Battery type	2 x 3V button cell (CR 2032)
Battery life	150 h (meas. rate 0.5 s) 2 months (meas. rate 10 s)


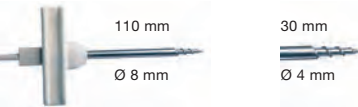
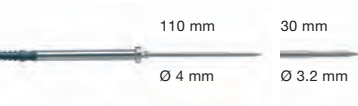
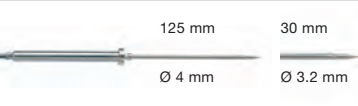
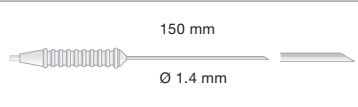


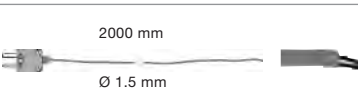
### Radio handle

Battery type	2 AAA micro batteries
Battery life	215 h (meas. rate 0.5 s) 6 months (meas. rate 10 s)

### Common Technical Data

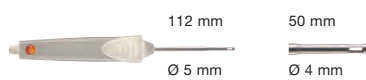
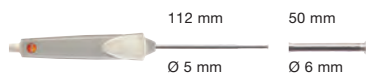
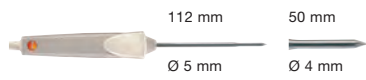
Measuring rate	0.5 s or 10 s, adjustable on handle
Radio coverage	Up to 20 m (without obstructions)
Radio transmission	Unidirectional
Operating temperature	-20 to +50 °C
Storage temperature	-40 to +70 °C

# Probes

Probe type	Dimensions Probe shaft/probe shaft tip	Measuring range	Accuracy	t <sub>99</sub>	Part no.
<b>Food probes</b>					
Robust food penetration probe with special handle, reinforced cable (PVC), T/C Type T, Fixed cable		-50 to +350 °C	±0.2 °C (-20 to +70 °C) Class 1 (remaining range) <sup>1)</sup>	6 s	0603 2492
Frozen food probe, corkscrew design, T/C Type T, Plug-in cable		-50 to +350 °C	±0.2 °C (-20 to +70 °C) Class 1 (remaining range) <sup>1)</sup>	8 s	0603 3292
Stainless steel food probe (IP67) with PUR cable, T/C Type T, Fixed cable		-50 to +350 °C	±0.2 °C (-20 to +70 °C) Class 1 (remaining range) <sup>1)</sup>	7 s	0603 2192
Stainless steel food probe (IP67), with FEP cable to +200 °C, TC Type T, Fixed cable		-50 to +350 °C	±0.2 °C (-20 to +70 °C) Class 1 (remaining range) <sup>1)</sup>	7 s	0603 3392
Waterproof, super-quick needle probe for measurements without visible penetration hole, T/C Type T, Fixed cable		-50 to +250 °C	±0.2 °C (-20 to +70 °C) Class 1 (remaining range) <sup>1)</sup>	2 s	0628 0027
Quick needle probe to monitor cooking in oven, T/C Type T, Fixed cable, Probe cable heat-proof up to +250 °C		-50 to +250 °C	±0.2 °C (-20 to +70 °C) Class 1 (remaining range) <sup>1)</sup>	2 s	0628 0030
Measurement tip with T/C adapter Type T, ideal for fast-action measurement on incoming goods		-50 to +350 °C	±1 °C (-40 to +133 °C) Class 2 (remaining range) <sup>1)</sup>	5 s	0628 0023
Flexible oven probe, Tmax +250 °C, PTFE cable		-50 to +250 °C	Class 1 <sup>1)</sup>		0603 0646

1) According to standard EN 60584-2, the accuracy of Class 1 and Class 2 refers to -40 to +350 °C (Type T).

# Probes

Probe type	Dimensions Probe shaft/probe shaft tip	Measuring range	Accuracy	t <sub>99</sub>	Part no.
<b>Air probes</b>					
Robust, affordable air probe, T/C Type T, Fixed cable 1.2 m		-50 to +350 °C	±0.2 °C (-20 to +70 °C) Class 1 (remaining range) <sup>1)</sup>	25 s	0603 1793
<b>Surface probes</b>					
Waterproof surface probe with widened measurement tip for flat surfaces, T/C Type T, Fixed cable 1.2 m		-50 to +350 °C	±0.2 °C (-20 to +70 °C) Class 1 (remaining range) <sup>1)</sup>	30 s	0603 1993
<b>Immers./penetr. probes</b>					
Waterproof standard immersion/penetration probe, T/C Type T, Fixed cable		-50 to +350 °C	±0.2 °C (-20 to +70 °C) Class 1 (remaining range) <sup>1)</sup>	7 s	0603 1293

<sup>1)</sup> According to standard EN 60584-2, the accuracy of Class 1 refers to -40 to +350 °C (Type T).

# WiFi data logger system

testo Saveris 2 –  
temperature, humidity and  
CO<sub>2</sub> monitoring re-thought

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Data transfer by wireless LAN

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All measurement data always available, anywhere,  
on any instrument

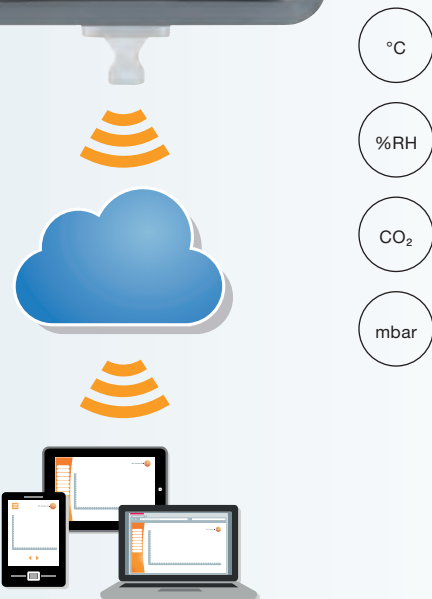
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Alarms when limit values are violated

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Cost-free online data store (Testo Cloud)

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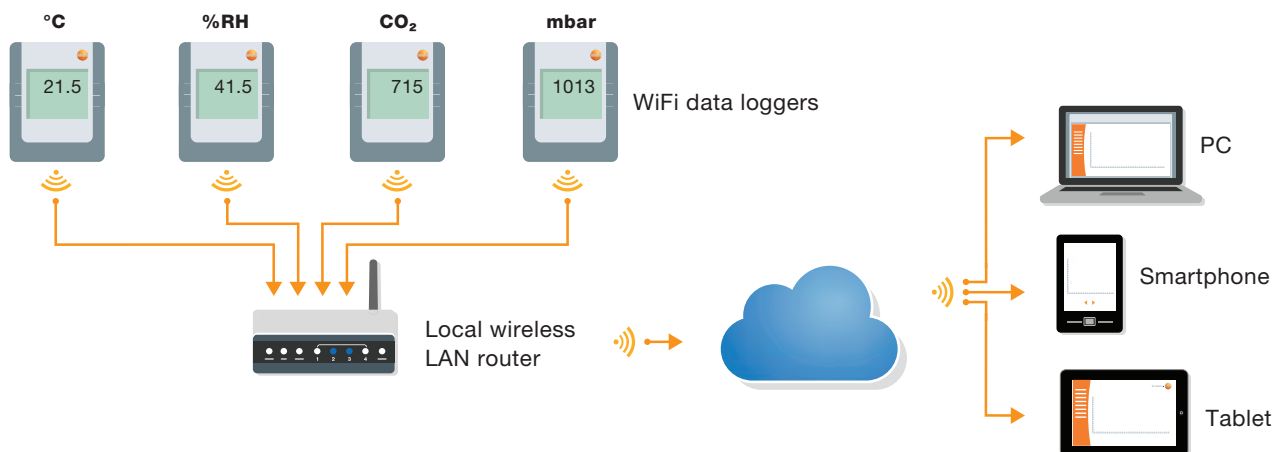


The testo Saveris 2 WiFi data logger system is the modern solution for monitoring temperature and humidity values as well as CO<sub>2</sub> concentration in storerooms and work rooms. Installing the system is child's play and can be carried out via the browser. The WiFi data loggers reliably record temperature, humidity and CO<sub>2</sub> concentration at adjustable intervals and transmit the measurement values directly by wireless LAN to the Testo Cloud.

The readings stored can be analyzed at any time, anywhere, using an internet-enabled smartphone, tablet or PC. Limit value violations are immediately reported via e-mail, or optionally via SMS. This allows critical processes to be kept always under control, even if you are not on site. The long battery life additionally ensures that the testo Saveris 2 system needs to be serviced only rarely.

# Climate monitoring re-thought

The data logger system testo Saveris 2 allows you full and easy control of ambient conditions at all times - no matter where you are.



## testo Saveris 2 Cloud

### Our packages

The Testo Cloud is the core operating element for setting up your testo Saveris 2 system. Here you can configure your WiFi data loggers, set limit value alarms and analyze your measurement data. You must first register at [www.saveris.net](http://www.saveris.net) to have access to the Testo Cloud. Depending on the desired range of functions, you have a choice between the free Basic and more extensive Advanced functionality for use of the Testo Cloud. In the Advanced licence, you have access to an API interface, in order to export measurement data to your systems.

	Basic <b>Free</b>	Advanced			
<b>Measuring cycle</b>	15 min to 24 h	1 min to 24 h			
<b>Communication cycle</b>	15 min to 24 h	1 min to 24 h			
<b>Data storage</b>	Max. 3 months	Max. 2 years			
<b>Reports</b>	Manual (.pdf/.csv)	Manual (.pdf/.csv) Automatic (.pdf/.csv)			
<b>Data analysis</b>	For one measurement site each (external probes count as measurement sites)	For up to 10 measurement channels simultaneously			
<b>Number of users per account</b>	1	10			
<b>Number of WiFi data loggers per account</b>	Unlimited	Unlimited			
<b>Alarm options</b>	Upper/lower alarm limits	<ul style="list-style-type: none"> <li>• Upper/lower alarm limits</li> <li>• Alarm delay</li> <li>• Time control of alarms</li> </ul>			
<b>System notifications</b>	<ul style="list-style-type: none"> <li>• Notification of low battery</li> <li>• Radio link interrupted</li> <li>• Power supply interrupted</li> </ul>	<ul style="list-style-type: none"> <li>• Notification of low battery</li> <li>• Radio link interrupted</li> <li>• Power supply interrupted</li> </ul>			
<b>E-mail alarm</b>	Yes	Yes			
<b>SMS alarm</b>	No	<ul style="list-style-type: none"> <li>• Including 25 SMS per logger and year</li> <li>• Option of purchasing additional SMS packages</li> </ul>			
		<table border="0"> <tr> <td>12-month licence Order no. 0526 0735</td> <td>24-month licence Order no. 0526 0732</td> <td>36-month licence Order no. 0526 0733</td> </tr> </table>	12-month licence Order no. 0526 0735	24-month licence Order no. 0526 0732	36-month licence Order no. 0526 0733
12-month licence Order no. 0526 0735	24-month licence Order no. 0526 0732	36-month licence Order no. 0526 0733			



## Ordering data WiFi data loggers

### testo Saveris 2-T1

testo Saveris 2-T1; WiFi data logger (wireless LAN) with display and internal NTC temperature sensor, incl. USB cable, wall bracket, batteries and calibration protocol



Order no. 0572 2031

### testo Saveris 2-H1

testo Saveris 2-H1; WiFi data logger (wireless LAN) with display for measuring temperature and relative humidity, internal capacitive sensor incl. USB cable, wall bracket, batteries and calibration protocol



Order no. 0572 2034

### testo Saveris 2-T2

testo Saveris 2-T2; WiFi data logger (wireless LAN) with display for measuring temperature, two connections for external NTC temperature probes or door contacts, incl. USB cable, wall bracket, batteries and calibration protocol



Order no. 0572 2032

### testo Saveris 2-H2

testo Saveris 2-H2; WiFi data logger (wireless LAN) with display for measuring temperature and relative humidity, connection for one external humidity probe, incl. USB cable, wall bracket, batteries



Order no. 0572 2035

### testo Saveris 2-T3

testo Saveris 2-T3; WiFi data logger (wireless LAN) with display for measuring temperature, two connections for external TC temperature probes (Types K, T, J), incl. USB cable, wall bracket, batteries and calibration protocol



Order no. 0572 2033

### testo 160 IAQ

testo 160 IAQ WiFi air quality logger with display and integrated sensors for temperature, humidity, CO<sub>2</sub> and atmospheric pressure incl. mains unit



Order no. 0572 2014

### testo Saveris 2 - set for temperature monitoring in refrigerators

testo Saveris 2-T2; WiFi data logger (wireless LAN) with display for measuring the temperature, two connections for external NTC temperature probes or door contacts, incl. two ribbon-cable temperature probes, two temperature simulation flasks for filling with a temperature buffer suitable for each respective area of application, USB cable, wall bracket, batteries and calibration protocol



Order no. 0572 2103

Please note that in order to use the WiFi data logger system testo Saveris 2, a WiFi data logger, registration in the Testo Cloud ([www.saveris.net](http://www.saveris.net)) and a wireless LAN-capable network are absolutely necessary.

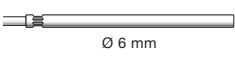
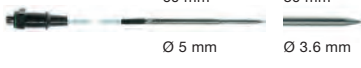
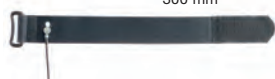

# Technical data

	testo Saveris 2-T1	testo Saveris 2-T2	testo Saveris 2-T3			testo Saveris 2-H1	testo Saveris 2-H2	testo 160 IAQ
<b>Temperature measurement</b>								
Sensor type	NTC internal	NTC	TC Type K	TC Type J	TC type T	NTC internal	NTC	
Measuring range	-30 to +50 °C	-50 to +150 °C	-195 to +1350 °C	-100 to +750 °C	-200 to +400 °C	-30 to +50 °C	Measuring range and accuracy correspond to probe	0 to +50 °C
Accuracy ±1 digit	±0.5 °C	±0.3 °C	±(0.5 + 0.5 % of m.v.) °C			±0.5 °C		±0.5 °C
Resolution	0.1 °C							0.1 °C
<b>Humidity measurement</b>								
Measuring range	-					0 to 100 %RH	Measuring range and accuracy correspond to probe	0 to 100 %RH
Accuracy	-					±2 %RH		±2 %RH at +25 °C and 20 to 80 %RH ±3 %RH at +25 °C and <20 %RH and >80 %RH ±1% RH hysteresis ±1% RH / year drift
Resolution	-					0.1 %RH		
<b>CO<sub>2</sub> measurement</b>								
Measuring range	-							0 to 5000 ppm
Accuracy	-							±(50 ppm + 3 % of m.v.) at +25 °C Without external power supply: ±(100 ppm + 3 % of m.v.) at +25 °C
Resolution	-							1 ppm
<b>Pressure measurement</b>								
Measuring range	-							600 to 1100 mbar
Accuracy	-							±3 mbar at +22 °C
Resolution	-							1 mbar
<b>Temperature/humidity measurement via external probes</b>								
External probe connection	-	External temperature probes	External temperature probes			-	External humidity/temperature probe	-
<b>General technical data</b>								
Operating temperature	-30 to +50 °C							0 to +50 °C
Storage temperature (without batteries)	-40 to +70 °C							-20 to +50 °C
Protection class	IP65	IP65	IP54			IP30	IP54	IP20
Measuring cycle	Depends on the Cloud licence / Basic: 15 min to 24 h / Advanced: 1 min to 24 h testo 160 IAQ – Advanced in battery operation: 5 mins to 24 h							
Communication cycle	Depends on the Cloud licence / Basic: 15 min to 24 h / Advanced: 1 min to 24 h							
Memory	10000 readings/channel							32,000 readings (sum of all channels)
Standards / permits	EN 12830	EN 12830	-					
Battery life	12 months (typical value, depending on the wireless LAN infrastructure) at +25 °C, 15 mins measurement rate and standard communication rate at -30 °C, 15 mins measurement rate and standard communication rate with Energizer batteries 0515 0572							12 months
Voltage supply	4 x AA AlMn Mignon batteries; mains unit optional; for temperatures under -10 °C please use Energizer batteries 0515 0572							4 x AA alkali manganese batteries 1.5 V, alternatively mains unit via USB connection
Dimensions	95 x 75 x 30.5 mm					115 x 82 x 31 mm	95 x 75 x 30.5 mm	117 x 82 x 32 mm
Weight (including batteries)	240 g					250 g	240 g	269 g
Door contact	No	Optional	No					
<b>Communication</b>								
WiFi (wireless LAN)	Signal transmission: wireless; frequency band: 2.4 GHz; supported wireless LAN standards: IEEE 802.11 b/g/n and IEEE 802.1X Possible encryption methods: without encryption, WEP, WPA, WPA2, WPA2 Enterprise The data loggers communicate via the standard protocol MQTT and are SNTP time synchronization-capable.							

