Be sure. **testo**

Thermal imager

testo 890 – Thermography for the highest demands

Infrared resolution 640 x 480 pixels

SuperResolution technology to 1280 x 960 pixels

Thermal sensitivity < 40 mK

Flexibility thanks to rotatable handle and fold-out, rotatable display

Exchangeable lenses

Special measurement mode for mould-risk areas

High temperature measurement up to 1,200 °C

Panorama image assistant

SiteRecognition technology

Fully radiometric video measurement and image sequence capturing

°C

The thermal imager testo 890 offers outstanding image quality for the highest thermographic demands. Thanks to the high-quality infrared measurement system with a 640 x 480-pixel detector, thermal images can be recorded in megapixel quality (1290 x 960) using the SuperResolution technology. This means that even the smallest measurement objects such as electronic components or far distant measurement objects, e.g. on industrial plants, can be safely recorded thermographically in best image quality and high resolution. Even thermal processes can be precisely analyzed over time using the fully radiometric video measurement: all measurement points of the thermal image are available, accurate to the pixel, at all times.

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Ordering data

testo 890-2 sets with your selection of lenses

Complete sets in a robust case, including pro software, SD card, USB cable, carrying strap, lens-cleaning cloth, mains unit, Li ion rech. battery, lens protection glass, spare rech. battery, fast charger, headset and lens case.

	Part no.
testo 890-2 set with standard and telephoto lens – see above for further set components	0563 0890 V3
testo 890-2 set with standard or telephoto, and super-telephoto lens – see above for further set components	0563 0890 V5
testo 890-2 set with standard, telephoto and super-telephoto lens – see above for further set components	0563 0890 V6

testo 890 thermal imagers	Part no.
Thermal imager testo 890-1 with standard lens in a robust case incl. pro software, SD card, USB cable, carrying strap, lens-cleaning cloth, mains unit and Li ion rech. battery	0563 0890 V1
Thermal imager testo 890-2 with standard lens in a robust case incl. pro software, SD card, USB cable, carrying strap, lens-cleaning cloth, mains unit, Li ion rech. battery, headset	0563 0890 V2
Thermal imager testo 890-2 with super-telephoto lens in a robust case incl. pro software, SD card, USB cable, carrying strap, lens-cleaning cloth, mains unit, Li ion rech. battery, headset	0563 0890 V4

Accessories

	Code[1] (Initial equipment)	Part no. (Retrofit)
SuperResolution. Four times more measurement values for even more detailed analysis of the thermal images	S1	0554 7806
Lens protection glass. Special Germanium protection glass for optimum protection of the lens from dust and sctratching	F1	0554 0289
Additional battery. Additional lithium-ion rechargeable battery for extending the operating time.	G1	0554 8852
Fast battery charger. Desktop charging station for two rechargeable batteries for the optimization of the charging time.	H1	0554 8851
High temperature measurement up to +1,200 °C	I1	[2]
Humidity measurement [3]	E1	[2]
Exchangeable telephoto lens 15° x 11°	D1	[2]
Super-telephoto lens 6.6° x 5°	T2	[2]
Process analysis package: image sequence capturing in instrument and fully radiometric video measurement	V1	0554 8902
Emission adhesive tape. Adhesive tape, e.g. for reflective surfaces (roll, L.: 10 m, W.: 25 mm), ε = 0.95, temperature resistant to +250 °C		0554 0051
ISO calibration certificates; Calibration points at 0 °C, +25 °C, +50 °C		0520 0489 [4]
ISO calibration certificates; Calibration points at 0 °C, +100 °C, +200 °C		0520 0490 [4]
ISO calibration certificates; Freely selectable calibration points in the range -18 to +250 °C		0520 0495 [4]

[1] When ordering as first equipment, you receive the accessories directly in the case. Example: testo 890-1 incl. lens protection glass and SuperResolution: Order no. 0563 0890 V1 F1 S1
[2] Please contact our customer service

[3] Wireless humidity probes only in the EU, Norway, Switzerland, USA, Canada, Colombia, Turkey, Brazil, Chile, Mexico, New Zealand, Indonesia.
[4] Per lens
[5] Plus installation

