



## testo – Smart Probes

testo 115i (0560 1115/ 0560 2115), testo 405i (0560 1405),  
testo 410i (0560 1410), testo 510i (560 1510),  
testo 549i (0560 1549/ 0560 2549),  
testo 552i (0560 1552/ 0560 2552)  
testo 605i (0560 1605/ 0560 2605), testo 805i (0560 1805),  
testo 905i (0560 1905), testo 915i (0560 1915)

## Instruction manual



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## 2 Safety and the environment

### 2.1. About this document

#### Use

- Please read this documentation through carefully and familiarize yourself with the product before putting it to use. Pay particular attention to the safety instructions and warning advice in order to prevent injuries and damage to the products.
- Keep this document to hand so that you can refer to it when necessary.
- Hand this documentation on to any subsequent users of the product.

#### Symbols and writing standards

| Representation                                                                    | Explanation                                                                                                                                                                                                                                         |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | Warning advice, risk level according to the signal word:<br><b>Warning!</b> Serious physical injury may occur.<br><b>Caution!</b> Slight physical injury or damage to the equipment may occur.<br>> Implement the specified precautionary measures. |
|  | Note: Basic or further information.                                                                                                                                                                                                                 |
| 1. ...<br>2. ...                                                                  | Action: more steps, the sequence must be followed.                                                                                                                                                                                                  |
| > ...                                                                             | Action: a step or an optional step.                                                                                                                                                                                                                 |
| - ...                                                                             | Result of an action.                                                                                                                                                                                                                                |
| <b>Menu</b>                                                                       | Elements of the instrument, the instrument display or the program interface.                                                                                                                                                                        |
| <b>[OK]</b>                                                                       | Control keys of the instrument or buttons of the program interface.                                                                                                                                                                                 |
| ...   ...                                                                         | Functions/paths within a menu.                                                                                                                                                                                                                      |
| “ ... ”                                                                           | Example entries                                                                                                                                                                                                                                     |

### 2.2. Ensure safety

- Do not operate the instrument if there are signs of damage at the housing, mains unit or feed lines.
- Do not perform contact measurements on non-insulated, live parts.
- Do not store the product together with solvents. Do not use any desiccants.
- Carry out only the maintenance and repair work on this instrument that is described in the documentation. Follow the prescribed steps exactly. Use only original spare parts from Testo.
- Dangers may also arise from the systems being measured or the measuring environment: Note the safety regulations valid in your area when performing the measurements.

#### 2.2.1. Safety and the testo 510i/605i/915i

##### **WARNING**



##### **Magnetic field!**

May be harmful to those with pacemakers.



- Keep a minimum distance of 10 cm between pacemaker and instrument.

#### 2.2.2. Safety and the testo 605i



Not for condensing atmospheres. For continuous application in high humidity (> 80 %RH at ≤ 30 °C for > 12 h, > 60 %RH at > 30 °C for > 12 h), contact us via [www.testo.com](http://www.testo.com).



The sensor must not be exposed to volatile chemicals such as solvents (e.g. ketene, ethanol, isopropyl alcohol, toluene) or organic compounds, especially in high concentrations and corresponding gases, over a prolonged period of time.

### 2.2.3. Safety and the testo 549i/552i

#### **WARNING**



**Risk of injury due to pressurized, hot, cold or toxic refrigerants/media!**

- Only to be used by qualified staff.
- Wear protective goggles and safety gloves.
- Before applying pressure to the measuring instrument: always fix the instrument tightly onto the pressure connection
- Comply with the permissible measuring range (0 to 60 bar). Pay particular attention to this in systems with R744 refrigerant, since these are frequently operated at higher pressures!
- Use with A2L refrigerants:  
Testo measuring instruments (as of July 2020) can be used in compliance with the prescribed laws, standards, directives and safety regulations for refrigeration systems and refrigerants as well as regulations of the manufacturers of refrigerants of safety group A2L as per ISO 817.

Regional standardization and interpretation must always be observed. For example, DIN EN 378-Part 1-4 applies to the scope of the EN standards.

During maintenance work, the employer must ensure that a hazardous explosive atmosphere is prevented (see also TRBS1112, TRBS2152 VDMA 24020-3).

A hazardous and potentially explosive atmosphere must be anticipated during maintenance and repair work on refrigeration systems with flammable refrigerants (e.g. those of category A2L and A3).

Maintenance, repairs, removal of refrigerants and commissioning of systems may only be carried out by qualified personnel.

