User Manual

PCE-IR 80 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

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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.
- Turn off the meter when not in use.

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.

If you have any questions please contact PCE Instruments. The contact details can be found at the end of this manual.
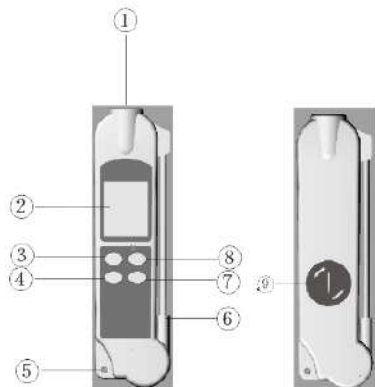
1.1 Delivery contents

1 x PCE-IR 80 pyrometer
1 x user manual

2   Technical specifications

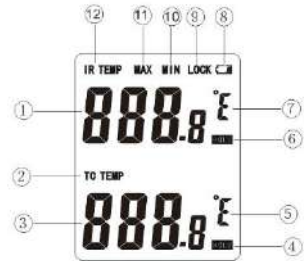| Measurement type infrared	
Measuring range	-35 ... 330°C / -31 ... 626°F
Resolution	0.1°C / 0.18°F
Accuracy	-35 ... 0°C / -31 ... 32°F : ± 4°C / 7.2°F
	>0°C / 32°F : ± 2% of rdg. ± 2°C / 3.6°F
Measurement type penetration sensor	
Measuring range	-20 ... 260°C / -4 ... 500°F
Resolution	0.1°C / 0.18°F
Accuracy	± 1% of rdg. ± 1.5°C / 2.7°F
Optical resolution	4: 1
Emissivity	Adjustable 0.1 ... 1.0
Response time	10 ms
Spectral	8 ... 14 µm
Power supply	3.0V CR2032 battery
Operating conditions	0 ... 50°C / 32 ... 122°F, max. 80% RH
Weight	About 100 g / < 1 lb
Dimensions	151 x 41 x 20 mm / 6 x 1.6 x 0.8 in

3   Device description

1.   Infrared sensor
2.   LCD
3.   SET key
4.   TC key
5.   Strap holder
6.   Penetration sensor
7.   IR key
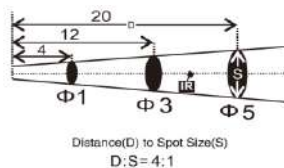8.   MODE key
9.   Battery compartment

3.1 Display description

1. Infrared reading
2. TC temperature icon
3. Temperature reading of penetration sensor
4. TC Hold icon
5. Temperature unit
6. IR Hold icon
7. Temperature unit
8. Battery level indicator
9. Continuous IR measurement
10. MIN icon
11. MAX icon
12. Infrared icon

4 Distance-to-target ratio

The distance-to-target ratio of the meter is 4:1. This means that the distance is 4 times wider than the diameter of the measuring spot itself. Example: If your measuring distance is 8 m, the measuring spot will have a diameter of 2 metres.

Distance(D) to Spot Size(S)
D:S= 4:1

5 Measurement

5.1 Infrared measurement

Power on the meter by pressing the TC or IR key. Press and hold the IR key to make a non-contact temperature measurement via infrared. The non-contact measurement is completed when the IR key is released. The Hold icon will appear below the temperature unit.

5.2 Contact measurement with penetration sensor

Power on the meter by pressing the TC or IR key. Short-press the TC key to make a measurement with the penetration sensor. As long as a measurement is made with the penetration sensor, no Hold icon will be displayed below the temperature unit.

Note: Making a measurement via infrared and with the contact sensor at the same time is not possible.

6 Turn off meter

To turn off the meter, press and hold the MODE key until the meter turns off.

7 Settings

7.1 Changing the unit

You can set the unit during a measurement by pressing the SET key. You can select °C or °F.

7.2 Max, Min, Lock mode / setting the emissivity

Enter the menu by pressing the MODE key. To select other menu items, press the MODE key again. The menu is arranged as follows:

Function	Description
MAX	As long as "MAX" is displayed, only the highest value will be shown
MIN	As long as "MIN" is displayed, only the lowest value will be shown
LOCK	As long as "LOCK" is displayed, the infrared measurement is continuous
Emissivity	Here you can set the emissivity value with the SET key
To leave the menu, press the MODE key again.	

Important:
The menu only applies to the infrared measurement. There is no separate menu for the penetration sensor.

8 Battery

When the battery level indicator [image] is displayed, this means that the battery voltage is no longer sufficient for further operation. Therefore, the battery must be replaced. The battery compartment can be found at the rear side of the meter.

9 Auto Power Off

The meter turns off automatically after 3 minutes. It will not turn off during a measurement.

10 Warranty

You can read our warranty terms in our General Business Terms which you can find here: https://www.pce-instruments.com/english/terms.

11 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.

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Contact Thermometer PCE-IR 80-ICA Incl. ISO Calibration Certificate

Contact thermometer PCE-IR 80-ICA incl. ISO calibration certificate

Food thermometer for non-contact and contact measurement / Up to 330°C (626°F) / Probe made of stainless steel / Simple operation

The contact thermometer PCE-IR 80 is used to quickly control the temperature of food. The contact thermometer is used in the area of canteen kitchens, catering services, refrigerated warehouses and warehouses. The contact thermometer has two types of measurement. On the one hand, the PCE-IR 80 contact thermometer can measure the temperature of the object without contact via infrared. Here the measuring range is -35 ... 330°C / -31 ... 626°F. The emissivity of the contact thermometer is adjustable, so that always best measuring results can be achieved.

On the other hand, the contact thermometer has a stainless steel needle sensor, so that the meter can also be used as a puncture, contact thermometer. If the core temperature is measured by this method, the contact thermometer can measure in the range between -20 ... 260°C / -4 ... 500°F. The unit of the penetration thermometer can be switched between °C and °F. The fast response time of 10 ms and high resolution of 0.1°C / 1.8°F complete the scope of the contact thermometer. The thermometer is supplied with a CR2032 battery.

▶ Non-contact and contacting temperature measurement combined in one measuring device only
▶ Large measuring range
▶ Suitable for use in the food industry according to HACCP
▶ Emissivity adjustable (pre-set for food)
▶ Low response time
▶ Measurement hold function (Min./Max.)
▶ Continuous measurement function
▶ Waterproof, thus simple hygienic cleaning (flushable housing)
▶ **Incl. ISO calibration certificate**

Subject to change

Specifications

Measurement type infrared

Measuring range	-35 ... 330°C / -31 ... 626°F
Resolution	0.1°C / 0.18°F
Accuracy	-35 ... 0°C / -31 ... 32°F : ± 4°C / 7.2°F > 0°C / 32°F : ± 2% of rdg. ± 2°C / 3.6°F

Type of measurement
Penetration sensor

Measuring range	-20 ... 260°C / -4 ... 500°F
Resolution	0.1°C / 0.18°F
Accuracy	± 1% of of rdg. ± 1.5°C / 2.7°F

Optical resolution	4: 1
Emissivity	Adjustable 0.1 ... 1.0
Response time	10 ms
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More information

Subject to change