Technical data

	testo 890-1	testo 890-2
Infrared image output		
Infrared resolution	640 x 480 pixels	
Thermal sensitivity (NETD)	< 40 mK at +30 °C	
Field of view/min. focus distance (Lens version)	42° x 32° / 0.1 m (Standard) 15° x 11° / 0.5 m (Telephoto) 6.6° x 5° / 2 m (Super-telephoto)	
Geometric resolution (IFOV) (Lens version)	1.13 mrad (Standard) 0.42 mrad (Telephoto) 0.18 mrad (Super-telephoto)	
SuperResolution (pixel / IFOV) (Lens version)	1280 x 960 pixels / 0.71 mrad (Standard) 1280 x 960 pixels / 0.26 mrad (Telephoto) 1280 x 960 pixels / 0.11 mrad (Super-telephoto)	
Image refresh rate	33 Hz*	
Focus	auto / manual	
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	4.3" LCD touchscreen with 480 x 272 pixels	
Digital zoom	1- to 3-fold	
Display options	IR / real image	
Video output	USB 2.0	
Colour palettes	9 (iron, rainbow, rainbow HC, cold-hot, blue-red, grey, inverted grey, sepia, Testo)	
Measurement		
Measuring range	-30 to +100 °C / 0 to +350 °C (switchable) 0 to +650 °C (switchable)	
Accuracy	±2 °C, ±2 % of m.v. (±3 °C of m.v. at -30 to -22 °C)	
High temperature measurement - optional	–	+350 to +1200 °C (not in connection with the telephoto lens)
Accuracy		±2 °C, ±2 % of m.v.
Emissivity / reflected temperature	0.01 to 1 / manual	
Transmission correction (atmosphere)	✓	
Measuring functions		
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 10 measurement points, Hot/Cold Spot Recognition, up to 5 x area measurement (min/max & average), Isotherm and alarm values	

	testo 890-1	testo 890-2
Imager equipment		
Digital camera	✓	
Lens version	42° x 32° (Standard)	
	–	15° x 11° (Telephoto) 6.6° x 5° (Super-telephoto)
SiteRecognition (measurement site recognition with image management)	–	✓
Panorama image assistant	✓	
Laser (laser classification 635 nm, Class 2)***	Laser marker	
Voice recording	–	Bluetooth****/ wired headset
Video measurement (via USB)	up to 3 measurement points	
Process analysis package: image sequence capturing in instrument and fully radiometric video measurement	–	(✓)
Interface	LabVIEW, interface description download on the Testo homepage	
Image storage		
File format single image	.bmt; export option in .bmp, .jpg, .png, .csv, .xls	
File format video (via USB)	.wmv, .mpeg-1	.wmv, .mpeg-1 / Testo format (fully radiometric video)
Storage device	SD cart 2GB (approx. 1500 - 2000 images)	
Power supply		
Battery type	Fast-charging, Li-ion battery can be changed on-site	
Operating time	4.5 hours	
Charging options	in instrument / in charger (optional)	
Mains operation	yes	
Ambient conditions		
Operating temperature range	-15 °C 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	1.630 g	
Dimensions (L x W x H) in mm	253 x 132 x 111 mm	
Tripod mounting	1/4" - 20UNC	
Housing	ABS	
PC software		
System requirements	Windows 10, Windows Vista, Windows 7 (Service Pack 1), Windows 8, interface USB 2.0	
Standards, tests		
EU Directive	2004 / 108 / EC	

✓ included in delivery
(✓) optional
– not available

* 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
**** Bluetooth only in the EU, Norway, Switzerland, USA, Canada, Colombia, Turkey, Japan, Russia, Ukraine, India, Australia

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Overview of variants

Features	testo 890-1	testo 890-2	testo 890-2 Set
Infrared resolution	640 x 480 pixels		
Thermal sensitivity (NETD)	< 40 mK		
Measuring range	-30 to +650 °C		
Image refresh rate	33 Hz*		
SuperResolution	(✓)	(✓)	(✓)
Exchangeable telephoto lens 15° x 11° *****	–	(✓)	✓
Super-tele 6.6° x 5° *****	–	(✓)	✓
Auto focus	✓	✓	✓
High temperature measurement up to 1,200 °C	–	(✓)	(✓)
Panorama image assistant	✓	✓	✓
SiteRecognition (measurement site recognition with image management)	–	✓	✓
Laser marker**	✓	✓	✓
Display of surface moisture distribution (by manual input)	–	✓	✓
Humidity measurement with wireless humidity probe*** (automatic measurement value transfer in real time)	–	(✓)	(✓)
Voice recording using the headset****	–	✓	✓
Process analysis package: image sequence capturing in instrument and fully radiometric video measurement	–	(✓)	(✓)
Solar mode	✓	✓	✓
Lens protection glass	(✓)	(✓)	✓
Additional battery	(✓)	(✓)	✓
Fast battery charger	(✓)	(✓)	✓

✓   included in delivery
(✓)   optional
–   not available

*   inside the EU, outside 9 Hz
**   excepting USA, China and Japan
***   Wireless humidity probes only in the EU, Norway, Switzerland, USA, Canada, Colombia, Turkey, Brazil, Chile, Mexico, New Zealand, Indonesia
**** Bluetooth only in the EU, Norway, Switzerland, USA, Canada, Colombia, Turkey, Japan, Russia, Ukraine, India, Australia
***** depending on the selected set

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