We measure it. testo



Thermal imager

testo 868 – smart and networked thermography.

Infrared resolution 160 x 120 pixels (with testo SuperResolution technology 320 x 240 pixels)

With testo Thermography App

Integrated digital camera

Automatic recognition of hot-cold spots

testo ScaleAssist for comparable images in building thermography

testo ε-Assist for the automatic determination of emissivity



Thermography connected – with the thermal imager testo 868. It has the best thermal image quality in its class, an integrated digital camera, and stands out thanks to smart new features. The testo Thermography App wirelessly integrates measurement values, turning your smartphone or tablet into a second display. In addition to this, you can operate the imager with the App as well as creating and sending reports on site.

Ordering data

testo 868

Thermal imager testo 868 with wireless LAN module, USB cable, mains unit, Lithium ion rechargeable battery, pro software, 3 x ϵ -markers, quick-start guide, short instructions, calibration certificate and case

Order no. 0560 8681





testo Thermography App

With the testo Thermography App, your smartphone/tablet becomes a second display, and a remote control for your thermal imager. In addition to this, you can use the App to create and send compact reports on site, and to save them online. Download for Android or iOS now free of charge.





Accessories	Order no.
Spare battery, additional Lithium ion rechargeable battery for extending the operating time.	0515 5107
Battery charger, desktop charging station for optimizing the charge time.	0554 1103
testo ϵ -marker (10 off), markers for the testo ϵ -Assist function for the automatic determination of emissivity and reflected temperature.	0554 0872
Holster case	0554 7808

testo ɛ-Assist

For precise thermal images, it is important to set the emissivity (ϵ) and the reflected temperature of the object being examined in the imager. Previously, this was complicated, and with regard to the reflected temperature, less than accurate. This changes with testo ϵ -Assist: Simply attach one of the reference stickers included in delivery to the measurement object. Via the integrated digital camera, the thermal imager recognizes the sticker, determines the emissivity and reflected temperature and sets both values automatically.

testo ScaleAssist

Since the temperature scale and colouring of thermal images can be adapted individually, it is possible that the thermal behaviour of a building, for example, can be wrongly interpreted. The testo ScaleAssist function solves this problem by adjusting the colour distribution of the scale to the interior and exterior temperature of the measurement object and the difference between them. This ensures objectively comparable and error-free thermal images.