## Ordering data for accessories


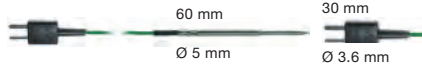
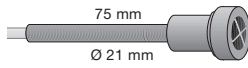
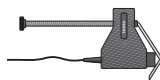
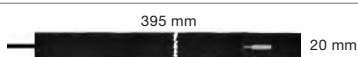

Accessories	Order no.	
Door contact for testo Saveris 2-T2 WiFi data logger	0572 2152	
Mains unit for testo Saveris 2 WiFi data loggers	0572 2020	
Battery for WiFi probes (4 x AA alkali manganese Mignon batteries))	0515 0414	
Batteries for operating WiFi data loggers testo Saveris 2 below -10 °C (4 x Energizer L91 Photo-Lithium)	0515 0572	
Magnetic adapter for testo Saveris 2 wall bracket, for attachment to magnetic surfaces	0554 2001	
Wall bracket for testo 160 IAQ	0554 2015	
Deco-cover for testo 160 IAQ	0554 2012	
ISO temperature calibration certificate, temperature probe; calibration points -18 °C, 0 °C, +40 °C; per channel/instrument	0520 0153	
DAkkS temperature calibration certificate; temperature probe; calibration points -18 °C, 0 °C, +40 °C; per channel/instrument	0520 0262	
ISO humidity calibration certificate; calibration points 11.3 %RH and 75.3 %RH at +25 °C/ +77 °F; per channel/instrument	0520 0076	
DAkks humidity calibration certificate; humidity probe; calibration points 11.3 %RH and 75.3 %RH at +25°C; per channel/instrument	0520 0246	
ISO calibration certificate CO <sub>2</sub> , calibration points 0; 1000; 5000 ppm	0520 0033	

## Temperature probes for testo Saveris 2-T2

Probe type	Dimensions probe shaft/probe shaft tip	Measuring range	Accuracy	t <sub>99</sub>	Order no.
Stump probe, IP 54		-20 to +70 °C	±0.2 °C (-20 to +40 °C) ±0.4 °C (+40.1 to +70 °C)	15 s	0628 7510
Stationary probe with aluminium sleeve, IP 65, fixed cable 2.4 m		-30 to +90 °C	±0.2 °C (0 to +70 °C) ±0.5 °C (remaining meas. range)	190 s	0628 7503
Accurate immersion/penetration probe, cable length 6 m, IP 67, fixed cable		-35 to +80 °C	±0.2 °C (-25 to +74.9 °C) ±0.4 °C (remaining meas. range)	5 s	0610 1725
Surface probe fixed cable, 2 m		-50 to +80 °C	±0.2 °C (0 to +70 °C)	150 s	0628 7516
Penetration probe NTC with ribbon cable, cable length 2 m, IP 54, fixed cable		-40 to +125 °C	±0.5 % of m.v. +100 to +125 °C) ±0.2 °C (-25 to +80 °C) ±0.4 °C (remaining meas. range)	8 s	0572 1001
Pipe wrap probe with Velcro tape for pipe diameters up to max. 75 mm, Tmax. +75 °C, fixed cable		-50 to +70 °C	±0.2 °C (-25 to +70 °C) ±0.4 °C (-50 to -25.1 °C)	60 s	0613 4611
External temperature probe 12 mm, plug-in, without cable		-30 to +50 °C	±0.2 °C (-30 to +50 °C)		0572 2153



**More probes at [www.testo.com](http://www.testo.com)!**

## Temperature probes for testo Saveris 2-T3

Probe type	Dimensions probe shaft/probe shaft tip	Measuring range	Accuracy	t <sub>99</sub>	Order no.
Stationary probe with stainless steel sheath, TC Type K	 40 mm Ø 6 mm Connection: Fixed cable 1.9 m	-50 to +205 °C	Class 2*	20 s	0628 7533
Penetration probe TC with ribbon cable, Type K, cable length 2 m, IP 54	 60 mm Ø 5 mm 30 mm Ø 3.6 mm	-40 to +220 °C	Class 1 (-25 to +200 °C) Class 2 (<-25 °C and >+200 °C)	7 s	0572 9001
Magnetic probe, adhesive power approx. 10 N, with magnets, for higher temperatures, for measurements on metal surfaces, TC Type K	 75 mm Ø 21 mm Connection: Fixed cable 1.6 m	-50 to +400 °C	Class 2*		0602 4892
Pipe clamp probe for pipe diameters 5 to 65 mm, with replaceable measuring head, measuring range short-term up to +280 °C, TC Type K	 Connection: Fixed cable 1.2 m	-60 to +130 °C	Class 2*	5 s	0602 4592
Pipe wrap probe with Velcro tape, for measuring temperatures on pipes with diameters up to max. 120 mm, Tmax +120°C, TC Type K	 395 mm 20 mm Connection: Fixed cable 1.5 m	-50 to +120 °C	Class 1*	90 s	0628 0020
Flexible, low-mass immersion measurement tip, ideal for measurements in small volumes such as Petri dishes or for surface measurements (e.g. fixed with adhesive tape), TC Type K, 2 m, FEP-insulated thermal wire, temperature-proof to 200 °C, oval cable with dimensions: 2.2 mm x 1.4 mm	 Ø 0.25 mm 500 mm	-200 to +1000 °C	Class 1*	1 s	0602 0493

\* Acc. to norm 60584-2, the accuracy of Class 1 refers to -40 to +1000 °C (Type K), Class 2 to -40 to +1200 °C (Type K), Class 3 to -200 to +40 °C (Type K).

## Humidity/temperature probes for testo Saveris 2-H2

Probe type	Dimensions Probe shaft/probe shaft tip	Measuring range	Accuracy	Order no.
Humidity/temperature probe 12 mm, fixed cable, cable length 1.3 m		-30 to +70 °C 0 to 100 %RH	± 0.3 °C ± 2 %RH at +25 °C (2 to 98 %RH) ± 0.03%RH/K ± 1 digit	0572 2155
External humidity/temperature probe 12 mm, plug-in, without cable	 105 mm Ø 20 mm Ø 12 mm	-30 to +50 °C 0 to 100 %RH	± 0.5 °C ± 2 %RH Temperature coefficient: ± 0.03 %RH/K (k=1) Long-term stability: ± 1 %RH/year	0572 2154

**More probes at [www.testo.com](http://www.testo.com)!**

## testo Smart Probes – VAC kit

testo 405i thermal anemometer  
testo 410i vane anemometer  
testo 605i thermohygrometer  
testo 805i infrared thermometer  
in the testo Smart Case

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Compact professional measuring instruments from the Testo Smart Probes series for use with smartphones/tablets

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For the measurement of air and surface temperature, humidity, air velocity and volume flow

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Application-specific menus: volume flow measurement in ducts and at outlets, identification of mould risk, easy image documentation including IR temperature measuring value and measurement spot marking

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Measurement data displayed as a table or graphic

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Measurement data analyzed and sent via testo Smart App

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Handy testo Smart Case transport bag

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 Bluetooth®  
+ App

testo Smart App  
for free download

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 Available on the  
App Store

The compact VAC kit includes four App-controlled measuring instruments for the most important measuring tasks performed by VAC engineers: the testo 405i thermal anemometer, the testo 410i vane anemometer, the testo 605i thermohygrometer and the testo 805i infrared thermometer. In conjunction with a smartphone or tablet, it can be used to measure air and surface temperatures, air humidity, air velocities and volume flows in, on and around air conditioning plants and systems. Users can read off their measuring values conveniently via the testo Smart App installed on the smartphone/tablet. In the App, measurement parameters (such as humidity or temperature)

can be deleted, added or their order altered with just one click. It is also possible to change the displayed measurement parameters just as quickly. In addition to this, the App offers application-specific menus, including for the identification of mould risks; automatic calculation of volume flow at outlets/in ducts by easy parameterization of the outlet/duct cross-section (dimensions and geometry). Finally, the measurement data report can be e-mailed directly as a pdf or Excel file. In the handy testo Smart Case, the measuring instruments can be conveniently transported and are always to hand when they are needed.



## Technical data/accessories

**testo Smart Probes - VAC kit**

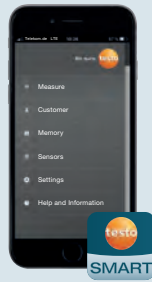
testo Smart Probes VAC kit for servicing on ventilation and air conditioning systems. Consists of: testo 405i, testo 410i, testo 605i, testo 805i, testo Smart Case (VAC), batteries, calibration protocol

Order no. 0563 0003 10



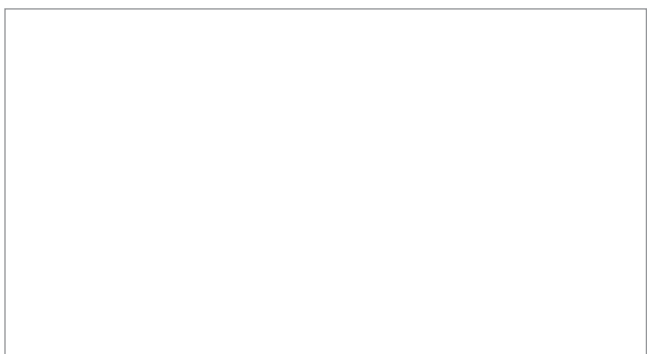
**testo Smart App**

The App turns your smartphone/tablet into the display for up to 6 Testo Smart Probes at the same time. Both the operation of the measuring instruments and the display of the readings are achieved by Bluetooth® via the testo Smart App on your smartphone or tablet – irrespective of the measuring location. In addition, you can use the App to create measurement reports, add photos and comments to these and send them by e-mail. For iOS and Android.



	<b>testo 405i</b>	<b>testo 410i</b>	<b>testo 605i</b>	<b>testo 805i</b>
<b>Sensor type</b>	<b>Hot wire</b>	<b>Vane</b>	<b>Humidity - capacitive</b>	<b>Infrared</b>
Measuring range	0 to 30 m/s	0.4 to 30 m/s	0 to 100 %RH	-30 to +250 °C
Accuracy ±1 digit	±(0.1 m/s + 5% of m.v.) (0 to 2 m/s) ±(0.3 m/s + 5% of m.v.) (2 to 15 m/s)	±(0.2 m/s + 2% of m.v.) (0.4 to 20 m/s)	±3.0 %RH (10 to 35 %RH) ±2.0 %RH (35 to 65 %RH) ±3.0 %RH (65 to 90 %RH) ±5 %RH (< 10 %RH or > 90 %RH) (at +25 °C)	±1.5 °C or ±1.5% of m.v. (0 to +250 °C) ±2.0 °C (-20 to -0.1 °C) ±2.5 °C (-30 to -20.1 °C)
Resolution	0.01 m/s	0.1 m/s	0.1 %RH	0.1 °C
<b>Sensor type</b>	<b>NTC</b>	<b>NTC</b>	<b>NTC</b>	
Measuring range	-20 to +60 °C	-20 to +60 °C	-20 to +60 °C	
Accuracy ±1 digit	±0.5 °C	±0.5 °C	±0.8 °C (-20 to 0 °C) ±0.5 °C (0 to +60 °C)	
Resolution	0.1 °C	0.1 °C	0.1 °C	
Compatibility	requires iOS 8.3 or newer / Android 4.3 or newer requires mobile terminal device with Bluetooth® 4.0			
Bluetooth® range	up to 15 m	up to 15 m	up to 100 m	up to 15 m
Storage temperature	-20 to +60 °C			
Operating temperature	-20 to +50 °C			-10 to +50 °C
Battery type	3 micro batteries AAA			
Battery life	15 hrs	130 hrs	150 hrs	30 hrs
Dimensions	200 x 30 x 41 mm telescope extendable to 400 mm	154 x 43 x 21 mm 40 mm vane diameter	218 x 30 x 25 mm 73 mm probe shaft	140 x 36 x 25 mm
Optics				10:1
Laser marking				diffractive optics (laser circle)
Emissivity				0.1 to 1.0 adjustable

<b>Accessories</b>	<b>Order no.</b>
ISO temperature calibration certificate, infrared thermometer, calibration points +60 °C; +120 °C; +180 °C	0520 0002
ISO humidity calibration certificate, calibration points 11.3 %RH and 75.3 %RH at +25 °C	0520 0006
ISO humidity calibration certificate, calibration point 75.3 %RH at +25 °C	0520 0096
ISO flow calibration certificate, two-point calibration, calibration points 5 m/s and 10 m/s	0520 0094
ISO flow calibration certificate, hot wire/vane anemometer, Pitot tube, calibration points 5; 10; 15; 20 m/s	0520 0034
ISO flow calibration certificate, hot wire/vane anemometer, Pitot tube, calibration points 1; 2; 5; 10 m/s	0520 0004



## testo Smart Probes – AC & refrigeration test kit

2 x testo 549i high-pressure measuring instrument  
2 x testo 115i clamp thermometer  
in the testo Smart Case

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Compact professional measuring instruments from the Testo Smart Probes series for use with smartphones/tablets

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Application-specific menus: superheating/subcooling

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Low refrigerant loss thanks to hoseless application

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Measurement data analyzed and sent via testo Smart App

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More than 90 common refrigerants stored in the testo Smart App, plus refrigerant updates

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100 m Bluetooth® range for particularly flexible applications

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 Bluetooth®  
+ App

testo Smart App  
for free download



The compact AC & refrigeration test kit contains the testo 549i high-pressure measuring instrument as well as the testo 115i clamp thermometer (two of each). In conjunction with a smartphone or tablet, the refrigeration kit is ideally suited to servicing and troubleshooting on air conditioning and refrigeration systems, as well as their installation. Both measuring instruments can be quickly and easily attached directly at the pressure connection or the temperature measuring point. They also make it considerably easier to work on measuring points that are a long distance apart, thanks to wireless connection to a smartphone or tablet. The measuring values of both instruments are transmitted via Bluetooth® connection to the App installed on the terminal device enabling convenient

and flexible readout. In the App, measurement parameters (such as temperature or pressure) can be deleted, added or their order altered with just one click. It is also possible to change the displayed measurement parameters just as quickly. In addition, the App enables automatic calculation of evaporation and condensation temperatures. All measurement data are presented either as a diagram or a table. Finally, the measurement data report can be e-mailed directly as a pdf or Excel file. The handy testo Smart Case enables the measuring instruments to be conveniently transported and ensures that they are always to hand when they are needed.

## Technical data/accessories

### testo Smart Probes – AC & refrigeration test kit

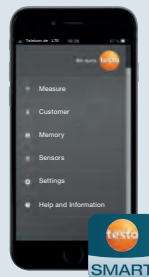
testo Smart probes AC & refrigeration test kit for servicing, commissioning and troubleshooting on air conditioning and refrigeration systems. Consists of: 2 x testo 115i, 2 x testo 549i, testo Smart Case (refrigeration), batteries, calibration protocol



Order no. 0563 0002 10

### testo Smart App

The App turns your smartphone/tablet into the display for up to 6 Testo Smart Probes at the same time. Both the operation of the measuring instruments and the display of the readings are achieved by Bluetooth® via the testo Smart App on your smartphone or tablet – irrespective of the measuring location. In addition, you can use the App to create measurement reports, add photos and comments to these and send them by e-mail. For iOS and Android.



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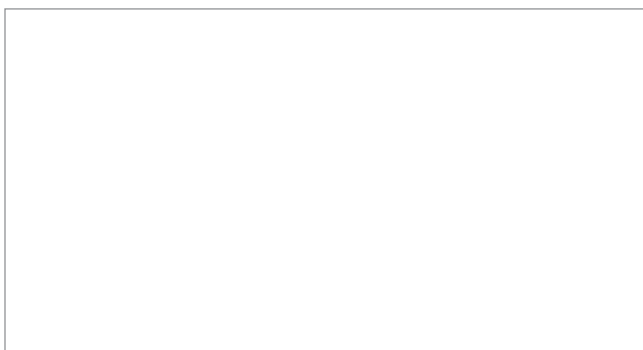
	testo 115i	testo 549i
<b>Sensor type</b>	<b>NTC</b>	<b>Pressure</b>
Measuring range	-40 to +150 °C	-1 to 60 bar
Accuracy ±1 digit	±1.3 °C (-20 to +85 °C)	0.5% of full scale value
Resolution	0.1 °C	0.01 bar
Connection		7/16" – UNF
Overload rel.		60 bar
Compatibility	requires iOS 8.3 or newer / Android 4.3 or newer	
	requires mobile terminal device with Bluetooth® 4.0	
Bluetooth® range	up to 100 m	
Storage temperature	-20 to +60 °C	
Operating temperature	-20 to +50 °C	
Battery type	3 micro batteries AAA	
Battery life	150 hrs	130 hrs
Dimensions	183 x 90 x 30 mm	150 x 32 x 31 mm
Measurable media		CFC, HFC, HCFC, N, H <sub>2</sub> O, CO <sub>2</sub>

Subject to change, including technical modifications.

