



# User Manual

PCE-RCM 10 Particle Counter



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: 4 July 2018  
v1.0



## Contents

|    |                           |   |
|----|---------------------------|---|
| 1  | Safety notes .....        | 1 |
| 2  | Description .....         | 2 |
| 3  | Characteristics .....     | 2 |
| 4  | Specifications .....      | 2 |
| 5  | Function description..... | 3 |
| 6  | Power ON/OFF .....        | 3 |
| 7  | Detection Mode .....      | 4 |
| 8  | Attachment .....          | 5 |
| 9  | Warranty.....             | 6 |
| 10 | Disposal .....            | 6 |

## 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.

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.



## 2 Description

PCE-RCM 10 is a sort of exquisite concise and efficient detector launched by PCE Instruments recently, which is integrated with PM2.5, PM10, temperature and humidity detection function. This device has adopted laser scattering weight test method, professional structure design, good fan and advanced particulate matter algorithm, which can detect the PM2.5&PM10 accurately and sensitively. The device is equipped with an accurate sensor that can detect the temperature and humidity in the current environment. The operation is very simple. There is a high-capacity rechargeable lithium battery inside, it is very convenient to carry, so that you can check air quality from time to time. In order to save electricity, the device powers off automatically when no button is pressed for 15 minutes.

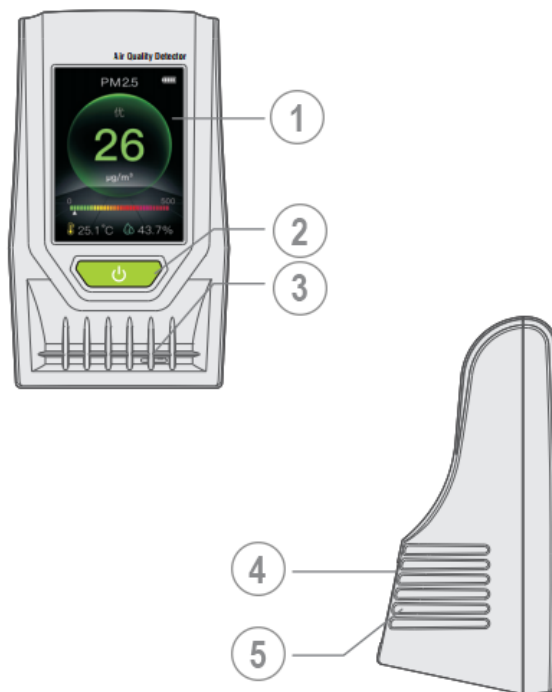
## 3 Characteristics

- 2.4 inch TFT colour LCD display
- 240\*320 pixels
- Detecting the particulate matter PM2.5/PM10
- Air temperature and humidity
- Auto Power Off
- Easy to carry

## 4 Specifications

| <b>Particulate matter detection</b>       |   |
|---|---|
| Size channels                             | PM2.5/PM10  |
| Mass concentration range                  | 0 ... 2000ug/m <sup>3</sup>   |
| Resolution                                | 1ug/m <sup>3</sup>  |
| <b>Temperature and humidity detection</b> |   |
| Temperature range                         | -20 ... 70 °C   |
| Temperature accuracy                      | ±1 °C   |
| Temperature resolution                    | 0.1 °C  |
| Humidity range                            | 0 ... 100 % RH  |
| Humidity accuracy                         | ±3.5 % RH (20 ... 80 % RH)<br>±5 % RH (0 ... 20 % RH / 80 ... 100 % RH) |
| Humidity resolution                       | 0.1 % RH  |
| <b>Power</b>                              |   |
| Battery                                   | 1000 mAh rechargeable lithium battery                                   |
| Discharge time                            | continuous use: 5 hours   |
| Charging                                  | USB 5 V charging  |
| Charging time                             | 2 hours power off charging  |
| <b>Other</b>                              |   |
| Display                                   | 2.4 inch TFT colour display<br>240 x 320 resolution                     |
| Working temperature                       | 0 ... 50 °C   |
| Storage temperature                       | -10 ... 60 °C   |

## 5 Function description



- 1 Colour LCD
- 2 Power button
- 3 Sensor air inlet
- 4 Sensor outlet
- 5 USB connector

## 6 Power ON/OFF

Switch on:

When meter is off, press and hold power button for a few seconds until you hear a beep tone.

