

We measure it.



# Datasheet

## Thermal imager

testo 875i – versatile professional-level thermography



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Infrared resolution 160 x 120 pixels

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SuperResolution technology to 320 x 240 pixels

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Thermal sensitivity < 50 mK

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Built-in digital camera with power LEDs

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Exchangeable lenses

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Measurement mode for detecting mould-risk areas

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High temperature measurement up to 550 °C

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The testo 875i thermal imager detects anomalies and weak spots in materials and components quickly and reliably. Thanks to an imaging process, energy losses and cold bridges as well as damage or overheating in industrial systems are detected without contact. Whereas with other methods, cable or pipeline systems must be exposed over a

large area, with the thermal imager testo 875i, a single glance is enough. testo SuperResolution technology also increases the resolution of the testo 875i from 160 x 120 pixels in the Software testo IRSof to 320 x 240 pixels. That's four times as many readings, enabling you to spot even the smallest irregularities.

## Ordering data

### testo 875-1i

Thermal imager testo 875-1i with integrated testo SuperResolution and digital camera, in a robust case, including professional software, soft case, carrying strap, SD card, USB cable, lens cleaning cloth, mains unit, rechargeable Li-ion battery and tripod adapter

Part no. 0563 0875 V1



### testo 875-2i set

Thermal imager testo 875-2i set with integrated testo SuperResolution and digital camera, in a robust case, including professional software, soft case, carrying strap, SD card, USB cable, lens cleaning cloth, mains unit, rechargeable Li-ion battery, tripod adapter, headset, 9° x 7° telephoto lens, lens protector, spare rechargeable battery and fast battery charger

Part no. 0563 0875 V3



### testo 875-2i

Thermal imager testo 875-2i with integrated testo SuperResolution and digital camera, in a robust case including professional software, soft case, carrying strap, SD card, USB cable, lens cleaning cloth, mains unit, rechargeable Li-ion battery, tripod adapter and headset

Part no. 0563 0875 V2



## Accessories

|  | Code <sup>1)</sup><br>(First<br>equipment<br>testo 875i) | Part no.<br>(Retrofit) |
|--|--|------------------------|
| Fast battery charger.<br>Desktop charging station for two rechargeable batteries for the optimization of charging time                                   | E1   | 0554 8801              |
| Additional battery.<br>Additional lithium ion rechargeable battery for extending the operating time  | D1   | 0554 8802              |
| Lens protection glass.<br>Special Germanium protective glass for optimum protection of the lens from dust and scratching                                 | C1   | 0554 8805              |
| Retrofit telephoto lens<br>(for testo 875-2 only); please contact our customer service   | A1   | <sup>2)</sup>          |
| High temperature measurement up to 550 °C<br>(testo 875-2i only )  | G1   | <sup>2)</sup>          |
| Humidity measurement with wireless humidity probe*<br>(testo 875-2i only)  | B1   | <sup>2) 3)</sup>       |
| Emission adhesive tape. Adhesive tape, e.g. for reflective surfaces (roll, L.: 10 m, W.: 25 mm),<br>$\epsilon = 0.95$ , temperature resistant to +250 °C |  | 0554 0051              |
| ISO calibration certificates;<br>Calibration points at 0 °C, +25 °C, +50 °C  |  | 0520 0489              |
| ISO calibration certificates;<br>Calibration points at 0 °C, +100 °C, +200 °C  |  | 0520 0490              |
| ISO calibration certificates;<br>Freely selectable calibration points in the range -18 to +250 °C  |  | 0520 0495              |

\*Wireless humidity probes only in the EU, Norway, Switzerland, USA, Canada, Colombia, Turkey, Brazil, Chile, Mexico, New Zealand, Indonesia

<sup>1)</sup> When ordering as initial equipment, you receive the accessories directly in the case. Example: testo 875-1i incl. lens protection glass and spare battery: Order no. 0563 0875 V1 C1 D1