Thermal image without ScaleAssist



Thermal image with ScaleAssist

Technical data

Infrared resolution160 x 120 pixelsThermal sensitivity (NETD)100 mKField of view/min. focusing distance31° x 23° / focusing distanceGeometric resolution (IFOV)3.4 mradGeometric resolution (Pixel/IFOV)320 x 240 pixels 2.1 mradImage refresh rate9 HzFocusFixed focusSpectral range7.5 to14 µmVisual image output100 mKImage refresh rate0.5 mImage size / min. focusing distanceat least 3.1 MP / 0.5 mImage display8.9 cm (3.5°) TFT, QVGA (320 x 240 pixels)Display optionsIR image / real imageColour palettesiron, rainbow HC, cold-hot, greyData interfacesVWLAN ConnectivityCommunication with the testo Thermography App wireless module WLAN (EU, EFTA, USA, AUS, CDN, TR)USB 2.0 Micro B✓Measuring range 1: -30 to +100 °C Measuring range 2: 0 to +650 °CAccuracy±2 °C, ±2 % of measured valueEmissivity / reflected temperature compensationAutomatic recognition of emissivity and determination of reflected temperature (RTC)Measurement functionsMean point measurement, hot/cold-spot recognition, Delta T,testo ScaleAssistImage site y and y y y y y and y y y y y y y y y y y y y y y y y y y	Infrared image output	
Thermal sensitivity (NETD)100 mKField of view/min. focusing distance31° x 23° / c 0.5 mGeometric resolution (IFOV)3.4 mrad(IFOV)320 x 240 pixels (2.1 mrad)testo SuperResolution (Pixel/IFOV)320 x 240 pixels (2.1 mrad)Image refresh rate9 HzFocusFixed focusSpectral range7.5 to14 µmVisual image output100 mKImage gotage output0.5 mImage display8.9 cm (3.5°) TFT, QVGA (320 x 240 pixels)Display optionsIR image / real imageColour palettesiron, rainbow HC, cold-hot, greyData interfacesVWLAN ConnectivityCommunication with the testo Thermography App wireless module WLAN (EU, EFTA, USA, AUS, CDN, TR)USB 2.0 Micro B✓Measuring rangesMeasuring range 1: -30 to +100 °C Measuring range 2: 0 to +650 °CAccuracy±2 °C, ±2 % of measured valueEmissivity / reflected temperature compensationMean point measurement, hot/cold-spot recognition, Delta T, testo ScaleAssistAnalysis functionsMean point measurement, hot/cold-spot recognition, Delta T, testo ScaleAssistIFOV warner✓Digital camera✓Uses, Video streamingvia USB, via wireless LAN with testo Thermography AppVideo streamingvia USB, via wireless LAN with testo Thermography App		
focusing distance< 0.5 mGeometric resolution (IFOV)3.4 mrad(IFOV)3.20 x 240 pixels(Pixel/IFOV)2.1 mradImage refresh rate9 HzFocusFixed focusSpectral range7.5 to14 µmVisual image output0.5 mImage size / min. focusing distanceat least 3.1 MP / 0.5 mImage display8.9 cm (3.5") TFT, QVGA (320 x 240 pixels)Display optionsIR image / real imageColour palettesiron, rainbow HC, cold-hot, greyData interfacesVWLAN ConnectivityCommunication with the testo Thermography App wireless module WLAN (EU, EFTA, USA, AUS, CDN, TR)USB 2.0 Micro B✓Measuring rangesMeasuring range 1: -30 to +100 °C Measuring range 2: 0 to +650 °CAccuracy±2 °C, ±2 % of measured valueEmissivity / reflected temperature compensationAutomatic recognition of emissivity and determination of reflected temperature (RTC)Measurement functionsMean point measurement, hot/cold-spot recognition, Delta T, testo ScaleAssist✓IFOV warner✓✓Digital camera✓Digital camera✓Usage equipmentJi* x 23°Video streamingvia USB, via wireless LAN with testo Thermography AppVideo streamingvia USB, via wireless LAN with testo Thermography App	,	
(IFOV)Initial initial		