### Accessories

### Order no.

ISO relative pressure calibration certificate, 3 measuring points distributed over the measuring range	0520 0085	
ISO temperature calibration certificate, one-point calibration for clamp thermometer, calibration point +60 °C	0520 0072	
testo HVAC softcase with precise-fit compartments for testo Smart Probes (2 x testo 115i, testo 405i, testo 410i, testo 510i, 2 x testo 549i, 2 x testo 605i, testo 805i, testo 905i), dimensions 400 x 290 x 80 mm	0516 0283	



Data sheet

testo Smart Probes –  
AC & refrigeration test kit plus



## testo Smart Probes – AC & refrigeration test kit plus

2 x testo 549i high-pressure measuring instrument  
2 x testo 115i clamp thermometer  
2 x testo 605i thermohygrometer  
in the testo HVAC softcase

---

Compact professional measuring instruments from the Testo Smart Probes series for use with smartphones/tablets

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More than 90 common refrigerants stored in the testo Smart App, plus refrigerant updates

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Application-specific menus: superheating and subcooling, target superheating, heating/cooling output

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Low refrigerant loss thanks to hoseless application

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Measurement data analyzed and sent via testo Smart App

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100 m Bluetooth® range for particularly flexible applications

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Bluetooth®  
+ App

testo Smart App  
for free download



The compact AC & refrigeration test kit plus includes two testo 549i high-pressure measuring instruments, two testo 605i thermohygrometers and two testo 115i clamp thermometers for pressure, (air) temperature and humidity measurement. In conjunction with a smartphone or tablet, the kit is ideally suited to servicing and troubleshooting on air conditioning and refrigeration systems, as well as their installation. The testo 549i and testo 115i can be quickly and easily attached directly at the pressure connection or the temperature measuring point. They also make it considerably easier to work on measuring points that are a long distance apart, thanks to wireless connection to a smartphone or tablet.

The measuring values of both instruments are transmitted via Bluetooth® to the testo Smart App installed on your terminal device enabling convenient and flexible readout there. In addition, the App enables automatic calculation of evaporation and condensation temperatures as well as of heating/cooling output. All measurement data are presented either as a diagram or a table. Finally, the measurement data report can be e-mailed directly as a pdf or Excel file.

[www.testo.com](http://www.testo.com)

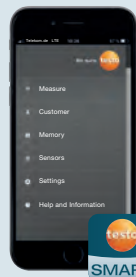
## Technical data/accessories

### testo Smart Probes – AC & refrigeration test kit plus

testo Smart Probes AC & refrigeration test kit plus for testing and troubleshooting on air conditioning and refrigeration systems as well as on heat pumps.

Consists of: 2 x testo 115i, 2 x testo 549i, 2 x testo 605i, testo HVAC softcase, batteries, calibration protocol

Order no. 0563 0002 41



#### testo Smart App

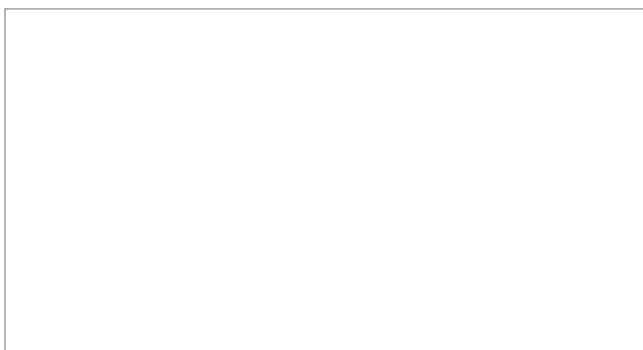
The App turns your smartphone/tablet into the display for up to 6 Testo Smart Probes at the same time. Both the operation of the measuring instruments and the display of the readings are achieved by Bluetooth® via the testo Smart App on your smartphone or tablet – irrespective of the measuring location. In addition, you can use the App to create measurement reports, add photos and comments to these and send them by e-mail. For iOS and Android.

	testo 115i	testo 549i	testo 605i	
Sensor type	NTC	Pressure	Humidity – capacitive	NTC
Measuring range	-40 to +150 °C	-1 to 60 bar	0 to 100 %RH	-20 to +60 °C
Accuracy ±1 digit	±1.3 °C (-20 to +85 °C)	0.5% of full scale value	±3.0 %RH (10 to 35 %RH) ±2.0 %RH (35 to 65 %RH) ±3.0 %RH (65 to 90 %RH) ±5 %RH (< 10 %RH or > 90 %RH) (at +25 °C)	±0.8 °C (-20 to 0 °C) ±0.5 °C (0 to +60 °C)
Resolution	0.1 °C	0.01 bar	0.1 %RH	0.1 °C
Connection		7/16" – UNF		
Overload rel.		65 bar		
Compatibility	requires iOS 8.3 or newer / Android 4.3 or newer			
	requires mobile terminal device with Bluetooth® 4.0			
Bluetooth® range	up to 100 m			
Storage temperature	-20 to +60 °C			
Operating temperature	-20 to +50 °C			
Battery type	3 micro batteries AAA			
Battery life	150 hrs	130 hrs	150 hrs	
Dimensions	183 x 90 x 30 mm	150 x 32 x 31 mm	218 x 30 x 25 mm, 73 mm probe shaft	
Measurable media		CFC, HFC, HCFC, N, H <sub>2</sub> O, CO <sub>2</sub>		

#### Accessories

#### Order no.

ISO relative pressure calibration certificate, 3 measuring points distributed over the measuring range	0520 0085	
ISO temperature calibration certificate, one-point calibration for clamp thermometer, calibration point +60 °C	0520 0072	
ISO humidity calibration certificate, calibration points 11.3 %RH and 75.3 %RH at +25 °C	0520 0006	
ISO humidity calibration certificate, calibration point 75.3 %RH at +25 °C	0520 0096	





## testo Smart Probes – heating kit

testo 115i clamp thermometer  
testo 510i differential pressure measuring instrument  
testo 805i infrared thermometer  
in the testo Smart Case

---

Compact professional measuring instruments from the Testo Smart Probes series for use with smartphones/tablets

---

All measuring instruments required for non-contact temperature measurement and the measurement of flow and return temperature, as well as gas flow pressure

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Measurement data analyzed and sent via testo Smart App

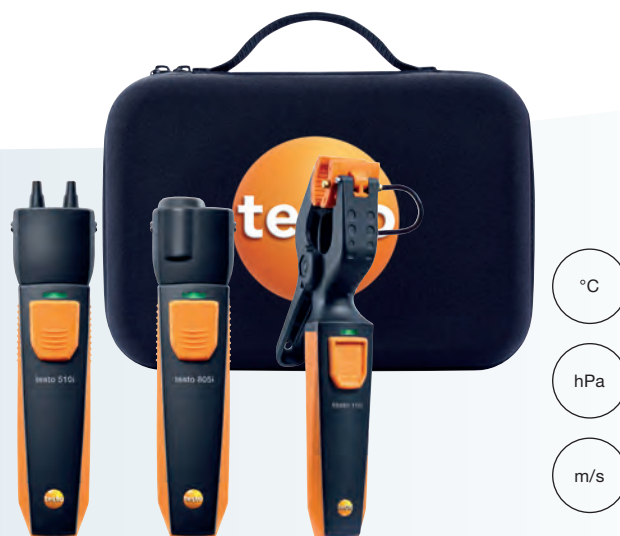
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Measurement data displayed as a table or graphic

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Handy testo Smart Case transport bag

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 Bluetooth®  
+ App

testo Smart App  
for free download



The compact heating kit with the testo 115i clamp thermometer, the testo 510i differential pressure measuring instrument and the testo 805i infrared thermometer is ideal for the most important measuring tasks performed by heating engineers. In conjunction with a smartphone or tablet, it enables all heating system temperatures and pressures to be measured and checked. Users can read off their measuring values conveniently via the App installed on the terminal device. For IR temperature measurement, for example on underfloor heating, the App makes it possible to document the measurement with an image, temperature

reading and measurement spot marking. It is also possible to change the displayed measurement parameters just as quickly. Application-specific menus, such as the pressure-drop test including alarms, support heating engineers in their daily work. All measurement data are presented either as a diagram or a table. Finally, the measurement data report can be e-mailed directly as a pdf or Excel file. In the handy testo Smart Case, the measuring instruments can be conveniently transported and are always to hand when they are needed.



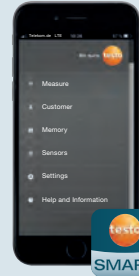
## Technical data/accessories

### testo Smart Probes – heating kit

testo Smart Probes heating kit for pressure and temperature measurement on heating systems. Consists of: testo 115i, testo 510i including hose kit (Ø 4 mm and 5 mm) with adapter, testo 805i, testo Smart Case (heating), batteries, calibration protocol



Order no. 0563 0004 10



### testo Smart App

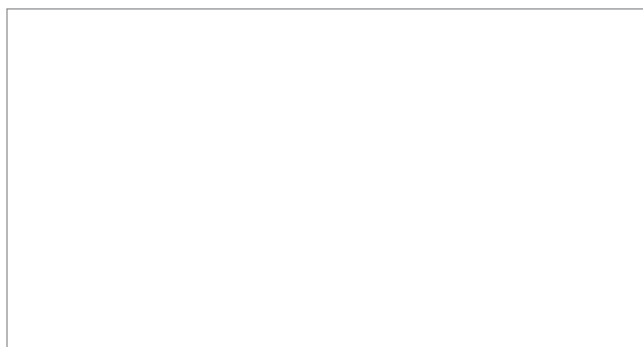
The App turns your smartphone/tablet into the display for up to 6 Testo Smart Probes at the same time. Both the operation of the measuring instruments and the display of the readings are achieved by Bluetooth® via the testo Smart App on your smartphone or tablet – irrespective of the measuring location. In addition, you can use the App to create measurement reports, add photos and comments to these and send them by e-mail. For iOS and Android.

	testo 115i	testo 510i	testo 805i
<b>Sensor type</b>	<b>NTC</b>	<b>Pressure</b>	<b>Infrared</b>
Measuring range	-40 to +150 °C	-150 to 150 hPa	-30 to +250 °C
Accuracy ±1 digit	±1.3 °C (-20 to +85 °C)	±0.05 hPa (0 to 1 hPa) ±(0.2 hPa + 1.5% of m.v.) (1 to 150 hPa)	±1.5 °C or ±1.5% of m.v. (0 to +250 °C) ±2.0 °C (-20 to -0.1 °C) ±2.5 °C (-30 to -20.1 °C)
Resolution	0.1 °C	0.01 hPa	0.1 °C
Compatibility	requires iOS 8.3 or newer / Android 4.3 or newer requires mobile terminal device with Bluetooth® 4.0		
Bluetooth® range	up to 100 m	up to 15 m	up to 15 m
Storage temperature	-20 to +60 °C		
Operating temperature	-20 to +50 °C		-10 to +50 °C
Battery type	3 micro batteries AAA		
Battery life	150 hrs	150 hrs	30 hrs
Dimensions	183 x 90 x 30 mm	148 x 36 x 23 mm	140 x 36 x 25 mm
Optics			10:1
Laser marking			diffractive optics (laser circle)
Emissivity			0.1 to 1.0 adjustable

### Accessories

### Order no.

ISO temperature calibration certificate, infrared thermometer, calibration points +60 °C; +120 °C; +180 °C	0520 0002	
ISO temperature calibration certificate, one-point calibration for clamp thermometer, calibration point +60 °C	0520 0072	
ISO pressure calibration certificate, accuracy > 0.6% of final value	0520 0005	



## testo Smart Probes – HVAC/R ultimate kit

2 x testo 115i clamp thermometer  
2 x testo 549i high-pressure measuring instrument  
2 x testo 605i thermohygrometer  
testo 405i thermal anemometer  
testo 410i vane anemometer  
testo 510i differential pressure measuring instrument  
testo 805i infrared thermometer  
Compact testo 905i thermometer  
in the testo HVAC softcase

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Carry out all measurements in the fields of heating, air conditioning, refrigeration and ventilation with one kit

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All Testo Smart Probes for temperature, pressure, humidity and flow velocity in one kit

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Display of measurement data progression as a graph or table

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Measurement data analyzed and sent via testo Smart App

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Bluetooth®  
+ App

testo Smart App  
for free download



The ultimate kit for air conditioning, refrigeration and heating contractors, enabling the measurement of temperature, humidity, flow and pressure. In conjunction with a smartphone or tablet, the refrigeration kit is ideally suited to servicing and troubleshooting on air conditioning, refrigeration and heating systems, as well as their installation. All the measuring instruments can be quickly and easily commissioned and attached directly at the pressure connection or the temperature measuring point. They also make it considerably easier to work on measuring points that are a long distance apart, thanks to wireless

connection to a smartphone or tablet and a range of up to 100 m (testo 549i, testo 115i, testo 605i). The measuring values of both instruments are transmitted via Bluetooth® connection to the App installed on the smartphone/tablet enabling convenient and flexible readout. In the App, measurement parameters can be deleted, added or their order altered with just one click. It is also possible to change the displayed measurement parameters just as quickly. All measurement data are presented either as a diagram or a table. Finally, the measurement data report can be e-mailed directly as a pdf or Excel file.

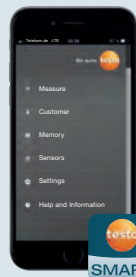
## Technical data/accessories

### testo Smart Probes – HVAC/R ultimate kit

Consists of: 2 x testo 115i, 2 x testo 549i, 2 x testo 605i, testo 405i, testo 410i, testo 510i, testo 805i, testo 905i, testo HVAC softcase, batteries, calibration protocol



Order no. 0563 0002 31



#### testo Smart App

The App turns your smartphone/tablet into the display for up to 6 Testo Smart Probes at the same time. Both the operation of the measuring instruments and the display of the readings are achieved by Bluetooth® via the testo Smart App on your smartphone or tablet – irrespective of the measuring location. In addition, you can use the App to create measurement reports, add photos and comments to these and send them by e-mail. For iOS and Android.

	<b>testo 115i</b>	<b>testo 405i</b>	<b>testo 410i</b>	<b>testo 510i</b>
<b>Sensor type</b>	<b>NTC</b>	<b>Hot wire / NTC</b>	<b>Vane / NTC</b>	<b>Pressure</b>
Measuring range	-40 to +150 °C	0 to 30 m/s -20 to +60 °C	0.4 to 30 m/s -20 to +60 °C	-150 to 150 hPa
Accuracy ±1 digit	±1.3 °C (-20 to +85 °C)	±(0.1 m/s + 5% of m.v.) (0 to 2 m/s) ±(0.3 m/s + 5% of m.v.) (2 to 15 m/s) ±0.5 °C	±(0.2 m/s + 2% of m.v.) (0.4 to 20 m/s) ±0.5 °C	±0.05 hPa (0 to 1 hPa) ±(0.2 hPa + 1.5% of m.v.) (1 to 150 hPa)
Resolution	0.1 °C	0.01 m/s / 0.1 °C	0.1 m/s / 0.1 °C	0.01 hPa
Compatibility	requires iOS 8.3 or newer, Android 4.3 or newer, requires mobile terminal device with Bluetooth® 4.0			
Bluetooth® range	up to 100 m	up to 15 m	up to 15 m	up to 15 m
Dimensions	183 x 90 x 30 mm	200 x 30 x 41 mm	154 x 43 x 21 mm	148 x 36 x 23 mm
	<b>testo 549i</b>	<b>testo 605i</b>	<b>testo 805i</b>	<b>testo 905i</b>
<b>Sensor type</b>	<b>Pressure</b>	<b>Humidity – capacitive / NTC</b>	<b>Infrared</b>	<b>Type K (NiCr-Ni)</b>
Measuring range	-1 to 60 bar	0 to 100 %RH -20 to +60 °C	-30 to +250 °C	-50 to +150 °C
Accuracy ±1 digit	0.5% of full scale value	±3.0 %RH (10 to 35 %RH) ±2.0 %RH (35 to 65 %RH) ±3.0 %RH (65 to 90 %RH) ±5 %RH (< 10 %RH or > 90 %RH) ±0.8 °C (-20 to 0 °C) ±0.5 °C (0 to +60 °C)	±1.5 °C or ±1.5% of m.v. (0 to +250 °C) ±2.0 °C (-20 to -0.1 °C) ±2.5 °C (-30 to -20.1 °C)	±1 °C
Resolution	0.01 bar	0.1 %RH / 0.1 °C	0.1 °C	0.1 °C
Compatibility	requires iOS 8.3 or newer, Android 4.3 or newer, requires mobile terminal device with Bluetooth® 4.0			
Bluetooth® range	up to 100 m	up to 100 m	up to 15 m	up to 15 m
Dimensions	150 x 32 x 31 mm	218 x 30 x 25 mm	140 x 36 x 25 mm	222 x 30 x 24 mm

#### Accessories

#### Order no.

ISO relative pressure calibration certificate, 3 measuring points distributed over the measuring range	0520 0085	
ISO pressure calibration certificate, accuracy > 0.6% of final value	0520 0005	
ISO temperature calibration certificate, one-point calibration for clamp thermometer, calibration point +60 °C	0520 0072	
ISO humidity calibration certificate, calibration points 11.3 %RH and 75.3 %RH at +25 °C	0520 0006	
ISO humidity calibration certificate, calibration point 75.3 %RH at +25 °C	0520 0096	
ISO flow calibration certificate, two-point calibration, calibration points 5 m/s and 10 m/s	0520 0094	
ISO flow calibration certificate, hot wire/vane anemometer, Pitot tube, calibration points 5; 10; 15; 20 m/s	0520 0034	
ISO flow calibration certificate, hot wire/vane anemometer, Pitot tube, calibration points 1; 2; 5; 10 m/s	0520 0004	



## testo Smart Probes – mould kit

testo 605i thermohygrometer  
testo 805i infrared thermometer  
in the testo Smart Case

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Identify mould risk early with the testo Smart App

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Measurement spot marking with laser function

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Presentation and evaluation of the mould risk in traffic-light colours

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Measurement data analysis and dispatch incl. photo documentation of the affected areas via testo Smart App

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 Bluetooth®  
+ App

testo Smart App  
for free download



The testo Smart Probes mould kit, in combination with the free testo Smart App, is ideal for preventive mould risk identification before this can even occur. This compact and easy-to-transport kit contains two testo Smart Probes testo 605i and testo 805i for measuring ambient temperature, relative air humidity and surface temperature. This makes it perfect for fast identification of mould danger.

