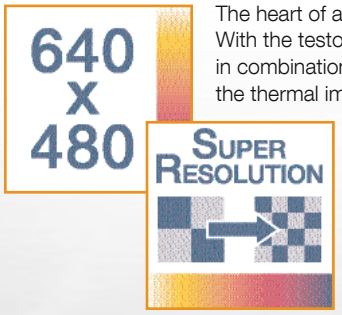
We measure it. testo

The thermal imager for the highest demands

testo 890

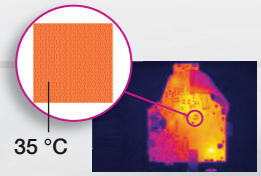
Highest image quality



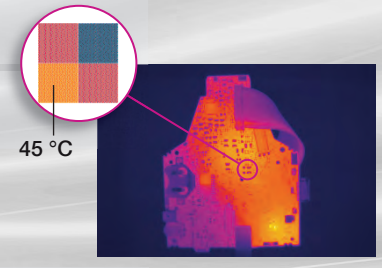
The heart of a thermal imager is the detector. Testo places great value on the highest possible quality. With the testo 890, you achieve the highest level of image quality thanks to the 640 x 480 pixel detector in combination with high-quality Germanium optics. Because the more measurement points there are in the thermal image, the more details can be recognized and analyzed.

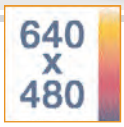
In combination with the Testo SuperResolution technology, the testo 890 records extremely high-resolution thermal images in megapixel quality (1280 x 960 pixels). This means that even the smallest or very distant measurement objects can be thermographed with an extremely high level of precision.

Thermal image
160 x 120 pixels

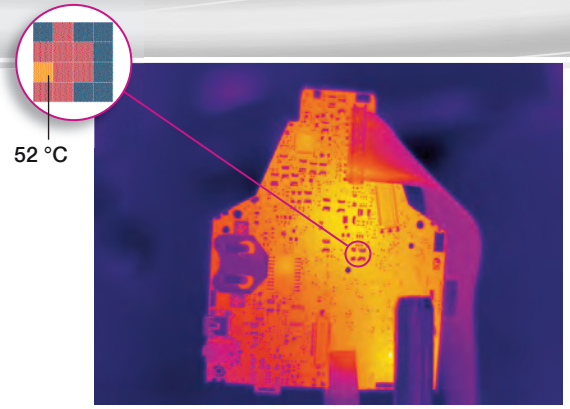


Thermal image
320 x 240 pixels

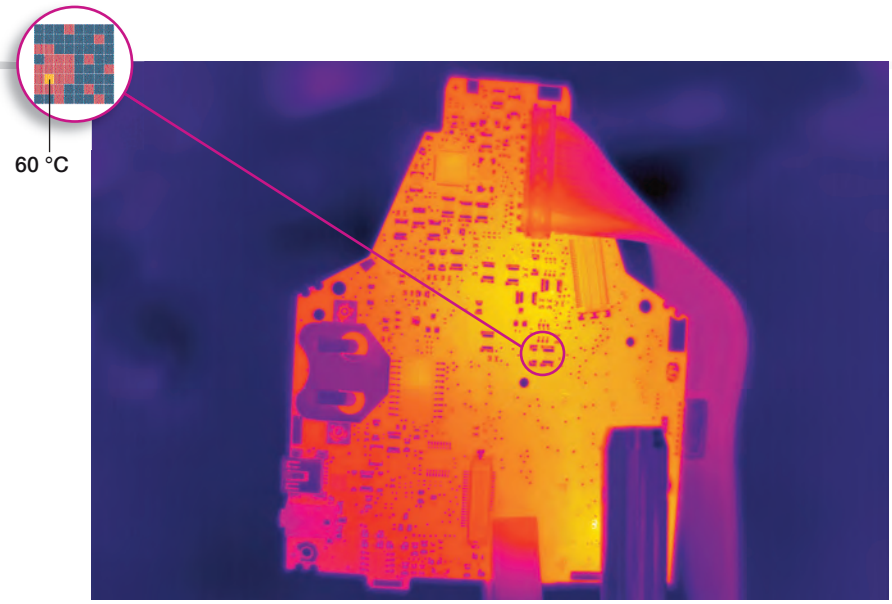




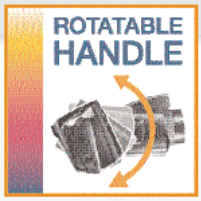
Thermal image
640 x 480 pixels



Thermal image with SuperResolution technology in megapixel quality
—> 1280 x 960 pixels



Ideal ergonomics and intuitive operation



Ergonomic handle

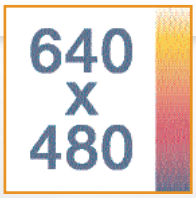
In order to be able to be used safely and efficiently in all applications, the testo 890 offers sophisticated ergonomics. The fold-out, rotatable display allows images to be recorded above the user's head. The ergonomic rotatable handle additionally allows secure handling in difficult-to-access places (such as at floor level).

