



User Manual

PCE-RCM 8 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

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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 Delivery contents

1x particle counter PCE-RCM 8
1x micro USB recharger cable
1x user manual

3 Specifications

Measuring function	Measurement range	Accuracy	Sensor technology
PM 1.0	0 ... 999 $\mu\text{g}/\text{m}^3$	$\pm 15\%$	Laser scattering
PM 2.5	0 ... 999 $\mu\text{g}/\text{m}^3$	$\pm 15\%$	Laser scattering
PM 10	0 ... 999 $\mu\text{g}/\text{m}^3$	$\pm 15\%$	Laser scattering
HCHO	0.001 ... 1.999 mg/m^3	$\pm 15\%$	Electrochemical sensor
TVOC	0.001 ... 9.999 mg/m^3	$\pm 15\%$	Semiconductor sensor
Temperature	-10 ... 60 °C, 14 ... 140 °F	$\pm 15\%$	
Humidity	20 ... 99 % RH	$\pm 15\%$	
Air quality index	0 ... 500		
Measuring rate	1.5 s		
Display	LC display 320 x 240 pixels		
Power supply	Built-in rechargeable lithium ion battery 1000 mAh		
Dimensions	155 x 87 x 35 mm		
Storage conditions	-10 ... 60 °C, 20 ... 85 % RH		
Weight	approx. 160 g		

4 Device description

1. Power / OK / Menu key
2. Up key
3. Switch / Down key
4. Exit / Back key
5. USB interface for charging



5 Operation

To turn on the meter, press and hold the Power key for a few seconds. To turn off the meter, press and hold the Power key for some time again.

Important: The measurement starts as soon as the meter has been switched on. The measurement cannot be stopped while the meter is on.

5.1 Display modes

To change the display mode, press the Up or Down key. You can choose between four different display modes. The display switches off automatically after approx. 20 minutes. The power off function cannot be deactivated.

5.2 Menu

To enter the menu, briefly press the Power / Menu key. To exit the menu, press the Exit / Back key. In the menu, you have six options. To access one of them, select a menu item with the Up or Down key and open it with the Power / OK key.



5.2.1 System Set

In the menu item "System Set" you can make some general settings. Use the Up/Down keys to select the desired setting, use the Power / OK key to confirm your selection. To exit the menu item, press the Exit key.

Temp Unit:	You can select °C or °F.
Alarm HTL:	Here you can set an alarm limit for the HCHO value.
Clear Log:	Select "clear" to reset the data memory.
Off Time:	You can select "never", "30 min", "60 min" or "90 min" to determine when the meter turns off automatically.
Style:	You can select different background colours.
Language:	You can select "English" or "Chinese".
Brightness:	You can set a display brightness between 10 % and 80 %.
Buzzer Set:	The key sounds can be activated or deactivated.

5.2.2 Time Set

Here you can set the date and time. Use the Up and Down keys to adjust the respective value. Use the Power / OK key to move to the next item.

5.2.3 History

In the "History", 10 data records are automatically saved at regular intervals. The data records can be reset in the settings. The recording then starts again.

5.2.4 Actual Data

Here you can see real-time values of formaldehyde and the mass of volatile organic compounds in the environment. The air quality is determined from these values below.

5.2.5 Calibration

A HCHO calibration is recommended at regular intervals to ensure the accuracy of the measurement results. Select "HCHO Calibration" with the Up and Down keys, confirm with the OK key and hold the device in the outside air. Press the OK key again to start the calibration. The meter performs a calibration automatically.

You also have the possibility to set a correction value of the sensors. To do so, select a sensor with the Up and Down keys and confirm the selection by pressing the OK key. You will be asked again whether you want to change the settings. You can continue with the OK key or cancel the procedure with the Exit key.

6 Battery level

The battery status is indicated by green bars in the top right-hand corner of the display. The device can be charged via the USB interface. If the device is used continuously, it can also be charged permanently.

7 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.

8 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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