The results of the the mould indication are evaluated according to the traffic light principle (green, yellow, red), and can be saved at the press of a button as a PDF, CSV or Excel file, and transferred to other devices or sent directly by e-mail. For the purposes of better visualization, photos of the affected area are added to the report.

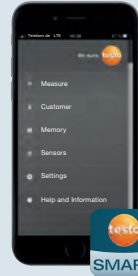
## Technical data/accessories

### testo Smart Probes – mould kit

testo Smart Probes – mould kit for the preventive identification of mould. Consists of: testo 605i, testo 805i, testo Smart Case (IAQ), batteries, calibration protocol



Order no. 0563 0005 10



### testo Smart App

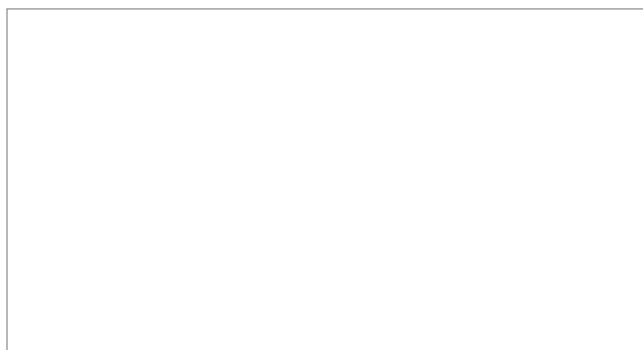
The App turns your smartphone/tablet into the display for up to 6 Testo Smart Probes at the same time. Both the operation of the measuring instruments and the display of the readings are achieved by Bluetooth® via the testo Smart App on your smartphone or tablet – independently of the measuring location. In addition, you can use the App to create measurement reports, add photos and comments to these and send them by e-mail. For iOS and Android.

	testo 605i	testo 805i
<b>Sensor type</b>	<b>Humidity – capacitive</b>	<b>Infrared</b>
Measuring range	0 to 100 %RH	-30 to +250 °C
Accuracy ±1 digit	±3.0 %RH (10 to 35 %RH) ±2.0 %RH (35 to 65 %RH) ±3.0 %RH (65 to 90 %RH) ±5 %RH (< 10 %RH or > 90 %RH) (at +25 °C)	±1.5 °C or ±1.5% of m.v. (0 to +250 °C) ±2.0 °C (-20 to -0.1 °C) ±2.5 °C (-30 to -20.1 °C)
Resolution	0.1 %RH	≤0.1 °C
<b>Sensor type</b>	<b>NTC</b>	
Measuring range	-20 to +60 °C	
Accuracy ±1 digit	±0.8 °C (-20 to 0 °C) ±0.5 °C (0 to +60 °C)	
Resolution	±0.1 °C	
Compatibility	requires iOS 8.3 or newer / Android 4.3 or newer requires mobile end device with Bluetooth® 4.0	
Bluetooth® range	up to 100 m	up to 15 m
Storage temperature	-20 to +60 °C	-20 to +60 °C
Operating temperature	-20 to +50 °C	-10 to +50 °C
Battery type	3 micro batteries AAA	3 micro batteries AAA
Battery life	150 hrs	30 hrs
Dimensions	218 x 30 x 25 mm 73 mm probe shaft	140 x 36 x 25 mm
Optics		10:1
Laser marking		diffractive optics (laser circle)
Emissivity		0.1 to 1.0 adjustable

### Accessories

### Order no.

ISO humidity calibration certificate, calibration point 75.3% RH at +25°C	0520 0096	
ISO humidity calibration certificate, calibration points 11.3% RH and 75.3% RH at +25°C	0520 0006	
ISO temperature calibration certificate, infrared thermometer, calibration points +60°C; +120°C; +180°C	0520 0002	



# Mini thermometer

## Mini alarm thermometer

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Settable min./max. alarm

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Permanently attached probe

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With a clip for standing up, wall installation or for attachment to clothing

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Illustration 1:1

The affordable testo mini thermometer with alarm function is small and handy, but big on performance. The penetration probe has an 80 cm wire and is permanently fixed to the instrument. The probe and the wire can be easily and compactly stored in the instrument.

If individually settable limit values are violated, an audible signal is sounded. The minimum penetration depth of the probe tip should be 20 mm. The alarm thermometer is suitable for the recording of temperature in the air, in soft, powdery substances and in liquids. It is not suitable for use in ovens or fermentation cabinets.



## Technical data / Accessories

### Mini alarm thermometer

Mini alarm thermometer with penetration probe up to 150 °C, probe length 190 mm, min/max alarm, attachent clip, incl. battery

Part no. 0900 0530



#### Sensor type

Measuring range	-50 to +150 °C
Accuracy ±1 digit	±1 °C (-30 to +150 °C) ±2 °C (remaining range)
Resolution	0.1 °C (-19.9 to +150 °C) 1 °C (-50 to -20 °C)

#### General technical data

Operating temperature	-10 to +50 °C
Storage temperature	-20 to +70 °C
Battery type	1 microcell AAA
Battery life	approx. 500 h
Display	LCD, 1 line
Housing material	ABS
Dimensions	100 x 73 x 18 mm
Probe length	190 mm
Diameter measuring tip	Ø 0.3 mm
Weight	135 g

#### Accessories for measuring instrument

#### Part no.

ISO calibration certificate/temperature; for air/immersion probes, calibration point -18°C	0520 0061	
ISO calibration certificate/temperature; for air/immersion probes, calibration point 0°C	0520 0062	

# Mini temperature measuring instruments

Small and handy,  
big on measurement

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Universally applicable

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Self-explanatory and robust

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Ready for use at the press of a button

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Waterproof (protection class IP67)

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Protective sleeve as a holder

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The mini and surface thermometers fit into any jacket pocket. They are small, convenient and always ready for use anywhere: whether in the food sector, the pharmaceutical industry or in the heating and ventilation business. The

great advantage is that the mini thermometers record temperature in the air as well as in soft or powdery substances and in liquids.

# The waterproof mini-thermometer

## Switch on, measure, finished

### Waterproof mini-thermometer

Waterproof mini thermometer, length 120 mm, up to +230 °C, with protective sleeve for probe shaft incl. calibration protocol

Part no. 0560 1113



After use, for example in a temperature measurement on foods, the waterproof mini-thermometer can simply be cleaned under running water or in a dishwasher.

#### Technical features:

- Waterproof, protection class IP67
- Measuring range from -20 to +230 °C
- Switch between °C and °F at the press of a button
- Battery charging level display
- MAX/MIN and HOLD button
- Easily exchangeable battery
- Probe shaft length 120 mm
- Protective sleeve as a holder

## Technical data

	Waterproof mini-thermometer	Standard mini penetration thermometer	Mini penetration thermometer with extended probe shaft	Mini surface thermometer
Measuring range	-20 to +230 °C	-50 to +150 °C	-50 to +250 °C	-50 to +300 °C
	120 mm	133 mm	213 mm	120 mm
Accuracy ±1 digit	±1 °C (-20 to +53.9 °C) ±0.8 °C (+54 to +90 °C) ±1 °C (+90.1 to +180 °C) ±1.5 °C (+180.1 to +230 °C)	±1 °C (-10 to +99.9 °C) ±2 °C (-30 to -10.1 °C) ±2% of m.v. (+100 to +150 °C)	±1 °C (-10 to +99.9 °C) ±2% of m.v. (+100 to +199.9 °C) ±3% of m.v. (+200 to +250 °C)	±1 °C (-30 to +250 °C) ±2 °C (remaining range)
Resolution	0.1 °C (-19.9 to +199.9 °C) 1 °C (remaining range)	0.1 °C (-19.9 to +150 °C) 1 °C (remaining range)	0.1 °C (-19.9 to +199.9 °C) 1 °C (remaining range)	0.1 °C (-19.9 to +199.9 °C) 1 °C (remaining range)
Operating temperature	-10 to +50 °C			
Battery type	Button cell LR44			
Display	LCD, 1 line			



For temperature spot-check measurements in food production



Dishwasher-safe

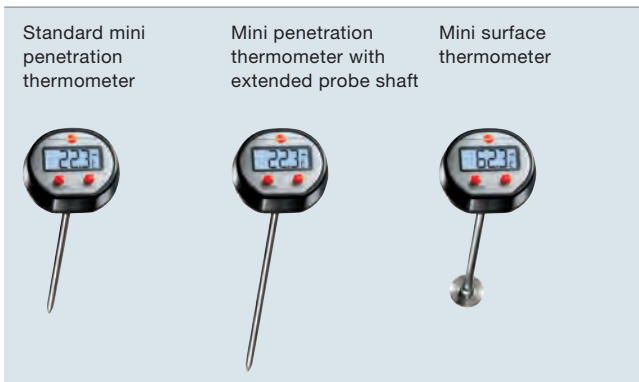


The protective sleeve with a clip holder. Always on you and ready to hand.



Simply rinse under running water when dirty.

# Your mini experts for every imaginable temperature measuring task



## Common technical features

- Easily legible display
- Battery charging level indicator
- Fast, easy battery replacement
- Switch between °C and °F at the press of a button
- Protective sleeve as a holder

## Additional technical features

### Standard mini penetration thermometer:

- Measuring range from -50 to +150 °C
- Probe shaft length 133 mm

## Standard mini penetration thermometer

Mini penetration thermometer up to 150 °C, length 133 mm, with protective sleeve for probe shaft, easily legible display, incl. batteries and calibration protocol

Part no. 0560 1110



## Additional technical features

### Mini penetration thermometer with extended probe shaft:

- Extended 213 mm probe shaft
- Measuring range from -50 to +250 °C

## Mini penetration thermometer with extended probe shaft

Mini penetration thermometer up to 250 °C, length 213 mm, with protective sleeve for probe shaft, easily legible display, incl. batteries and calibration protocol

Part no. 0560 1111



## Additional technical features

### Mini surface thermometer:

- Universally applicable for surface measurement
- Probe shaft length 120 mm
- Diameter of measurement tip 15 mm
- Measuring range from -50 to +300 °C

## Mini surface thermometer

Mini surface thermometer up to 300 °C, length 120 mm, broad measurement tip, easily legible display, incl. batteries

Part no. 0560 1109



## Data sheet

testoterm measuring strips  
testoterm measuring points  
testoterm mini indicators



# Self-adhesive temperature films

testoterm measuring strips  
testoterm measuring points  
testoterm mini indicators

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Clear indication by irreversible colour change  
within 2 to 3 seconds

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Covers a large measuring range

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Can be used universally

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Printing of individual logo possible

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Delivery on rolls possible for large orders

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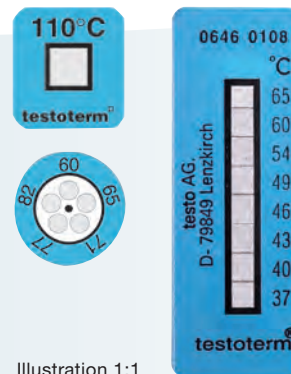


Illustration 1:1

testoterm measuring strips and mini indicators are self-adhesive, temperature-resistant films with heat-sensitive elements for checking and monitoring temperature, e.g. for measurements on moving parts, for long-term monitoring and on small objects.

Equally suitable for checking a defined maximum temperature are the also self-adhesive and temperature-resistant testoterm measuring points with heat-sensitive elements.

# testoterm measuring strips

## testoterm measuring strips

testoterm measuring strips are self-adhesive films with heat-sensitive elements for checking and monitoring temperature, e.g. for measurements on moving parts, for long-term monitoring and on small objects.

- Irreversible temperature changes takes place within 2 seconds
- Practical pack with 10 testoterm measuring strips each
- 8 temperature levels



### General technical data

Accuracy	from +43 °C to +154 °C: $\pm 1.5$ °C; from +160 °C: $\pm 1$ % $\pm 1$ °C of the respective temperature value
Operating temperature	corresponds to the respective measuring ranges
Storage	up to +65 °C: max. 4 months; remaining measuring ranges up to 2 years; max. storage temperature +25 °C. Storage in refrigerator recommended.
L x B	50 x 18 mm or 39 x 18 mm

### Available temperature ranges

+37 to +65 °C	Order no. 0646 0108
+71 to +110 °C	Order no. 0646 0916
+116 to +154 °C	Order no. 0646 1724
+161 to +204 °C	Order no. 0646 2532
+204 to +260 °C	Order no. 0646 3341

### Discounts

#### Number of packs

- 1 to 4 packs
- 5 to 9 packs
- 10 to 19 packs
- 20 to 49 packs
- 50 to 99 packs
- from 100 packs

**Possible special orders:** 0646 9999

### Special temperature ranges

Temperature ranges	Temperature levels	Minimum order quantity	Delivery time
+29 to +40 °C	5	100 pack	7 weeks
+249 to +280 °C	5	100 pack	7 weeks
+182 to +241 °C	9	4 rolls (@ 1,000 testoterm measuring strips)	7 weeks

### testoterm measuring strips on a roll

1 roll @ 1,000 testoterm measuring strips

Minimum order quantity: 4 rolls (= 4,000 testoterm measuring strips)



### Individual company logo

From 10,000 off (per temperature value), the testoterm measuring strips can be printed with the company name or the company logo.

Minimum order quantity: 10 rolls (= 10,000 testoterm measuring strips)



Your company name/  
logo can appear here



# testoterm measuring points

## testoterm measuring points

testoterm measuring points are self-adhesive, temperature-resistant films with heat-sensitive elements for monitoring a defined maximum temperature.

- Irreversible temperature changes takes place within 2 seconds
- Practical pack with 50 testoterm measuring strips each
- 1 temperature level



### General technical data

Accuracy	from +43 °C to +154 °C: $\pm 1.5$ °C; from +160 °C: $\pm 1$ % $\pm 1$ °C of the respective temperature value
Operating temperature	corresponds to the respective measuring ranges
Storage	up to +65 °C: max. 9 months; remaining measuring ranges up to 2 years; max. storage temperature +25 °C. Storage in refrigerator recommended.

### Available temperature ranges

+65 °C	Order no. 0646 1065
+71 °C	Order no. 0646 1071
+77 °C	Order no. 0646 1077
+82 °C	Order no. 0646 1082
+110 °C	Order no. 0646 1110
+121 °C	Order no. 0646 1112

### Discounts

#### Number of packs

1 to 4 packs
5 to 9 packs
10 to 19 packs
20 to 49 packs
50 to 99 packs
from 100 packs

Possible special orders: 0646 9999

### Special temperature ranges

Temperature ranges	Minimum order quantity	Delivery time
+37 °C +60 °C +127 °C +166 °C +249 °C +40 °C +88 °C +132 °C +171 °C +280 °C +43 °C +93 °C +138 °C +177 °C +46 °C +99 °C +143 °C +182 °C +49 °C +104 °C +149 °C +199 °C +54 °C +116 °C +154 °C +204 °C	50 pack (= 2,500 testoterm measuring points)	7 weeks

### testoterm measuring points on a roll

1 roll @ 1,000 testoterm measuring strips

Minimum order quantity: 6 rolls (= 6,000 testoterm measuring strips)  
 Delivery 7 weeks

### Individual company logo

From 10,000 off (per temperature value), the testoterm measuring strips can be printed with the company name or the company logo.

