User Manual

PCE-EM 880 Air Quality Meter

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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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.

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.

2   Specifications

Measuring function	Measurement range	Resolution	Accuracy
HCHO	0.00 ... 5.00 mg/m³	0.01 mg/m³	±5 % of range
TVOC	0.00 ... 9.99 mg/m³	0.01 mg/m³	±5 % of range
Temperature	0 ... 50 °C 32 ... 122 °F	0,1 °C 0,1 °F	±2 °C ±4 °F
Humidity	0 ... 100 % RH	0.1 % RH	±3.5 % (at 20 ... 80 % RH) ±5 % (at 0 ... 20 %) ±5 % (at 80 ... 100 %)
Alarm	Visual alarm when limit value is exceeded		
Interface	Micro USB		
Power supply (battery)	3.7 V, 1500 mAh		
Power supply (mains adaptor)	5 V DC, 1 A		
Operating conditions	0 ... 45 °C / 32 ... 113 °F, <90 % RH		
Storage conditions	-10 ... 55 °C / 14 ... 131 °F, <90 % RH		
Dimensions	54 x 215 x 34 mm / 2.1 x 8.4 x 1.3"		
Weight	143 g / 5.0 oz		

3   Delivery scope

1 x air quality meter PCE-EM 880
1 x Micro USB cable
1 x user manual

4   Device description
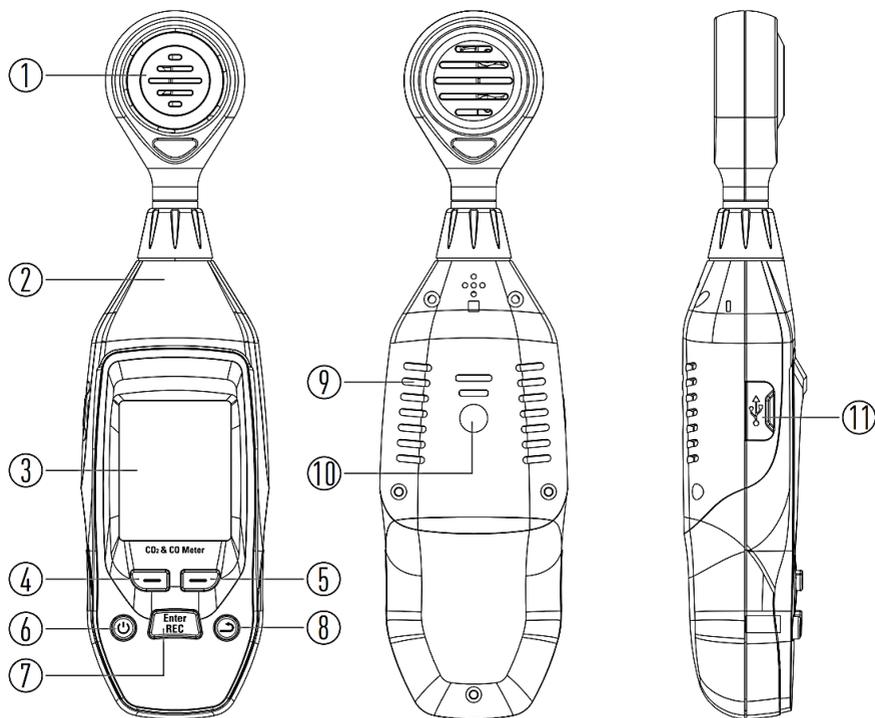
No.	Description
1	HCHO and TVCO sensor
2	Temperature and humidity sensor
3	LC display
4	Left key (interaction with the function shown on the display)
5	Right key (interaction with the function shown on the display)
6	On and off key
7	Enter and record key
8	Back key
9	Ventilation slot
10	Tripod holder
11	Micro USB interface

5 Switching the meter on and off

To switch on the meter, press and hold the on/off key for two seconds. The HCHO sensor needs a warm-up time of 10 seconds after switching on before it can measure. The TVOC sensor requires a warm-up time of 90 seconds. After that, the meter is ready for measurement.

