



# 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



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## 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.

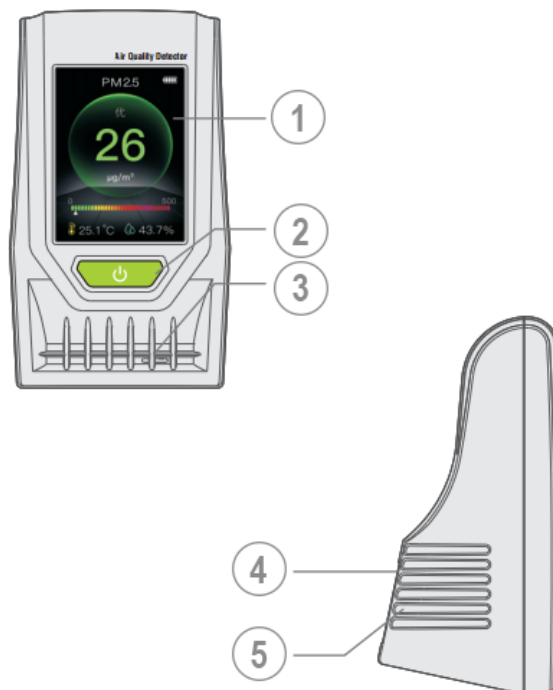
## 3 Characteristics

- 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) ±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 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.



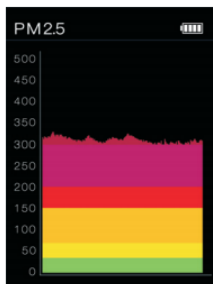
Pic 1

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.



Pic 2

## 8 Attachment

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.





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