User Manual

PCE-MIR 20 Infrared Thermometer

User manuals in various languages (français, italiano, español, português, nederlands, türk, polski, русский, 中文) can be found by using our product search on: www.pce-instruments.com

Last change: 22 January 2024
v1.0

Contents

1   Safety notes

Please read this manual carefully and completely before you use the device for the first time. The device may only be used by qualified personnel and repaired by PCE Instruments personnel. Damage or injuries caused by non-observance of the manual are excluded from our liability and not covered by our warranty.

- The device must only be used as described in this instruction manual. If used otherwise, this can cause dangerous situations for the user and damage to the meter.
- The instrument may only be used if the environmental conditions (temperature, relative humidity, …) are within the ranges stated in the technical specifications. Do not expose the device to extreme temperatures, direct sunlight, extreme humidity or moisture.
- Do not expose the device to shocks or strong vibrations.
- The case should only be opened by qualified PCE Instruments personnel.
- Never use the instrument when your hands are wet.
- You must not make any technical changes to the device.
- The appliance should only be cleaned with a damp cloth. Use only pH-neutral cleaner, no abrasives or solvents.
- The device must only be used with accessories from PCE Instruments or equivalent.
- Before each use, inspect the case for visible damage. If any damage is visible, do not use the device.
- Do not use the instrument in explosive atmospheres.
- The measurement range as stated in the specifications must not be exceeded under any circumstances.
- Non-observance of the safety notes can cause damage to the device and injuries to the user.
- Never point the laser beam at people or animals.
- Never look directly into the laser beam.

We do not assume liability for printing errors or any other mistakes in this manual.

We expressly point to our general guarantee terms which can be found in our general terms of business.
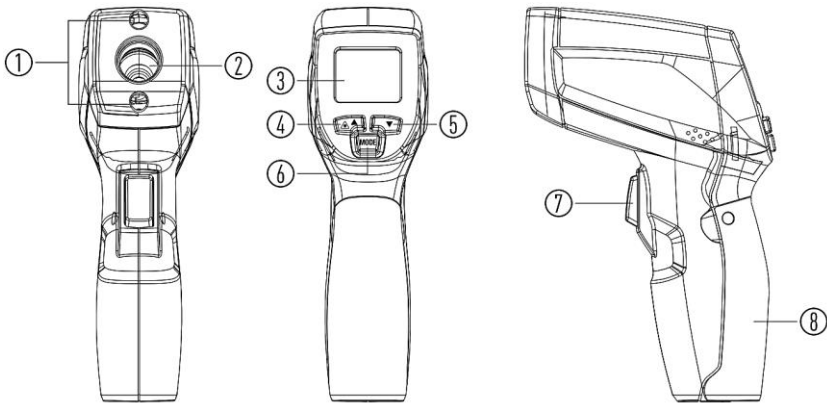
2   Specifications

Measurement range	-50 ... 760 °C / -58 ... 1400 °F
Resolution	0.1 °C / 0.1 °F
Accuracy	±3 °C / 5.4 °F at -50 ... +20 °C / -58 ... +68 °F ±2 % ±2 °C / 3.6 °F at 20 ... 760 °C / 68 ... 1400 °F
Repeatability	±1 °C / ±1.8 °F
Measuring spot ratio	12:1
Emissivity	0.10 ... 1.00
Measuring rate	2 Hz
Spectral range	8 ... 14 µm
Overload indication	" - - - - "
Laser	Output power: <1 mW Wavelength: 630 ... 670 mm; Laser class: 2
Power supply	9 V block battery
Operating conditions	0 ... 50 °C / 32 ... 122 °F, <90 % RH
Storage conditions	-10 ... 60 °C / 14 ... 140 °F, <80 % RH
Dimensions	175 x 75 x 35 mm
Weight	114 g (without battery)