### 2.2.4. Safety and the testo 805i

#### **CAUTION**



**Laser radiation! Class 2 laser.**

- Do not look into the laser beam!
- < 1 mW; 645-660 nm
- IEC 60825-1:2014 / EN 60825-1:2014 + A11:2021

### 2.2.5. Safety and the testo 552i

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The testo 552i Smart Probe must not be connected if the pressure is higher than 5 bar. Otherwise, damage may occur.

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## 2.3. Protecting the environment

- Dispose of faulty rechargeable batteries/spent batteries in accordance with the valid legal specifications.
- At the end of its useful life, send the product to the separate collection for electric and electronic devices (observe local regulations) or return the product to Testo for disposal.



WEEE Reg. Nr. DE 75334352

## 3 Specifications

Testo Smart Probes are different hand-held measuring instruments for various applications that communicate with your mobile terminal devices by means of an app. The respective Smart Probe performs the measurement and is operated by your mobile terminal device. The various Smart Probes allow you to measure the temperature, humidity, flow, and volume flow at the outlet, or perform pressure, differential pressure, and non-contact temperature measurements in the duct.

# 4 Product description

## 4.1. Overview of Smart Probes



- 1 Measuring unit
- 2 LED
- 3 Button
- 4 Battery compartment (at the back)
- 5 Direction of flow testo 405i / testo 410i (not shown)  
(An arrow on the top of the housing displays the direction of flow in which the measuring instrument has been calibrated and which achieves the best measurement results. Please note the direction of flow during usage.)

### Explanation of icons

|  |                                                                                                                                             |
|--|---------------------------------------------------------------------------------------------------------------------------------------------|
|  | Refer to instruction manual                                                                                                                 |
|  | Do not dispose of old instruments with household waste                                                                                      |
|  | Symbol of the Bluetooth® Special Interest Group (SIG)                                                                                       |
|  | Declaration of conformity: products marked with this symbol comply with all applicable Community regulations of the European Economic Area. |
|  | Certification symbol of the FCC in the USA                                                                                                  |

## 4 Product description

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|                                                                                   |                                                                                                                           |
|-----------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|
|  | Australian certification symbol                                                                                           |
|  | Declaration of conformity: products marked with this symbol comply with all applicable regulations of the United Kingdom. |
|  | Russian certification symbol                                                                                              |
|  | Brazilian certification symbol                                                                                            |
|  | Korean certification symbol                                                                                               |
|  | Japanese certification symbol                                                                                             |

### 4.2. LED status

| LED status      | Meaning                                                                                                                                                     |
|-----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Flashing red    | Low battery status                                                                                                                                          |
| Flashing yellow | <ul style="list-style-type: none"><li>• Smart Probe is switched on.</li><li>• Smart Probe is searching for a BT connection, but is not connected.</li></ul> |
| Flashing green  | <ul style="list-style-type: none"><li>• Smart Probe is switched on.</li><li>• Bluetooth is connected.</li></ul>                                             |

## 5 First steps

### 5.1. Switching on/off



#### 5.1.1. Switching on

- 1 Pull the film out of the battery compartment.
  - 2 Press the button on your Smart Probe.
- The Smart Probes switch on.

#### 5.1.2. Switching off

- 1 Press and hold the button on your Smart Probe.
- The Smart Probes switch off.

### 5.1.3. Establishing Bluetooth® connection

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To establish a connection via Bluetooth®, you need a tablet or smartphone with the Testo Smart App installed on it.

You can get the App for iOS instruments in the App Store or for Android instruments in the Play Store.

Compatibility:

- Requires iOS 17.0 or later/Android 14.0 or later,
- requires Bluetooth® 4.0.



- ✓ The Testo Smart App is installed on your terminal device and ready for use.
- 1. Press the button on the Smart Probe.
  - The Smart Probe switches on.
  - The LED flashes yellow while connecting via Bluetooth and then flashes green once the connection is established.
  - The connection between the Smart Probe and your mobile terminal device is established.

## 5.2. Transmitting readings

- ✓ The Smart Probe is switched on and connected to your mobile terminal device via Bluetooth.
- The current readings are automatically displayed in the App.

## 6 Using the App

### 6.1. Overview of operating controls



- 1  Choice of applications.
- 2 Switch between the views (list, graphic diagram, table)
- 3 Display of connected Smart Probes including readings
- 4 Start/stop
- 5  Measurement configuration (the menu changes depending on the Smart Probe connected and the application selected)
- 6  Smart Probe configuration

## 6.2. App options

### 6.2.1. Set “Language”

1. Tap  -> **Settings** -> **Language**.
  - A selection list is displayed.
2. Tap the required language.
  - The language has been changed.

