LAN/PoE communication module for testo 150

0554 9330

WLAN communication module for testo 150

0554 9320, 0554 9320 01

testo UltraRange communication module

0554 9311 01 / 0554 9311 02
0554 9312 01 / 0554 9312 02
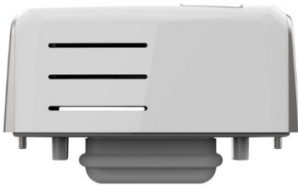0554 9313 01 / 0554 9313 02
0554 9314 01 / 0554 9314 02
0554 9315 01 / 0554 9315 02
0554 9316 01 / 0554 9316 02
0554 9317 01 / 0554 9317 02

Instruction manual

Contents

1 About this document

The instruction manual forms an integral part of the measurement data monitoring system testo Saveris 1.

- Keep this documentation to hand so that you can refer to it when necessary.
- Please read this instruction manual through carefully and familiarize yourself with the product before putting it to use.
- Hand this instruction manual on to any subsequent users of the product.
- The instruction manual for the testo Saveris 1 measurement data monitoring system is divided into the following sub-documents:
  - o Operating instructions for the testo Saveris 1 measurement data monitoring system
  - o Commissioning instructions for the testo Saveris 1 measurement data monitoring system
  - o Operating instructions for individual system components
- Pay particular attention to the safety instructions and warning advice in order to prevent injury and damage to the product.
- Familiarity with a PC as well as the Microsoft® products is assumed in this documentation.

Symbols and writing standards

Display	Explanation
ℹ	Note: basic or further information.
1. ... 2. ...	Action: several steps, the sequence must be followed.
• ...	List
> ...	Action: one step or optional step.
- ...	Result of an action.
✓ ...	Requirement
1... 2...	Position numbers for the clarification of the relationship between text and picture.
Menu	Elements of the instrument, the instrument display or the program interface.
[OK]	Control keys of the instrument or buttons of the program interface.

Display	Explanation
... | ...	Functions/paths within a menu.
"..."	Example entries

2 Safety and disposal

2.1 Security

- Only operate the product properly, for its intended purpose, and within the parameters specified in the technical data.
- Do not apply any force.
- Do not operate the product if there are signs of damage on the housing, mains unit or connected cables.
- Only use the product in closed, dry rooms and protect it from rain and moisture.
- The product must be checked for any visible damage before commissioning.
- Dangers may also arise from objects to be measured or the measuring environment. Always comply with the locally valid safety regulations when carrying out measurements.
- Only perform maintenance and repair work on this instrument that is described in this documentation. Follow the prescribed steps exactly when doing the work.
- Maintenance work that is not described in this documentation must only be carried out by trained service engineers.
- Safety instructions for patients with an implanted cardiac pacemaker when using Testo products with magnets
  - Handle instruments or accessories containing a magnet with care and keep them in a safe place.
  - Maintain a distance of 20 cm between your implant and the magnet which is incorporated into the instrument or accessories.
- Keep a safe distance from products which could be damaged by the effects of magnetism (e.g. monitors, computers, pacemakers or credit cards).
- Use only original spare parts from Testo.
- The product must not be used in potentially explosive atmospheres, if it is not explicitly approved for these areas.
- Do not carry out any contact measurements on uninsulated, live parts.
- Protect the product from dust and dirt. Make sure that it is not exposed to an environment with dust, dirt, sand, etc.
- Prevent the product from falling.

2.2 Disposal

- At the end of its useful life, deliver the product to the separate collection point for electric and electronic devices (observe local regulations) or return the product to Testo for disposal.

- WEEE Reg. no. DE 75334352

2.3 Cleaning

- Clean the product with a dry, soft cloth. Do not use any alcohol, aggressive cleaning agents and solvents or other washing liquids to clean the product.

- Do not use any desiccants.

- Use distilled water, or alternatively mild solvents or degreasers.

2.4 Products with wireless technology

Changes or modifications that have been made without the explicit consent of the competent approval authority may lead to cancellation of the type approval.

Data transfer may be disturbed by equipment that uses the same ISM band.

2.5 Storage

- Keep the product away from any liquids and do not put it into water. Protect it from rain and humidity.

- Do not store the product together with solvents.

3 Product-specific approvals

Please find the current country approvals in the enclosed **Approvals and Certifications** document.

4 Support

You can find up-to-date information on products, downloads and links to contact addresses for support queries on the Testo website at: www.testo.com.