Minimum order quantity: 10 rolls (= 10,000 testoterm measuring strips)  
 Delivery 7 weeks

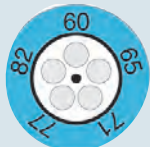


Your company name/  
 logo can appear here

# testoterm mini indicators

## testoterm mini indicators

testoterm mini-indicators are adhesive, heat-resistant films with heat-sensitive elements for temperature monitoring and control. They are particularly suitable for temperature control on small objects.



- Irreversible temperature changes takes place within 2 seconds
- Practical pack with 10 testoterm mini indicators each
- 5 temperature levels

### Available temperature ranges

+60/+65/+71/+77/+82 °C	Order no. 0646 0072
+88/+93/+99/+104/+110 °C	Order no. 0646 0073
+116/+121/+127/+132/+138 °C	Order no. 0646 0074
+143/+149/+154/+160/+166 °C	Order no. 0646 0075
+171/+177/+182/+188/+193 °C	Order no. 0646 0076
+199/+204/+210/+216/+224 °C	Order no. 0646 0077

**Possible special orders:** 0646 9999

### Special temperature ranges

Temperature ranges	Minimum order quantity	Delivery time
+40/+43/+46/+49/+54 °C +232/+241/+249/+254/+260 °C	100 pack (= 1,000 testoterm mini indicators)	7 weeks

### General technical data

Accuracy	from +43 °C to +154 °C: $\pm 1.5$ °C; from +160 °C: $\pm 1$ % $\pm 1$ °C of the respective temperature value
Operating temperature	corresponds to the respective measuring ranges
Storage	up to +65 °C: max. 9 months; remaining measuring ranges up to 2 years; max. storage temperature +25 °C. Storage in refrigerator recommended.
Diameter	15 mm

### Discounts

#### Number of packs

- 1 to 4 packs
- 5 to 9 packs
- 10 to 19 packs
- 20 to 49 packs
- 50 to 99 packs
- from 100 packs

## Software for data loggers

**testo ComSoft Basic**  
**testo ComSoft Professional**  
**testo ComSoft CFR**

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Three software versions – the right one for every application

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testo ComSoft Basic – the free standard software

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testo ComSoft Professional – the comprehensive software

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testo ComSoft CFR 21 Part 11 – the software for pharmaceutical requirements

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Convenient export functions e.g. for the further processing of the data in Microsoft Excel

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For the purposes of programming and reading out the logger, as well as for the analysis of the data, you can choose between three different software versions. Testo has the right solution for your requirements: The free testo ComSoft Basic with a graphic user interface offers all the basic functions of a standard logger software. Independently of where the loggers are being used – the testo ComSoft Basic makes not only the configuration and readout of the instrument, but also the analysis of the data very easy. User-friendliness and intuitive operation are placed in the foreground here.

Further requirements, such as the collation of measurement data created at different sites, are also excellently fulfilled by the testo ComSoft. Testo even offers an optimum software solution for the special requirements of the pharmaceutical industry: the testo ComSoft CFR 21 Part 11.

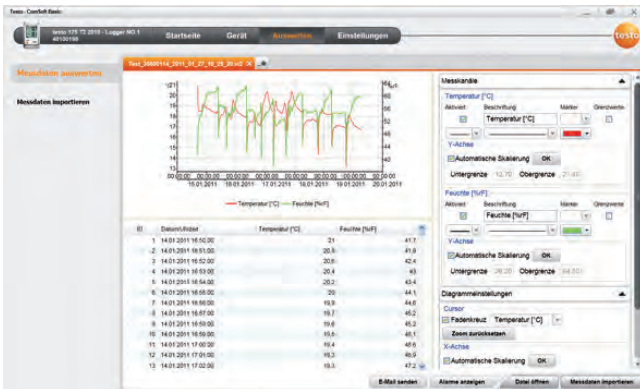
# Software for data loggers

## ComSoft Basic

Free download at [www.testo.com](http://www.testo.com)

ComSoft Basic, Basic software for programming and readout of Testo data loggers; graphic and tabular measurement value presentation as well as export function.

Part no. 0572 0580



### ComSoft Basic – for easy operation and convenient analysis

- Free download of the ComSoft Basic at [www.testo.com](http://www.testo.com)
- The ComSoft Basic offers all basic functions of a logger software
- Supports Testo data loggers from the instrument series testo 174, testo 175 and testo 176
- Runs on Windows XP ServicePack 3 (SP3), Windows Vista and Windows 7. More operating systems on request.

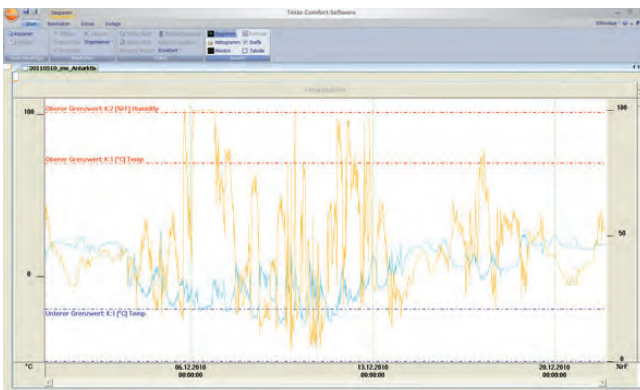
### Important functions

- Intuitive user interface guides the user through the individual processes step by step
- Graphic measurement value curve for clear presentation of the measurement values
- Logger configuration: start and stop criterion, measurement interval, storage rate and limit value adjustment
- Convenient export functions e.g. for the further processing of the data in Microsoft Excel, or the generation of a PDF which can be made available to other users.

## ComSoft Professional

ComSoft Professional Pro software incl. data archiving for programming and readout of Testo data loggers

Part no. 0554 1704



### ComSoft Professional – for demanding users

- The ComSoft Professional offers analysis and presentation possibilities beyond the basic functions
- Multiple measurement sites and data loggers can be organized, e.g. in a clear tree structure
- Supports Testo data loggers from the instrument series testo 174, testo 175, testo 176 and testo 184
- Runs on Windows XP ServicePack 3 (SP2), Windows Vista and Windows 7. More operating systems on request.

### Important functions:

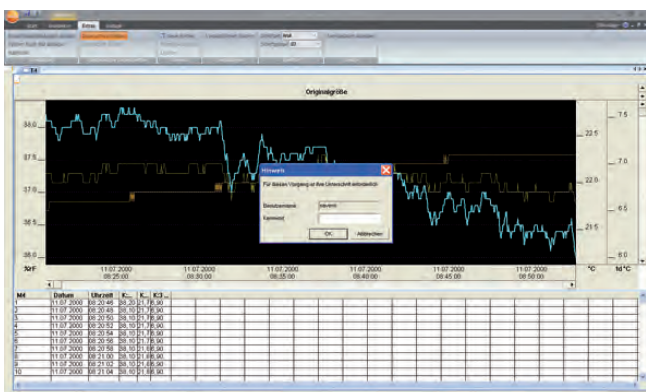
- Adaptation of menu and scope of function
- Selection of different print headings for tabular and graphic printout
- Extended presentation options such as number field, bar display, analog instrument and xy presentation
- Graphic measurement value curve for clear presentation of measurement values
- Logger configuration: start and stop criterion, measurement interval, storage rate and limit value adjustment
- Adjustment functions 0 (mean value) to 7th degree

# Software for data loggers

**ComSoft CFR 21 Part 11**

ComSoft CFR 21 Part 11 – Software for requirements according to CFR 21 Part 11 for the programming and readout of Testo data loggers

Part no. 0554 1705

**ComSoft CFR 21 Part 11 – specially for the requirements of the pharmaceutical industry**

- The ComSoft CFR 21 Part 11 is a validatable software and fulfils all requirements of the FDA (Food and Drug Administration) in a closed system.
- Conformity with the CFR guidelines is confirmed by an independent institute.
- Supports Testo data loggers from the instrument series testo 174, testo 175, testo 176 and testo 184
- Runs on all 32 and 64-Bit operating systems Windows XP SP2, Windows Vista, Windows 7 (excepting the respective „HOME Edition“). Further operating systems on request.

**Important functions:**

- Administration of user groups by administrator
- Storage of raw data in tamper-proof file format
- Recognition of carry-over errors thanks to test sums
- Inactivity lockout to prevent unauthorized access
- Monitoring of login/logout activity, successful/unsuccessful use of digital signatures and alteration of raw data with the help of an Audit Trail

## And which software will you choose?

Select the right software for yopur application:

	<b>ComSoft Basic</b> 0572 0580	<b>ComSoft Professional</b> 0554 1704	<b>ComSoft CFR 21 Part 11</b> 0554 1705
Logger readout / configuration	X	X	X
Storage rate and measurement interval adjustment	X	X	X
Data export as .xls / .pdf / .html / .csv	X	X	X
Display of diagram amd table	X	X	X
Adjustment		X	X
Scientific / statistical evaluation (min./max.; mean value, limit value violation)		X	X
Creation of formulae		X	X
Online measurement		X	X
Report template		X	X
Data archiving		X	X
Electronic signature			X
Allocation of access rights at 3 user levels			X
Audit trail			X

# Accessories

	Part no.	
Cable for connecting the data loggers testo 175 and testo 176 to the PC, Mini-USB to USB	0449 0047	
SD card - for collecting the measurement data from the data loggers testo 175 and testo 176; 2 GB; application range to -20 °C	0554 8803	
USB interface for programming and readout of the loggers testo 174T and testo 174H	0572 0500	

0981 4014/msp/I/05.2020

Subject to change without notice.





Be sure. **testo**



# Environmental monitoring system **testo Saveris Pharma.**

Automated and uninterrupted measurement data recording with comprehensive alarm management.

# testo Saveris Pharma: **All the information at a glance – using just one system.**

The all-in-one solution testo Saveris Pharma was developed in conjunction with industry experts, utilizing our more than 10 years of experience in pharmaceuticals. High-precision measurement technology, intuitive software and comprehensive services will help you work with speed and efficiency, and in compliance with GxP regulations.







### Get an overview of the entire process.

- ✔ Minimize risks and reduce costs to make your manufacturing processes more efficient.
- ✔ Access all your data on any platform, from anywhere and at any time.
- ✔ Use the recorded data for process analysis and optimization.

### Achieve greater efficiency.

- ✔ Record the quality data for all key environmental parameters – digitally and paper-free.
- ✔ Record and document all relevant quality data for a variety of applications.
- ✔ Access your data at any time – and always be ready for your next audit.

### Identify critical points.

- ✔ Detect faults early on and take corrective action.
- ✔ Use the intelligent alarm functions for fast action according to your CAPA system.
- ✔ Identify potential issues before they even occur.

### Have everything under control.

- ✔ Meet the high quality standards that are in force for your application.
- ✔ Strengthen quality awareness in your organisation and among your partners.
- ✔ Gain full control over the quality of individual areas of responsibility.

And for your next audit: **Be sure.**

# testo Saveris Pharma: Areas of application for the Solution

Environmental monitoring along the entire supply chain

## Research & Development

In medical, biotechnical, chemical and pharmaceutical laboratories and cleanrooms, important climatic parameters have to be monitored. This is the only way to maintain a high standard of quality while creating traceability.

Temperature in particular is a critical parameter that must be controlled and monitored. Humidity and pressure must also be included in standard-compliant IAQ monitoring. Our solution offers reliable, automated and continuous measurement of the relevant environmental conditions for almost any laboratory application, and therefore supports compliance with various internationally applicable quality standards such as Good Laboratory Practice (GLP) or DIN EN ISO 17025 and DIN EN ISO 15189.

Monitoring of environmental conditions in indoor areas:

- (Research) laboratories
- Cleanrooms
- Facilities for animals
- Greenhouses
- Stability test chambers
- Biobanks
- Blood and tissue banks

Monitoring the temperature and humidity of equipment:

- Refrigerators, freezers, ultra-low temperature freezers, liquid nitrogen applications
- Other laboratory equipment such as water baths

## Manufacturing

If pharmaceutical products such as drugs, medicines, APIs (Active Pharmaceutical Ingredients), biopharmaceuticals, tissue samples or medical devices are not produced and stored in the right climatic conditions, the stability and efficacy of the products can suffer. The internationally applicable minimum standards stipulate that the relevant areas must be qualified, and the environmental conditions must be monitored and documented in such a way that they cannot be tampered with, and the monitoring devices must be calibrated to comply with the guidelines. testo Saveris Pharma automates the centralized and complete documentation of measurement data and enables a rapid response capability in the event of limit value violations or other system-critical deviations via a comprehensive alarm management system.

testo Saveris Pharma offers an all-in-one solution consisting of sensor technology, software and all-encompassing GxP services for the following applications:

- Cleanrooms
- Production
- Aseptic filling
- Packaging
- Interim and final storage of APIs, excipients and finished products

The validatable environmental monitoring system complies with the ERES (Electronic Records, Electronic Signatures) concept and is therefore compliant with the 21 CFR Part 11 requirement for automated systems.



## Logistics

Internationally applicable minimum standards also require continuous temperature monitoring and documentation for the storage of pharmaceutical goods, as well as calibration of the measuring instruments used at a predefined interval. This ensures that the quality and safety of the products is not compromised. Before installing an environmental monitoring system, a reliable temperature distribution study (temperature mapping study) must be carried out so that the system is set up in accordance with the study results.

At Testo, not only do we supply you with the system, we also provide full support when it comes to calibration, mapping, qualification and validation in the following application areas:

- Warehouses and distribution centres
- Receipt of goods
- High-bay warehouses
- Cold stores
- Refrigerators, freezers, ultra-low temperature freezers, liquid nitrogen applications



## Healthcare

In healthcare, environmental measurement solutions are used in many different areas to ensure patient safety and to reduce the risk of product losses and compliance violations. Whether this is needed in operating theatres and treatment rooms of a hospital to monitor medicines, in a blood and tissue bank to protect samples, or in an in-house pharmacy where sensitive medicines are manufactured and stored – as a centralized environmental monitoring system, testo Saveris Pharma brings lots of different rooms and facilities together across multiple locations to ensure compliant documentation. Our solution is used in the following areas of healthcare to protect patients and sensitive samples:

Monitoring of environmental conditions in indoor areas:

- Hospitals
  - Laboratories
  - Operating theatres
  - Treatment rooms and patient wards
  - Pharmacy
  - (Cold) storage
  - Cleanrooms
- Blood and tissue banks

Monitoring the temperature and humidity of equipment:

- Refrigerators, freezers ultra-low temperature freezers, liquid nitrogen applications
- Incubators



# testo Saveris Pharma: System overview

## Communication modules

The use of different communication technologies with the testo 150 data logger modules is permitted. Depending on the application, you can either use an existing infrastructure (WLAN or Ethernet) or the **testo UltraRange** long-range radio technology.

With this innovative product, you have the option of using an autonomous radio network via encrypted, proprietary signals, which has an excellent range and signal stability for use in enclosed spaces.

More information on page 10



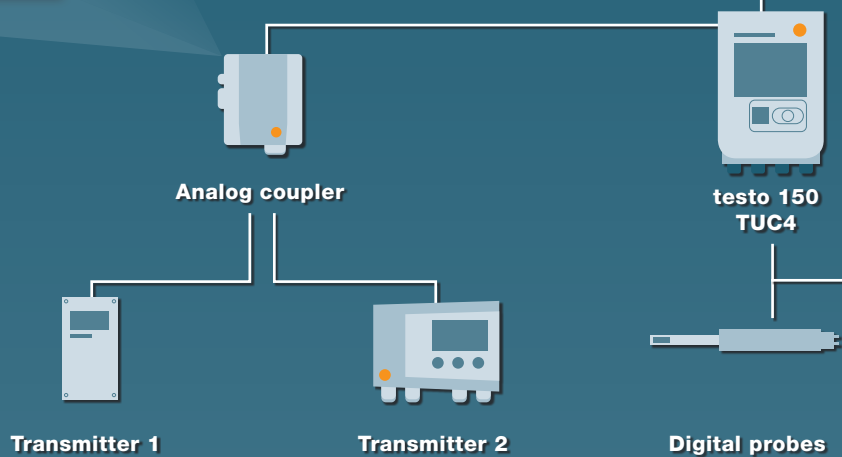
testo UltraRange

## Analog coupler

In addition to temperature and humidity, other measurement parameters such as differential pressure can be integrated into the Testo environmental monitoring system.

For example, all transmitters with standardized current and voltage inputs can be integrated.

More information on page 14



Analog coupler

testo 150  
TUC4

Transmitter 1

Transmitter 2

Digital probes

Ana

## Transmitter

### testo 6681 with probe:

Humidity and temperature measurement for special applications (high humidity / trace humidity / challenging measurement environments, e.g. H<sub>2</sub>O<sub>2</sub>)

### testo 6383

High-precision differential pressure measurement in clean room applications (transmitter in flush design, optional combination of differential pressure, humidity and temperature)

For more information, please get in touch with your contact partner.

## Digital probes

High-precision measurements for GxP-relevant parameters in a regulated environment. It is not necessary to interrupt the measurement to calibrate the probes – they are replaced during operation. There is no need to remove the data loggers and there are no gaps in the measured values.