### 6.2.2. Display Tutorial



The **Tutorial** guides you through the first steps when operating the Testo Smart App.

1. Tap -> **Help & Information** -> **Tutorial**
  - The **Tutorial** is displayed. In **Tutorial**, swipe to display the next page.
2. Tap X to close the **Tutorial**.

### 6.2.3. Display App Info



In App Info you can find the version number of the installed App.

1. Tap -> **Help & Information** -> **Instrument information**
  - The App's version number is displayed, as well as the ID.

## 6.3. Application menus

### 6.3.1. Selecting the application menu

1. Press .
- A selection of menus for various applications is displayed.
2. Select the required application.
- The selection disappears and your selected application is displayed.

### 6.3.2. Setting favourites

1. Press .
- A selection of applications is displayed.
2. Press next to the application that you would like to designate as a favourite.
- The asterisk is displayed in orange .

### 6.3.3. Displaying information about an application

1. Press .
- A selection of applications is displayed.
2. Press .
- The information about an application is displayed.

## 6.4. Smart Probe settings



If the readings fluctuate wildly, it is advisable to damp the readings.

- ✓ The probe is connected to the SMART App.
- 1 Click on .
  - ▶ Main menu opens.
- 2 Click on **Sensors**.
  - ▶ The Sensors menu opens.
- 3 Click on the required sensor.
  - ▶ Information is displayed about the model, order number, serial number and firmware version.
- 4 Click on the **Settings** tab.
  - ▶ The settings window opens.
- 5 Enable **Activate damping** using the slider.
- 6 Click on **Average of the measured values**.
  - ▶ Window for Average of the measured values opens.
- 7 Enter a value between 2 and 20 seconds.

### 6.5. testo 115i/915i - Surface increment

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Surface probes withdraw heat from the measured surface immediately after the initial contact. This makes the measurement result lower than the true surface temperature without the probe (or the reverse if the surface is colder than the environment). This effect can be corrected by an increment in % of the reading.

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- ✓ The probe is connected to the SMART App.
- 1 Click on .
- ▶ Main menu opens.
- 2 Click on **Sensors**.
- ▶ The Sensors menu opens.
- 3 Click on the required sensor.
- ▶ Information is displayed about the model, order number, serial number and firmware version.
- 4 Click on the **Settings** tab.
- ▶ The settings window opens.
- 5 Click on **Use surface increment**.

- 6 | Enable **Activate surface increment** using the slider.

## 6.6. List, graphic diagram and table view

The available readings can be displayed in different ways in the various views.

- List view  
Displays the readings transmitted by the Smart Probe in the form of a list. Readings from all connected Smart Probes are displayed here.
- Graphic diagram view  
The graphical progression of up to four different readings can be displayed. Tap on a reading above the diagram to select the readings to be displayed.
- Table view  
In the Table view, all readings are displayed in sequence according to date and time. The different readings from the individual Smart Probes can be selected by pressing ◀ ▶.

## 6.7. Settings view

1. Press  and select **Edit View**.
  - An overview of parameters is displayed.
2. Deselect the check mark to hide a Smart Probe reading.
3. Press ▼ to select the unit for a reading.
4. Press **OK** to confirm your settings

# 6.8. Exporting readings

1. Press  -> **Memory** -> **Select measurement.**

|                                                                                   |        |
|-----------------------------------------------------------------------------------|--------|
|  | Export |
|  | Report |
|  | Delete |
|                                                                                   |        |

12:30

Volume flow outlet

Date: 26.03.2024 12:30

Customer: Testo Office Building

Attach images



Write a comment

Measurement data

Volume flow

Ø 1,032.5 m³/h

Air velocity

Ø 2.39 m/s

Temperature

Ø 25.0 °C

Recorded by sensor

378

Actual measuring time period

Start

26.03.2024, 12:15:15

End

26.03.2024, 12:30:16

Export

PDF Report

### 6.8.1. Excel (CSV) Export

1. Press .
- A selection of export options appears.
2. Press **Start export**.
- A selection of sending/export options appears.
3. Select your required sending/export options.

### 6.8.2. PDF Export

- 1  Click on **Report**.

- ▶ A selection window is displayed.