Flexible fold-out, rotatable display

Intuitive hybrid operation

With the intuitive hybrid operation, input by touchscreen can be selected in addition to the proven joystick operation. In order to always have a hand free (e.g. for safety reasons), one-hand operation by joystick is recommended. In order to navigate through the menu directly on the display, touchscreen operation is the best choice.

The advantages of testo 890



Detector size 640 x 480 pixels

With 307,200 temperature measurement points, the measurement objects are detected in excellent image quality, clearly and precisely.

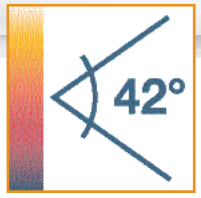
SuperResolution technology (to 1280 x 960 pixels)

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

Exchangeable lenses

Thermal sensitivity < 40 mK

Thanks to an excellent temperature resolution of < 40 mK, even the smallest temperature differences are visible.



Large field of view thanks to 42° lens

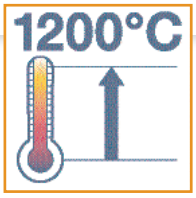
With the 42° standard wide-angle lens, large image sections are immediately recognized, and the temperature distribution of the measurement object recorded at a glance.

Panorama image assistant

For large measurement objects, the panorama image assistant allows the analysis and documentation of a total image stitched together from many individual images. There is no need to administer, view and compare several images.

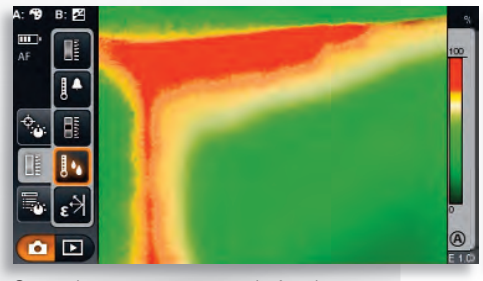
SiteRecognition technology

For repetitive thermography of similar measurement objects, the SiteRecognition technology offers the direct recognition, allocation and archiving of the measurement sites, as well as the automatic allocation and archiving of the the thermal images.



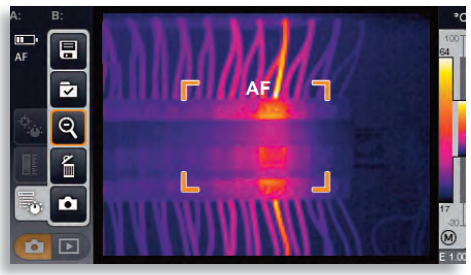
High temperature up to 1200 °C

With the high temperature option, the measuring range can be flexibly extended up to 1200 °C.



Special measurement mode for detecting areas with danger of mould

Lens protection glass



Auto focus

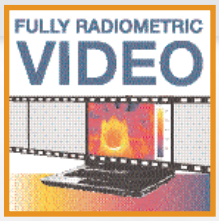
Built-in digital camera with power LEDs

Minimum focus distance 10 cm

Voice recording using headset

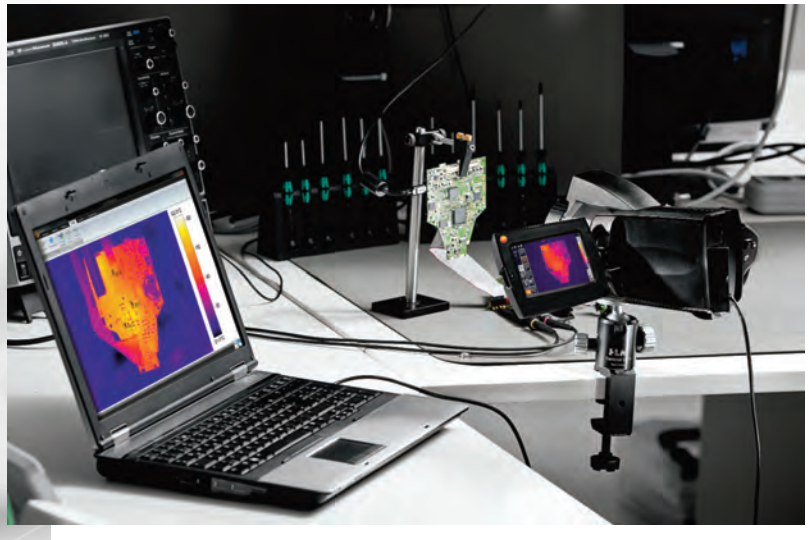
Function of the PC software: Image overlay TwinPix