To switch off the meter, press and hold the on/off key again for two seconds. The meter switches off.
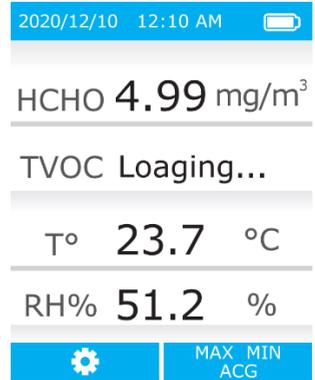
5.1 Lowest, highest and average reading

To display the lowest, the highest and the average measured value, press the right key in the measurement window to select MAX, MIN, AVG. The lowest, the highest and the average measured value are now displayed for each measuring function.
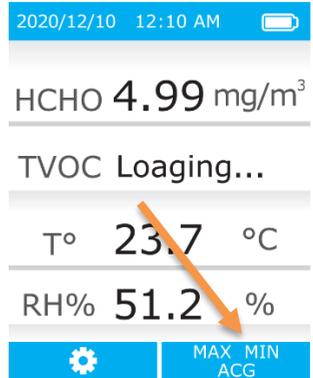
Now press the left key repeatedly to display the desired measurement function. Use the right key to pause and resume the evaluation. Press the back key to return to measuring mode.

Note: The evaluation is reset as soon as you return to normal measuring mode.
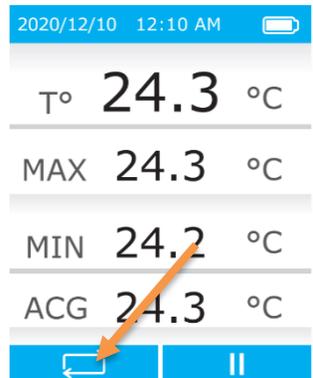
5.2 Settings

To access the settings, press the right key in the measurement window. This takes you directly to the settings.

The left and right keys can be used to select between the individual menu items and to change parameters. The enter key opens the setting item and the set parameter is accepted. The back key takes you back one level.
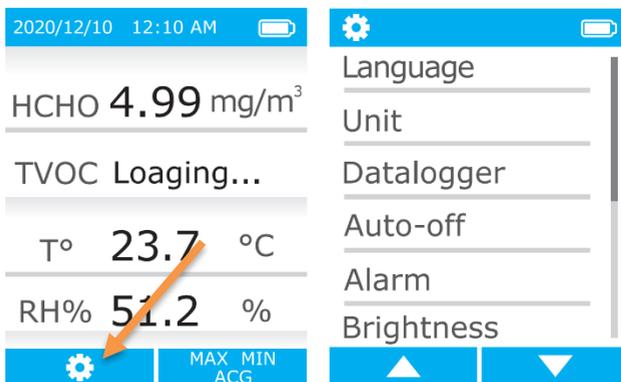
The menu is organised as follows:

Setting option	Description
Language	Setting the menu language Chinese and English are available
Unit	Setting the temperature unit to °C or °F Setting the unit for HCHO and TVOC to ppm or mg/m³
Datalogger	Setting the data logger
Auto-off	Setting automatic power off
Alarm	Setting the alarm limit value
Brightness	Setting the display brightness
Date/Time	Setting the date and time

5.2.1 Setting the language

To set the language of the meter, go to the menu, to the item "Language". Here, you can change the menu language to Chinese or English.

5.2.2 Setting the units

To set the units, go to the settings, to the item "Unit". From there, the unit of temperature can be changed to °C or °F. The unit of HCHO and TVOC can be changed to ppm or mg/m³.

5.2.4 Setting the data logger

To set the data logger, go to the menu, to the item "Data logger".Here, the data logger can be set.
**Note:** The data logger is always active.
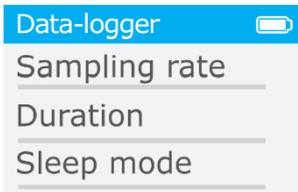
The options are:

Setting option	Description
Sampling rate	Setting the storage rate
Duration	Setting the recording time
Sleep Mode	Setting whether or not the meter switches off the display when no entries are made.

5.2.4.1 Setting the storage rate

To set the storage rate, select "Sampling rate" in the data logger settings. Here, the storage rate can be set to 1 minute, 15 minutes or 1 hour.