- 2 If required, activate the **Create PDF with all readings** button.

- 3 Click on **Create**.



For measurements, please be aware that the option **Create PDF with all readings** is only possible up to 30 pages, due to the resulting file size and number of pages. In the testo DataControl software, however, PDF reports can be created for all measurements without any restrictions.

- ▶ A report containing all the information is created.

- ▶ A selection window is displayed. The report can be sent via e-mail or Bluetooth®.

- 4 Click on e-mail or Bluetooth®.

- ▶ The report will be sent.



## 7 Maintaining the product

### 7.1. Cleaning the instrument



Do not use any aggressive cleaning agents or solvents!  
Mild household cleaning agents or soap suds may be used.

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

### 7.2. Keeping connections clean

- > Keep connections clean and free of grease and other deposits, clean with a damp cloth as required.

### 7.3. Ensuring measuring accuracy

- > Testo Customer Service will be happy to help you if you require it.
- > Keep within the permissible measuring range!
- > Calibrate instrument regularly (recommendation: once a year).

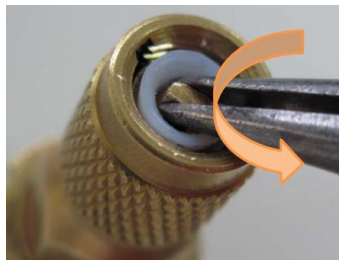
### 7.4. testo 552i – Cleaning vacuum probe

#### CAUTION

**Possible damage to the sensor!**

- Do not use any sharp-edged objects.

- 1 Remove the vacuum probe from the device.
- 2 Use a plier to unscrew and remove the middle part.



## 7 Maintaining the product

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- 3 Turn a suitable screw left-handed slightly into the white seal and pull out the white seal to expose the sensor opening.



- 3.1 Alternatively you can use the plier to pull it out.



- 4 Put a few drops of rubbing alcohol (95%) into the sensor opening.



- 5 Seal the opening by placing your finger on it and shake the vacuum probe briefly.
- 6 Remove all the alcohol from the probe.
- 7 Repeat the process at least twice.

- 8 Leave the probe to dry at least 4 hours.

To dry the sensor faster, you can connect the probe directly to a vacuum pump and create a vacuum.

- 9 Reinstall the white sealing ring and screw the middle back in with the pliers.

### 7.5. Smart Probes App

The Testo Smart App is kept updated via the Play Store for Android devices and the App Store for iOS devices. Please update the App as soon as a new update is available. We therefore recommend that you do not disable automatic notifications when new updates are available.

## 8 Tips and assistance

### 8.1. Questions and answers

| Question                                                   | Answer                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| LED flashes red                                            | <ul style="list-style-type: none"> <li>• Batteries are almost spent.</li> <li>• Change batteries.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                |
| The instrument switches itself off                         | Remaining battery capacity insufficient<br>> Change the batteries.                                                                                                                                                                                                                                                                                                                                                                                                                          |
| --- lights up instead of the measurement parameter display | <ul style="list-style-type: none"> <li>• Outside the permissible measuring range.</li> <li>&gt; Keep within the permissible measuring range.</li> </ul> or <ul style="list-style-type: none"> <li>• Sensor is defective</li> <li>&gt; Contact your testo Service department.</li> </ul>                                                                                                                                                                                                     |
| The App cannot be found in the store                       | <ul style="list-style-type: none"> <li>• No correct search terms were entered.</li> <li>&gt; Enter an unambiguous search term, e.g.: "testo Smart Probes" or use the link on the testo website.</li> </ul> or <ul style="list-style-type: none"> <li>• Your mobile terminal device does not meet the technical requirements (iOS 12.0 or later, Android 6.0 or later / Bluetooth 4.2 (Low Energy))</li> <li>&gt; Please check the technical data for your mobile terminal device</li> </ul> |

### 8.2. Accessories and spare parts

| Designation                                                                                                                                                 | Item number |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| testo Smart Case (Refrigeration) for storing and transporting 2 × testo 115i and 2 × testo 549i, dimensions 250 × 180 × 70 mm                               | 0516 0240   |
| testo Smart Case (Heating) for storing and transporting testo 115i, testo 410i, testo 510i, testo 549i and testo 805i, dimensions 250 × 180 × 70 mm         | 0516 0270   |
| testo Smart Case (VAC) for storing and transporting testo 405i, testo 410i, testo 510i, testo 605i, testo 805i and testo 905i, dimensions 270 × 190 × 60 mm | 0516 0250   |
| testo Smart Case (temperature) for the storage and transportation of testo 915i and plug-in probes, dimensions 250 × 180 × 70 mm                            | 0516 0032   |

## 9 Technical data

### 9.1. Bluetooth module



The use of the wireless module is subject to the regulations and stipulations of the respective country of use, and the module may only be used in each case in countries for which a country certification has been granted.

