

USER MANUAL

HYDROGEN DETECTOR

PCE-HLD 10



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 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.

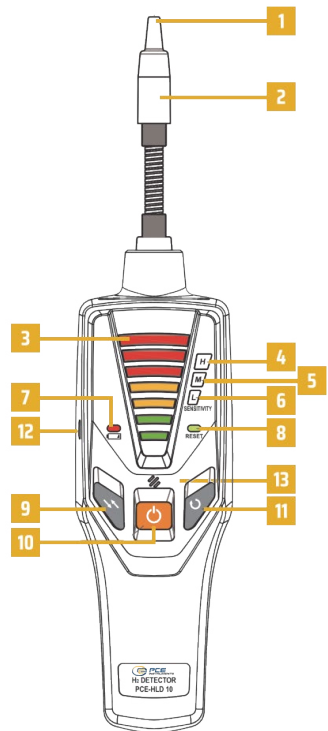
We expressly point to our general guarantee terms which can be found in our general terms of business. If you have any questions please contact PCE Instruments. The contact details can be found at the end of this manual.

SPECIFICATIONS

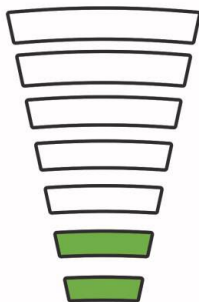
High sensitivity	>2 g (0.07 oz)/year
Medium sensitivity	>15 g (0.53 oz)/year
Low sensitivity	>30 g (1.05 oz)/year
The sensitivity refers to 5 % hydrogen (H ₂) and 95 % nitrogen (N ₂).	
Alarm	audible and visible
Warm-up time	45 s
Battery life	approx. 12 h
Power supply	4 x 1.5 V AA battery
Automatic power off	10 min
Maximum height	2000 m / 6561 ft above sea level
Operating conditions	0 ... 40 °C / 32 ... 104 °F, <80 % RH, non-condensing
Storage conditions	-10 ... 60 °C / 14 ... 140 °F, <70 % RH, non-condensing
Hose length	40 cm / 15.7"
Dimensions	213 x 65.5 x 53.5 mm / 83.8 x 25.7 x 21.0"
Weight	400 g / 14.1 oz

DEVICE DESCRIPTION

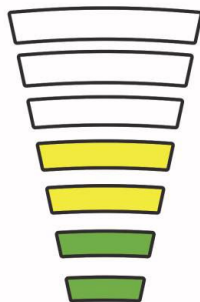
- 1- Sensor
- 2- Sensor protection cap
- 3- Hydrogen concentration display
- 4- Selection with high sensitivity
- 5- Selection with medium sensitivity
- 6- Selection with low sensitivity
- 7- Battery status display
- 8- Reset indicator
- 9- Sensitivity setting
- 10- On / off key
- 11- Reset key
- 12- Micro-USB interface for alternative power supply
- 13- Battery compartment cover



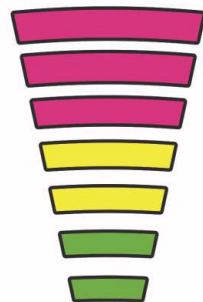
BAR DISPLAY



Low concentration



Medium concentration



High concentration

Depending on the sensitivity setting, the concentration range also changes.

POWER SUPPLY

The PCE-HLD 10 can be powered either by 4 1.5 V AA batteries or via the 5 V DC USB interface.

Power Supply via the Micro-USB Interface

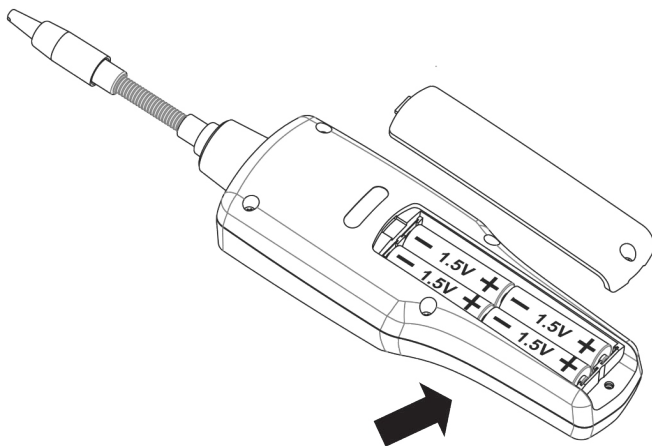
The PCE-HLD 10 can be powered via the Micro-USB interface using a 5 V DC, 1 A constant-voltage power source.

Note: This port is not a data interface. The batteries cannot be recharged via this port.

Power Supply via Batteries

To power the device using batteries, open the battery compartment on the back. Then insert four 1.5 V AA batteries. Be sure to observe the correct polarity when inserting them. Close the battery compartment after inserting the batteries.

Once the batteries are discharged, this is indicated by the battery status indicator lighting up. As soon as this indicator lights up, the batteries must be replaced with new ones to ensure proper operation.



TURN ON/OFF

To turn the meter on or off, press and hold the On/Off button for at least 2 seconds. After turning it on, the meter requires a warm-up time of 45 seconds before it is ready for use. The warm-up time is indicated by all LEDs flashing. Once the flashing stops, the meter is ready to take a measurement.

Note

A zero calibration is performed during the warm-up period. Therefore, make sure to turn on the meter in fresh air. If a zero calibration is performed in the presence of hydrogen, this hydrogen concentration will be ignored in subsequent measurements until a new zero calibration is performed.

Automatic Shutdown

If no buttons are pressed for 10 minutes, the meter will shut down automatically. To disable this feature, hold down button 9 while turning on the meter, then turn it on. After turning it on, you can release the buttons. The meter will no longer shut down automatically. The automatic shutdown feature will be active again after the meter is turned off manually.

SENSITIVITY SETTING

To set the sensitivity, press the key repeatedly until you have reached your desired sensitivity. The smaller the sensitivity has been selected, the larger the measurement range on the bar graph. As a result, the meter may not display anything for small amounts of hydrogen. With a high sensitivity, the measurement range of the bar graph will be exhausted quickly. Set the sensitivity according to your application.

Display	Meaning
L	Low sensitivity
M	Medium sensitivity
H	High sensitivity

ZEROING

When the meter is switched on, it is zeroed automatically.

Only switch on the meter in a non-polluted environment. Switching it on in a polluted environment will cause incorrect measurements and any H₂ leakage will not be detected.

During operation, the sensor is always adjusted to the set zero point in order to filter out any background gases that may occur.

To switch off this function, press and hold the RESET key for two seconds. To enable this function again, press and hold this key again for two seconds. The reset indicator shows whether the function is switched on. As soon as the control LED lights up, the function is activated.

Manual zeroing

To perform a manual zeroing, press the reset key once.

Note: Make sure that the meter is zeroed in fresh air. If it is zeroed with hydrogen present, this hydrogen content will be ignored in subsequent measurements until a new zeroing is performed.

REPLACE SENSOR

The sensor has a lifetime of approx. 1 year. Obsolete sensors may cause faulty measurements or existing leaks may not be detected. High concentrations can reduce the lifetime of the sensor.

Replacement sensors can be found directly on <https://www.pce-instruments.com>.

To replace the sensor, first switch off the meter. Then loosen the sensor protection. Then pull off the sensor and replace it with a new one. Then check whether the filter inside the sensor protector is clean and whether there is any damage to the sealing ring. If there is damage or dirt, it must be eliminated.

Note: The sensor heats up during operation and could possibly cause burns. Therefore, let the sensor cool down for a short time.

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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