USER MANUAL

AIR QUALITY METER

PCE-RCM 02

ENGLISH



User manuals in various languages (français, italiano, español, português, nederlands, türk, polski) can be found via our product search on:
www.pce-instruments.com

SAFETY INFORMATION

Please read this user manual carefully and in full before using the device for the first time. The device must only be operated by properly trained personnel. We accept no liability for any damage resulting from failure to follow the instructions in this user manual.

- This measuring instrument must only be used in the manner described in this user manual. Using the instrument for any other purpose may result in dangerous situations.
- A manual or automatic calibration should be carried out before first use or when the operating environment changes. To ensure that the device displays accurate readings, it must take a measurement in the open air at least once every 24 hours.
- Only use the measuring instrument if the environmental conditions (temperature, humidity, etc.) are within the limits specified in the technical specifications. Do not expose the instrument to extreme temperatures, direct sunlight, extreme humidity or moisture.
- Do not expose the instrument to impacts or strong vibrations.
- The device housing must only be opened by qualified personnel from PCE Instruments.
- Never use the measuring instrument with wet hands.
- No technical modifications may be made to the device.
- The device should only be cleaned with a cloth. Do not use abrasive cleaners or cleaning agents containing solvents.
- The instrument must only be used with accessories supplied by PCE Instruments or equivalent replacements.
- Check the instrument's casing for visible damage before each use. If any visible damage is found, the instrument must not be used.
- The instrument must not be used in an explosive atmosphere.
- The measurement range specified in the technical specifications must not be exceeded under any circumstances.
- Do not block the air inlet whilst the device is in use.
- Do not insert any sharp, flammable or metallic objects into the air inlet, as this poses a risk of electric shock or burns.
- This product features an automatic brightness adjustment function that adjusts the screen brightness according to the ambient light. Do not block the brightness sensor area, as this will result in the screen brightness being too low.
- Use the USB-C cable for power supply when the product is used for an extended period. The battery is only suitable for temporary use.
- Keep the device away from your face, as your breath may distort the readings.
- Failure to observe the safety instructions may result in damage to the device and injury to the user.

We accept no liability for typographical errors or inaccuracies in the content of this manual.
We expressly refer you to our general warranty terms, which can be found in our General Terms and Conditions.

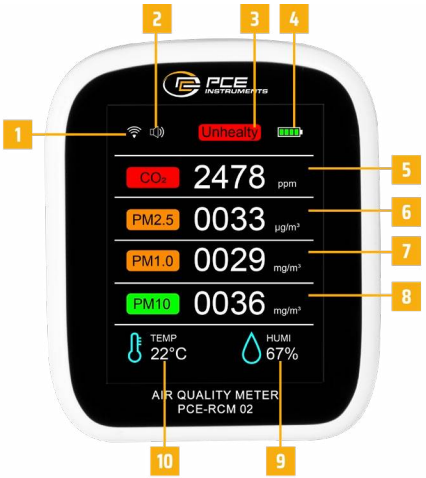
TECHNICAL SPECIFICATIONS

CO2	
Measuring range	400 ... 5000 ppm
Resolution	1 ppm
Accuracy	± (50 ppm + 5 % v. Mw.)
Relative humidity	
Measuring range	0 ... 99 % r. F.
Resolution	1 % r. F.
Accuracy	± 5 % r. F.
Formaldehyde	
Measuring range	0 ... 1,999 mg/m³
Resolution	0,001 mg/m³
Accuracy	15 % v. Mw.
Particle	
Measuring range	0 ... 1000 µg/m³
Resolution	1 µg/m³
Accuracy	±10 µg/m³ (0 ... 100 µg/m³) ±10 % v. Mw. (0 ... 500 µg/m³)
Measurement channel sizes	PM 1,0, PM 2,5, PM 10
TVOC	
Measuring range	0 ... 9,999 mg/m³
Resolution	0,001 mg/m³
Accuracy	15 % v. Mw.
Temperature	
Measuring range	0 ... 50 °C
Resolution	1 °C
Accuracy	±1 °C

General technical specifications	
Display type	LCD
Display size	3.5 inches
Interface	USB-C
Alarm	visual, audible
Sensors	NDIR, semiconductor TVOC, laser scattered light
Menu language	German, English (US)
Protection class (device)	IP20
Power supply	5 V DC, 2 A
Weight	107 g
Operating conditions	0 ... 50 °C, 0 ... 99 % r. F.
Storage conditions	0 ... 50 °C, 0 ... 99 % r. F.
Capacity	5 V DC, 2 A
Dimensions (L x W x H)	85 x 70 x 35 mm

DEVICE DESCRIPTION

1 - Alarm tone
2 - Wi-Fi
3 - Rating
4 - Battery level indicator
5 - CO2 concentration reading
6 - PM2.5 concentration reading
7 - HCHO or PM1.0 concentration reading
8 - TVOC or PM10 concentration
9 - Relative humidity
10 - Temperature



1 - Multifunction button
2 - Temperature and humidity sensor
3 - Type-C charging port



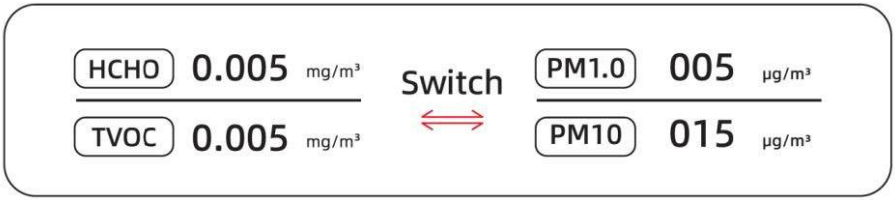
OPERATION

Switching on/off
When the device is switched off, press and hold the multifunction button for 2 seconds. A beep will sound and the current parameters will be displayed on the screen.
When the device is switched on, press and hold the multifunction button to switch it off.