More information on page 16

———— Customer network  
- - - - - Testo network



**testo Saveris Base V 3.0**

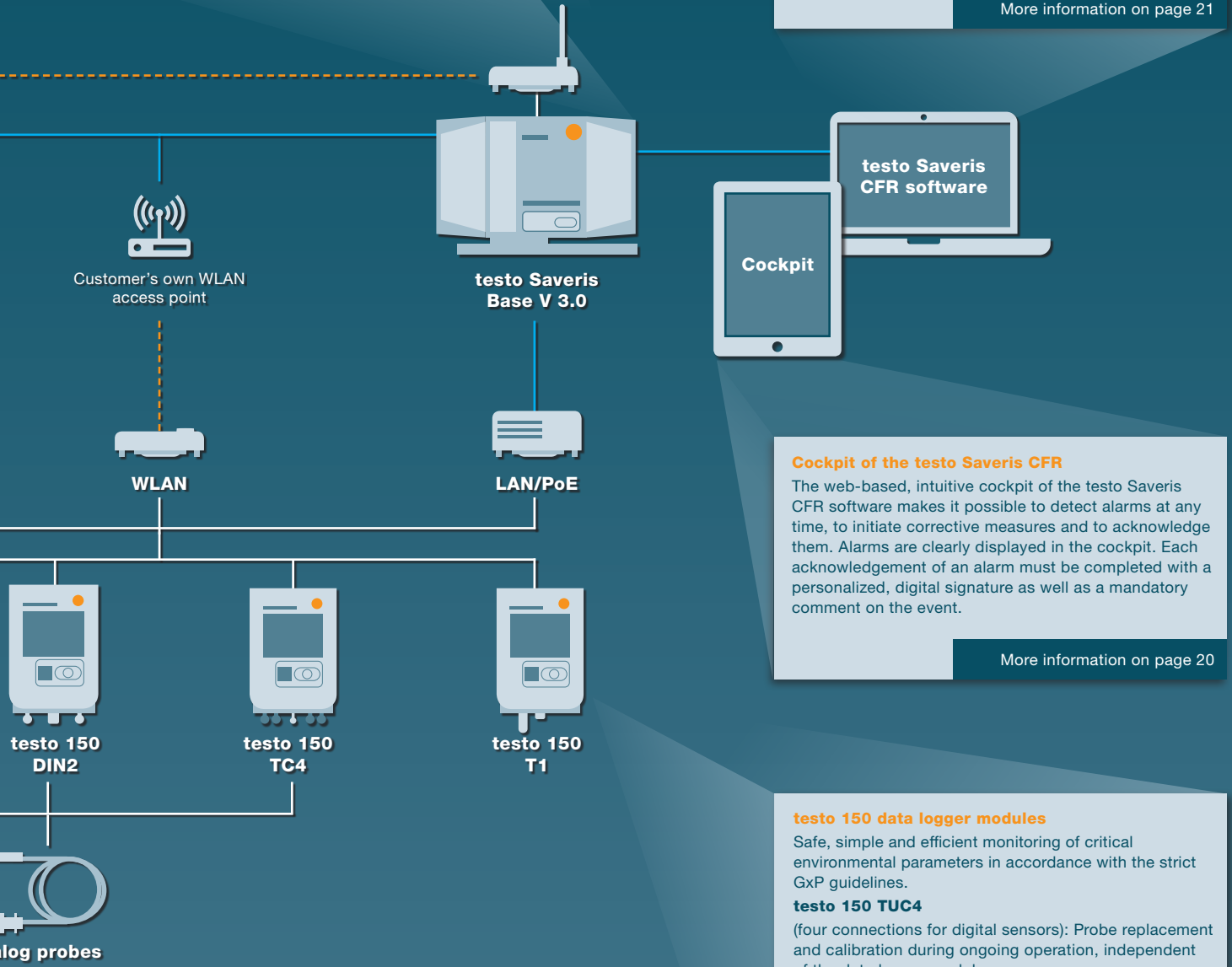
The core component of testo Saveris Pharma manages measurement data from up to 3,000 channels, evaluates it and generates alarms if any limit value violations should occur.

More information on page 12

**testo Saveris CFR software**

All measurement data is compiled, visualized and documented seamlessly. Strict compliance with US FDA 21 CFR Part 11 – as well as Annex 11 of the EU GMP Guideline – is ensured by maximum data integrity, audit trail, user levels with different user rights and electronic signatures.

More information on page 21



**Cockpit of the testo Saveris CFR**

The web-based, intuitive cockpit of the testo Saveris CFR software makes it possible to detect alarms at any time, to initiate corrective measures and to acknowledge them. Alarms are clearly displayed in the cockpit. Each acknowledgement of an alarm must be completed with a personalized, digital signature as well as a mandatory comment on the event.

More information on page 20

**Analog probes**

Almost every possible temperature measurement scenario is covered:

**NTC resistance probes**

are exceptionally robust and reliable

**Platinum resistance probes**

(PT 100) are used for measurements in a wider temperature range

**Thermocouples**

really stand out thanks to a flexible and broad selection of suitable sensors for a wide range of applications.

More information on page 18

**testo 150 data logger modules**

Safe, simple and efficient monitoring of critical environmental parameters in accordance with the strict GxP guidelines.

**testo 150 TUC4**

(four connections for digital sensors): Probe replacement and calibration during ongoing operation, independent of the data logger module.

**testo 150 TC4**

(four connections for thermocouples): Ideal for industrial applications and measurement of extreme conditions.

**testo 150 DIN2**

(two connections for standard probes): Enables use of the Testo probe portfolio covering all applications.

**testo 150 T1**

(internal sensor only): Internal NTC temperature sensor for temperature monitoring

More information on page 8

# Data logger modules for monitoring environmental parameters

## testo 150



---

Automated, uninterrupted, no-loss recording of measurement data in a regulated GxP environment

---

Can be combined with Testo communication modules for measurement data transmission via WLAN, Ethernet or testo UltraRange technology

---

GxP-compliant alarm system and documentation

---

Efficient monitoring by connecting up to four sensors

---

Certified according to DIN EN 12830:2018

---

In the event of any limit value violations, dual alarms on the logger itself

---

The four testo 150 data logger modules are part of the testo Saveris Pharma environmental monitoring system and they enable safe, simple and efficient monitoring of critical environmental parameters in accordance with the strict GxP guidelines.

- **testo 150 TUC4** (four connections for digital sensors): Probe replacement and calibration during ongoing operation, independent of the data logger module.
- **testo 150 TC4** (four connections for thermocouples): Ideal for industrial applications and measurement of extreme conditions.
- **testo 150 DIN2** (two connections for standard probes): Enables use of the Testo probe portfolio covering all applications.
- **testo 150 T1** (internal sensor only): Internal NTC temperature sensor for temperature monitoring

All data logger modules alert you to limit violations via the measurement data management software, testo Saveris CFR software + cockpit.

Thanks to their modular design, the testo 150 data logger modules can be integrated into any existing communication infrastructure (WLAN, LAN). The optional testo UltraRange long-range radio technology also enables the autonomous and secure transmission of readings over long distances.




**Note: Technical data can be found on page 22**

## Order data

**testo 150 TUC4**

Data logger module with display and 4 connections for all Testo sensors with TUC (Testo Universal Connector). Incl. wall bracket, batteries and calibration protocol.

Order no. 0572 3320



**DIN**  
EN 12830:2018

**testo 150 DIN2**

Data logger module with display and 2 connections for temperature sensors with miniDIN connector. Incl. wall bracket, batteries and calibration protocol.

Order no. 0572 3340




**DIN**  
EN 12830:2018

**testo 150 TC4**

Data logger module with display and 4 connections for thermocouples. Incl. wall bracket, batteries and calibration protocol.

Order no. 0572 3330



**DIN**  
EN 12830:2018

**testo 150 T1**

Data logger module with display and 1 internal NTC temperature sensor. Incl. wall bracket, batteries and calibration protocol.

Order no. 0572 3350



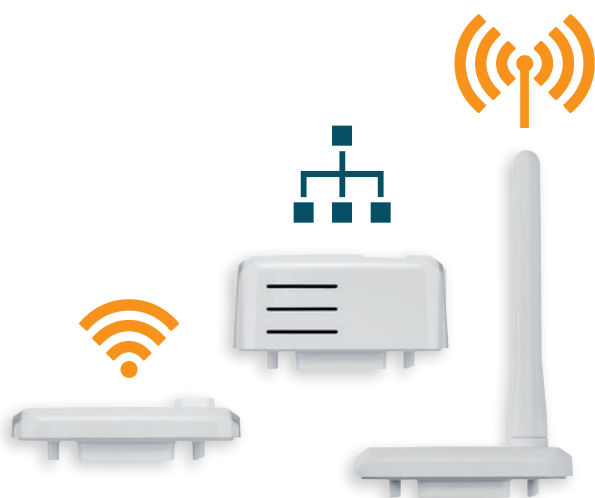
**DIN**  
EN 12830:2018

## Accessories

Accessories	Order no.
L91 Energizer batteries	0515 0572
Mains unit & USB cable for testo 150	0572 5004
4 x AIMn battery LR 6 (alkaline manganese AA batteries)	0515 0414
Magnetic attachment for testo 150 wall bracket	0554 2001
Communication modules	Order no.
LAN / PoE communication module	0554 9330
WLAN communication module	0554 9320
testo UltraRange communication module (region Europe)	0554 9311 01
testo UltraRange communication module (region Americas)	0554 9312 01
testo UltraRange communication module (region China)	0554 9313 01
testo UltraRange communication module (region APAC*)	0554 9314 01
testo UltraRange communication module (region South Korea)	0554 9315 01
testo UltraRange communication module (region India)	0554 9316 01
testo UltraRange communication module (region Russia)	0554 9317 01

\*Japan, Malaysia, Singapore, Taiwan, Macau

# Communication modules for testo 150, testo Saveris Base V3.0 and testo UltraRange Gateway



---

Modular components for communication via WLAN, Ethernet and testo UltraRange (radio)

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testo UltraRange technology: Very high radio range and signal stability compared with conventional radio technologies

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International radio authorizations

---

Can be freely combined with all testo 150 data logger modules for maximum scope of application

---

Easy installation, maintenance and commissioning

---

The communication modules enable the use of a wide range of communication technologies with the testo 150 data logger modules. Depending on the application, you can either use an existing infrastructure (WLAN or Ethernet) or use the testo UltraRange long-range radio technology.

With this innovative product, you have the option of using an autonomous radio network via encrypted, proprietary signals, which has an excellent range and signal stability for use in enclosed spaces.



**Note: Technical data for the modules can be found on page 23**

## Order data

### LAN/PoE communication module

LAN communication module with PoE for testo 150 data loggers

Order no. 0554 9330



### WLAN communication module

WLAN communication module for testo 150 data loggers

Order no. 0554 9320



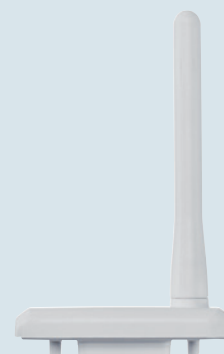
### testo UltraRange communication module

testo UltraRange communication module for testo 150 data loggers and testo UltraRange Gateway

Version	for	Order no.
Region	Data logger	0554 9311 01
Europe	Base and Gateway	0554 9311 02
Region	Data logger	0554 9312 01
Americas	Base and Gateway	0554 9312 02
Region	Data logger	0554 9313 01
China	Base and Gateway	0554 9313 02
Region	Data logger	0554 9314 01
APAC*	Base and Gateway	0554 9314 02

\*Japan, Malaysia, Singapore, Taiwan, Macau

Version	for	Order no.
Region South Korea	Data logger	0554 9315 01
	Base and Gateway	0554 9315 02
Region India	Data logger	0554 9316 01
	Base and Gateway	0554 9316 02
Region Russia	Data logger	0554 9317 01
	Base and Gateway	0554 9317 02



## Accessories

#### Base

#### Order no.

testo Saveris Base V3.0

0572 9320

#### Gateway

#### Order no.

testo UltraRange Gateway

0572 9310

#### Data logger

#### Order no.

testo 150 TUC4 data logger

0572 3320

testo 150 TC4 data logger

0572 3330

testo 150 DIN2 data logger

0572 3340

testo 150 T1 data logger

0572 3350

# Base station and Gateway

## testo Saveris Base V3.0 testo UltraRange Gateway



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Automated, uninterrupted, no-loss storage of measurement data

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The testo Saveris Base V3.0 can manage up to 3,000 measurement channels

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Comprehensive alarm management

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Alarms in the event of limit value violations as per GxP specifications

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The testo Saveris Base V3.0 is the core component of the testo Saveris Pharma environmental monitoring system. It manages measurement data from up to 3,000 channels, evaluates it and generates alarms if any limit value violations should occur.

The built-in emergency battery guarantees maximum data security, even in the event of a power failure. Various alarm transmitters can be connected via an alarm relay – so you can have alerts via SMS as well as optical or acoustic signals.

In addition to Ethernet and WLAN, the testo Saveris Pharma environmental monitoring system also supports testo UltraRange long-range radio technology. In addition to using an existing infrastructure, this also offers the option of using an autonomous radio network via encrypted, proprietary signals, which has an excellent range and signal stability for use in enclosed spaces.



**Note: For technical data on the Base station and Gateway, please see page 24**



## Order data

### testo Saveris Base V3.0

testo Saveris Base incl. rechargeable battery and configuration cable.  
Caution: Communication modules and mains units are not included in delivery.



Order no. 0572 9320

### testo UltraRange Gateway

Gateway for testo UltraRange radio connection incl. configuration cable.  
Caution: Communication modules and mains units are not included in delivery.



Order no. 0572 9310

## Accessories

### Accessories for testo Saveris Base V3.0 and testo UltraRange Gateway

### Order no.

Tabletop stand	0554 7200
Mains unit with USB cable	0572 5004
testo UltraRange communication module (region EU)	0554 9311 02
testo UltraRange communication module (region US)	0554 9312 02
testo UltraRange communication module (region CN)	0554 9313 02
testo UltraRange communication module (region APAC*)	0554 9314 02
testo UltraRange communication module (region KR)	0554 9315 02
testo UltraRange communication module (region IN)	0554 9316 02
testo UltraRange communication module (region RU)	0554 9317 02

\*Japan, Malaysia, Singapore, Taiwan, Macau

### Accessories for testo Saveris Base V3.0

### Order no.

Spare rechargeable battery	0515 5107
LTE stick (EMEA)	0554 7210
LTE stick (Americas)	0554 7211
LTE stick (APAC & Australia)	0554 7212
External antenna for LTE stick	0554 7230
Alarm module (optical & audible)	0572 9999

for operation: 24V mains unit  
0554 1749 required

# Digital analog coupler with current/voltage input for the data logger module testo 150 TUC4

testo Saveris Pharma



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Integration of lots of other measurement parameters via 4 – 20 mA connection

---

Standardized interfaces for easy integration

---

Easy connection to the testo 150 TUC4 data logger via TUC (Testo Universal Connector)

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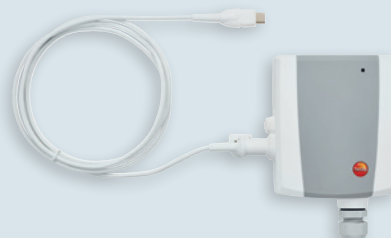
In addition to temperature and humidity, other measurement parameters such as differential pressure can be integrated into the Testo environmental monitoring system. For example, all transmitters with standardized current and voltage inputs can be integrated.

The digital analog coupler is easily integrated into the Saveris system via Ethernet, WLAN or testo UltraRange radio technology using the testo 150 TUC4 data logger.

## Order data

Digital analog coupler  
for testo 150

Order no. 0572 2166



**Note: For technical data on the digital analog coupler, please see page 25**



# Digital temperature and humidity probes for the testo 150 TUC4 data logger module



---

High-precision digital probes for the GxP-regulated environment

---

Probe replacement within seconds, with no data gaps in the documentation

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Wide temperature measuring range

---

Easy handling and installation

---

Efficient system monitoring with digital door contacts

---

The digital probes make it possible to carry out high-precision measurements for GxP-relevant parameters in a regulated environment. It is not necessary to interrupt the measurement to calibrate the probes – they are replaced during operation. There is no need to remove the data loggers and there are no gaps in the measured values.

The digital probes can be used with the testo 150 TUC4 data logger module, and they can benefit from the versatility of the testo Saveris Pharma environmental monitoring system: Use either different communication infrastructures such as WLAN or Ethernet, or the state-of-the-art testo UltraRange radio technology for unparalleled, secure and efficient long-range communication in a proprietary network.