The user and every owner undertake to adhere to these regulations and prerequisites for use, and acknowledge that the re-sale, export, import, etc. in particular in, to or from countries without wireless permits, is their responsibility.

### 9.2. General technical data



All accuracy specifications apply at a nominal temperature of 22 °C.

#### 9.2.1. testo 905i

| Feature                        | Values                                                                           |
|--------------------------------|----------------------------------------------------------------------------------|
| Measuring range                | -50 ...150 °C / -58 ... 302 °F                                                   |
| Accuracy ± 1 digit             | ± 1 °C / ± 1.8 °F                                                                |
| Resolution                     | 0.1 °C / 0.1 °F                                                                  |
| Measurement rate               | 1/sec                                                                            |
| Available units of measurement | °C, °F                                                                           |
| Storage temperature            | -20 ... 60 °C / -4 ... 140 °F                                                    |
| Operating temperature          | -20 ... 50 °C / -4 ... 122 °F                                                    |
| Battery type                   | 3 micro batteries AAA                                                            |
| Battery life                   | 150 h                                                                            |
| Dimensions                     | 222 mm × 30 mm × 24 mm<br>Probe shaft length 100 mm<br>Probe shaft diameter 4 mm |

### 9.2.2. testo 410i

| Feature                        | Values                                                                                                       |
|--------------------------------|--------------------------------------------------------------------------------------------------------------|
| Measuring range                | 0.4 ... 30 m/s / 80 ... 5,900 fpm<br>-20 ... 60 °C / -4 ... 140 °F                                           |
| Accuracy ± 1 digit             | ±(0.2 m/s + 2 % of m.v.) (0.4 ... 20 m/s)<br>±(40 fpm + 2 % of m.v.) (80 ... 4,000 fpm)<br>±0.5 °C / ±0.9 °F |
| Resolution                     | 0.1 °C / 0.1 °F<br>0.1 m/s / 1 fpm                                                                           |
| Measurement rate               | 1/sec                                                                                                        |
| Available units of measurement | °C, °F, m/s, fpm, m³/h, cfm, l/s                                                                             |
| Storage temperature            | -20 ... 60 °C / -4 ... 140 °F                                                                                |
| Operating temperature          | -20 ... 50 °C / -4 ... 122 °F                                                                                |
| Battery type                   | 3 micro batteries AAA                                                                                        |
| Battery life                   | 130 h                                                                                                        |
| Dimensions                     | 154 mm × 43 mm × 21 mm<br>30 mm vane diameter                                                                |

### 9.2.3. testo 405i



Depending on the point of use, the ambient pressure (default value 1.013 hPa) must be entered in the SMART App so that the air pressure can be compensated. Otherwise, errors of measurement may occur.

| Feature                      | Values                                                                                                                                                                                                                                                        |
|------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Measuring range <sup>1</sup> | 0 ... 30 m/s / 0 ... 5,900 fpm<br>-20 ... 60 °C / -4 ... 140 °F                                                                                                                                                                                               |
| Accuracy ± 1 digit           | ±(0.1 m/s + 5 % v. Mw) (0 ... 2 m/s)<br>±(0.3 m/s + 5 % v. Mw) (2 ... 15 m/s)<br>±(0.5 m/s + 5 % v. Mw) (15 ... 30 m/s)<br>±(20 fpm + 5 % v. Mw) (0 ... 394 fpm)<br>±(59 fpm + 5 % v. Mw) (394 ... 3,000 fpm)<br>±(100 fpm + 5 % v. Mw) (3,000 ... 4,900 fpm) |

<sup>1</sup> Please switch on the Smart Probe in the following ambient conditions: > 10 °C, air velocity 0 m/s = protective cap closed to enable the sensor to heat up.

