English



User Manual

PCE-CMM 10 CO_2 analyser

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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.

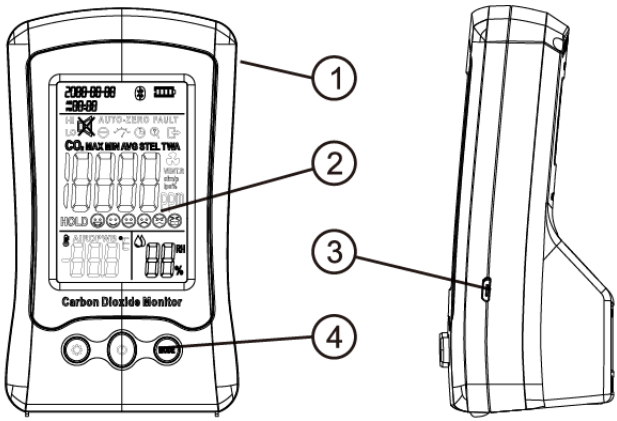
We do not assume liability for printing errors or any other mistakes in this manual.

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.

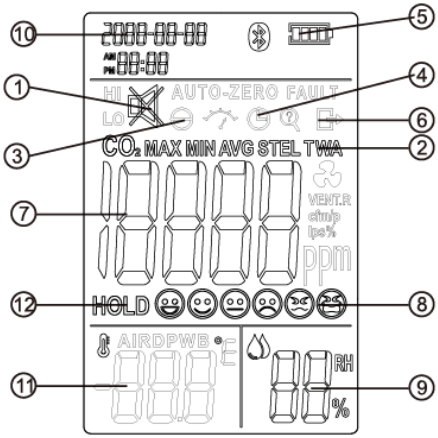
2 System description

2.1 Device



① Case
② Display
③ USB socket
③ Function keys

2.2 Display



①	Audio alarm indicator	②	Mode indicator
③	Calibration indicator	④	Automatic power-off
⑤	Battery status	⑥	Cancel calibration
⑦	Measured CO_2 value	⑧	Emoticon CO_2 value
⑨	Air humidity	⑩	Date / time
⑪	Temperature	⑫	Freeze displayed measured value

2.3 Function keys



2.4 Terms / icons

Symbol	Measurement modality
HOLD	Freeze measured values
MAX	Maximum measured value
MIN	Minimum measured value
AVG	Average measured value
TWA	Time weighted average (8 hours)
STEL	Short-term exposure limit (15 minutes weighted average)

Emoticons

Emoticon	CO_2 reading range
	400ppm ~ 450ppm
	450ppm ~ 700ppm
	700ppm ~ 1000ppm
	1000ppm ~ 2000ppm
	2000ppm ~ 5000ppm
	>5000ppm

3 Technical specifications

Specification	Description
Measurement range CO_2	400 ... 5000 ppm
Resolution	1 ppm
Accuracy	±(5 % + 50 ppm) between 400 ... 2000 ppm and at an atmospheric pressure of 1013 mbar
Measurement range temperature	-10.0 ... 50.0 °C
Resolution	0.1 °C
Accuracy	±1 °C (may be influenced by meter's waste heat)
Measurement range air humidity	0 ... 99 % RH
Resolution	1 % RH
Accuracy	±(5 % at 25 °C) between 10 ... 90 % RH
Sensor	NDIR principle
ABC	Automatic baseline correction
Audio alarm	Buzzer
Visual alarm	Red backlight
Display	3-inch LC display
Battery status	Four-level display
Display frequency	3 seconds
Automatic power-off	switches itself off after 2 hours
Backlight	white backlight
Operating conditions	0 ... 50 °C, 0 ... 85 % RH
Storage conditions	-20 ... 60 °C, 0 ... 95 % RH
Power supply	integrated rechargeable 3.7 VDC battery
Weight	195 g
Dimensions	75 x 55 x 130 mm

4 Operation

4.1 On / off

On

To switch on the meter when it is switched off, press and hold the centre key ⏻ for about 3 seconds. The meter starts with a 120-second warm-up phase.

Off

To switch off the meter when it is switched on, press and hold the centre key ⏻ for approx. 3 seconds.

4.2 Temperature

Press and release the ⚙ key to switch between the temperature units °C and °F.

4.3 Alarm

When 1000 ppm of CO_2 is reached, the unit switches to alarm mode.
This is indicated by means of an acoustic and a visual alarm.

Visual alarm:
The display background flashes red every second.

Audible alarm:
The beep sounds every second. To switch the acoustic warning off or on, press and hold the ⚙ key for about 3 seconds.

4.4 Measurement mode

Press the **MODE** key to switch between the different measurement modes. (see 2.4)
Press and hold the **MODE** key to delete the minimum, maximum and average values.

4.5 Backlight

When the meter is switched on, press the central key ⏻ to switch the backlight on or off.

4.6 Automatic power-off

The unit switches off after 2 hours of inactivity (no operation by pressing a key) in battery mode. This function is not active during mains operation. The unit then remains permanently switched on.

4.7 Charging the battery

Fully charge the device using the USB cable supplied before using it for the first time.
Recharge the device when the battery status indicator shows the flat battery icon ▭.
For example, use a USB plug-in mains adaptor (not included) with at least 1 A output power or use a USB port on a PC that provides this power.

4.8 Date / time

To set the date and time, press and hold the ⚙+⏻ keys simultaneously when the meter is turned off until the display switches on.
Press the ⚙ key twice. The year flashes.
Use the keys ⏻ and **MODE** to set the current year.
Press the ⚙ key.
Use the keys ⏻ and **MODE** to set the current month.
Press the ⚙ key.
Use the ⏻ and **MODE** keys to set the current day.
Press the ⚙ key to switch to the hour setting.
Use the ⏻ and **MODE** keys to set the current hour.
Press the ⚙ key.
Use the ⏻ and **MODE** keys to set the current minute.
Press the ⚙ key.
Use the ⏻ and **MODE** keys to set the current second.
Press the ⚙ key to go to 12-hour or 24-hour setting mode.
Use the ⏻ and **MODE** keys to select the mode.
To save your entries, press and hold the ⚙ key until the icon appears on the display as a confirmation.
Press and hold the ⚙+⏻ keys to exit setting mode.

5 Calibration

The unit was calibrated at the factory. If there are noticeable deviations in the measured values, you can recalibrate the unit.
Two options are available for calibration.

5.1 Automatic calibration

The PCE-CMM 10 has an integrated self-correcting ABC (Automatic Baseline Correction) algorithm for automatic adjustment of the base value.
To calibrate the meter, place it in an environment with fresh air for 3 days when it is switched on. (The best result is achieved outside buildings)
Connect the instrument to an external power source for calibration.
The measured value is automatically adjusted.

The ABC function is permanently switched on and adjusts the base value at regular intervals in case of low CO_2 pollution.
Do not use this meter in a closed environment where the CO_2 concentration remains relatively high. This would negatively affect the self-correction of the device.

5.2 Manual calibration

Place the switched-on unit in an environment with fresh air for 20 minutes.
(The best results are achieved outside buildings)
When the meter is switched on, press and hold the ⚙ and **MODE** keys and until the icon ⊖ appears on the display. The calibration takes about 10 minutes. Afterwards, the instrument returns to measurement mode.

6 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.

7 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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