English



User Manual

PCE-HLD 10 Hydrogen Detector

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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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.

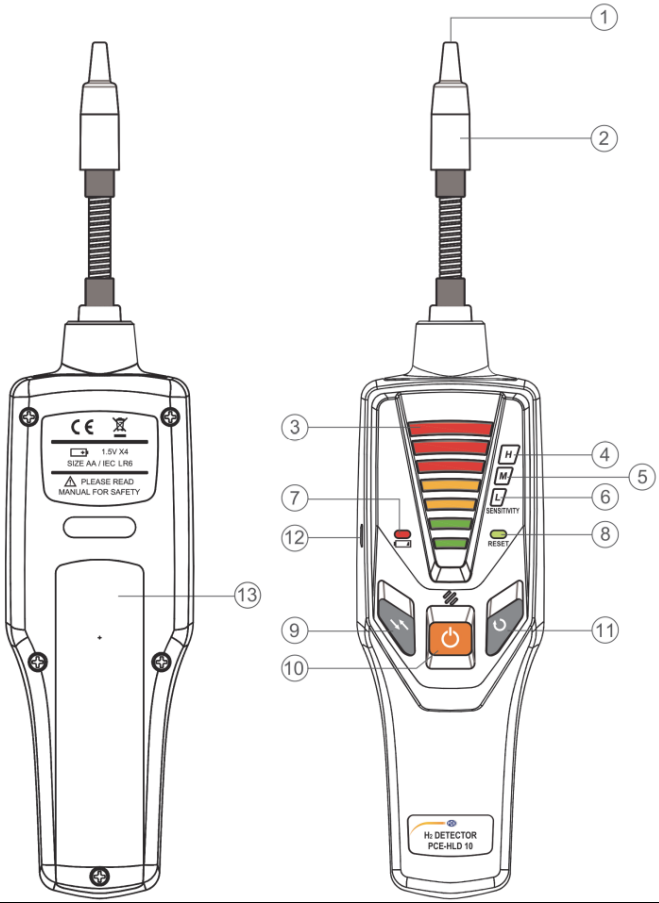
2 Specifications

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 (H2) and 95 % nitrogen (N2).	
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

3 Delivery scope

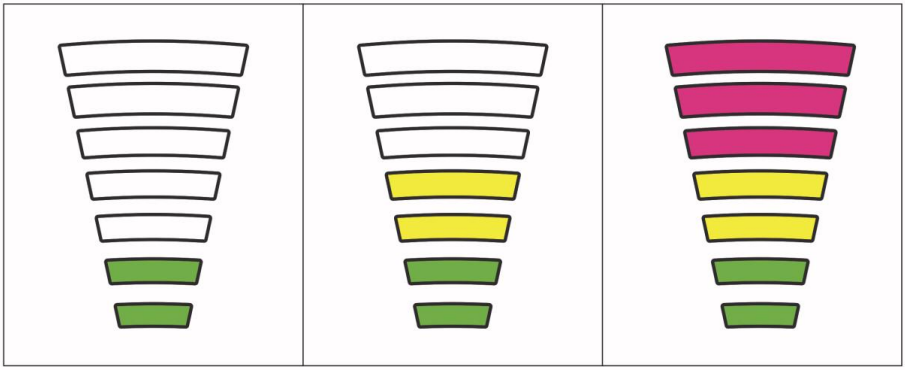
1 x hydrogen detector PCE-HLD 10
1 x carrying case
4 x 1.5 V AA battery
1 x user manual

4 Device description



No.	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

5 Bar display



Low concentration | Medium concentration | High concentration

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

6 Power supply

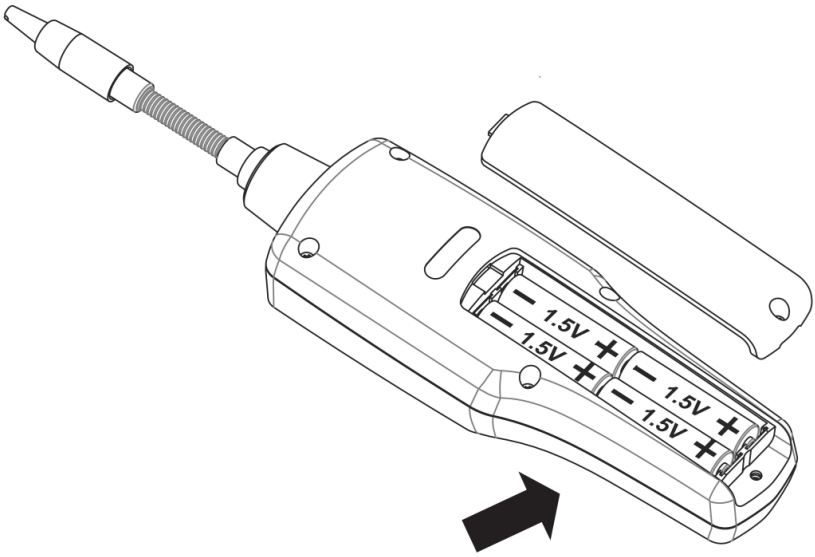
The PCE-HLD 10 can be powered either by 4 1,5V AA batteries or via the 5 V DC USB interface.