| Feature                        | Values                                                                                                         |
|--------------------------------|----------------------------------------------------------------------------------------------------------------|
|                                | ±0.5 °C / ±0.9 °F                                                                                              |
| Resolution                     | 0.01 m/s / 1 fpm<br>0.1 °C / 0.1 °F                                                                            |
| Measurement rate               | 1/sec                                                                                                          |
| Available units of measurement | °C, °F, m/s, fpm, m³/h, cfm, l/s                                                                               |
| Storage temperature            | -20 ... 60 °C / -4 ... 140 °F                                                                                  |
| Operating temperature          | -20 ... 50 °C / -4 ... 122 °F                                                                                  |
| Battery type                   | 3 micro batteries AAA                                                                                          |
| Battery life                   | 15 hrs                                                                                                         |
| Dimensions                     | 200 mm × 30 mm × 41 mm<br>Extendible telescope 400 mm<br>Probe shaft diameter 12 mm<br>Probe tip diameter 9 mm |

#### 9.2.4. testo 549i

| Feature                        | Values                                 |
|--------------------------------|----------------------------------------|
| Measuring range                | 0 to 60 bar (rel) / 0 to 870 psi (rel) |
| Accuracy ± 1 digit             | 0.5 % of full scale value              |
| Resolution                     | 0.01 bar / 0.1 psi                     |
| Measurement rate               | 2/sec                                  |
| Available units of measurement | bar, psi, MPa, kPa                     |
| Connection                     | 1× 7/16" UNF / 1/4" SAE connection     |
| Overload                       | 65 bar (rel)                           |
| Storage temperature            | -20 ... 60 °C / -4 ... 140 °F          |
| Operating temperature          | -20 ... 50 °C / -4 ... 122 °F          |
| Battery type                   | 3 micro batteries AAA                  |
| Battery life                   | 130 hrs                                |
| Measurable media               | CFC, HFC, HCFC, N, H2O, CO2            |
| Dimensions                     | 152 mm x 35 mm x 35 mm                 |

### 9.2.5. testo 805i

| Feature                        | Values                                                                                                                                                                                                                                                |
|--------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Measuring range                | -30 °C to 250 °C / -22 to 482 °F                                                                                                                                                                                                                      |
| Accuracy $\pm 1$ digit         | $\pm 1.5$ °C or $\pm 1.5$ % of m.v. (0 ... 250 °C)<br>$\pm 2.0$ °C (-20.0 ... -0.1 °C)<br>$\pm 2.5$ °C (-30.0 ... -20.1 °C)<br><br>$\pm 2.7$ °F or $\pm 1.5$ % of m.v. (32 ... 482 °F)<br>$\pm 3.6$ °F (-4 ... 32 °F)<br>$\pm 4.5$ °F (-22 ... -4 °F) |
| Resolution                     | 0.1 °C / 0.1 °F                                                                                                                                                                                                                                       |
| Measurement rate               | 2/sec                                                                                                                                                                                                                                                 |
| Available units of measurement | °C, °F                                                                                                                                                                                                                                                |
| Connection                     | 7/16" – UNF                                                                                                                                                                                                                                           |
| Storage temperature            | -20 ... 60 °C / -4 ... 140 °F                                                                                                                                                                                                                         |
| Operating temperature          | -10 ... 50 °C / 14 ... 122 °F                                                                                                                                                                                                                         |
| Battery type                   | 3 micro batteries AAA                                                                                                                                                                                                                                 |
| Battery life                   | 30 hrs                                                                                                                                                                                                                                                |
| Optics                         | 10:1                                                                                                                                                                                                                                                  |
| Laser marking                  | Diffraction lens as laser marking (laser circle)                                                                                                                                                                                                      |
| Dimensions                     | 140 mm × 36 mm × 25 mm                                                                                                                                                                                                                                |
| Emission level                 | Adjustable from 0.1 to 1.0                                                                                                                                                                                                                            |

### 9.2.6. testo 605i



The humidity sensor attains the highest degree of accuracy in temperatures between + 5 °C and + 60 °C and 20 % to 80 % RH. If the instrument is exposed to higher humidity for a long period of time, this can falsify the readings by up to 3 % RH. After 48 hours at 50 % RH  $\pm$  10 % and + 20 °C  $\pm$  5 °C, the sensor regenerates by itself.