(Pixel//FOV)2.1 mradImage refresh rate9 HzFocusFixed focusSpectral range7.5 to14 µmVisual image outputat least 3.1 MP / 0.5 mImage size / min. focusing distanceat least 3.1 MP / 0.5 mImage presentation0.5 mImage display8.9 cm (3.5") TFT, QVGA (320 x 240 pixels)Display optionsIR image / real imageColour palettesiron, rainbow HC, cold-hot, greyData interfacesVWLAN ConnectivityCommunication with the testo Thermography App wireless module WLAN (EU, EFTA, USA, AUS, CDN, TR)USB 2.0 Micro B✓Measuring rangesMeasuring range 1: -30 to +100 °C Measuring range 2: 0 to +650 °CAccuracy±2 °C, ±2 % of measured valueEmissivity / reflected temperature compensation0.01 to 1 / manual determination of reflected temperature (RTC)Measurement functio>Mean point measurement, hot/cold-spot recognition, Delta T, testo ScaleAssist✓IFOV warner✓Image requipment✓Digital camera✓Uideo streamingvia USB, via wireless LAN with testo Thermography AppVideo streamingvia USB, via wireless LAN with testo Thermography App		3.4 mrad
FocusFixed focusSpectral range7.5 to14 µmVisual image outputat least 3.1 MP / 0.5 mImage size / min. focusing distance0.5 mImage presentation0.5 mImage display8.9 cm (3.5") TFT, QVGA (320 x 240 pixels)Display optionsIR image / real imageColour palettesiron, rainbow HC, cold-hot, greyData interfacesCommunication with the testo Thermography App wireless module WLAN (EU, EFTA, USA, AUS, CDN, TR)USB 2.0 Micro B✓Measuring range 1: -30 to +100 °C Measuring range 2: 0 to +650 °CAccuracy±2 °C, ±2 % of measured valueEmissivity / reflected temperature compensation0.01 to 1 / manualtesto ε-AssistAutomatic recognition of emissivity and determination of reflected temperature (RTC)Measurement functionsMean point measurement, hot/cold-spot recognition, Delta T, testo ScaleAssistIFOV warner✓Digital camera✓Use steaming31° x 23°Video streamingvia USB, via wireless LAN with testo Thermography AppStorage as JPG✓		· ·
Spectral range7.5 to14 µmVisual image outputat least 3.1 MP / 0.5 mImage size / min. focusing distance0.5 mImage presentation8.9 cm (3.5°) TFT, QVGA (320 x 240 pixels)Display optionsIR image / real imageColour palettesiron, rainbow HC, cold-hot, greyData interfacesCommunication with the testo Thermography App wireless module WLAN (EU, EFTA, USA, AUS, CDN, TR)USB 2.0 Micro B✓MeasurementMeasuring range 1: -30 to +100 °C Measuring range 2: 0 to +650 °CAccuracy±2 °C, ±2 % of measured valueEmissivity / reflected temperature compensation0.01 to 1 / manualtesto ε-AssistAutomatic recognition of emissivity and determination of reflected temperature (RTC)Measurement functionsMean point measurement, hot/cold-spot recognition, Delta T, testo ScaleAssistIFOV warner✓Image equipmentJigital cameraDigital camera✓Video streamingvia USB, via wireless LAN with testo Thermography AppStorage as JPG✓	Image refresh rate	9 Hz
Visual image outputImage size / min. focusing distanceat least 3.1 MP / 0.5 mImage presentation0.5 mImage display8.9 cm (3.5") TFT, QVGA (320 x 240 pixels)Display optionsIR image / real imageColour palettesiron, rainbow HC, cold-hot, greyData interfacesWLAN ConnectivityWLAN ConnectivityCommunication with the testo Thermography App wireless module WLAN (EU, EFTA, USA, AUS, CDN, TR)USB 2.0 Micro B✓MeasurementMeasuring rangesMeasuring range 1: -30 to +100 °C Measuring range 2: 0 to +650 °CAccuracy±2 °C, ±2 % of measured valueEmissivity / reflected temperature compensation0.01 to 1 / manualtesto ɛ-AssistAutomatic recognition of emissivity and determination of reflected temperature (RTC)Measurement functionsMean point measurement, hot/cold-spot recognition, Delta T, testo ScaleAssistIFOV warner✓Digital camera✓Lens31° x 23°Video streamingvia USB, via wireless LAN with testo Thermography AppStorage as JPG✓	Focus	Fixed focus