<sup>2)</sup> Please contact our customer service

<sup>3)</sup> Plus installation

## Technical data

|  | testo 875-1i   | testo 875-2i  |
|--|--|---|
| <b>Infrared image output</b>   |  |   |
| Infrared resolution  | 160 x 120 pixels   |   |
| Thermal sensitivity (NETD)   | < 50 mK at +30 °C  |   |
| Field of view/min. focus distance  | 32° x 23° / 0.1 m<br>(Standard lens)   | 32° x 23° / 0.1 m<br>(Tele: 9° x 7° / 0.5 m)  |
| Geometric resolution (IFOV)  | 3.3 mrad<br>(Standard lens)  | 3.3 mrad<br>(Tele: 1.0 mrad)  |
| SuperResolution (pixel / IFOV)   | 320 x 240 pixels /<br>2.1 mrad<br>(Standard lens)  | 320 x 240 pixels /<br>2.1 mrad<br>(Tele: 0.6 mrad)  |
| Image refresh rate   | 33 Hz*   |   |
| Focus  | manual   |   |
| Spectral range   | 7.5 to 14 µm   |   |
| <b>Image output visual</b>   |  |   |
| Image size / min. focus distance   | 640 x 480 pixels / 0.4 m   |   |
| <b>Image presentation</b>  |  |   |
| Image display  | 3.5" LCD with 320 x 240 pixels   |   |
| Display options  | IR image only / real image only/<br>IR and real image  |   |
| Video output   | USB 2.0  |   |
| Colour palettes  | 10 (iron, rainbow, rainbow HC, cold-hot,<br>blue-red, grey, inverted grey, sepia, Testo,<br>iron HT) |   |
| <b>Image presentation</b>  |  |   |
| Measuring range  | -30 to +100°C /<br>0 to +350 °C (switchable)   |   |
| Accuracy   | ±2 °C, ±2 % of m.v.<br>(±3 °C of m.v. at -30 to -22 °C)  |   |
| High temperature measurement – optional  | –  | +350 to +550 °C   |
| Accuracy   |  | ±3 % of m.v.<br>at +350 to +550 °C  |
| Emissivity / reflected temperature   | 0.01 to 1 /<br>manual  |   |
| <b>Measuring functions</b>   |  |   |
| 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 2<br>measurement<br>points,<br>Hot/Cold Spot<br>Recognition                                    | up to 2<br>measurement<br>points,<br>Hot/Cold Spot<br>Recognition,<br>Isotherms, Area<br>measurement (Min-<br>/Max on Area) |

\* 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

|   | testo 875-1i   | testo 875-2i  |
|---|--|---------------|
| <b>Imager equipment</b>                         |  |               |
| Digital camera                                  |  | ✓             |
| Power LEDs                                      | –  | ✓             |
| Standard lens                                   | 32° x 23°  |               |
| Exchangeable lenses - optional                  | –  | 9° x 7°       |
| Laser (laser classification 635 nm, Class 2)*** |  | ✓             |
| Voice recording                                 | –  | wired headset |
| Video streaming (via USB)                       |  | ✓             |
| <b>Image storage</b>                            |  |               |
| File format                                     | .bmt; export option in .bmp, .jpg, .png,<br>.csv, .xls   |               |
| Storage device                                  | SD card 2GB (approx. 2.000 images)   |               |
| <b>Power supply</b>                             |  |               |
| Battery type                                    | Fast-charging, Li-ion battery can be<br>changed on-site  |               |
| Operating time                                  | 4 hours  |               |
| Charging options                                | In instrument/in charging station (optional)   |               |
| Mains operation                                 | yes  |               |
| <b>Ambient conditions</b>                       |  |               |
| Operating temperature range                     | -15 to +40 °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   |               |
| <b>Physical specifications</b>                  |  |               |
| Weight  | Approx. 900 g  |               |
| Dimensions (L x W x H) in mm                    | 152 x 108 x 262  |               |
| Tripod mounting                                 | M6   |               |
| Housing   | ABS  |               |
| <b>PC software</b>                              |  |               |
| System requirements                             | Windows XP (Service Pack 3), Windows<br>Vista, Windows 7 (Service Pack 1),<br>Windows 8, interface USB 2.0 |               |
| <b>Standards, tests, warranty</b>               |  |               |
| EU Directive                                    | 2004 / 108 / EC  |               |
| Warranty  | 2 years  |               |

✓ included in delivery

(✓) optional

– not available

## Overview of variants

| Features   | testo 875-1i     | testo 875-2i | testo 875-2i Set |
|--|------------------|--------------|------------------|
| Infrared resolution  | 160 x 120 pixels |              |                  |
| Thermal sensitivity (NETD)   | < 50 mK          |              |                  |
| Measuring range  | -30 to +350 °C   |              |                  |
| Image refresh rate   | 33 Hz*           |              |                  |
| Lens 32° x 23°   | ✓                | ✓            | ✓                |
| Exchangeable telephoto lens 9° x 7°  | -                | (✓)          | ✓                |
| SuperResolution  | ✓                | ✓            | ✓                |
| High temperature measurement up to 550 °C  | -                | (✓)          | (✓)              |
| Integrated digital camera  | ✓                | ✓            | ✓                |
| Integrated power LEDs  | -                | ✓            | ✓                |
| Voice recording using the headset  | -                | ✓            | ✓                |
| Laser pointer**  | ✓                | ✓            | ✓                |
| Display of surface moisture distribution (by manual input)   | -                | ✓            | ✓                |
| Humidity measurement with wireless humidity probe*** (automatic measurement value transfer in real time) | -                | (✓)          | (✓)              |
| Isotherm display in instrument   | -                | ✓            | ✓                |
| Min/Max on Area calculation  | -                | ✓            | ✓                |
| Auto Hot/Cold Spot Recognition   | ✓                | ✓            | ✓                |
| Solar mode   | ✓                | ✓            | ✓                |
| Lens protection glass  | (✓)              | (✓)          | ✓                |
| Additional battery   | (✓)              | (✓)          | ✓                |
| Fast battery charger   | (✓)              | (✓)          | ✓                |

- ✓ included in delivery
- (✓) optional
- not available

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