#### CAUTION

##### Damage to the humidity probe

- The probe must never be exposed to a humidity level of 100 % RH for longer than 3 days.

| Feature                        | Values                                                                                                                                                                                                                                                                                                                                                                                          |
|--------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Measuring range                | -20 to 60 °C, -4 to 140 °F, 0 to 100% RH                                                                                                                                                                                                                                                                                                                                                        |
| Accuracy $\pm$ 1 digit         | $\pm 0.8$ °C (-20 ... 0 °C) / $\pm 1.44$ °F (-4 ... 32 °F)<br>$\pm 0.5$ °C (0 ... 60 °C) / $\pm 0.9$ °F (32 ... 140 °F)<br>$\pm 3.0$ % RH (10 % RH ... 35 % RH)<br>$\pm 2.0$ % RH (35 % RH ... 65 % RH)<br>$\pm 3.0$ % RH (65 % RH ... 90 % RH)<br>$\pm 5.0$ % RH (< 10 % RH or > 90 % RH)<br>@ 25 °C $\pm 1$ °C<br>Hysteresis: $\pm 1.0$ % RH<br>Long term stability/year: $\pm 1.0$ % RH/year |
| Resolution                     | 0.1 °F / 0.1 °C<br>0.1 % RH                                                                                                                                                                                                                                                                                                                                                                     |
| Measurement rate               | 1/sec                                                                                                                                                                                                                                                                                                                                                                                           |
| Available units of measurement | °C, °F, % RH, °Ctd, °Ftd, wetbulb °C, wetbulb °F                                                                                                                                                                                                                                                                                                                                                |
| Storage temperature            | -20 ... 60 °C / -4 ... 140 °F                                                                                                                                                                                                                                                                                                                                                                   |
| Operating temperature          | -20 ... 50 °C / -4 ... 122 °F                                                                                                                                                                                                                                                                                                                                                                   |
| Battery type                   | 3 micro batteries AAA                                                                                                                                                                                                                                                                                                                                                                           |
| Battery life                   | 150 h                                                                                                                                                                                                                                                                                                                                                                                           |
| Dimensions                     | 218 mm $\times$ 30 mm $\times$ 27 mm<br>Probe shaft length 90 mm                                                                                                                                                                                                                                                                                                                                |

### 9.2.7. testo 510i

| Feature                        | Values                                                                                                                                                                                  |
|--------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Measuring range                | -150 ... 150 hPa / 60 in wc                                                                                                                                                             |
| Accuracy $\pm 1$ digit         | $\pm 0.05$ hPa (0 ... 1.00 hPa) /<br>$\pm 0.02$ in wc (0 ... 0.4 in wc)<br><br>$\pm 0.2$ hPa + 1.5 % of m.v. (1.01 ... 150 hPa)<br>$\pm 0.08$ in wc + 1.5 % of m.v. (0.41 ... 60 in wc) |
| Overload                       | 500 hPa                                                                                                                                                                                 |
| Resolution                     | 0.01 hPa / 0.01 inch wc                                                                                                                                                                 |
| Measurement rate               | 2/sec                                                                                                                                                                                   |
| Available units of measurement | mbar, hPa, Pa, mmHg, inHg, in WC, psi, mmWC<br>In conjunction with Pitot tube (optional): m/s, fpm, m <sup>3</sup> /h, cfm, l/s                                                         |
| Storage temperature            | -20 ... 60 °C / -4 ... 140 °F                                                                                                                                                           |
| Operating temperature          | -20 ... 50 °C / -4 ... 122 °F                                                                                                                                                           |
| Battery type                   | 3 micro batteries AAA                                                                                                                                                                   |
| Battery life                   | 150 hrs                                                                                                                                                                                 |
| Dimensions                     | 148 × 36 × 23 mm                                                                                                                                                                        |

### 9.2.8. testo 115i

| Feature                        | Values                                                        |
|--------------------------------|---------------------------------------------------------------|
| Measuring range                | -40 ... 150 °C / -58 ... 302 °F                               |
| Accuracy $\pm 1$ digit         | $\pm 1.3$ °C (-20 ... 85 °C)<br>$\pm 2.34$ °F (-4 ... 185 °F) |
| Resolution                     | 0.1 °C / 0.1 °F                                               |
| Measurement rate               | 1/sec                                                         |
| Available units of measurement | °C, °F                                                        |
| Storage temperature            | -20 ... 60 °C / -4 ... 140 °F                                 |
| Operating temperature          | -20 ... 50 °C / -4 ... 122 °F                                 |
| Battery type                   | 3 micro batteries AAA                                         |
| Battery life                   | 150 h                                                         |
| Dimensions                     | 183 mm × 90 mm × 30 mm<br>max. 35 mm pipe diameter            |