Image size / min. focusing distanceat least 3.1 MP / 0.5 mImage presentationImage display8.9 cm (3.5") TFT, QVGA (320 x 240 pixels)Display optionsIR image / real imageColour palettesiron, rainbow HC, cold-hot, greyData interfacesWLAN ConnectivityCommunication with the testo Thermography App wireless module WLAN (EU, EFTA, USA, AUS, CDN, TR)USB 2.0 Micro B✓MeasurementMeasuring rangesMeasuring range 1: -30 to +100 °C Measuring range 2: 0 to +650 °CAccuracy±2 °C, ±2 % of measured valueEmissivity / reflected temperature compensationAutomatic recognition of emissivity and determination of reflected temperature (RTC)Measurement functionsMean point measurement, hot/cold-spot recognition, Delta T,testo ScaleAssist✓IFOV warner✓Digital camera✓Lens31° x 23°Video streamingvia USB, via wireless LAN with testo Thermography AppStorage as JPG✓	Spectral range	7.5 to14 µm
min. focusing distance0.5 mImage presentationImage display8.9 cm (3.5") TFT, QVGA (320 x 240 pixels)Display optionsIR image / real imageColour palettesiron, rainbow HC, cold-hot, greyData interfacesWLAN ConnectivityCommunication with the testo Thermography App wireless module WLAN (EU, EFTA, USA, AUS, CDN, TR)USB 2.0 Micro B✓MeasurementMeasuring rangesMeasuring range 1: -30 to +100 °C Measuring range 2: 0 to +650 °CAccuracy±2 °C, ±2 % of measured valueEmissivity / reflected temperature compensation0.01 to 1 / manualtesto ɛ-AssistAutomatic recognition of emissivity and determination of reflected temperature (RTC)Measurement functions✓Analysis functionsMean point measurement, hot/cold-spot recognition, Delta T, testo ScaleAssistIFOV warner✓Digital camera✓Lens31° x 23°Video streamingvia USB, via wireless LAN with testo Thermography AppStorage as JPG✓	Visual image output	
Image display8.9 cm (3.5") TFT, QVGA (320 x 240 pixels)Display optionsIR image / real imageColour palettesiron, rainbow HC, cold-hot, greyData interfacesWLAN ConnectivityCommunication with the testo Thermography App wireless module WLAN (EU, EFTA, USA, AUS, CDN, TR)USB 2.0 Micro B✓MeasurementMeasuring range 1: -30 to +100 °C Measuring range 2: 0 to +650 °CAccuracy±2 °C, ±2 % of measured valueEmissivity / reflected temperature compensation0.01 to 1 / manualtesto ε-AssistAutomatic recognition of emissivity and determination of reflected temperature (RTC)Measurement functionsMean point measurement, hot/cold-spot recognition, Delta T, testo ScaleAssistIFOV warner✓Imager equipmentJ1° x 23°Video streamingVia USB, via wireless LAN with testo Thermography AppStorage as JPG✓	-	
Display optionsIR image / real imageColour palettesiron, rainbow HC, cold-hot, greyData interfacesWLAN ConnectivityCommunication with the testo Thermography App wireless module WLAN (EU, EFTA, USA, AUS, CDN, TR)USB 2.0 Micro B✓MeasurementMeasuring rangesMeasuring range 1: -30 to +100 °C Measuring range 2: 0 to +650 °CAccuracy±2 °C, ±2 % of measured valueEmissivity / reflected temperature compensation0.01 to 1 / manualtesto ε-AssistAutomatic recognition of emissivity and determination of reflected temperature (RTC)Measurement functionsMean point measurement, hot/cold-spot recognition, Delta T, testo ScaleAssistIFOV warner✓Imager equipmentDigital camera✓Lens31° x 23°Video streamingvia USB, via wireless LAN with testo Thermography AppStorage as JPG✓	Image presentation	
Colour palettesiron, rainbow HC, cold-hot, greyData interfacesWLAN ConnectivityCommunication with the testo Thermography App wireless module WLAN (EU, EFTA, USA, AUS, CDN, TR)USB 2.0 Micro B✓Measurement✓Measuring rangesMeasuring range 1: -30 to +100 °C Measuring range 2: 0 to +650 °CAccuracy±2 °C, ±2 % of measured valueEmissivity / reflected temperature compensation0.01 to 1 / manualtesto ɛ-AssistAutomatic recognition of emissivity and determination of reflected temperature (RTC)Measurement functionsMean point measurement, hot/cold-spot recognition, Delta T, testo ScaleAssistIFOV warner✓IIFOV warner✓Digital camera✓Lens31° x 23°Video streamingVia USB, via wireless LAN with testo Thermography AppStorage as JPG✓	Image display	8.9 cm (3.5") TFT, QVGA (320 x 240 pixels)
