



# 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](http://www.pce-instruments.com)

Last change: 19 September 2019  
v1.0



## Contents

<b>1</b>	<b>Safety notes</b> .....	<b>1</b>
1.1	Delivery contents .....	1
<b>2</b>	<b>Technical specifications</b> .....	<b>2</b>
<b>3</b>	<b>Device description</b> .....	<b>2</b>
3.1	Display description .....	3
<b>4</b>	<b>Distance-to-target ratio</b> .....	<b>3</b>
<b>5</b>	<b>Measurement</b> .....	<b>3</b>
5.1	Infrared measurement .....	3
5.2	Contact measurement with penetration sensor .....	3
<b>6</b>	<b>Turn off meter</b> .....	<b>3</b>
<b>7</b>	<b>Settings</b> .....	<b>4</b>
7.1	Changing the unit .....	4
7.2	Max, Min, Lock mode / setting the emissivity .....	4
<b>8</b>	<b>Battery</b> .....	<b>4</b>
<b>9</b>	<b>Auto Power Off</b> .....	<b>4</b>
<b>10</b>	<b>Contact</b> .....	<b>4</b>
<b>11</b>	<b>Disposal</b> .....	<b>4</b>

## 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

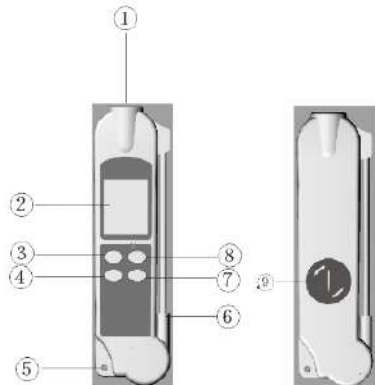
- 1 x PCE-IR 80 pyrometer
- 1 x user manual

## 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

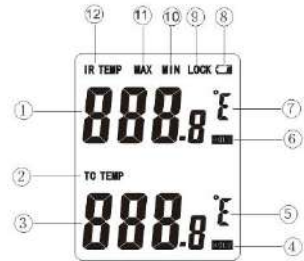
## 3 Device description

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



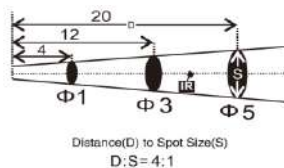
### 3.1 Display description

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.



### 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  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 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.

## 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.



## PCE Instruments contact information

### Germany

PCE Deutschland GmbH  
Im Langel 4  
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

### Germany

PCE Produktions- und  
Entwicklungsgesellschaft mbH  
Im Langel 26  
D-59872 Meschede  
Deutschland  
Tel.: +49 (0) 2903 976 99 471  
Fax: +49 (0) 2903 976 99 9971  
info@pce-instruments.com  
www.pce-instruments.com/deutsch

### 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.  
711 Commerce Way 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

### 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

### United Kingdom

PCE Instruments UK Ltd  
Unit 11 Southpoint Business Park  
Ensign Way, Southampton  
Hampshire  
United Kingdom, SO31 4RF  
Tel: +44 (0) 2380 98703 0  
Fax: +44 (0) 2380 98703 9  
info@pce-instruments.co.uk  
www.pce-instruments.com/english

### China

PCE (Beijing) Technology Co., Limited  
1519 Room, 6 Building  
Zhong Ang Times Plaza  
No. 9 Mentougou Road, Tou Gou District  
102300 Beijing, China  
Tel: +86 (10) 8893 9660  
info@pce-instruments.cn  
www.pce-instruments.cn

### 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

### Spain

PCE Ibérica S.L.  
Calle Mayor, 53  
02500 Tobarra (Albacete)  
España  
Tel. : +34 967 543 548  
Fax: +34 967 543 542  
info@pce-iberica.es  
www.pce-instruments.com/espanol

### 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

### Hong Kong

PCE Instruments HK Ltd.  
Unit J, 21/F., COS Centre  
56 Tsun Yip Street  
Kwun Tong  
Kowloon, Hong Kong  
Tel: +852-301-84912  
jyi@pce-instruments.com  
www.pce-instruments.cn