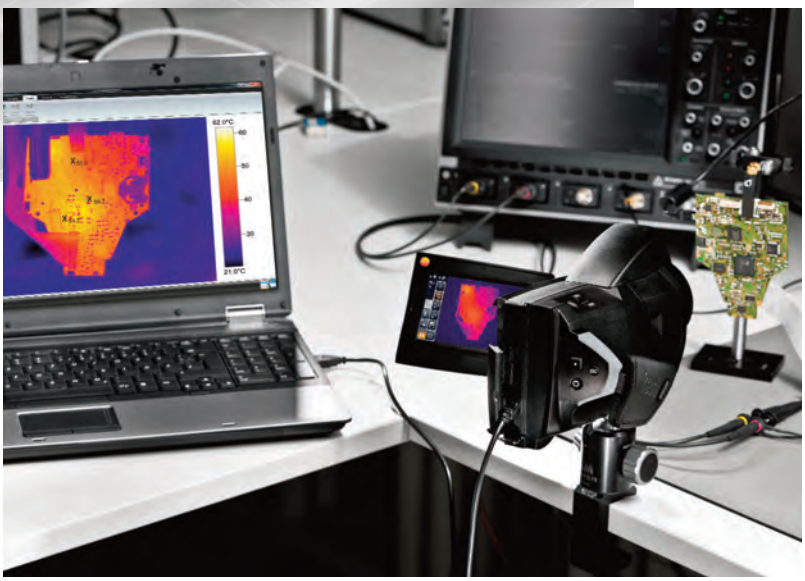
Fully radiometric video measurement



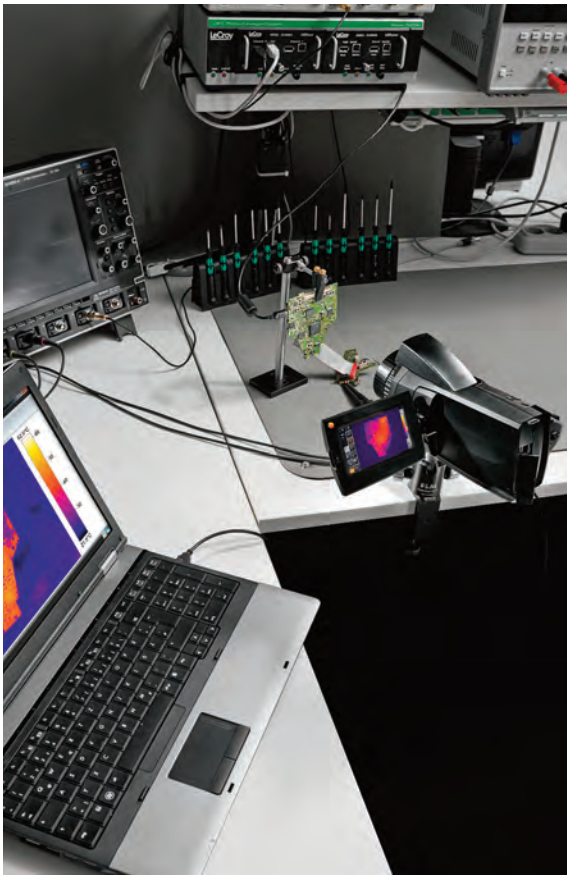
Analyze heat development over time

With the testo 890, thermal processes can be recorded in real time. Via the USB 2.0 interface, all data from the thermographic recording are directly transferred to the PC, and can be stopped and analyzed at any point. The settings for the video are carried out using the IRSoft from a PC. This makes the testo 890 optimum for the examination of heat development in development processes.





For every instant, all temperature measurement points are exactly available per pixel, so that all thermal developments can be precisely analyzed over time. In addition to this, a logger function allows the recording of several individual images at defined time intervals or after certain events, such as limit value violations, for example.



