

USER MANUAL

pH METER

PCE-PH20 Series



ENGLISH



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

CHARACTERISTICS

- » pH meter for measuring in soil, food, and cosmetics
- » Easy to use
- » Measuring range 0 ... 14pH
- » Special external measuring electrode on cable
- » Waterproof (IP 67)
- » LCD display
- » High accuracy
- » Data hold function
- » Automatic shut-off to conserve battery power
- » Compact design
- » Calibration in pH 4, 7, or 10

SPECIFICATIONS

Display	LCD, 20x28mm
Measuring range	0 ... 14pH
Temperature	Automatic temperature compensation
Electrode	pH electrode with long service life
Data hold function	Freezes the current display for easier reading.
Probe connection	BNC
Calibration	3-point calibration in pH4, pH7, pH10
Automatic shut-off	Automatic shut-off to conserve battery power after approx. 10 minutes
Ambient conditions	0 ... 60°C / < 80% RH
Dimensions	180x40x32mm
Weight	220g incl. electrode

pH Measurement

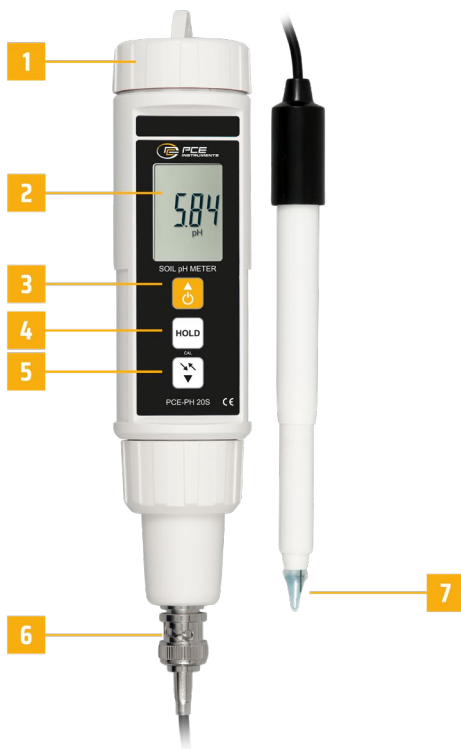
Measuring range	Resolution	Accuracy
0 ... 14pH	0,01pH	$\pm 0,07\text{pH}$ (pH 5 ... 9) $\pm 0,1\text{pH}$ (pH 4...4,9 + 9,1...10) $\pm 0,2\text{pH}$ (pH 1...3,9 + 10...13)

Temperature

Measuring range	Resolution	Accuracy
0 ... 60 °C	0,1 °C	$\pm 0,8\text{ °C}$

DEVICE DESCRIPTION

- 1 - Battery compartment cover
- 2 - Display
- 3 - Power button
- 4 - Hold button
- 5 - Rotate display button
- 6 - BNC connection for the pH electrode
- 7 - pH Electrode



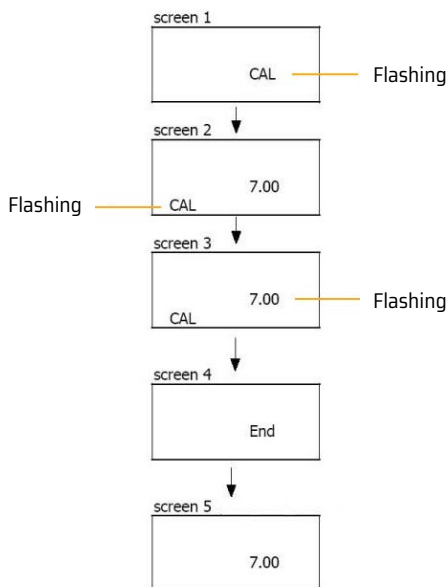
CALIBRATION

The pH meter is delivered already calibrated. To ensure maximum accuracy, recalibration should be performed at certain intervals. The ideal ambient temperature is between 15°C and 35°C.

Calibration in pH7

Hold the electrode in the pH7 solution and switch on the device using the POWER button.

Now press the HOLD button, the **Hold** symbol will appear on the display, and then press the DOWN button. You will see the following display:



After the **CAL** symbol flashes on the display, use the AB button to select the calibration solution. Once you have selected the appropriate solution, press the HOLD button to continue.

Calibration in pH4

First clean the electrode with distilled water. Replace the solution from pH7 to pH4.

Hold the electrode in the pH4 solution and switch on the device using the POWER button.

Now press the HOLD button; the **Hold** symbol will appear on the display, and then press the AB button. The display will show the same reading as described for **calibration in pH7**. Instead of the flashing **7.00**, the display will now flash **4.00**.

Calibration instructions

- » The pH meter can also be calibrated at pH10.
- » Calibration starts at pH7 and then pH4 (pH10).
- » Clean the electrode with distilled water before changing the calibration solution.
- » If the calibration solution deviates by approx. $\pm 1\text{pH}$, **ERR** will be shown on the display. You should replace the liquid.

MEASUREMENT METHOD

Measurement instructions

- » The electrode is stable and durable, but should be handled with care.
- » Damage to the sensor tip or the entire electrode is not covered by the device warranty.
- » Measurements in the ground should only be carried out in loose soil, as otherwise the electrode will be destroyed.
- » The pH electrode is a consumable, similar to a light bulb, and is therefore excluded from the warranty and guarantee.

pH measurement

Connect the electrode to the device and switch on the device. Now carefully insert the electrode into the material to be measured (soil, sand). The measured pH value is now shown on the display. Clean the electrode with distilled water after each measurement.

Data hold

To hold the currently displayed value, press the HOLD button after completing the measurement. The value will now be held on the display. To exit this function, press the HOLD button again.

Rotate display

To make the display easier to read, you can rotate it. To rotate the display, press the DOWN button once. Press the button again to return to the original display.

Automatic shutdown

The device has an automatic shutdown function to conserve battery power and switches off automatically after ten minutes of inactivity.

BATTERY REPLACEMENT

- » Switch off the device
- » Remove the battery compartment cover
- » Remove the old battery and insert new batteries (4 x 1.5V AAA batteries)
- » Close the battery compartment cover again

SAFETY

Please read the operating instructions carefully before using the device. We accept no liability for damage caused by failure to observe the instructions in the operating manual.

- » The device may only be used within the approved temperature range.
- » The device housing may only be opened by qualified personnel from PCE Deutschland GmbH.
- » The device must never be placed with the user interface facing down (e.g., keyboard side down on a table).
- » No technical modifications may be made to the device.
- » The device should only be cleaned with a damp cloth / only pH-neutral cleaners may be used.

If you have any questions, please contact PCE Instruments.

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.

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Subject to change without notice

TRUST IN EVERY MEASUREMENT.