5 Scope of delivery

- Communication module

- Instruction manual

- Approvals and Certifications

6 LAN/PoE[1] communication module for testo 150

6.1 Use

The LAN/PoE communication module for the testo 150 data logger module is designed to transmit measurement data and to supply power via a LAN infrastructure. The product is used in the monitoring of products subject to cold chain requirements in warehouses, production facilities, cold rooms, clinics, laboratories and laboratory equipment.

The product can only be used with other Testo components. Use of the product requires skilled personnel trained in the above areas.

If the network ports used are PoE-enabled, power can be supplied to a connected testo 150 data logger module via the Ethernet cable.

> **i** testo 150 data loggers with LAN/POE communication module installed must have an external power supply (USB or POE). The batteries in the data logger are only intended to bridge power failures.

> **i** The components of the measurement data monitoring system testo Saveris 1 are generally not designed for outdoor use when delivered.

6.2 Product description

Overview
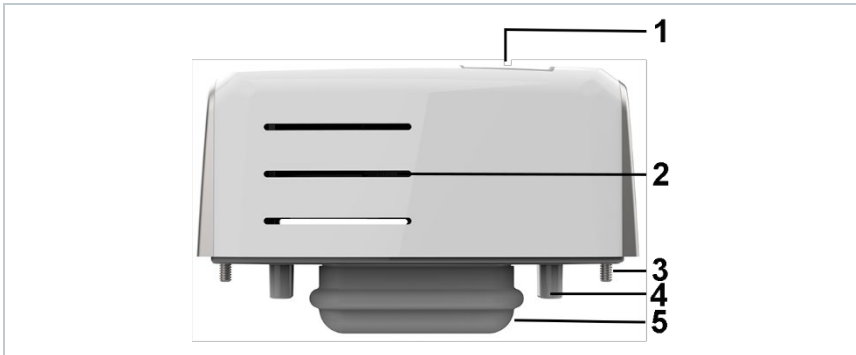
1	Ethernet/PoE connection	2	Ventilation slits
3	Fastening screws	4	Positioning aid
5	TCI[2] connector		

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[1] Power over Ethernet
[2] Testo Communication Interface

6.3 Commissioning
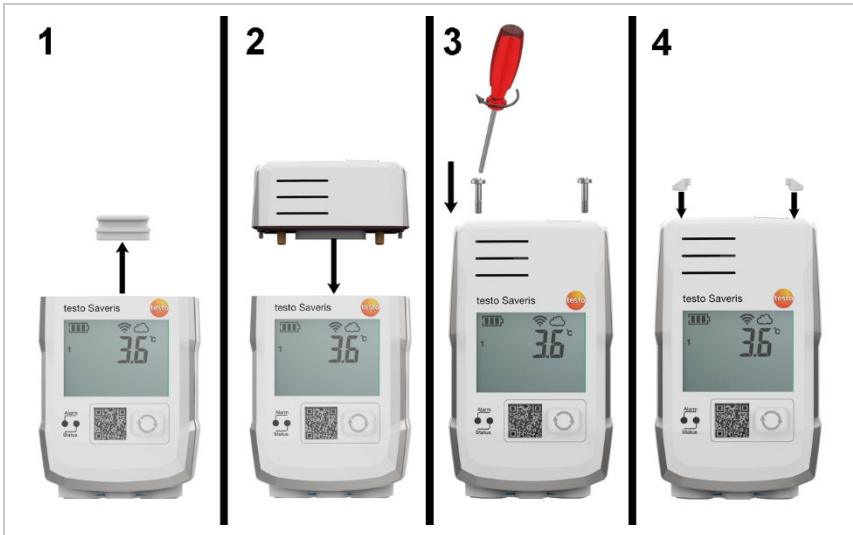
Attaching the communication module

1	Remove the protective cap.

2	Place the communication module on the testo 150 data logger module.

3	Attach the communication module to the testo 150 data logger module using the screws.

4	Close screw openings with rubber plugs.

> **i** It is not possible to replace communication modules while the testo 150 data logger module is in operation!
>
> To replace a communication module, the power supply must be disconnected (remove batteries/pull out mains plug).

> **i** Once the communication modules have been installed, the testo 150 data logger module can be returned to its original packaging.

6.4 Technical data for the LAN/PoE communication module for testo 150

Feature	Value
Order no.	0554 9330
Connections	TCI
	LAN/PoE
PoE performance class	0; max. 7 W
Dimensions (W x H x L)	67,8 x 29,5 x 28,9 mm
Weight	Approx. 45 g
Protection class	IP30 with mounted testo 150 data logger module
Housing material	PC/PET (front); ABS+PC+10% GF/PET (rear)
Communication cycle	1 minute - 24 hours
Storage temperature	-40...+60 °C
Operating temperature	+5...+50 °C
Network transfer rate	10MBit/s and 100MBit/s

7 WLAN communication module for testo 150

7.1 Use

The WLAN communication module for the testo 150 data logger module is designed for the wireless transmission of measurement data. The product is used in the monitoring of products subject to cold chain requirements in warehouses, production facilities, cold rooms, clinics, laboratories and laboratory equipment.