5.2.4.2 Setting the recording time

To set the recording time, select "Duration" in the data logger settings. You can select "None", 1 hour, 24 hours or 7 days.
If "None" is selected, recording will continue until the meter switches off automatically or the battery is discharged.

5.2.4.3 Switch off display automatically

To switch off the display automatically, select "Sleep mode" in the data logger settings. If this function is active, the meter switches itself off within 2 minutes.
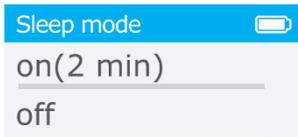
5.2.5 Automatic power off

To set the automatic power off, go to "Auto-off" in the settings. Here, you can choose between "None", 2 and 10 minutes or one hour.
If "None" is selected, automatic power off is permanently deactivated.

5.2.6 Set alarm limits

To set the alarm limit values, go to the settings and to the item "Alarm". Here, an alarm limit value can be set for each measuring function. To change the parameter, use the right or left key. To move to the next measurement function, press the enter key repeatedly until you reach your measurement function.
If an alarm limit is exceeded, the measured value is displayed in red.
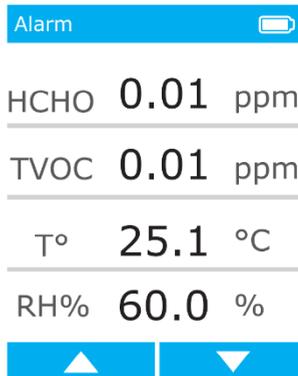
5.2.7 Set display brightness

To adjust the display brightness, go to "Brightness" in the settings. Here, the brightness of the display can be adjusted.
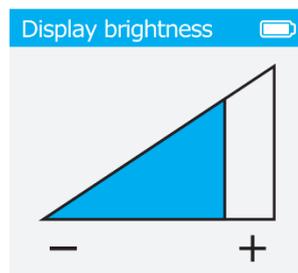
5.2.8   Setting the date and time

To set the date and time, go to the settings, to the item "Data / Time". Here, the date and time can be set with the left and right keys. With the enter key, you can jump to the next item.
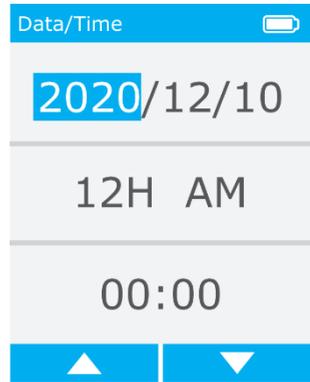
6   View measured values

To view the measured values, press and hold the record key in measurement mode. All saved files are now displayed. The file name is named and sorted according to the storage date. Select the desired file with the left or right key and open it with the enter key.
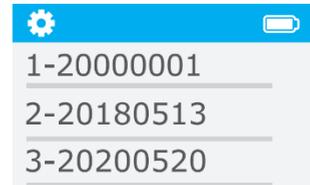
Now select the desired measuring function from the file. The measured values are then displayed directly.
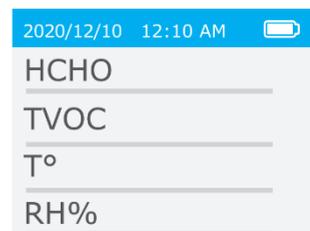
The left and right keys can then be used to select and read each individual measured value.
In addition, the lowest, the highest and the average measured value are displayed.

Note: The saved measured values can only be deleted via the PC.
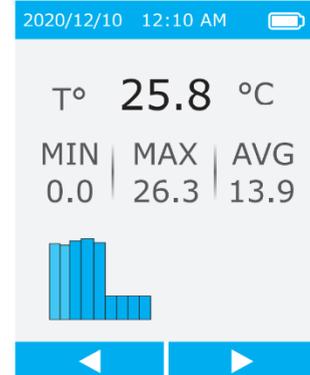
7   Exporting the measurement data

To export the measurement data to a PC, first switch off the meter and then connect it to a PC. The PC recognises the meter as a mass data storage device. From there, the measurement data are saved as a CSV file. Measurement data can be deleted from here.

8   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.

9   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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