**Note: For technical data on digital temperature and humidity probes, please see page 26**

## Order data

### Probe/logger matrix

Order no.	Description	testo 150 TUC4	testo 150 TC4	testo 150 DIN2
<b>Digital probes</b>				
0572 2162	Digital NTC stub temperature probe	X	-	-
0572 2163	Digital PT100 cable temperature probe	X	-	-
0572 2164	Digital stub humidity/temperature probe	X	-	-
0572 2165	Digital cable humidity/temperature probe	X	-	-
0572 2161	Digital door contact	X	-	-
0618 0071	Flexible digital Pt100 temperature probe	X	-	-
0618 7072	Glass-coated digital Pt100 laboratory probe	X	-	-

### Accessories

	Temperature range	Order no.
Extension cable 2 m	-30 to +50 °C	0449 3302
Extension cable 6 m	-30 to +50 °C	0449 3306
Extension cable 10 m	-30 to +50 °C	0449 3310

# Analog temperature probes for the testo 150 data logger modules



---

High-precision measurement in the GxP-regulated environment

---

Wide temperature measuring range

---

Extensive probe portfolio – customized adaptations are also possible

---

Short response time

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Different cable variants and cable lengths available

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Testo's analog temperature probes cover almost every possible temperature measurement scenario in the pharmaceutical sector.

**NTC resistance probes** are exceptionally robust and reliable. They also feature a high degree of accuracy and a wide range of applications within temperature measurement.

**Platinum resistance probes** (PT100) are used when a wider temperature range needs to be measured than can be covered by NTC resistance probes, for example.

**Thermocouples** really stand out thanks to a flexible and broad selection of suitable sensors for a wide range of applications.



**Note: For technical data on analog temperature probes, please see pages 27 and 28**



## Probe/logger matrix

Type	Probes	Order no.	Probe suitable for data logger		
			testo 150 TUC4	testo 150 TC4	testo 150 DIN2
NTC	Penetration probe NTC with ribbon cable, cable length 2 m, IP 54	0572 1001	-	-	X
	External temperature probe 12 mm, plug-in, without cable	0572 2153	-	-	X
	Stub probe, IP 54	0628 7510	-	-	X
	Accurate immersion/penetration probe, cable length 6 m, IP 67	0610 1725	-	-	X
	Stationary probe with aluminium sleeve, IP 65	0628 7503	-	-	X
	Pipe wrap probe with Velcro tape for pipe diameters up to max. 75 mm	0613 4611	-	-	X
	Probe for surface measurement	0628 7516	-	-	X
	Wall surface temperature probe	0628 7507	-	-	X
	Stainless steel NTC food probe (IP65) with PU line	0613 2211	-	-	X
	Waterproof NTC immersion/penetration probe	0613 1212	-	-	X
	Accurate immersion/penetration probe, cable length 1.5 m, IP 67	0628 0006	-	-	X
	Waterproof immersion/penetration probe	0615 1212	X	-	-
	Robust air probe	0615 1712	X	-	-
	Temperature probe with Velcro	0615 4611	X	-	-
Pt100	Penetration probe Pt100 with ribbon cable, cable length 2 m, IP54	0572 7001	-	-	X
	Robust, waterproof Pt100 immersion/penetration probe	0609 1273	-	-	X
	Robust Pt100 stainless steel food probe (IP65)	0609 2272	-	-	X
TC	Penetration probe, TC type K with ribbon cable, cable length 2 m, IP 54	0572 9001	-	X	-
	Thermocouple with TC plug, flexible, length 800 mm, fibreglass	0602 0644	-	X	-
	Thermocouple with TC plug, flexible, length 1500 mm, fibreglass	0602 0645	-	X	-
	Thermocouple with TC plug, flexible, length 1500 mm, PTFE	0602 0646	-	X	-
	Magnetic probe, adhesive force approx. 20 N, with adhesive magnets	0602 4792	-	X	-
	Magnetic probe, adhesive force approx. 10 N, with adhesive magnets	0602 4892	-	X	-
	Immersion measuring tip, flexible, for measurements in air/flue gases	0602 5693	-	X	-
	Immersion measuring tip, flexible	0602 5792	-	X	-
	Flexible, low-mass immersion measuring tip	0602 0493	-	X	-
	Pipe wrap probe for pipe diameters 5 to 65 mm	0602 4592	-	X	-
	Pipe wrap probe with Velcro strip	0628 0020	-	X	-
	Stationary probe with stainless steel sheath	0628 7533	-	X	-
	Waterproof superfast needle probe	0628 0027	-	X	-
	Frozen food probe for screw-in use without pre-drilling	0603 3292	-	X	-
	Robust food penetration probe with special handle	0603 2492	-	X	-
Waterproof standard immersion/penetration probe	0603 1293	-	X	-	

# Measurement data management software for the industrial and GxP-regulated environment

testo Saveris CFR  
testo Saveris PRO  
Cockpit



---

Client and viewer software including database for installation on PC or server

---

Fast localization and analysis of alarms with graphic visualization

---

Platform-independent data access

---

Customizable alarm management and reporting

---

Reduced training requirement and low error potential thanks to intuitive operability

---

Possibility of alarm acknowledgement via smart device

---

In the testo Saveris software, all measurement data is collated, visualized and documented seamlessly.

The validatable CFR version of the software ensures strict compliance with US 21 CFR Part 11 as well as Annex 11 of the EU GMP Guideline through maximum data integrity, audit trail, user levels with different user rights and electronic signatures.

The web-based, intuitive cockpit of the testo Saveris CFR software additionally allows alarms to be identified and acknowledged at all times and from any end device. Alarms are clearly presented in the cockpit and can no longer be overlooked. Each acknowledgement of an alarm must be completed with a personalized, digital signature as well as a mandatory comment on the event.

## Order data

### testo Saveris PRO

testo Saveris PRO software (1-10 users) + Cockpit

Order no. 0572 0181

testo Saveris PRO license (+1 user)

Order no. 0572 0190

### testo Saveris CFR

testo Saveris CFR software license (1-10 users) + Cockpit

Order no. 0572 0182

testo Saveris CFR software license (+1 user)

Order no. 0572 0193

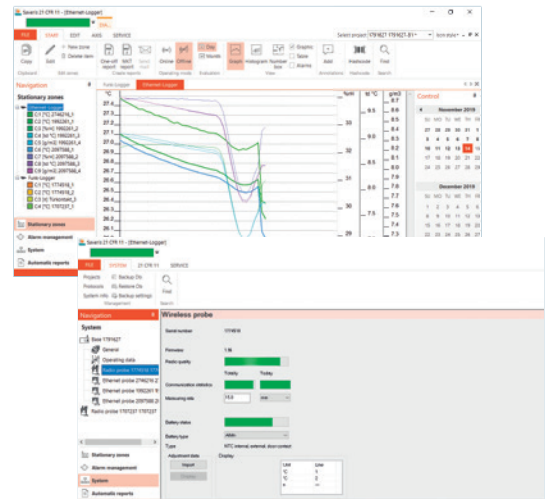
testo Saveris CFR Software license (unlimited)

Order no. 0572 0195



## testo Saveris Software

- Alarm management incl. escalation management
- Calibration management
- Extended analysis functions without data export as a CSV file (however optionally also possible)
- Individual reporting based on the rules and wishes of the user
- Analysis and graphical/tabular display of measurement data
- Client-server concept: the measurement data can be monitored by different PCs connected to the network
- All recorded measurement data from humidity and temperature monitoring is centrally archived and stored tamper-proof by the testo Saveris software.

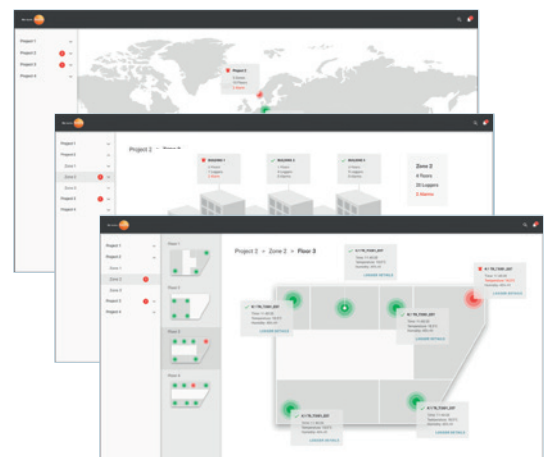


## The testo Saveris CFR software also includes

- Audit trail and ERES (Electronic Records / Electronic Signatures) concept based on regulatory requirements according to 21CFR part 11 and EU Annex 11 of the GMP regulations
- Powerful user management based on different Windows user groups and the respective valid Windows Active Directory entries

## Cockpit

- Easy and location-independent access to measurement data as well as alarm acknowledgement via your smart device
- Easy and intuitively operated, platform-independent user interface
- Significantly reduced requirement for training and the creation of training courses and SOPs
- Geographically hierarchical structure allows zooming into complex systems with a large number of measurement locations
- Powerful user management, based on the customer's Windows Active Directory content
- Control of access and alarm acknowledgement rights
- Individualization of the system by upload of own floor plans and logos



## Technical data for data logger modules

	testo 150 TUC4	testo 150 TC4	testo 150 DIN2	testo 150 T1
<b>Display</b>				
Display type	Segment display			
Display functions	Display of 2 measurement channels, limit value violations, connection status, signal strength, battery status, display can be disabled			
<b>Physical specifications</b>				
Housing material	PC/PET (front) / ABS+PC+10% GF/PET (rear)			
Size (W x H x L)	69.3 x 88.0 x 29.0 mm	69.3 x 89.3 x 29.0 mm	69.3 x 87.9 x 29.0 mm	69.3 x 88.3 x 29.0 mm
Measuring range	Analog (NTC): -40 to +150 °C Digital: See probes	1. TC Type K: -200 to +1350 °C 2. TC Type J: -100 to +750 °C 3 TC Type T: -200 to +400 °C	NTC: -40 to +150 °C Pt100 (with external probe): -200 to +600 °C	-40 to +50 °C (internal probe)
Accuracy (±1 digit)	Analog (NTC): ±0.3 °C Digital: See probes	±(0.5 °C + 0.5% of measured value)	NTC: ±0.3 °C Pt100: ±0.1 °C (0 to +60 °C) ±0.2 °C (-100 to +200 °C) ±0.5 °C (other measuring ranges)	±0.4 °C
Resolution	Analog (NTC): 0.1 °C / 0.1 °F Digital: See probes	0.1 °C	NTC: 0.1 °C / 0.1 °F Pt100: 0.01 °C / 0.01 °F	0.1 °C / 0.1 °F
Weight	Approx. 255 g			
IP protection class	IP 67 & IP 65 (with mounted testo UltraRange and WLAN communication module), IP 30 (Ethernet) (in each case without probe)			
<b>Operating and storage conditions</b>				
Storage temperature	-40 to +60 °C			
Operating temperature	-40 to +50 °C			
<b>Power</b>				
Power supply	optionally via mains unit & micro USB (0572 5004)			
Battery type	4 x AA alkaline manganese batteries At temperatures below +10 °C, the use of Energizer Li batteries is recommended (0515 0572)			
Battery life	testo UltraRange: Up to 7.2 years WLAN: 3.5 years (1 h communication cycle, 15 min measurement, +25 °C, 1 digital NTC probe connected)	testo UltraRange: Up to 6.4 years WLAN: 3.3 years (1 h communication cycle, 15 min measurement, +25 °C, 1 Type K probe connected)	testo UltraRange: Up to 6.7 years WLAN: 3.7 years (1 h communication cycle, 15 min measurement, +25 °C, 1 analog NTC probe connected)	testo UltraRange: Up to 7.2 years WLAN: 3.5 years (1 h communication cycle, 15 min measurement, +25 °C)
<b>Interfaces</b>				
Connections	4x TUC micro USB TCI (testo Communication Interface)	4x thermocouple (Type K, J, T) micro USB TCI (testo Communication Interface)	2x miniDIN micro USB TCI (testo Communication Interface)	micro USB TCI (testo Communication Interface)
<b>Measurement data storage</b>				
Measuring interval	5 seconds to 24 hours (Ethernet communication) / 1 minute to 24 hours (testo UltraRange radio or WLAN)			
Channels	16	4	2	1
Internal memory (per channel)	min. 16,000 readings	min. 64,000 readings	min. 128,000 readings	256,000 readings
Communication cycle	1 minute to 24 hours			
<b>Other</b>				
Wall bracket	Included			

## Technical data for communication modules

	LAN/PoE communication module	WLAN communication module	testo UltraRange communication module
<b>Physical specifications</b>			
Housing material	Plastic		
Size (W x H x L)	67.8 x 29.5 x 28.9 mm	67.8 x 12.2 x 28.9 mm	67.8 x 112.8 x 28.9 mm
Weight	Approx. 45 g	Approx. 17 g	Approx. 30 g
IP protection class (when connected to a testo 150 data logger module)	IP 30	IP 67	IP 67
<b>Operating and storage conditions</b>			
Storage temperature	-40 to +60 °C		
Operating temperature	-35 to +50 °C	-35 to +50 °C	-40 to +50 °C
<b>Power</b>			
Power supply	via PoE (Class 0)	via TCI	via TCI
<b>Interfaces</b>			
Connections	LAN (transmission rate: 10/100 Mbit)	TCI	TCI
Connectible loggers	testo 150 TUC4, testo 150 TC4, testo 150 DIN2, testo 150 T1		
<b>Measurement data storage</b>			
Communication cycle	1 min to 24 h		
<b>Other</b>			
Radio frequency	–	2.4 GHz	868 MHz (region Europe) 868 MHz (China) 920 MHz (region APAC*) 915 MHz (region Americas) 922 MHz (South Korea) 865 MHz (India) 868 MHz (Russia)
Transmission range		20 m inside buildings	100 m inside buildings (depending on spatial conditions) 17 km with no obstructions
*Japan, Malaysia, Singapore, Taiwan, Macau			

## Technical data for Base station and Gateway





	Base station testo Saveris Base V3.0	testo UltraRange Gateway
<b>Physical specifications</b>		
Housing material	ABS/PC plastic	
Dimensions (L x W x H)	193 x 112 x 46 mm	
Weight	Approx. 370 g	Approx. 314 g
IP protection class	IP20	
<b>Operating and storage conditions</b>		
Storage temperature	-20 to +60 °C	-20 to +80 °C
Operating temperature	+5 to +35 °C	0 to +50 °C
<b>Power</b>		
Power supply	PoE class 0; optionally via mains unit & micro USB cable (order no. 0572 5004)	
Rechargeable battery type	Li-Ion rechargeable battery, 3.7 V / 2.6 Ah, Order no. 0515 0107 (for data backup and emergency alarm in the event of power failure)	-
<b>Interfaces</b>		
Connections	2x USB LAN/PoE: Transfer rate 10/100 Mbit PoE class 0 micro USB alarm relay connection	1x USB LAN/PoE: Transfer rate 10/100 Mbit PoE class 0 micro USB
Channels per Base	3,000	-
Loggers per Gateway	-	40
<b>Measurement data storage</b>		
Memory	Circular buffer memory	-
Max. number of measurement values	120,000,000	-
Internal memory (per channel)	40,000	-
<b>Other</b>		
Alarm relay	Connection for external alarm relay available	-
GSM module	via LTE stick	-






## Technical data for digital analog coupler

Physical specifications	
Housing material	Plastic
Size (W x H x L)	85 x 100 x 38 mm
Weight	240 g
IP protection class	IP54
Operating and storage conditions	
Storage temperature	-25 to +60 °C
Operating temperature	+5 to +45 °C
Power	
Power supply	Power supply via testo 150 TUC4 logger
Interfaces	
Connections	2- or 4-wire current/voltage input
Connectible loggers	testo 150 TUC4
Measurement data storage	
Measuring range	4 to 20 mA; 0 to 10 V
Measuring interval	1 min to 24 h
Internal memory (per channel)	6,000 readings
Communication cycle	depends on method of communication of testo 150
Accuracy	<p>Power                      Maximum error: ±0.03 mA                      Resolution (min. error): 0.75 µA (16 bit) typical error: 5 µA</p> <p>Voltage                      0 to 1 V maximum error: ±1.5 mV resolution (min. error): 39 µV (16 bit)                      Typical error: 250 µV                      0 to 5 V maximum error: ±7.5 mV resolution (min. error): 0.17 mV typical error: 1.25 mV                      0 to 10 V maximum error: ±15 mV                      Resolution (min. error): 0.34 mV                      Typical error: 2.50 mV</p>

## Technical data for digital temperature and humidity probes

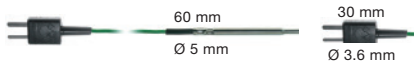
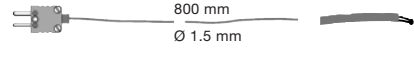
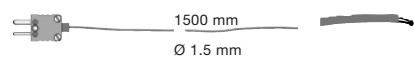
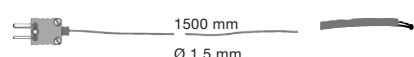



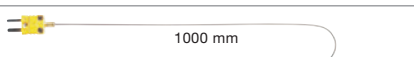

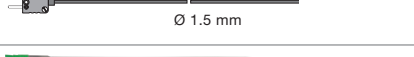
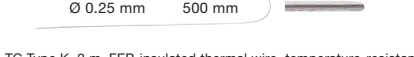
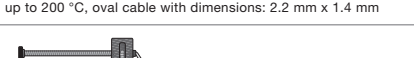

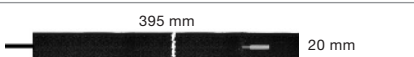

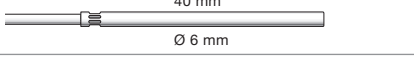
				
<b>Probes</b>	<b>Digital NTC stub temperature probe</b>	<b>Digital stub humidity/temperature probe</b>	<b>Digital cable humidity/temperature probe</b>	<b>Digital door contact</b>
<b>Order no.</b>	<b>0572 2162</b>	<b>0572 2164**</b>	<b>0572 2165**</b>	<b>0572 2161</b>
Measurement parameters	°C/°F	°C/°F, %RH (+ °C <sub>td</sub> , g/m <sup>3</sup> )	°C/°F, %RH (+ °C <sub>td</sub> , g/m <sup>3</sup> )	-
Probe type	NTC	NTC	NTC	-
Operating temperature	-30 to +50 °C			
Storage temperature	-30 to +60 °C			
Measuring range	-30 to +50 °C	-30 to +50 °C / 0 to 100 %RH (non-condensing)		I/O
System accuracy	±0.4 °C	±0.4 °C at +25 °C ±2.0 %RH at 0 to 90 %RH at +25 °C ± 0.03 %RH/K (k=1)		-
Resolution	0.1 °C	0.1 °C / 0.1 %RH		-
Dimensions	Length 140 mm Ø 15 mm	Length 140 mm Ø 15 mm		Length 30 mm / width 40 mm / height 7 mm
Cable diameter	-	-	5 mm	2 mm
Cable length	-	-	1.3 m	1.3 m
Protection class	IP42 in the data logger/probe system			
Weight	17.2 g	17.4 g	40.8 g	22.8 g
t <sub>90</sub>	°C 240 s	°C 240 s / %RH 20 s	°C 240 s / %RH 20 s	-
Connection	TUC			

\*\*Please do not use the probe head in condensing atmospheres. For continuous application in high-humidity ranges: > 80 %RH at ≤ 30 °C for > 12 h and > 60 %RH at > 30 °C for > 12 h, please contact Testo Service or contact us via the Testo website.

