



# User Manual

Air Quality Meter PCE-RCM 16



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)

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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.
- This meter has very precise sensors. Avoid contact with alcohol. Alcohols influence the measurement results.

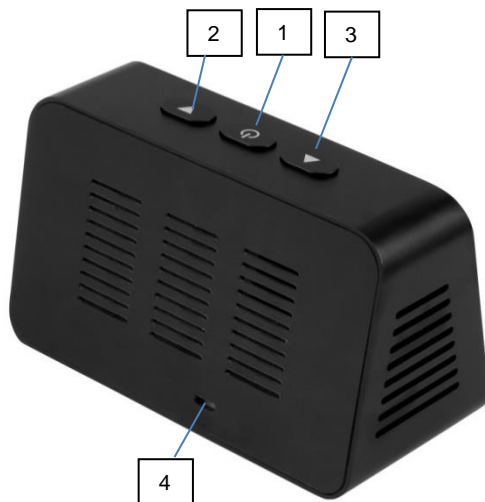
We do not assume liability for printing errors or any other mistakes in this manual.

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 Device description

### 2.1 Keys and connections



1. On/off key
2. Arrow key DOWN
3. Arrow key UP
4. Micro USB charging socket

## 2.2 Display



Figure 1 Standard view



Figure 2 List view



Figure 3 Graphic view



### 3 Technical specifications

Measurement function	Measurement range	Resolution	Accuracy
TVOC	0.000 ... 9.999 mg/m <sup>3</sup>	0.001 mg/m <sup>3</sup>	±10 % of reading
PM1, PM 2.5, PM10	0 ... 999 µg/m <sup>3</sup>	1 µg/m <sup>3</sup> .	±10 % of reading
Temperature	0 ... 50 °C	1 °C	±1 °C
Humidity	20 ... 90 %	1 %	±4 %
CO <sub>2</sub>	0 ... 5000 ppm	1 ppm	±10 % of reading
<b>General</b>			
Settling time	approx. 24 hours		
Display	TFT display, 4.3"		
Environmental conditions	0 ... 50 °C / max. 90 % RH		
Connection	micro USB to charge the battery		
Power supply micro USB	5 V / 2 A		
Power supply rechargeable battery	3000 mAh battery		
Operating time without mains adaptor	approx. 6 hours		
Battery charging time	approx. 2-3 hours		
Case	metal		
Dimensions	131 x 78 x 67.5 mm		
Weight	336 g		

### 4 Delivery cope

- 1 x air quality meter PCE-RCM 16
- 1 x micro USB cable
- 1 x user manual

### 5 Operating instructions

#### 5.1 Switch on the device

When the air quality meter is switched off, press and hold the on/off key for 3 seconds to switch on the meter.

#### 5.2 Switch off the device

When the power is on, press and hold the on/off key for 3 seconds to switch off the meter.

#### 5.3 Toggle view

When the unit is switched on, all measured values are displayed as numerical values. Furthermore, the air quality meter displays the air quality status in traffic light colours. The view can be changed using the UP arrow key. The graph shows the course of the measured values for the last 5 h after switching on.

In graphic view, you can select the measured variable for which the history is to be displayed with the DOWN arrow key.

## 5.4 Traffic light function

The air quality meter indicates the measured value with traffic light colours. The limit values for changing the colours are as follows:

CO <sub>2</sub> in ppm		
Air quality	Value	Colour
Good	<1000	Green
OK	1001...2000	Yellow
Poor	>2000	Red
PM <sub>2.5</sub> in µg/m <sup>3</sup>		
Good	<60	Green
OK	61...120	Yellow
Poor	>120	Red
AQI (Air Quality Index)		
Good	<100	Green
OK	101...300	Yellow
Poor	>300	Red
TVOC		
Good	<0.500	Green
OK	0.501...1.500	Yellow
Poor	> 1.500	Red

## 5.5 Setup

Press the on/off key twice in quick succession to open the settings menu.

### 5.5.1 Setting the date (DATE)

Use the arrow keys to change the highlighted numerical value for day, month, year. Confirm the setting with the on/off key. You are automatically taken to the next setting option.

### 5.5.2 Setting the time (TIME)

Use the arrow keys to change the highlighted numerical value for hour and minute. Confirm the setting with the on/off key. You will automatically be taken to the next setting option.

### 5.5.3 Alarm clock (ALARM)

Use the arrow keys to change the highlighted numerical value for hour and minute. You can also use them to switch the alarm clock on or off. Confirm the setting with the on/off key. You will automatically be taken to the next setting option.

### 5.5.4 Screensaver (SCR SAVER)

Use the arrow keys to set 10, 30, 60 min or "Never". When the screen saver is active, the display is black but measurements are still taken. This extends the battery life.



### 5.5.5 Temperature unit (UNIT)

Use the arrow keys to change the temperature unit between °C and °F. Confirm the setting with the on/off key.

### 5.5.6 CO2-alarm (BUZZER SET)

Use the arrow keys to switch the CO2 alarm on or off. Confirm the setting with the on/off key. If the CO2 value is above 800 ppm and continues to rise, this is signalled by short beep tones. If the values fall, the beeping stops.

## 5.6 Charging the battery

As soon as the battery symbol on the display indicates that the battery is discharged, the PCE-RCM 16 must be charged via the micro USB port. To do this, use the supplied USB cable or a USB adaptor with 5 V / 1000 mA. Please note that it may take at least 2 hours to recharge the battery to 100 %.

**Note:** The unit can also be operated permanently with a mains adaptor.



Figure 4Setup menu

## 6 Automatic calibration

The PCE-RCM 16 has the integrated self-correcting ABC algorithm (Automatic Baseline Correction) for automatic adjustment of the baseline value. This calibration is performed once a day.

For this, the PCE-RCM 16 requires a regular supply of fresh air. The measured value is adjusted automatically.

The ABC function is permanently switched on (cannot be switched off) and adjusts the baseline value at regular intervals when the CO2 level is low. Do not use this meter in a closed environment where the CO2 concentration remains relatively high. This would adversely affect the self-correction of the meter.



## 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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