

# Thermal imager

## testo 876 – flexible thermography in camcorder design

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Detector size 160 x 120 pixels

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SuperResolution technology to 320 x 240 pixels

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Thermal sensitivity < 80 mK

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Flexible fold-out, rotatable display

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Integrated digital camera

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Exchangeable lenses

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Special measurement mode for mould risk areas

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Thanks to the rotatable, fold-out display, you maintain a complete overview in any position and reach every corner with the thermal imager testo 876. This allows you to detect anomalies and weak spots in buildings, mechanical compo-

nents, photovoltaic systems or switching cabinets completely non-intrusively. For you, that means: A better overview and more security in thermography!

## The advantages of testo 876



### Detector size 160 x 120 pixels

With 19,200 temperature measurement points, the measurement objects are detected in very good image quality, clearly and precisely.



### SuperResolution technology (to 320 x 240 pixels)

SuperResolution technology improves the image quality by one class, i.e. the resolution of the thermal images is four times higher.



### Thermal sensitivity < 80 mK

Thanks to an excellent temperature resolution of < 80 mK, even small temperature differences are visible.



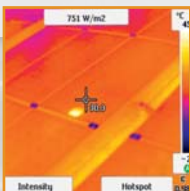
### Integrated digital camera

Parallel to the thermal image, a real image of each measurement object is also stored.



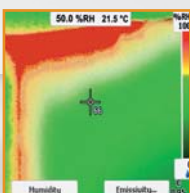
### Voice recording using headset

Voice recording allows each thermal imager to be recorded with a comment. This valuable information is stored together with the thermal image.



### Solar mode

For each measurement, the sun irradiation value can be entered into the camera. This value is stored for each thermal image.



### Special measurement mode for detecting areas with danger of mould

Using the externally measured ambient temperature and air humidity, as well as the surface temperature, the humidity value of each measurement point is calculated and shown in the display as areal humidity image.



Flexible fold-out, rotatable display

Function of the PC software: Image overlay TwinPix



## Technical data testo 876



Exchangeable lenses



Motor focus for one-hand operation



<b>Infrared image output</b>	
Detector type	FPA 160 x 120 pixels, a.Si
Thermal sensitivity (NETD)	< 80 mK at 30 °C
Field of vision/min. focusing distance	32° x 23° / 0.1 m (standard lens) 9° x 7° / 0.5 m (telephoto lens)
Geometric resolution (IFOV)	3.3 mrad (standard lens), 1.0 mrad (telephoto lens)
SuperResolution (pixel / IFOV) - optional	320 x 240 pixels / 2.1 mrad (standard lens) 0.6 mrad (telephoto lens)
Image refresh rate	9 Hz
Focus	manual and motor focus
Spectral range	8 to 14 µm
Image output visual	
Image size / min. focusing distance	640 x 480 pixels / 0.4 m
<b>Image presentation</b>	
Image display	3.5" fold-out LCD with 320 x 240 pixels
Display options	IR image only / real image only / IR and real image
Video output	USB 2.0
Colour palettes	10 (iron, rainbow, rainbow HC, cold-hot, blue-red, grey, inverted grey, sepia, Testo, iron HT)
<b>Measurement</b>	
Temperature range	-20 to +100 °C/0 to +280 °C (switchable)
Accuracy	±2 °C, ±2% of m.v.
Emissivity / reflected temperature	0.01 to 1 / manual
<b>Measuring functions</b>	
Display of surface moisture (via manual input)	✓
Solar mode	✓
Analysis function	Centre point measurement, Hot-/Cold-Spot recognition, Isotherms, Min-/Max on Area
<b>Imager equipment</b>	
Digital camera	✓
Motor focus	✓
Standard lens	32° x 23°
Exchangeable lenses - optional	9° x 7°
Voice recording	wired headset
Video streaming (via USB)	✓
<b>Image storage</b>	
File format	.bmt; export options in .bmp, .jpg, .png, .csv, .xls
Storage device	SD card 2 GB (approx. 2.000 images)
<b>Power supply</b>	
Battery type	Fast-charging, Li-ion battery can be 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 °C to +40 °C
Storage temperature range	-30 °C to +60 °C
Air humidity	20% to 80% non-condensing
Housing protection class (IEC 60529)	IP 54
Vibration (IEC 60068-2-6)	2G
<b>Physical specifications</b>	
Weight	approx. 900 g
Dimensions (L x W x H) in mm	210 x 85 x 97
Tripod mounting	1/4" - 20UNC
Housing	ABS
<b>PC software</b>	
System requirements	Windows XP (Service Pack 3) Windows Vista, Windows 7 (Service Pack 1), interface USB 2.0
<b>Standards, tests, warranty</b>	
EU Directive	2004 / 108 / EG
Warranty	2 years

