Datasheet
Thermal imager

testo 870 – Thermography for those who get things done. Switch on and go.

Infrared resolution 160 x 120 pixels

SuperResolution technology to 320 x 240 pixels

Thermal sensitivity <100 mK

Fixed focus 34° lens

Automatic recognition of hot-cold spots

Integrated digital camera

°C

The thermal imager testo 870 was specially developed for your applications, in cooperation with heating constructors, building contractors, service engineers and facility management specialists – for example for detecting leakages, localizing cold bridges or visualizing overheated connections. Thanks to its large display, high-quality detector, wide field of view and the uncomplicated operation, the thermal imager testo 870 allows you to work even better, faster and more productively.

Ordering data

testo 870-1

Thermal imager testo 870-1 including pro software, USB cable, mains unit, and Li ion rechargeable battery

Part no. 0560 8701

testo 870-2

Thermal imager testo 870-2 in a robust case including pro software, USB cable, mains unit, and Li ion rechargeable battery

Part no. 0560 8702

Accessories

	Part no.	
SuperResolution. Four times more measurement values for even more detailed analysis of the thermal images	0554 7806	
High-quality transport case	0516 8700	
Holster case	0554 7808	
Spare battery. Additional Lithium ion rechargeable battery for extending operating time.	0515 0100	
Battery charging station. Desktop charger for optimizing charging time.	0554 1103	
Emission adhesive tape. Adhesive tape, e.g. for reflective surfaces (roll, L.: 10 m, W.: 25 mm), $\varepsilon = 0.95$, temperature resistant to +250 °C	0554 0051	
ISO calibration certificates; Calibration points at 0 °C, +25 °C, +50 °C	0520 0489	
ISO calibration certificates; Calibration points at 0 °C, +100 °C, +200 °C	0520 0490	
ISO calibration certificates; Freely selectable calibration points in the range -18 to +250 °C	0520 0495	

Technical data

	testo 870-1	testo 870-2
Infrared image output		
Infrared resolution	160 x 120 pixels	
Thermal sensitivity (NETD)	<100 mK at +30 °C	
Field of view/min. focus distance	34° x 26° / <0.5 m (Fixed focus)	
Geometric resolution (IFOV)	3.68 mrad	
SuperResolution (pixel / IFOV) - optional	320 x 240 pixels / 2.3 mrad	
Image refresh rate	9 Hz	
Focus	Fixed focus	
Spectral range	7.5 to 14 µm	
Image output visual		
Image size / min. focus distance	–	3.1 MP / 0.5 m
Image presentation		
Image display	3.5" LCD with 320 x 240 pixels	
Display options	IR image only	IR image / real image
Colour palettes	4 (iron, rainbow, cold-hot, grey)	
Image presentation		
Measuring range	-20 to +280 °C	
Accuracy	±2 °C, ±2 % of mv	
Emissivity / reflected temperature	0.01 to 1 / manual	
Measuring functions		
Analysis function	Centre point measurement, hot/cold spot measurement	
Imager equipment		
Digital camera	–	✓
Lens	34° x 26°	
JPEG storage	✓	
Full screen mode	✓	

	testo 870-1	testo 870-2
Image storage		
File format	.bmt and .jpg; export options in .bmp, .jpg, .png, .csv, .xls	
Memory	Internal storage (1.6 GB / >2000 images)	
Power supply		
Battery type	Li ion rechargeable battery exchangeable on site	
Operating time	4 hours	
Charging options	in instrument / charger (optional)	
Mains operation	yes	
Ambient conditions		
Operating temperature range	-15 to +50 °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	
Physical specifications		
Weight	550 g	
Dimensions (L x W x H) in mm	219 x 96 x 95	
Housing	PC - ABS	
PC software		
System requirements	Windows XP (Service Pack 3), Windows Vista, Windows 7. Windows 8 Interface: USB 2.0	
Standards, tests, warranty		
EU Directive	2004 / 108 / EG	
Warranty	2 years	

✓ included in delivery
(✓) optional
– not available

Overview of variants

Features	testo 870-1	testo 870-2
Infrared resolution	160 x 120 pixels	
Thermal sensitivity (NETD)	<100 mK at +30 °C	
Temperature range	-20 to +280 °C	
Image refresh rate	9 Hz	
Lens 34° x 26°	✓	
SuperResolution	(✓)	
Integrated digital camera	–	✓
Auto Hot/Cold Spot Recognition	✓	
High-quality transport case	(✓)	✓
Additional battery	(✓)	
Battery charging station	(✓)	

✓ included in delivery　　　(✓) optional　　　– not available

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