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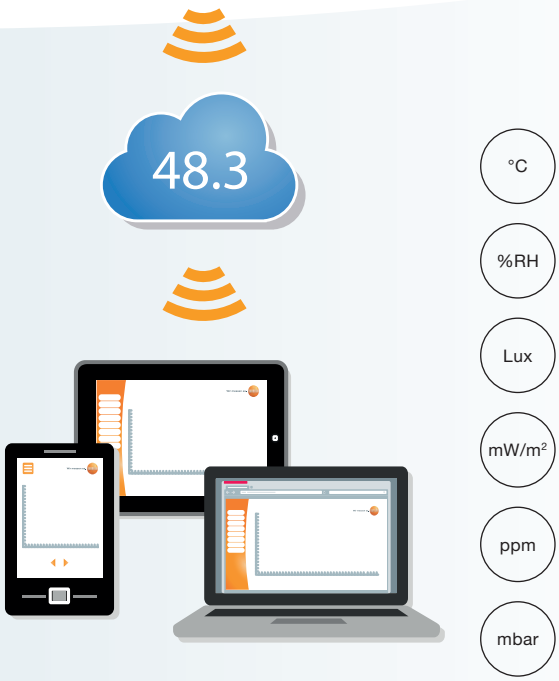
Monitoring system

testo 160 – Monitoring system for the monitoring of temperature, humidity, light intensity, UV radiation and CO_2 concentration.



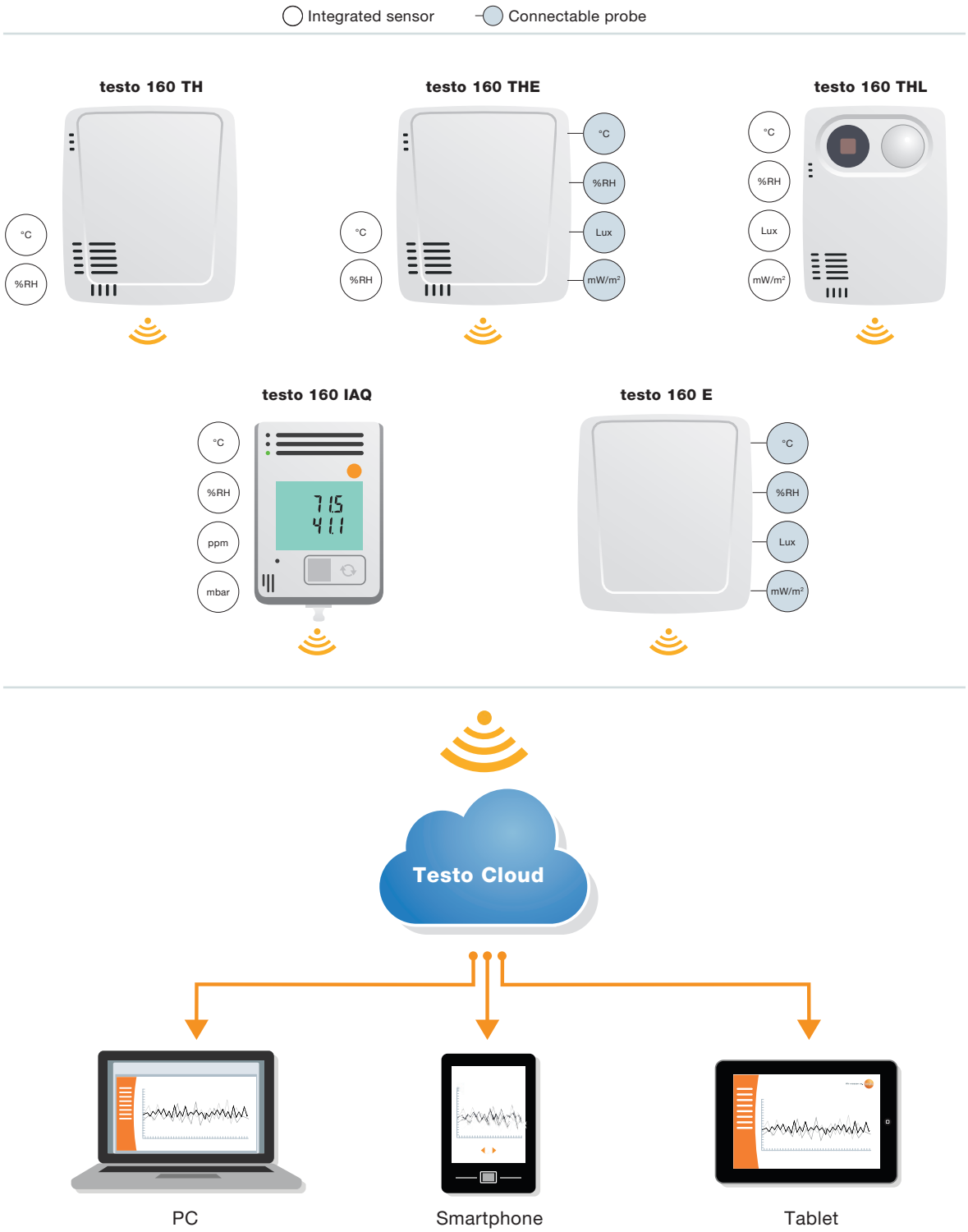
- Measurement value transfer by wireless LAN to the Cloud store
- Measurement values can be called up on all end devices
- Alarm notification by SMS or e-mail
- Inconspicuous design and small dimensions
- Deco-cover for optimum individual adaptation of the loggers to the surroundings

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

The services at a glance

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 to have access to the testo 160 Cloud.

In the Advanced licence, you have access to an API interface, in order to export measurement data to your systems.

	Advanced
Measuring cycle	1 min. to 24 h
Communication cycle	1 min. to 24 h
Data storage	Max. 2 years
Reports	Manual (.pdf/.csv) Automatic (.pdf/.csv)
Data analysis	For up to 10 measurement channels simultaneously
Number of users per account	10
Number of WiFi data loggers per account	Unlimited
Alarm options	• Upper/lower alarm limits • Alarm delay • Time control of alarms
System notifications	• Notification of low battery • Radio link interrupted • Power supply interrupted
E-mail alarm	Yes
SMS alarm	• Including 25 SMS per logger and year • More SMS packages purchasable
Duration	12 month license: Order no. 0526 0735

Register now: **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_2 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
Temperature measurement					
Measuring range	-10 to +50 °C			0 to +50 °C	see external probe
Accuracy	± 0.5 °C				
Resolution	0.1 °C				
Humidity measurement					
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				
Lux measurement					
Measuring range		see external probe	0 to 20,000 lux		see external probe
Accuracy			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		
UV measurement					
Measuring range		see external probe	0 to 10,000 mW/m²		see external probe
Accuracy			±5 mW/m² or ±5 % of m.v. (refers to external reference)		
Resolution			0.1 mW/m²		
CO_2 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	-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	Advanced: 1 min to 24 h testo 160 IAQ – Advanced in battery operation: 5 mins to 24 h				
Communication cycle	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

	Order no.	
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_2, calibration points 0; 1000; 5000 ppm	0520 0033	

Probe

Probe type	Temperature and humidity probes	Lux and UV sensors	Lux sensor
			
Measuring range	-10 to +50 °C 0 to 100 %RH	0 to 20,000 lux 0 to 10,000 mW/m²	0 to 20,000 lux
Accuracy	± 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/m² 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)
Order no.	0572 2156	0572 2157	0572 2158

Data management

The testo 160 Cloud

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

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

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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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