

# Thermal imager

**testo 871 – smart thermography for professional demands.**

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Infrared resolution 240 x 180 pixels  
(with testo SuperResolution technology 480 x 360 pixels)

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Thermal sensitivity 90 mK

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Integrated digital camera

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With testo Thermography App

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Wireless measurement data transfer from clamp meter  
testo 770-3 and humidity measuring instrument testo 605i

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With testo ScaleAssist and testo  $\epsilon$ -Assist

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testo Thermography App  
for free download



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.

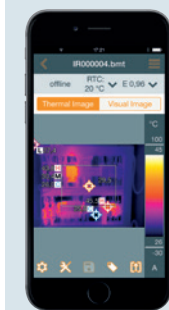
For even more meaningful thermal images, the thermal imager also wirelessly integrates the measurement values of the clamp probe testo 770-3 as well as the thermohygrometer testo 605i (both available as an option).

# Ordering data

## testo 871

Thermal imager testo 871 with wireless module BT/wireless LAN, USB cable, mains unit, Lithium ion rechargeable battery, pro software, 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 |
| 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. |
|--|-----------|
| <b>testo 605i thermohygrometer</b><br>with smartphone operation, including batteries and calibration protocol <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 1605 |
| <b>testo 770-3 clamp meter</b><br>including batteries and 1 set of measuring cables <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<br>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<br>Measuring range 2: 0 to +650 °C  |
| Accuracy  | ±2 °C, ±2 % of measured value   |
| 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,   |
| 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, warranty           |   |
| EU directive                         | EMC: 2014/30/EU<br>RED: 2014/53/EU                            |
| Warranty                             | 2 years   |

<sup>1)</sup> Wireless permit in EU, EFTA, USA, Canada, Australia, Turkey

