

Thermal imager

testo 890 - Thermography for the highest demands

Infrared resolution 64	40 x 480	pixels
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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



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.



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.



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

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	1	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

(Lens version) (Telephoto) Geometric resolution (IFOV) 1.13 mrad (Standard) (Lens version) 0.42 mrad (Telephoto) SuperResolution (pixel / IFOV) 1280 x 960 pixels / 0.71 mrad (Standard) (Lens version) 1280 x 960 pixels / 0.71 mrad (Standard) (Lens version) 1280 x 960 pixels / 0.71 mrad (Standard) (Lens version) 1280 x 960 pixels / 0.71 mrad (Standard) Image refresh rate 33 Hz* Focus auto / manual Spectral range 7.5 to 14 µm Image output visual Image size / min. focus 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-blue-red, grey, inverted grey, sepi Testo) Measurement 0 to +350 °C (switchable) Accuracy ±2 °C, ±2 % of m.v. ±30 to +100 °C / (ot in connectior the telephoto leephoto		testo 890-1	testo 890-2
Thermal sensitivity (NETD)< 40 mK at +30 °CField of view/min. focus distance (Lens version) $42^{\circ} x 32^{\circ} / 0.1 m$ (Standard) (Telephoto) $6.6^{\circ} x 5^{\circ} / 2$ (Super-telephoto) $0.42 mrad (Telephoto)0.42 mrad (Telephoto)0.26 mrad (Telephoto)Image display(distribution (using manualinput)0.26 mrad (Telephoto)0 to +350 °C (switchable)0 to +$	Infrared image output	1	
Field of view/min. focus (Lens version) 42° x 32° / 0.1 m (Standard) (Telephoto) 6.6° x 5° / 2 (Super-telephoto) (Lens version)Geometric resolution (IFOV) (Lens version)1.13 mrad (Standard) 0.42 mrad (Telephoto) 1.280 x 960 pixels / 0.71 mrad (Standard) (Super-telephoto) 1.280 x 960 pixels / 0.71 mrad (Standard) (Lens version)SuperResolution (pixel / IFOV) (Lens version)1280 x 960 pixels / 0.71 mrad (Standard) 0.26 mrad (Telephoto) 1.280 x 960 pixels / 0.71 mrad (Standard) 0.26 mrad (Telephoto) 1.280 x 960 pixels / 0.71 mrad (Standard) 0.26 mrad (Telephoto) 0.26 mrad (Super-telephoto) 0.26 mrad (Super-telephoto) 0.26 mrad (Super-telephoto) 0.26 mrad (Telephoto) 0.26 mrad (Super-telephoto) 0.26 mrad (Telephoto) 0.26 mrad (Super-telephoto) 0.26 mrad (Telephoto) 0.26 mrad (Telephoto) 0.26 mrad (Telephoto) 0.26 mrad (Telephoto) 0.26 mrad (Super-telephoto) 0.26 mrad (Super-telephoto) 1280 x 960 pixels / 0.71 mrad (Standard) 0.26 mrad (Telephoto) 1280 x 960 pixels / 0.71 mrad (Standard) 0.26 mrad (Telephoto) 1280 x 960 pixels / 0.71 mrad (Standard) 0.26 mrad (Telephoto) 1280 x 960 pixels / 0.71 mrad (Standard) 0.26 mrad (Telephoto) 0.26 mrad (Telephoto) 1280 x 960 pixels / 0.71 mrad (Standard) 0.26 mrad (Telephoto) 1280 x 960 pixels / 0.71 mrad (Standard) 0.26 m	Infrared resolution	640 x 48	30 pixels
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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,		_	+350 to +1200 °C (not in connection with the telephoto lens)
temperature 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	Accuracy		±2 °C, ±2 % of m.v.
(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,		0.01 to 1	/ manual
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,		v	(
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,			
with radio humidity probe (automatic measurement value transfer in real time)** Image: Constraint of the second Solar mode Analysis function up to 10 measurement points, Hot/Cold Spot Recognition,	distribution (using manual	_	\checkmark
Analysis function up to 10 measurement points, Hot/Cold Spot Recognition,	with radio humidity probe (automatic measurement	_	(
Hot/Cold Spot Recognition,	Solar mode	\ \	/
(min/max & average), Isotherm and alarm values	-	Hot/Cold Spo up to 5 x area (min/max 8	t Recognition, measurement & average),

inside	the	EU,	outside	9 Hz	

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

	testo 890-1	testo 890-2
Imager equipment		l
Digital camera	,	/
Lens version	42° x 32°	(Standard)
	_	15° x 11° (Telephoto) 6.6° x 5° (Super-telephoto)
SiteRecognition (measure- ment site recognition with image management)	_	\checkmark
Panorama image assistant	,	/
Laser (laser classification 635 nm, Class 2)***	Laser	marker
Voice recording	-	Bluetooth****/ wired headset
Video measurement (via USB)	up to 3 measu	irement points
Process analysis package: image sequence capturing in instrument and fully radi- ometric video measurement	-	(√)
Interface		ace description Testo homepage
Image storage		
File format single image		in .bmp, .jpg, .png, , .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	changed	ion battery can be d on-site
Operating time	4.5 ł	nours
Charging options	in instrument / in	charger (optional)
Mains operation	y	es
Ambient conditions		
Operating temperature range	-15 °C t	o +50 °C
Storage temperature range	-30 to	+60 °C
Air humidity	20 to 80 % RH	non-condensing
Housing protection class (IEC 60529)	IP	54
Vibration (IEC 60068-2-6)	2	G
Physical specifications		
Weight		30 g
Dimensions (L x W x H) in mm		x 111 mm
Tripod mounting	1/4" - :	20UNC
Housing	A	BS
PC software		
System requirements	7 (Service Pack 1), \	ows Vista, Windows Windows 8, interface 3 2.0
Standards, tests		
EU Directive	2004 / 1	108 / EC
	 ✓ include (✓) optiona – not ava 	



Overview of variants

Features	testo 890-1	testo 890-2	testo 890-2 Set
Infrared resolution	6	40 x 480 pixe	els
Thermal sensitivity (NETD)		< 40 mK	
Measuring range	-30 to +650 °C		
Image refresh rate		33 Hz*	
SuperResolution	(√)	(√)	(🗸)
Exchangeable telephoto lens 15° x 11° *****	-	(√)	\checkmark
Super-tele 6.6° x 5° *****	-	(√)	\checkmark
Auto focus	\checkmark	\checkmark	\checkmark
High temperature measurement up to 1,200 °C	-	(√)	(🗸)
Panorama image assistant	\checkmark	\checkmark	\checkmark
SiteRecognition (measurement site recognition with image management)	-	\checkmark	\checkmark
Laser marker**	\checkmark	\checkmark	\checkmark
Display of surface moisture distribution (by manual input)	-	~	\checkmark
Humidity measurement with wireless humidity probe*** (automatic measurement value transfer in real time)	-	(√)	(√)
Voice recording using the headset****	-	\checkmark	\checkmark
Process analysis package: image sequence capturing in instrument and fully radiometric video measurement	-	(√)	(√)
Solar mode	\checkmark	\checkmark	\checkmark
Lens protection glass	(√)	(√)	\checkmark
Additional battery	(√)	(√)	\checkmark
Fast battery charger	(√)	(√)	\checkmark

✓ 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