Data interfaces WLAN Connectivity Communication with the testo Thermography App wireless module WLAN (EU, EFTA, USA, AUS, CDN, TR) USB 2.0 Micro B ✓ Measurement ✓ Measuring ranges Measuring range 1: -30 to +100 °C Measuring range 2: 0 to +650 °C Accuracy ±2 °C, ±2 % of measured value Emissivity / reflected temperature compensation 0.01 to 1 / manual testo ɛ-Assist Automatic recognition of emissivity and determination of reflected temperature (RTC) Measurement functions Mean point measurement, hot/cold-spot recognition, Delta T, testo ScaleAssist ✓ IFOV warner ✓ Digital camera ✓ Lens 31° x 23° Video streaming via USB, via wireless LAN with testo Thermography App Storage as JPG ✓	Display options	IR image / real image
WLAN ConnectivityCommunication with the testo Thermography App wireless module WLAN (EU, EFTA, USA, AUS, CDN, TR)USB 2.0 Micro B✓MeasurementMeasuring rangesMeasuring range 1: -30 to +100 °C Measuring range 2: 0 to +650 °CAccuracy±2 °C, ±2 % of measured valueEmissivity / reflected temperature compensation0.01 to 1 / manualtesto ɛ-AssistAutomatic recognition of emissivity and determination of reflected temperature (RTC)Measurement functionsMean point measurement, hot/cold-spot recognition, Delta T,testo ScaleAssist✓IFOV warner✓Digital camera✓Lens31° x 23°Video streamingvia USB, via wireless LAN with testo Thermography AppStorage as JPG✓	Colour palettes	iron, rainbow HC, cold-hot, grey
testo Thermography App wireless module WLAN (EU, EFTA, USA, AUS, CDN, TR)USB 2.0 Micro B✓Measurement✓Measuring rangesMeasuring range 1: -30 to +100 °C Measuring range 2: 0 to +650 °CAccuracy±2 °C, ±2 % of measured valueEmissivity / reflected temperature compensation0.01 to 1 / manualtesto ε-AssistAutomatic recognition of emissivity and determination of reflected temperature (RTC)Measurement functionsMean point measurement, hot/cold-spot recognition, Delta T,testo ScaleAssist✓IFOV warner✓Imager equipment11° × 23°Digital camera✓Lens31° × 23°Video streamingvia USB, via wireless LAN with testo Thermography AppStorage as JPG✓	Data interfaces	
Measurement Measuring ranges Measuring range 1: -30 to +100 °C Measuring range 2: 0 to +650 °C Accuracy ±2 °C, ±2 % of measured value Emissivity / reflected temperature compensation 0.01 to 1 / manual testo ɛ-Assist Automatic recognition of emissivity and determination of reflected temperature (RTC) Measurement functions Mean point measurement, hot/cold-spot recognition, Delta T, testo ScaleAssist ✓ IFOV warner ✓ Imager equipment J1° x 23° Video streaming via USB, via wireless LAN with testo Thermography App Storage as JPG ✓	WLAN Connectivity	testo Thermography App wireless module WLAN
Measuring ranges Measuring range 1: -30 to +100 °C Measuring range 2: 0 to +650 °C Accuracy ±2 °C, ±2 % of measured value Emissivity / reflected temperature compensation 0.01 to 1 / manual testo ε-Assist Automatic recognition of emissivity and determination of reflected temperature (RTC) Measurement functions Mean point measurement, hot/cold-spot recognition, Delta T, testo ScaleAssist ✓ IFOV warner ✓ Digital camera ✓ Lens 31° x 23° Video streaming via USB, via wireless LAN with testo Thermography App Storage as JPG ✓	USB 2.0 Micro B	V