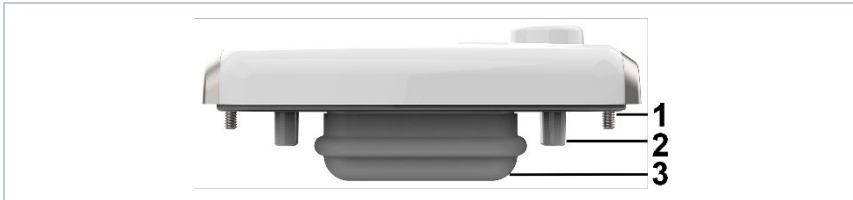The product can only be used with other Testo components. Use of the product requires skilled personnel trained in the above areas.

> **i** The components of the measurement data monitoring system testo Saveris 1 are generally not designed for outdoor use when delivered.
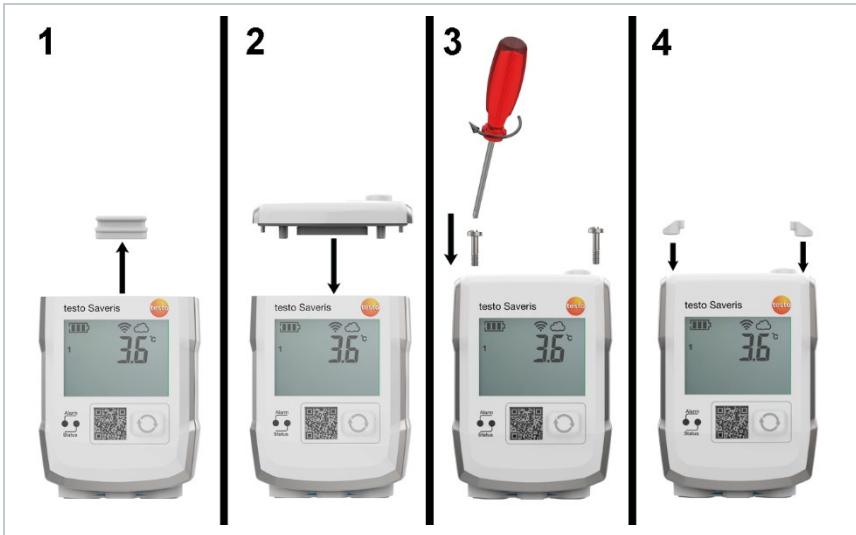
7.2 Product description

Overview

1	Fastening screws	2	Positioning aid
3	TCI connector		

7.3   Commissioning

Attaching the communication module

<table>
<tr><td>1</td><td>Remove the protective cap.</td></tr>
<tr><td>2</td><td>Place the communication module on the testo 150 data logger module.</td></tr>
<tr><td>3</td><td>Attach the communication module to the testo 150 data logger module using the screws.</td></tr>
<tr><td>4</td><td>Close screw openings with rubber plugs.</td></tr>
</table>

> ℹ️ It is not possible to replace communication modules while the testo 150 data logger module is in operation!
>
> To replace a communication module, the power supply must be disconnected (remove batteries/pull out mains plug).

> ℹ️ Once the communication modules have been installed, the testo 150 data logger module can be returned to its original packaging.

7.4 Technical data for WLAN communication module for testo 150

Feature	Value
Order no.	0554 9320, 0554 9320 01
Connections	TCI
Dimensions (W x H x L)	67,8 x 12,2 x 28,9 mm
Weight	Approx. 17 g
Protection class	IP67 with mounted testo 150 data logger module
Housing material	PC/PET (front); ABS+PC+10% GF/PET (rear)
Communication cycle	1 min to 24 h
Storage temperature	-40 ... 60 °C
Operating temperature	-35 ... 50 °C

WLAN specific data

	Features
Radio frequency	2,4 GHz (IEEE 802.11 b/g/n)
General encryption method	WEP, WPA (TKIP), WPA2 (TKIP, AES, CCMP)
WPA2 Enterprise	EAP-TLS, EAP-TTLS-TLS, EAP-TTLS-MSCHAPv2, EAP-TTLS-PSK, EAP-PEAPO-TLS, EAP-PEAPO-MSCHAPv2, EAP PEAPO-PSK, EAP-PEAP1-TLS, EAP-PEAP1-MSCHAPv2, EAP-PEAP1-PSK
WPA Personal	WPA2 (AES), WPA (TKIP), WEP

8 testo UltraRange communication module

8.1 Use

A testo UltraRange communication module with testo UltraRange radio technology is designed for the wireless transmission of measurement data. UltraRange communication modules are designed either for combination with testo 150 data logger modules or with the UltraRange Gateway.