✓ Standard

## Overview

Features	testo 876	testo 876 set
Detector	160 x 120 pixels	
Thermal sensitivity (NETD)	< 80 mK	
Temperature range	-20 to +280 °C	
Image refresh rate	9 Hz	
Lens 32° x 23°	✓	✓
Exchangeable telephoto lens 9° x 7°	(✓)	✓
SuperResolution	(✓)	(✓)
Integrated digital camera	✓	✓
Display of surface moisture(via manual input)	✓	✓
Voice recording using the headset	✓	✓
Motor focus	✓	✓
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

## Ordering data

Thermal imager testo 876	Order no.
<b>Thermal imager testo 876</b> in a robust case incl. pro software, SD card, USB cable, lens cleaning cloth, headset, mains unit, and Li ion rechargeable battery	0560 8761
<b>Thermal imager testo 876 set</b> in a robust case incl. pro software, SD card, USB cable, lens cleaning cloth, headset, mains unit, and Li ion rechargeable battery	0560 8762

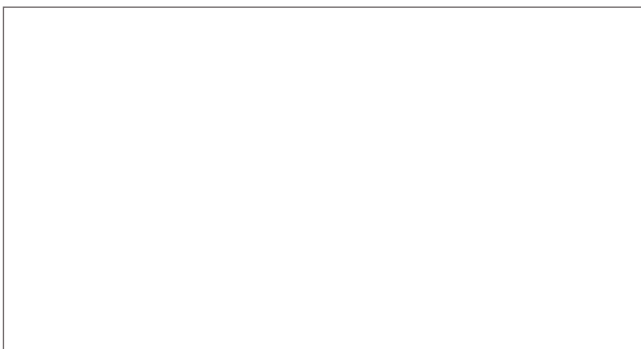
In addition to the equipment of the testo 876, the testo 876 set also includes:

- Telephoto lens 9° x 7°
- Lens protection glass
- Additional battery
- Fast battery charger



### Accessories

Accessories	Order no.
<b>SuperResolution.</b> Four times more measurement values for even more detailed analysis of the thermal images.	0554 7806
<b>Fast battery charger.</b> Desktop charging station for two rechargeable batteries for the optimization of charging time.	0554 8851
<b>Additional battery.</b> Additional Lithium ion rechargeable battery for extending the operating time.	0554 8852
<b>Lens protection glass.</b> Special Germanium protective glass for optimum protection of the lens from dust and scratching	0554 8805
<b>Retrofit telephoto lens</b> Please contact our customer service.	-
<b>Emissivity adhesive tape.</b> Adhesive tape, e.g. for bare surfaces (roll, L.: 10 m, W.: 25 mm), e=0.95, temperature-resistant to +250 °C.	0554 0051
<b>ISO calibration certificates</b> Calibration points at 0 °C, +25 °C, +50 °C Calibration points at 0 °C, +100 °C, +200 °C Freely selectable calibration points in the range -18 °C to +250 °C	0520 0489 0520 0490 0520 0495



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