3   Delivery scope

1 x PCE-MIR 20 infrared thermometer
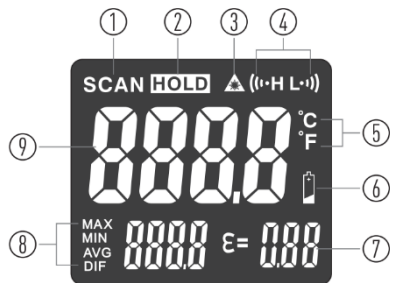1 x transport bag
1 x 9 V block battery
1 x user manual

4 Device description

No.	Description of the
1	Laser pointer
2	Infrared sensor
3	Display
4	arrow up key / switching the laser pointer on and off
5	arrow down key
6	MODE key
7	Key for switching on the meter and starting the measurement
8	Battery compartment cover

4.1 Display description

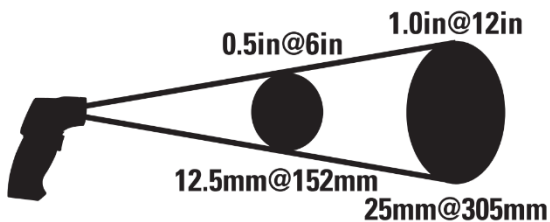| No.	Description
1	SCAN display: measurement is active
2	Displayed measured value is frozen
3	Laser pointer is active
4	Display when limit value is exceeded
5	Temperature unit
6	Battery status display
7	Set emissivity
8	Display of the highest, lowest, average measured value or difference
9	Measured value

5 Making a measurement

To carry out a measurement, press and hold the switch-on key. The measuring device switches on and makes a measurement. Release the key to interrupt the measurement. To switch off the meter, wait 10 seconds. The measuring device switches itself off.

5.1 Measuring spot ratio

The measuring spot ratio must be observed during the measurement. The measuring spot ratio is 12:1, which means that the size of the measuring spot is 1/12 of the distance of the measuring surface. The measured value is the average of the measuring spot.

1.0in@12in

0.5in@6in

12.5mm@152mm

25mm@305mm

Distance : Spot = 12:1

5.2 Highest, lowest, average and difference value

The following values are shown at the bottom of the display: maximum (MAX), minimum (MIN), average (AVG) and difference (DIF). To switch between the maximum, minimum, average and difference values, press and release the MODE key once until the desired function is reached.

Note   The function is reset with every new measurement.

6   Settings

To make settings, press and hold the MODE key for two seconds. The settings are applied immediately.

6.1   Set emissivity

To set the emissivity, go to the settings. The emissivity is set in the first menu item. This can be recognised by the flashing ε icon on the display. The emissivity can be set using the arrow keys.

6.2   Set unit

Press and release the MODE key to set the temperature unit. The currently set temperature unit flashes on the display. The temperature unit can be set using the arrow keys. You can choose between °C and °F.

6.3   Limit value setting: highest measured value - switch alarm on and off

Press and release the MODE key. The alarm for the highest measured value can now be switched on and off. Use the arrow keys to switch the alarm on and off.
On = alarm is switched on, OFF = alarm is switched off

6.4   Limit value setting: highest measured value - limit value setting

Press and release the MODE key. Once the alarm has been activated, the limit value can be set. The temperature value can be set using the arrow keys.

6.5   Limit value setting: lowest measured value - switch alarm on and off

Press and release the MODE key. The alarm for the lowest measured value can now be switched on and off. Use the arrow keys to switch the alarm on and off.
On = alarm is switched on, OFF = alarm is switched off

6.6   Limit value setting: lowest measured value - limit value setting

Press and release the MODE key. Once the alarm has been activated, the limit value can be set. The temperature value can be set using the arrow keys.