Use of the product requires skilled personnel trained in the above areas.

> **i** An UltraRange Gateway is required to transmit data to the Saveris base when testo 150 data logger modules are combined with UltraRange communication modules.

> **i** Select the appropriate regional version of the testo UltraRange communication module depending on the intended region of use.

> **i** Products of this type are generally not suitable for outdoor use when delivered. Prerequisite for outdoor use are measures that reliably protect the product from environmental influences (e.g. moisture, solar radiation). Please note that measures to protect the product from environmental influences may impair its performance.

> **i** The components of the measurement data monitoring system testo Saveris 1 are generally not designed for outdoor use when delivered.
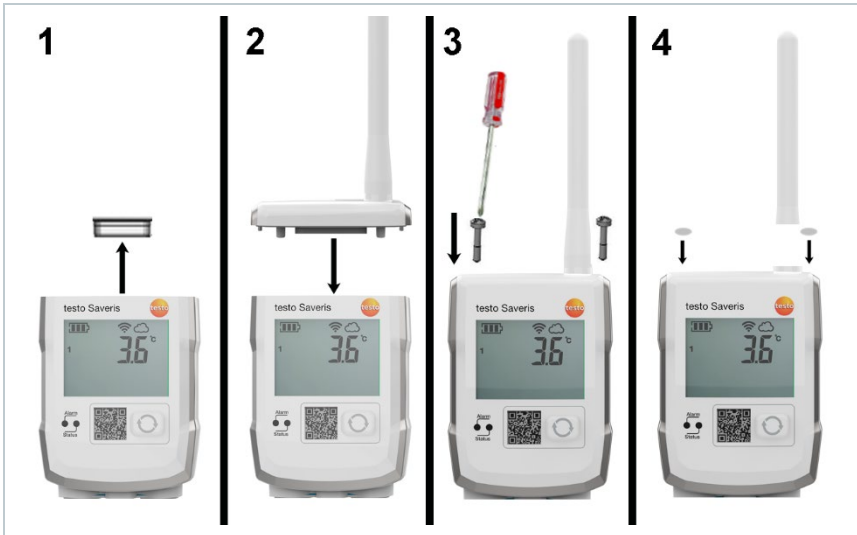
8.2   Product description

Overview
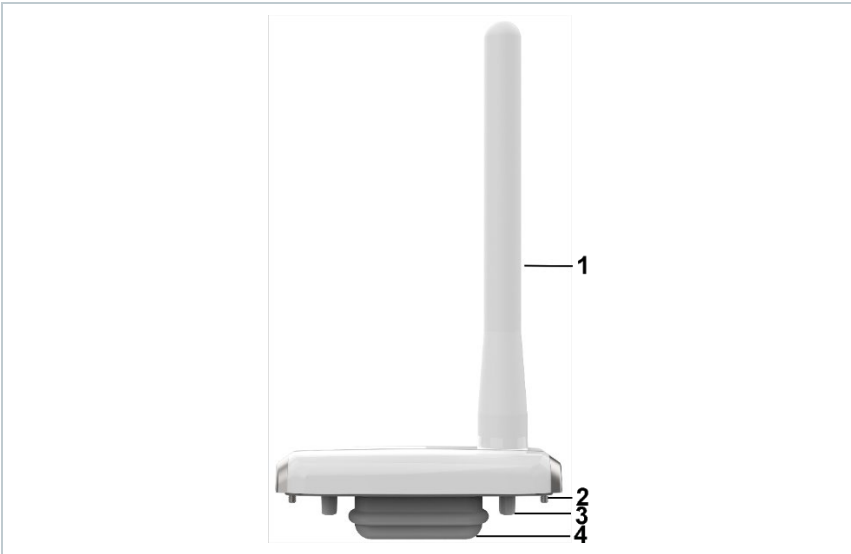
1	Radio antenna	2	Fastening screws
3	Positioning aid	4	TCI connector

8.3 Commissioning

Attaching the communication module

1	Remove the protective cap.
2	Place the communication module on the testo 150 data logger module.
3	Attach the communication module to the testo 150 data logger module using the screws.
4	Close screw openings with rubber plugs.