			
<b>Probes</b>	<b>Digital Pt100 cable temperature probe</b>	<b>Flexible digital Pt100 temperature probe</b>	<b>Glass-coated digital Pt100 laboratory probe</b>
<b>Order no.</b>	<b>0572 2163*</b>	<b>0618 0071</b>	<b>0618 7072</b>
Measurement parameters	°C/°F	°C/°F	°C/°F
Probe type	Pt100	Pt100	Pt100
Operating temperature	-30 to +50 °C		
Storage temperature	-30 to +60 °C		
Measuring range	-85 to +150 °C (only probes and cable)	-100 to +260 °C	-50 to +400 °C
System accuracy	±(0.25 °C + 0.3% of reading) at -49.9 to +99.9 °C ±0.55 °C remaining measuring range	±(0.3 °C + 0.3% of measured value)	±(0.3 °C + 0.3% of measured value) (-50 to +300 °C) ±(0.4 °C + 0.6% of measured value) (+300.01 to +400 °C)
Resolution	0.01 °C	0.01 °C	0.01 °C
Dimensions	Length 90 mm Ø 3 mm	Length 1000 mm Ø 4 mm	Length 200 mm Ø 6 mm
Cable diameter	5 mm	4 mm	3 mm
Cable length	1.3 m	1 m	1.6 m
Protection class	IP42 in the data logger/probe system		
Weight	23.8 g	29 g	39 g
t <sub>90</sub>	°C 20 s	°C 45 s	°C 45 s
Connection	TUC		





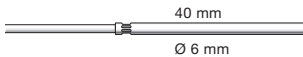







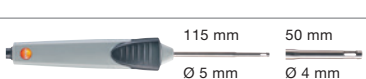
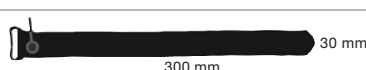
\*Pt100 accuracy Class A

## Technical data for TC probes

	Dimensions Probe shaft/probe shaft tip	Measuring range	Accuracy	t <sub>90</sub>	Order no.
<b>TC probes</b>					
Penetration probe, TC type K with ribbon cable, cable length 2 m, IP 54		-40 to +220 °C	Class 1*	7 sec	0572 9001
Thermocouple with TC plug, flexible, length 800 mm, fibreglass, TC Type K		-50 to +400 °C	Class 2*	5 sec	0602 0644
Thermocouple with TC plug, flexible, length 1500 mm, fibreglass, TC Type K		-50 to +400 °C	Class 2*	5 sec	0602 0645
Thermocouple with TC plug, flexible, length 1500 mm, PTFE, TC Type K		-50 to +250 °C	Class 2*	5 sec	0602 0646
Magnetic probe, adhesive power approx. 20 N, with adhesive magnets, for measurements on metal surfaces, TC Type K, connection: fixed cable		-50 to +170 °C	Class 2*	150 sec	0602 4792
Magnetic probe, adhesive power approx. 10 N, with adhesive magnets, for higher temperatures, for measurements on metal surfaces, TC type K, connection: fixed cable 1.6 m		-50 to +400 °C	Class 2*	60 sec	0602 4892
Immersion measuring tip, flexible, for measurements in air/flue gases (not suitable for measurements in smelters), TC Type K		-200 to +1300 °C	Class 1*	4 sec	0602 5693
Immersion measuring tip, flexible, TC Type K		-200 to +1000 °C	Class 1*	5 sec	0602 5792
Flexible, low-mass immersion measuring tip, ideal for measurements in small volumes, such as Petri dishes, or for surface measurements (e.g. fixed with adhesive tape)	 TC Type K, 2 m, FEP-insulated thermal wire, temperature-resistant up to 200 °C, oval cable with dimensions: 2.2 mm x 1.4 mm	-200 to +1000 °C	Class 1*	1 sec	0602 0493
Pipe wrap probe for pipe diameters 5 to 65 mm, with replaceable measuring head, short-term measuring range up to +280 °C, TC type K, connection: fixed cable 1.2 m		-60 to +130 °C	Class 2*	5 sec	0602 4592
Pipe wrap probe with Velcro tape, for measuring temperatures on pipes with diameters up to max. 120 mm, Tmax +120 °C, TC type K, connection: fixed cable 1.5 m		-50 to +120 °C	Class 1*	90 sec	0628 0020
Stationary probe with stainless steel sheath, TC type K, connection: fixed cable 1.9 m		-50 to +205 °C	Class 2*	20 sec	0628 7533
Waterproof superfast needle probe for measurements with no visible penetration hole, TC type T, fixed cable		-50 to +250 °C	±0.2 °C (-20 to +70 °C) Class 1* (remaining meas. range)	2 sec	0628 0027
Frozen food probe for screw-in use without pre-drilling; TC type T, plug-in cable		-50 to +350 °C	±0.2 °C (-20 to +70 °C) Class 1* (remaining meas. range)	8 sec	0603 3292
Robust food penetration probe with special handle, reinforced cable (PVC), TC type T, fixed cable		-50 to +350 °C	±0.2 °C (-20 to +70 °C) Class 1* (remaining meas. range)	6 sec	0603 2492
Waterproof standard immersion/penetration probe, TC Type T, fixed cable		-50 to +350 °C	±0.2 °C (-20 to +70 °C) Class 1* (remaining meas. range)	7 sec	0603 1293

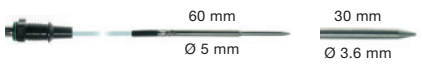
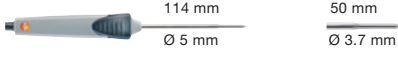

\*According to standard EN 60584-2, the accuracy of Class 1 refers to -40 to +1000 °C (type K), Class 2 refers to -40 to +1200 °C (type K), Class 3 refers to -200 to +40 °C (type K).

## Technical data for NTC probes / Pt100 probes

	Dimensions Probe shaft/probe shaft tip	Measuring range	Accuracy	t <sub>90</sub>	Order no.
<b>NTC probes</b>					
Penetration probe NTC with ribbon cable, cable length 2 m, IP 54		-40 to +125 °C	±0.5% of measured value (+100 to +125 °C) ±0.2 °C (-25 to +80 °C) ±0.4 °C (remaining meas. range)	8 sec	0572 1001
External temperature probe 12 mm, plug-in, without cable		-30 to +50 °C	±0.2 °C (-30 to +50 °C)	240 sec	0572 2153
Stub probe, IP 54		-20 to +70 °C	±0.2 °C (-20 to +40 °C) ±0.4 °C (+40.1 to +70 °C)	15 sec	0628 7510
Accurate immersion/penetration probe, cable length 6 m, IP 67, connection: fixed cable; Cable length: 6 m		-35 to +80 °C	±0.2 °C (-25 to +74.9 °C) ±0.4 °C (remaining meas. range)	5 sec	0610 1725
Stationary probe with aluminium sleeve, IP 65, connection: fixed cable; cable length: 2.4 m		-30 to +90 °C	±0.2 °C (0 to +70 °C) ±0.5 °C (remaining meas. range)	190 sec	0628 7503
Pipe wrap probe with Velcro tape for pipe diameters up to max. 75 mm, Tmax +75 °C, NTC, connection: fixed cable; cable length: 1.5 m		-50 to +70 °C	±0.2 °C (-25 to +70 °C) ±0.4 °C (-50 to -25.1 °C)	60 sec	0613 4611
Probe for surface measurement, fixed cable, 2 m		-50 to +80 °C	±0.2 °C (0 to +70 °C)	150 sec	0628 7516
Wall surface temperature probe, e. g. for proof of structural damage in buildings, connection: fixed cable; Cable length: 3 m		-50 to +80 °C	±0.2 °C (-25 to +80 °C) ±0.5 °C (-40 to -25.1 °C)	20 sec	0628 7507
Stainless steel NTC food probe (IP65) with PUR cable, connection: fixed cable; Cable length: 1.6 m		-50 to +150 °C	±0.5% of measured value (+100 to +150 °C) ±0.2 °C (-25 to +74.9 °C) ±0.4 °C (remaining meas. range)	8 sec	0613 2211
Waterproof NTC immersion/penetration probe, fixed cable 1.2 m		-50 to +150 °C	±0.5% of measured value (+100 to +150 °C) ±0.2 °C (-25 to +74.9 °C) ±0.4 °C (remaining meas. range)	10 sec	0613 1212
Accurate immersion/penetration probe, cable length 1.5 m, IP 67, connection: fixed cable; Cable length: 1.5 m		-35 to +80 °C	±0.2 °C (-25 to +74.9 °C) ±0.4 °C (remaining meas. range)	5 sec	0628 0006
Waterproof NTC immersion/penetration probe, fixed cable 1.2 m		-50 to +150 °C	±0.5% of measured value (+100 to +150 °C) ±0.2 °C (-25 to +74.9 °C) ±0.4 °C (remaining meas. range)	10 sec	0615 1212
Robust NTC air probe, fixed cable 1.2 m		-50 to +125 °C	±0.2 °C (-25 to +80 °C) ±0.4 °C (remaining meas. range)	60 sec	0615 1712
Temperature probe with Velcro (NTC), fixed cable 1.4 m		-50 to +70 °C	±0.2 °C (-25 to +70 °C) ±0.4 °C (-50 to -25.1 °C)	60 sec	0615 4611

The standard temperature probes from the Testo range can be individually tailored to your application. For more information please contact your Testo partner.

### Pt100 probes

Penetration probe Pt100 with ribbon cable, cable length 2 m, IP54		-85 to +150 °C	Class A*	35 sec	0572 7001
Robust, waterproof Pt100 immersion/penetration probe, fixed cable		-50 to +400 °C	Class A* (-50 to +300 °C) Class B* (remaining meas. range)	12 sec	0609 1273
Robust Pt100 stainless steel food probe (IP65), connection: fixed cable		-50 to +400 °C	Class A* (-50 to +300 °C) Class B* (remaining meas. range)	10 sec	0609 2272

\* According to standard EN 60751, the accuracies of Classes A and B refer to -200 to +600 °C (Pt100).

## The testo Saveris Pharma performance promise.

testo Saveris Pharma supports you in four ways. The environmental monitoring system records and analyzes your critical environmental data, alerts you immediately if limit values are violated and can help you optimize your processes. For this, the all-in-one solution uses three performance-related components: sensors, software and services.



### Sensors: Reliable recording of quality data.

Thanks to more than 60 years of experience in the manufacture of measuring solutions and sensors, Testo has all the measuring instruments you need to monitor environmental parameters. These include data loggers for automatic recording of readings and alerts.



### Software: Audit-proof compliance for all GxP-relevant data.

The testo Saveris CFR software fulfils FDA requirements with regard to 21 CFR Part 11 as well as Annex 11 of the EU GMP guidelines, with an audit-proof central data management platform that is accessible worldwide. The platform enables comprehensive analysis and evaluation of all recorded measurement parameters – with the aid of flexible alarm systems, various logging functions and a wide variety of database-hosting options.

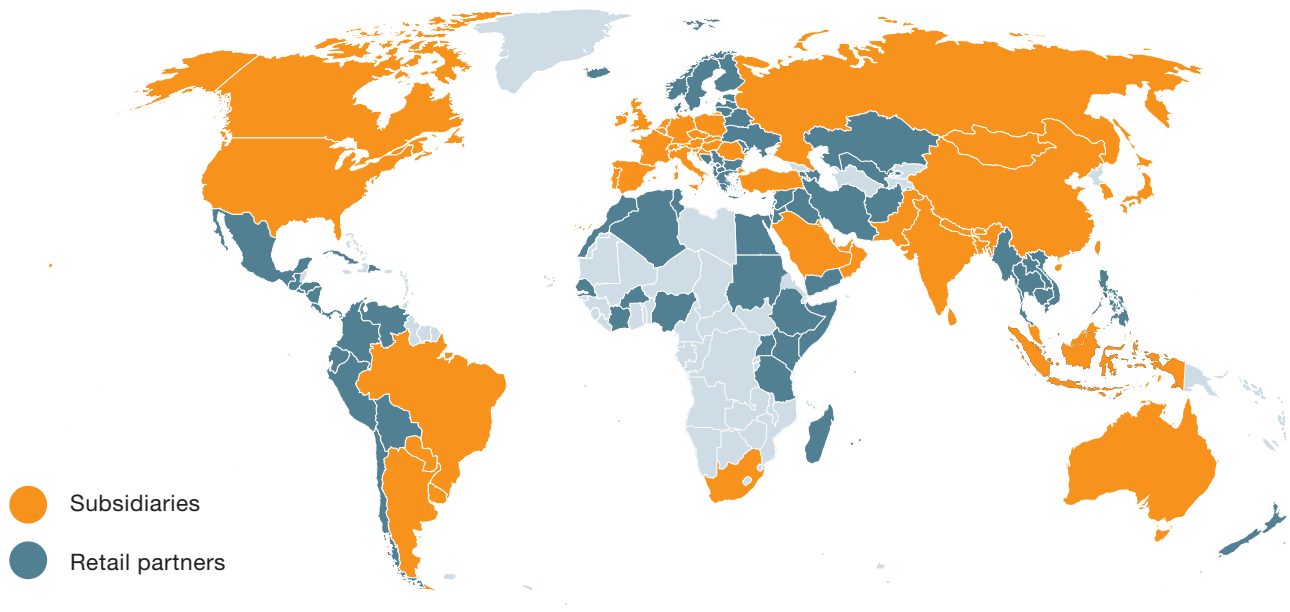


### Services: A competent partner worldwide.

Our specially GxP-trained service team accompanies you through all process steps in a customer-oriented and systematic way – from planning, documentation, system qualification and software validation through to service and support. Together with you, we define a tailored service concept in all project phases. You can rely on us during operation, too.

We take care of your system and its maintenance, calibration and validation.

## High-tech from southern Germany.



For over 60 years, Testo has been known for creating innovative measuring solutions made in Germany. As a world market leader in portable and stationary measuring technology, we support our customers in saving time and resources, in protecting the environment and human health and in increasing the quality of goods and services. More than 3000 employees work in research, development, production and marketing for the high-tech company in 35 subsidiaries all over the world. Testo impresses more than 1 million customers all over the world with

high-precision measuring instruments and innovative solutions for the measurement data management of tomorrow. An average annual growth of over 10% since the company's foundation in 1957 and a current turnover of just short of 300 million Euros impressively demonstrate that southern Germany and high-tech systems go perfectly together. The above-average investments in the future of the company are also a part of Testo's recipe for success. Testo invests about a tenth of annual turnover in research and development.