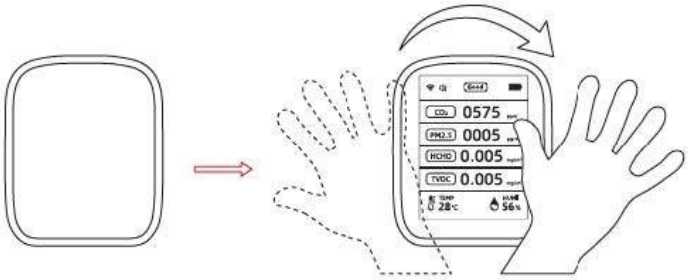
Calibration
Manual calibration
Switch on the device and place it in an environment with a CO2 concentration of approximately 400 ppm (outdoors or by a window) for 5–10 minutes. Press the multifunction button three times in quick succession. After a few seconds, the device will switch off automatically to complete the manual calibration. Then restart the device to use it as normal.

Automatic Calibration
24 hours after switching on, the sensor sets the lowest CO2 reading recorded within that 24-hour period as the zero value. Therefore, ensure that the room is ventilated from time to time during this 24-hour period.

Switching the display content
Press the multifunction button once to switch between HCHO & TVOC and PM1.0 & PM10 when switching on the device.



This product is fitted with a proximity sensor. When the device is in sleep mode, you can wake the screen by waving your hand (the device enters sleep mode after 30 seconds without any measurements; you can disable this feature in the app).



CLASSIFICATION OF CONCENTRATIONS

	Good	Bad	Harmful to health
CO2	0 ... 1000 ppm	1000 ... 2000 ppm	>2000 ppm
PM1,0	0 ... 25 µg/m³	25 ... 75 µg/m³	>75 µg/m³
PM2,5	0 ... 25 µg/m³	25 ... 75µg/m³	>75 µg/m³
PM10	0 ... 50 µg/m³	50 ... 150 µg/m³	>150 µg/m³
TVOC	0 ... 0,5 mg/m³	0,5 ... 1mg/m³	>1 mg/m³
HCHO	0 ... 0,1 mg/m³	0,1 ... 0,15 mg/m³	>0,15 mg/m³

» Green means good

» Orange means bad (if one of the readings reaches the bad range, an alarm sounds)

» Red means harmful to health

HOW TO USE THE APP

- Scan the QR code below, download the app and install it.
- By default, the device enters pairing mode when switched on for the first time; the Wi-Fi icon will flash.
- Open the app, create an account and log in.
- Tap Add device or the PLUS icon in the top right-hand corner to add the device.
- The connection screen will then appear. Tap Add to start pairing.
- Tap the icon for the connected device to view specific data on the app's home screen.
- Tap the value you wish to view to see the data for that value.
- To access settings mode, swipe down on the screen and tap Set to adjust the PM2.5 and CO2 alarm thresholds, the alarm sound, the temperature unit, the screen-off function and the screen-off timer.
- Reset Wi-Fi. Tap the icon in the top right-hand corner to open the settings screen, tap Delete Device and, after removing the device, return to pairing mode.
- Resetting Wi-Fi on the device: Whilst the device is switched off, press and hold the multifunction button for 8 seconds (during which time the screen will light up and emit an initial beep) until the buzzer beeps a second time, the Wi-Fi icon flashes and the device enters pairing mode. Then release the button.

INFORMATION ON THE WI-FI FUNCTION

The Wi-Fi icon is flashing	The device is in pairing mode and needs to be paired with the smartphone and the Wi-Fi router.
The Wi-Fi icon is lit continuously	Normal connection status
The Wi-Fi icon is flashing slowly	The device has already been paired with the smartphone once, but there is a problem with the current network (e.g. the paired router is not switched on) and the network needs to be restored or the device needs to be paired again
No Wi-Fi icon	The product has no Wi-Fi or the Wi-Fi module is damaged

Notes:
You will need to pair the device again if the network is changed.
A device can only be paired with one smartphone and one router; a smartphone can be paired with several devices (up to 200 devices).

DISPOSAL

For the disposal of batteries in the EU, the (EU) 2023/1542 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 26
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
2, rue Georges Kuhnmunch
67250 Soultz-sous-Forêts
France
Tel.: +33 (0) 972 35 37 17
Fax.: +33 (0) 972 35 37 18
info@pce-france.fr
www.pce-instruments.com/french

Spain
PCE Ibérica S.L.
Calle Mula, 8
02500 Tobarra (Albacete)
España
Tel. : +34 967 543 548
info@pce-iberica.es
www.pce-instruments.com/espanol

United Kingdom
PCE Instruments UK Ltd
Trafford House
Chester Rd, Old Trafford
Manchester M32 0RS
United Kingdom
Tel: +44 (0) 161 464902 0
Fax: +44 (0) 161 464902 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.
Twentepoort West 17
7609 RD Almelo
Nederland
Telefoon: +31 (0)53 737 01 92
info@pcebenelux.nl
www.pce-instruments.com/dutch

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

Denmark
PCE Instruments Denmark ApS
Birk Centerpark 40
7400 Herning
Denmark
Tel.: +45 70 30 53 08
kontakt@pce-instruments.com
www.pce-instruments.com/dansk

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