> ℹ️ When using wireless modules with external antenna, please ensure that the screw connection between antenna and module has been tightened.

> ℹ️ It is not possible to replace communication modules of the same types while the testo 150 data logger module is in operation!
>
> To replace a communication module, the power supply must be disconnected (remove batteries/pull out mains plug).

> ℹ️ It is not possible to exchange communication module types during operation of the testo 150 data logger module!
>
> To change a communication module on the testo 150 data logger module, the testo 150 data logger module must be logged off.

1	Log off the testo 150 data logger module via the startup wizard. The testo 150 data logger module must then communicate twice (press the Connect button of the testo 150 data logger once each time).
2	Remove the batteries from the testo 150 data logger module.
3	Change the communication module.
4	Insert batteries into the testo 150 data logger module.
5	Press and hold the **Connect** button of the testo 150 data logger module for 1 s.
6	Re-register testo 150 data logger module via the startup wizard.

Once the communication modules have been installed, the testo 150 data logger module can be returned to its original packaging. To place testo 150 data logger modules with mounted UltraRange module in the packaging, unscrew the external antenna and place in the recess provided in the packaging, underneath the testo 150 data logger module.

8.4 Technical data for the testo UltraRange communication module

Feature	Value
Order no.	0554 9311 01 (Region EU, testo 150 data logger module) 0554 9311 02 (Region EU, testo Saveris 1 Base V3.0 and testo UltraRange Gateway)
	0554 9312 01 (Region US, testo 150 data logger module) 0554 9312 02 (Region US, testo Saveris 1 Base V3.0 and testo UltraRange Gateway)
	0554 9313 01 (Region CN, testo 150 data logger module) 0554 9313 02 (Region CN, testo Saveris 1 Base V3.0 and testo UltraRange Gateway)

Feature	Value
	0554 9314 01 (Region APAC*, testo 150 data logger module) 0554 9314 02 (Region APAC*, testo Saveris 1 Base V3.0 and testo UltraRange Gateway)
	0554 9315 01 (Region KR, testo 150 data logger module) 0554 9315 02 (Region KR, testo Saveris 1 Base V3.0 and testo UltraRange Gateway)
	0554 9316 01 (Region IN, testo 150 data logger module) 0554 9316 02 (Region IN, testo Saveris 1 Base V3.0 and testo UltraRange Gateway)
	0554 9317 01 (Region RU, testo 150 data logger module) 0554 9317 02 (Region RU, testo Saveris 1 Base V3.0 and testo UltraRange Gateway)
Connections	TCI[1]
Dimensions (W x H x L)	67,8 x 112,8 x 28,9 mm (incl. antenna)
Weight	Approx. 30 g
Protection class	IP67 with mounted testo 150 data logger
Housing material	ABS+PC+10% GF/PET
Radio frequency testo UltraRange communication module - Region: EU - Region: US - Region: CN 868 - Region: APAC* 920 - Region: KR - Region: IN	868 MHz 915 MHz 868 MHz 920 MHz 922 MHz 865 MHz
Wireless range	up to 100 m inside buildings (depending on spatial conditions) 17 km free field (without obstacles)
Communication cycle	1 min to 24 h
Storage temperature	-40 ... 60 °C
Operating temperature	-40 ... 50 °C

* Japan, Malaysia, Singapore, Taiwan, Macau

9 Maintenance

9.1 Cleaning the housing

> If the housing is dirty, clean it with a damp cloth.

Use distilled water, or alternatively mild solvents, such as isopropanol. If using isopropanol, please refer to the instruction leaflet for the product. Isopropanol fumes have a slight narcotic effect, and typically cause irritation of the eyes and sensitive mucous membranes. When using it, please ensure that there is adequate ventilation.

The use of strong or harsh alcohol may result in damage to the instrument.

1 Moisten a microfibre cloth with 70% isopropanol.

2 Clean the data logger and wall bracket.

Other tolerated reagents for cleaning:

Active substances/additives	Maximum concentration
Pentapotassium bis(peroxymonosulphate) bis(sulphate)	1% (%V/V)
Peracetic acid, acetic acid	3% (%V/V)
Glutaraldehyde	3% (%V/V)
Quaternary ammonium cations/compounds	1.5% (%V/V)
Sodium hydroxide	3% (%V/V)
Isopropanol	70% (%V/V)
Ethanol	80% (%V/V)
H2O2	35% (m%)

% V/V = volume percent
m % = mass fraction