User Manual

Air Quality Meter PCE-RCM 16

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v1.0

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Contents

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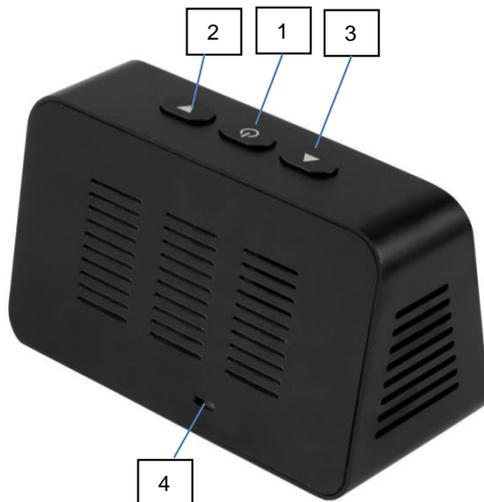
We do not assume liability for printing errors or any other mistakes in this manual.

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 1Standard view

Figure 2List view

Figure 3Graphic view

3 Technical specifications

Measurement function	Measurement range	Resolution	Accuracy
TVOC	0.000 ... 9.999 mg/m³	0.001 mg/m³	±10 % of reading
PM1, PM 2.5, PM10	0 ... 999 µg/m³	1 µg/m³.	±10 % of reading
Temperature	0 ... 50 °C	1 °C	±1 °C
Humidity	20 ... 90 %	1 %	±4 %
CO_2	0 ... 5000 ppm	1 ppm	±10 % of reading
General			
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:

CO2 in ppm		
Air quality	**Value**	**Colour**
Good	<1000	Green
OK	1001…3000	Yellow
Poor	>3000	Red
PM2.5 in µg/m³		
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 Settings

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 Clock)

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

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.

5.6 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 %.

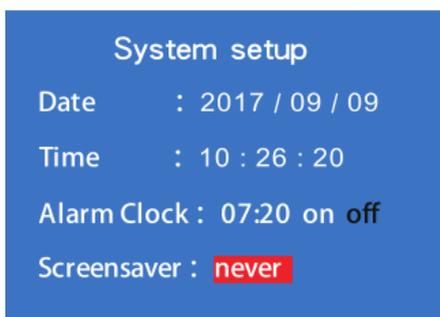**Note:** The unit can also be operated permanently with a mains adaptor.

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 CO_2 level is low. Do not use this meter in a closed environment where the CO_2 concentration remains relatively high. This would adversely affect the self-correction of the meter.

7   Warranty

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

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.

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 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

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

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

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

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

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

United States of America
PCE Americas Inc.
1201 Jupiter Park Drive, 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