6.1 Power supply via the micro-USB interface

The PCE-HLD 10 can be supplied with a 5 V DC, 1 A fixed voltage source via the micro-USB interface.

Note:
This interface is not a data interface. The inserted batteries can also not be recharged via this interface.

6.2 Power supply via batteries



To supply power from batteries, open the battery compartment on the back. Then insert four 1.5 V AA batteries. Ensure correct polarity when inserting them. After inserting the batteries, close the battery compartment.
As soon as the batteries are discharged, this is signalled 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 functioning.

7 Switching the meter on/off

To switch the meter on or off, press and hold the on / off key for at least 2 seconds. After switching on, the meter requires a warm-up time of 45 s until it is ready for operation. The warm-up time is signalled by all LEDs flashing. As soon as the flashing stops, the meter is ready for measurement.

Note:
Zeroing is carried out during the warm-up period. Therefore, make sure that the meter is switched on in fresh air. If the meter is zeroed when hydrogen is present, this hydrogen content is ignored in subsequent measurements until a new zeroing is performed.

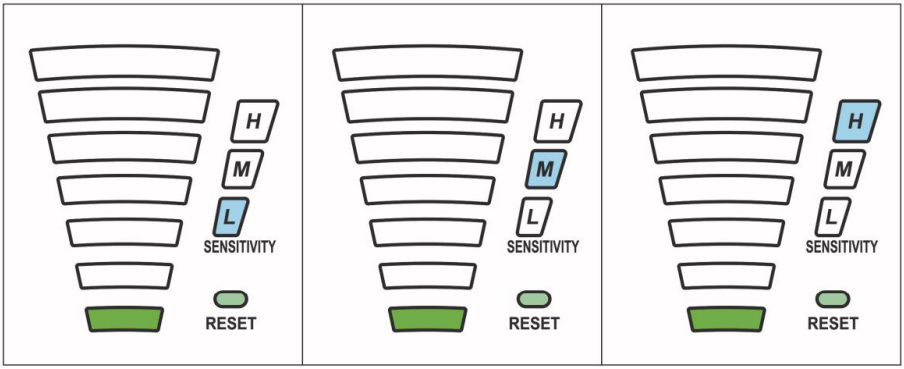
7.1 Automatic power off

If no key is pressed for 10 minutes, the meter turns off. To disable this function, press and hold the key when turning on the meter. After switching on, you can release the keys. The meter will now no longer switch off automatically. The automatic power off function will be active again after manual switch-off.

8 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



9 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 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.

9.1 Manual zeroing

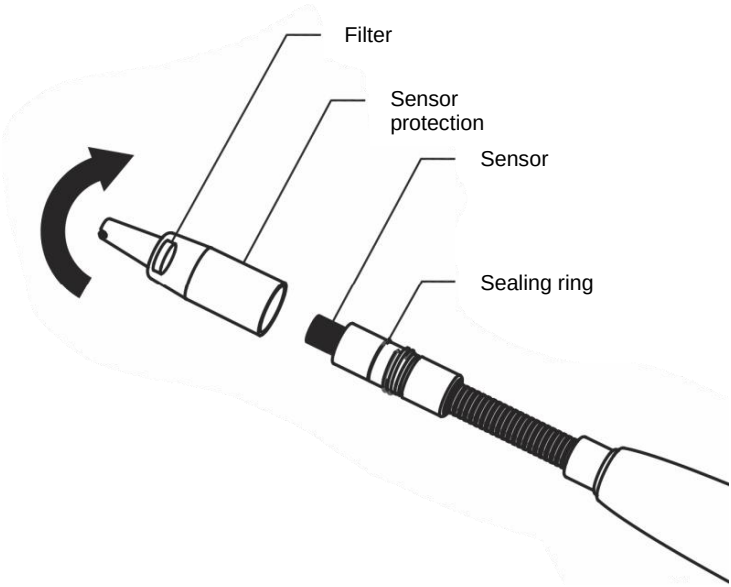
To perform a manual zeroing, press the reset key once.

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.

10 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.



11 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.

12 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.

www.pce-instruments.com

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
23, rue de Strasbourg
67250 Soultz-Sous-Forets
France
Téléphone: +33 (0) 972 3537 17
Numéro de fax: +33 (0) 972 3537 18
info@pce-france.fr
www.pce-instruments.com/french

Spain
PCE Ibérica S.L.
Calle Mayor, 53
02500 Tobarra (Albacete)
España
Tel. : +34 967 543 548
Fax: +34 967 543 542
info@pce-iberica.es
www.pce-instruments.com/espanol

United Kingdom
PCE Instruments UK Ltd
Unit 11 Southpoint Business Park
Ensign Way, Southampton
Hampshire
United Kingdom, SO31 4RF
Tel: +44 (0) 2380 98703 0
Fax: +44 (0) 2380 98703 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.
Institutenweg 15
7521 PH Enschede
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