Switch off:

When meter is on, press and hold power button for a few seconds until you hear a beep tone.



## 7 Detection Mode

When the device is started, the display shows the current value of PM 2.5 in the middle. The evaluation of the measured value is shown by the colour in which it is shown. Green means good, yellow means neither good neither bad, red means bad. The quality of PM 2.5 is also displayed in a colour scale. In the lower area of the display on the left-hand side, the current temperature is displayed. The current air humidity is shown on the right-hand side. In the upper part of the display, you can see the icon for the battery status.



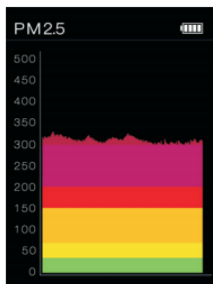
Pic 1

By pushing and releasing the power button, you can enter the next interface where you can see the temperature, air humidity, PM 2.5 and PM 10.



Pic 2

By pushing the power button again, you can enter the area for the graphical representation. The graphics show the values measured during the last 3 minutes.



## 8 Attachment

Pic 2

| Air quality level | The alarm thresholds indicated here are based on an average value of the particle concentration PM2.5 over a time period of 24 h and are inspired by the global regulations of the WHO (World Trade Organization) for air quality. These are not binding and only meant for orientation. |                            | Corresponding colors |
|-------------------|--|----------------------------|----------------------|
|                   | PM 2.5 (ug/m <sup>2</sup> )  | PM 10 (ug/m <sup>2</sup> ) |                      |
| Best              | 0~35ug/m <sup>3</sup>  | 0~70ug/m <sup>3</sup>      | Green                |
| Good              | 35~75ug/m <sup>3</sup>   | 70~150ug/m <sup>3</sup>    | Yellow               |
| Slight pollution  | 75~115ug/m <sup>3</sup>  | 150~250ug/m <sup>3</sup>   | Orange               |
| Medium pollution  | 115~150ug/m <sup>3</sup>   | 250~300ug/m <sup>3</sup>   | Red                  |
| Heavy pollution   | 150~250ug/m <sup>3</sup>   | 300~500ug/m <sup>3</sup>   | Purple               |
| Serious pollution | Above 250ug/m <sup>3</sup>   | Above 500ug/m <sup>3</sup> | Dark Purple          |



## 9 Warranty

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

## 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 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

### 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 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

### 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

### United Kingdom

PCE Instruments UK Ltd  
Units 12/13 Southpoint Business Park  
Ensign Way, Southampton  
Hampshire  
United Kingdom, SO31 4RF  
Tel: +44 (0) 2380 98703 0  
Fax: +44 (0) 2380 98703 9  
info@industrial-needs.com  
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

### The Netherlands

PCE Brookhuis B.V.  
Institutenweg 15  
7521 PH Enschede  
Nederland  
Telefoon: +31 (0) 900 1200 003  
Fax: +31 53 430 36 46  
info@pcebenelux.nl  
www.pce-instruments.com/dutch

### Chile

PCE Instruments Chile S.A.  
RUT: 76.154.057-2  
Santos Dumont 738, local 4  
Comuna de Recoleta, Santiago, Chile  
Tel. : +56 2 24053238  
Fax: +56 2 2873 3777  
info@pce-instruments.cl  
www.pce-instruments.com/chile

### 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  
jji@pce-instruments.com  
www.pce-instruments.cn

### China

PCE (Beijing) Technology Co.,Ltd  
1519 Room, 6 Building  
Men Tou Gou Xin Cheng,  
Men 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