

# Hach pHD sc Online Process pH Sensor, Low pH, 10 m Cable

| | |
|---|---|
| **Product #:** | **DPD1R3.99** |
| AED Price: | Contact Hach |

## The smart choice for accurate and reliable online process pH measurement

Low pH Online Process pH Sensor with Integrated Digital Electronics for "Plug and Play" with Hach Digital SC Controllers - pHD Technology, Glass pH Electrode, PPS Housing, Convertible Mount, 10 m Cable

This instrument connects to Claros, Hach's innovative Water Intelligence System, enabling you to seamlessly connect and manage instruments, data, and process – anywhere, anytime. The result is greater confidence in your data and improved efficiency in your operations. To unlock the full potential of Claros, insist on Claros Enabled instruments.

**Exceptional Process pH Sensor Performance with the Differential Electrode pHD Measurement Technique**
This field-proven technique uses three electrodes instead of the two normally used in conventional pH sensors. Process and reference electrodes measure the pH differentially with respect to a third ground electrode. The end result is unsurpassed measurement accuracy, reduced reference junction potential, and elimination of sensor ground loops. These process pH sensors provide greater reliability, resulting in less downtime and maintenance.

**Lower Maintenance Needs with the Double Junction Salt Bridge**
The double junction salt bridge creates a barrier to contamination which minimizes the dilution of the internal standard cell solution. The result is lower maintenance needs and a longer time period between calibrations.

**Extended Working Life with the Replaceable Salt Bridge/Protector**
The unique, replaceable salt bridge holds an extraordinary volume of buffer to extend the working life of the sensor by protecting the reference electrode from harsh process conditions. The salt bridge simply threads onto the end of the sensor if replacement is needed.

**Reliability with Built-in Encapsulated Preamp**
Encapsulated construction protects the sensor's built-in preamp from moisture and humidity, ensuring reliable sensor operation. The preamp in the pHD analog sensor produces a strong signal, enabling the sensor to be located up to 1000 m (3280 ft.) from the analyzer.

**Patented Technology**
The former GLI, now a Hach Company brand, invented the Differential Electrode Technique for pH measurement in 1970. The pHD sensor series takes this field-proven technology to a new level.

---

## Specifications

| | |
|---|---|
| Accuracy: | ± 0.02 pH |
| Cable connection: | Digital |
| Cable length: | 10 m PUR (polyurethane) 4-conductor with one shield, rated to 105 Ã‚Â°C |
| Calibration method: | Two point automatic, one point automatic, two point manual, one point manual. |
| Communication: | MODBUS |
| Compliance: | Hazardous location, Maritime, CE |
| Drift: | 0.03 pH per 24 hours, non-cumulative |
| Electrode type: | HF Resistant |
| Flow rate: | 3 m (10 ft.) per second, maximum |
| Housing material: | PPS |

| | |
|---|---|
| Length: | 271.3 mm |
| Measuring range: | -2.0 to 14.0 pH |
| Mounting: | Convertible |
| Operating temperature range: | -5 - 70 °C (23 - 158 °F) pHD and ORP<br><br>0 - 50 °C (32 - 122 °F) SS pHD<br><br>Before initial pH calibration, calibrate the temperature measurement when the sensor is in water or buffer which is at approximately the same temperature as the pH buffers (matches current recommendation) |
| Pressure range: | Maximum 10.7 bar . 6.9 bar for Digital Sensor at 70°C, and 6.9 bar for Analog Sensor at 105°C. |
| Repeatability: | ± 0.05 pH |
| Sensitivity: | ± 0.01 pH |
| Sensor cable: | 10 m (33 ft.) polyurethane, 4-conductor cable with one shield, rated to 105°C (221°F) |
| Sensor thread: | 1" NPT |
| Storage conditions: | 4 - 70 °C, 0 - 95% relative humidity (non-condensing) |
| Temperature accuracy: | ± 0.5 °C (± 0.9 °F) |
| Temperature compensation: | Automatic with NTC 300 Ω thermistor, or manually fixed at a user-entered temperature,<br><br>additional selectable temperature correction factors (ammonia, morpholine, or user-defined pH/°C linear slope) available for pure water automatic compensation 0.0 - 50 °C |
| Temperature sensor: | NTC 300 Ω thermistor for automatic temperature compensation and analyser temperature readout |
| Transmission distance: | 100 m (328 ft.), maximum |
| Warranty: | 24 months |
| Weight: | 0.316 kg |
| Wetted Materials: | PEEK or PPS, salt bridge of matching material with PVDF junction, glass process electrode, titanium ground electrode, and FKM/FPM O-ring seals (pH sensor with optional HF-resistant glass process electrode has 316 stainless steel ground electrode, and perfluoroelastomer wetted O-rings; consult factory for other available wetted O-ring materials) |

## Required Accessories

- SC1000 Probe Module, 4 Sensor Connectors, 4 mA Output, 4 Relays, 100-240 VAC, with EU plug  (Item LXV400.99.2R121)
- SC1000 Display Module  (Item LXV402.99.00001)