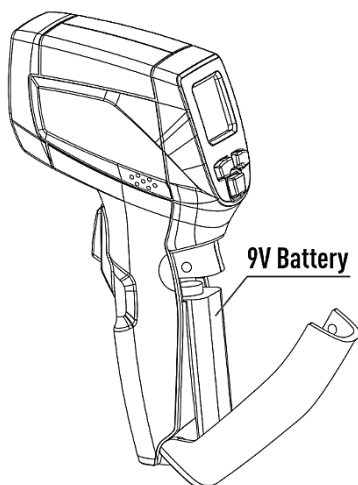Press and release the MODE key to exit the settings.

7 Laser pointer

To switch the laser pointer on and off for better orientation, press and release the ⚠ key once.

8 Replace / insert battery

To insert the battery or replace it if necessary, open the battery compartment. Now insert a 9 V block battery. Ensure that the polarity is correct.

Note If the battery indicator appears on the display, the battery is discharged and must be replaced to ensure proper function.

9 Contact

If you have any questions, suggestions or technical problems, please do not hesitate to contact us. You will find the relevant contact information at the end of this user manual.

10 Disposal

For the disposal of batteries in the EU, the 2006/66/EC directive of the European Parliament applies. Due to the contained pollutants, batteries must not be disposed of as household waste. They must be given to collection points designed for that purpose.

In order to comply with the EU directive 2012/19/EU we take our devices back. We either re-use them or give them to a recycling company which disposes of the devices in line with law.

For countries outside the EU, batteries and devices should be disposed of in accordance with your local waste regulations.

If you have any questions, please contact PCE Instruments.

PCE Instruments contact information

Germany
PCE Deutschland GmbH
Im Langel 26
D-59872 Meschede
Deutschland
Tel.: +49 (0) 2903 976 99 0
Fax: +49 (0) 2903 976 99 29
info@pce-instruments.com
www.pce-instruments.com/deutsch

France
PCE Instruments France EURL
23, rue de Strasbourg
67250 Soultz-Sous-Forets
France
Téléphone: +33 (0) 972 3537 17
Numéro de fax: +33 (0) 972 3537 18
info@pce-france.fr
www.pce-instruments.com/french

Spain
PCE Ibérica S.L.
Calle Mula, 8
02500 Tobarra (Albacete)
España
Tel. : +34 967 543 548
Fax: +34 967 543 542
info@pce-iberica.es
www.pce-instruments.com/espanol

United Kingdom
PCE Instruments UK Ltd
Trafford House
Chester Rd, Old Trafford
Manchester M32 0RS
United Kingdom
Tel: +44 (0) 161 464902 0
Fax: +44 (0) 161 464902 9
info@pce-instruments.co.uk
www.pce-instruments.com/english

Italy
PCE Italia s.r.l.
Via Pesciatina 878 / B-Interno 6
55010 Loc. Gragnano
Capannori (Lucca)
Italia
Telefono: +39 0583 975 114
Fax: +39 0583 974 824
info@pce-italia.it
www.pce-instruments.com/italiano

Turkey
PCE Teknik Cihazları Ltd.Şti.
Halkalı Merkez Mah.
Pehlivan Sok. No.6/C
34303 Küçükçekmece - İstanbul
Türkiye
Tel: 0212 471 11 47
Faks: 0212 705 53 93
info@pce-cihazlari.com.tr
www.pce-instruments.com/turkish

The Netherlands
PCE Brookhuis B.V.
Institutenweg 15
7521 PH Enschede
Nederland
Telefoon: +31 (0)53 737 01 92
info@pcebenelux.nl
www.pce-instruments.com/dutch

United States of America
PCE Americas Inc.
1201 Jupiter Park Drive, Suite 8
Jupiter / Palm Beach
33458 FL
USA
Tel: +1 (561) 320-9162
Fax: +1 (561) 320-9176
info@pce-americas.com
www.pce-instruments.com/us

Denmark
PCE Instruments Denmark ApS
Birk Centerpark 40
7400 Herning
Denmark
Tel.: +45 70 30 53 08
kontakt@pce-instruments.com
www.pce-instruments.com/dansk