Technical data testo 890

	testo 890-1	testo 890-2
Infrared image output		
Detector type	FPA 640 x 480 pixels, a.Si	
Thermal sensitivity (NETD)	< 40 mK bei 30 °C	
Field of view/min. focus distance	42° x 32° / 0.1 m (standard lens) 15° x 11° / 0.5 m (telephoto lens)	
Geometric resolution (IFOV)	1,13 mrad (standard lens), 0.42 mrad (telephoto lens)	
SuperResolution (pixel / IFOV) - optional	1,280 x 960 pixels / 0,71 mrad (standard lens), 0.26 mrad (telephoto lens)	
Image refresh rate	33 Hz*	
Focus	manual / auto	
Spectral range	8 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	8 (iron, rainbow, cold-hot, blue-red, grey, inverted grey, sepia, Testo)	
Measurement		
Temperature range	-20 °C to +100 °C / 0 °to +350 °C (switchable)	
High temperature measurement - optional	–	+350 °C to +1.200 °C
Accuracy	±2 °C, ±2% of m.v.	
Emissivity / reflected temperature	0.01 to 1 / manual	
Transmission correction (atmosphere)	✓	
Measuring functions		
Display of surface moisture (via manual input)	–	✓
Humidity measurement with wireless humidity probe** (automatic measurement value transfer in real time)	–	(✓)
Analysis functions	up to 3 measurement points, Hot/Cold Spot Recognition, Area measurement (Min/Max & average), Isotherm and alarm values	
Solar mode	✓	
Imager equipment		
Digital camera with power LEDs	✓	
Standard lens	42° x 32°	
Exchangeable lens - optional	–	15° x 11°
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	up to 3 measurement points
Fully radiometric video measurement incl. logger function (via USB)	–	(✓)
Image storage		
File format single image	.bmt; export options 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 card 2 GB (800-1,000 images)	
Power supply		
Battery type	Fast-charging, Li-ion battery can be changed on-site	
Operating time	4.5 hours	
Charging options	in instrument or optionally in charger	
Mains operation	Yes	
Ambient conditions		
Operating temperature range	-15 °C to +50 °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	
Physical specifications		
Weight	1.630 g	
Dimensions (L x W x H) in mm	253 x 132 x 111	
Tripod mounting	1/4" - 20UNC	
Housing	ABS	
PC software		
System requirements	Windows XP (Service Pack 3), Windows Vista, Windows 7, Interface USB 2.0	
Standards, tests, warranty		
EU Directive	2004 / 108 / EC	
Warranty	2 years	

✓ Standard (✓) 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, Japan and China

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

Overview of variants

Features	testo 890-1	testo 890-2	testo 890-2 set
Detector	640 x 480 pixels		
Thermal sensitivity (NETD)	< 40 mK		
Image refresh rate	33 Hz*		
Temperature range	-20 to +350 °C		
SuperResolution	(✓)	(✓)	(✓)
Exchangeable telephoto lens 15° x 11°	–	(✓)	✓
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 via manual input (via manual input)	–	✓	✓
Humidity measurement with wireless humidity probe*** (automatic measurement value transfer in real time)	–	(✓)	(✓)
Voice recording using the headset******	–	✓	✓
Fully radiometric video measurement incl. logger function	–	(✓)	(✓)
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

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sales@sjelectronics.co.uk

Ordering data

Thermal imagers testo 890	Order no.
Thermal imager testo 890-1 in a robust case incl. pro software, SD card, USB cable, carrying strap, lens cleaning cloth, mains unit, and Li ion rechargeable battery.	0563 0890 V1
Thermal imager testo 890-2 in a robust case incl. pro software, SD card, USB cable, carrying strap, lens cleaning cloth, mains unit, Li ion rechargeable battery, headset	0563 0890 V2
Thermal imager testo 890-2 set in a robust case incl. pro software, SD card, USB cable, carrying strap, lens cleaning cloth, mains unit, Li ion rechargeable battery, exchangeable lens, lens protection glass, spare battery, fast charger, headset	0563 0890 V3

In addition to the equipment of the testo 890-2, the testo 890-2 set also includes:
· Telephoto lens
· Lens case
· Lens protection glass
· Additional battery
· Fast battery charger

Accessories	Code[1] (Initial equipment)	Order no. (Retrofit)
SuperResolution. Four times more measurement values for even more detailed analysis of the thermal images.	S1	0554 7806
Lens protection glass. Special protective glass for optimum protection of the lens from dust and scratching.	F1	0554 0289
Additional battery. Additional Lithium ion recharg. 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 with wireless humidity probe***	E1	[2] [3]
Exchangeable telephoto lens 15° x 11°	D1	[2]
Fully radiometric video measurement incl. logger function	J1	0554 8901
Aluminium tripod. Professional, extremely light and stable aluminium tripod with Quick-Release legs and 3-way tripod head.		0554 8804
Emissivity adhesive tape. Adhesive tape, e.g. for bare surfaces (roll, L.: 10 m, W.: 25 mm), e=0.95, temperature-resistant to +250 °C		0554 0051
ISO calibration certificates 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

[1] When ordering as initial equipment, you receive the accessories directly in the case. Example: testo 890-1 incl. lens protection glass and SuperResolution: Order no. 0563 0890 V1 F1S1

[2] Please contact our customer service

[3] Plus installation

Subject to change without notice.

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