Measuring range 2: 0 to +650 °CAccuracy±2 °C, ±2 % of measured valueEmissivity / reflected temperature compensation0.01 to 1 / manualtesto ε-AssistAutomatic recognition of emissivity and determination of reflected temperature (RTC)Measurement functionsMean point measurement, hot/cold-spot recognition, Delta T,testo ScaleAssist✓IFOV warner✓Digital camera✓Lens31° x 23°Video streamingvia USB, via wireless LAN with testo Thermography AppStorage as JPG✓	Measurement	
Emissivity / reflected temperature compensation 0.01 to 1 / manual testo ε-Assist Automatic recognition of emissivity and determination of reflected temperature (RTC) Measurement functions Mean point measurement, hot/cold-spot recognition, Delta T, testo ScaleAssist ✓ IFOV warner ✓ Digital camera ✓ Lens 31° x 23° Video streaming via USB, via wireless LAN with testo Thermography App Storage as JPG ✓	Measuring ranges	
reflected temperature compensationAutomatic recognition of emissivity and determination of reflected temperature (RTC)Measurement functionsMean point measurement, hot/cold-spot recognition, Delta T,Analysis functionsMean point measurement, hot/cold-spot recognition, Delta T,IESO ScaleAssist✓IFOV warner✓Digital camera✓Lens31° x 23°Video streamingvia USB, via wireless LAN with testo Thermography AppStorage as JPG✓	Accuracy	±2 °C, ±2 % of measured value
determination of reflected temperature (RTC) Measurement functions Mean point measurement, hot/cold-spot recognition, Delta T, Analysis functions Mean point measurement, hot/cold-spot recognition, Delta T, testo ScaleAssist ✓ IFOV warner ✓ Digital camera ✓ Lens 31° x 23° Video streaming via USB, via wireless LAN with testo Thermography App Storage as JPG ✓	reflected temperature	0.01 to 1 / manual
Analysis functionsMean point measurement, hot/cold-spot recognition, Delta T,testo ScaleAssist✓IFOV warner✓Imager equipment✓Digital camera✓Lens31° x 23°Video streamingvia USB, via wireless LAN with testo Thermography AppStorage as JPG✓	testo ε-Assist	, , , , , , , , , , , , , , , , , , ,
hot/cold-spot recognition, Delta T,testo ScaleAssist✓IFOV warner✓Imager equipment✓Digital camera✓Lens31° x 23°Video streamingvia USB, via wireless LAN with testo Thermography AppStorage as JPG✓	Measurement function	ns
IFOV warner ✓ Imager equipment ✓ Digital camera ✓ Lens 31° x 23° Video streaming via USB, via wireless LAN with testo Thermography App Storage as JPG ✓	Analysis functions	
Imager equipment Digital camera ✓ Lens 31° x 23° Video streaming via USB, via wireless LAN with testo Thermography App Storage as JPG ✓	testo ScaleAssist	V
Digital camera ✓ Lens 31° x 23° Video streaming via USB, via wireless LAN with testo Thermography App Storage as JPG ✓	IFOV warner	v
Lens 31° x 23° Video streaming via USB, via wireless LAN with testo Thermography App Storage as JPG ✓	Imager equipment	
Video streamingvia USB, via wireless LAN with testo Thermography AppStorage as JPG✓	Digital camera	V
testo Thermography App Storage as JPG	Lens	31° x 23°
	Video streaming	
Fullscreen mode 🗸	Storage as JPG	v
	Fullscreen mode	V

Image storage	
File format	.bmt and .jpg; export options in .bmp, .jpg .png, .csv, .xls
Memory	Internal memory (2.8 GB)
Power supply	
Battery type	Li-ion battery can be changed on-site
Operating time	4 hours
Charging options	In instrument/in charging station (optional)
Mains operation	 ✓
Ambient conditions	
Operating temperature range	-15 to +50 °C
Storage temperature range	-30 to +60 °C
Air humidity	20 to 80 %RH, not condensing
Housing protection class (IEC 60529)	IP54
Vibration (IEC 60068-2-6)	2G
Physical features	
Weight	510 g
Dimensions (LxWxH)	219 x 96 x 95 mm
Housing	PC - ABS
PC software	
System requirements	Windows 10, Windows 8, Windows 7
Standards, tests, war	ranty
EU directive	EMC: 2014/30/EU RED: 2014/53/EU
Warranty	2 years





www.testo.com