### 9.2.9. testo 915i

| Feature                                                        | Values                                                                                                                                                                                                                          |
|----------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Measuring range: handle (0560 1915)                            | -60 ... 1,000 °C<br>-76 ... 1,832 °F                                                                                                                                                                                            |
| Measuring range with TC immersion probe (0602 1093)            | -50 ... 400 °C<br>-58 ... 752 °F                                                                                                                                                                                                |
| Measuring range with TC surface probe (0602 2093)              | -50 ... 350 °C<br>-58 ... 662 °F                                                                                                                                                                                                |
| Measuring range with TC air probe (0602 3093)                  | -50 ... 400 °C<br>-58 ... 752 °F                                                                                                                                                                                                |
| Measuring range with flexible TC probe (0602 4093)             | -50 ... 400 °C<br>-58 ... 752 °F                                                                                                                                                                                                |
| Accuracy ± 1 digit: handle (0560 1915)                         | ±(0.5 °C + 0.3 % of m.v.)<br>±(0.9 °F + 0.3 % of m.v.)                                                                                                                                                                          |
| Accuracy ± 1 digit: handle with TC immersion probe (0602 1093) | ±1.0 °C (-50 ... 100 °C)<br>±1 % of m.v. (remaining meas. range)<br>±1.8 °F (-58 ... 212 °F)<br>±1 % of m.v. (remaining meas. range)                                                                                            |
| Accuracy ± 1 digit: handle with TC surface probe (0602 2093)   | ±(1.0 + 1 % of m.v.) °C<br>±(1.8 + 1 % of m.v.) °F                                                                                                                                                                              |
| Accuracy ± 1 digit: handle with TC air probe (0602 3093)       | ±1.0 °C (-50 ... 100 °C)<br>±1 % of m.v. (remaining meas. range)<br>±1.8 °F (-58 °C ... 212 °F)<br>±1 % of m.v. (remaining meas. range)                                                                                         |
| Accuracy ± 1 digit: handle with flexible TC probe (0602 4093)  | ±1.0 °C (-30 ... 80 °C)<br>±(0.7 + 1 % of m.v.) (-50 ... -30 °C)<br>±(0.2 + 1 % of m.v.) (80 ... 400 °C)<br>±1.8 °F (-22 °F ... 186 °F)<br>±(1.3 + 1 % of m.v.) (-58 °F ... -22 °F)<br>±(0.4 + 1 % of m.v.) (186 °F ... 752 °F) |
| Resolution                                                     | 0.1 °C / 0.1 °F                                                                                                                                                                                                                 |
| Available units of measurement                                 | °C, °F                                                                                                                                                                                                                          |
| Storage temperature                                            | -20 ... 60 °C / -4 ... 140 °F                                                                                                                                                                                                   |
| Operating temperature                                          | -20 ... 50 °C / -4 ... 122 °F                                                                                                                                                                                                   |
| Battery type                                                   | 3 AAA batteries                                                                                                                                                                                                                 |

## 9 Technical data

| Feature                        | Values           |
|--------------------------------|------------------|
| Battery life                   | 150 h            |
| Dimensions of handle           | 129 x 31 x 31 mm |
| Cable length of plug-in sensor | max. 3 m         |

### 9.2.10. testo 552i

| Feature                        | Values                                                                                                              |
|--------------------------------|---------------------------------------------------------------------------------------------------------------------|
| Measuring range                | 0 ... 26.66 mbar<br>0 ... 20,000 microns                                                                            |
| Accuracy $\pm 1$ digit         | $\pm 10$ microns + 10 % of m.v. (100 ... 1,000 microns)                                                             |
| Resolution                     | 1 micron (0 ... 1,000 microns) /<br>10 microns (1,000 ... 2,000 microns) /<br>100 microns (2,000 ... 5,000 microns) |
| Measurement rate               | 1/sec                                                                                                               |
| Available units of measurement | bar, psi, MPa, kPa                                                                                                  |
| Storage temperature            | -20 ... 50 °C / -4 ... 122 °F                                                                                       |
| Operating temperature          | -10 ... -50 °C / -14 ... 122 °F                                                                                     |
|                                | PA66 +30 % GF TPE, P                                                                                                |
| Protection class               | IP 54                                                                                                               |
| Battery type                   | 3 AAA batteries                                                                                                     |
| Battery life                   | 39 h                                                                                                                |
| Connection                     | 7/16" UNF                                                                                                           |
| Dimensions                     | 155 x 35 x 35 mm<br>6.10 x 1.38 x 1.38 inch                                                                         |





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