

pH/ORP: DIFFERENTIAL SENSORS, 1-1/2 INCH

Regenerateable Encapsulated LCP or Ryton® Differential pH and ORP Sensors—ideal for aggressive applications.



These field-proven differential electrodes are available in LCP (foreground) or Ryton® body materials. They provide greater reliability and reduced maintenance

- Unsurpassed accuracy and reliability with differential measurement technique—three electrodes instead of the normal two in conventional pH sensors
- Greater reliability results in less downtime and maintenance
- Built-in preamp or two-wire transmitter
- Versatile mounting styles
- 3,000 ft. (914 m) transmission distance
- Also available with flat glass electrodes

Complete Encapsulation

Complete encapsulated construction protects the sensor's built-in electronics from moisture and humidity problems, extending the working life of the sensor.

Built-in Preamp or Two-wire Transmitter

The built-in preamp produces a strong signal, enabling you to locate the analyzer up to 3000 ft. (914 m) from the sensor. An optional built-in two-wire transmitter is available for applications requiring a 4-20 mA sensor signal. This option requires that the indicating instrument of the measuring system be capable of providing 24 Vdc to power the sensor, and have adjustment means to calibrate for zero offset and span.

Versatile Mounting Styles

Threads are provided on both ends of the convertible mounting style sensor for either mounting into a pipe tee or attaching to the end of a pipe for immersion. The convertible style enables you to consolidate inventory, and thereby reduce associated costs. A union-mount style sensor and mounting tee are also available to conveniently install and remove the sensor for in-line service.

LCP Sensor

Chemically-resistant LCP Body

The exceptional chemical resistance and mechanical strength of the LCP (liquid crystal polymer) sensor body makes it ideal for most applications. These sensors can be used in aggressive process solutions such as acids, bases, alcohols, hydrocarbons, aromatics, chlorinated hydrocarbons, esters, ketones, and most other chemicals.

Low Heat Distortion

LCP sensors are physically stable and will not expand or contract when subjected to the heating and cooling cycles of a process. Furthermore, these sensors may be installed in metal fittings without fear of leakage, normally a problem when dissimilar materials are threaded together.

Ryton® Sensor

Excellent, Strong Base Chemical Compatibility

The Ryton sensor is best suited for measuring strong base solutions of more than 12 pH at elevated temperatures. It can also be used in acidic solutions, but is not recommended when aromatic hydrocarbons are present.



Platinum ORP
(Gold ORP also available)



Antimony Sensor

Primary Applications

- Drinking Water
- Wastewater
- Industrial Water
- Environmental

Specifications*

Measuring Range pH: 0 to 14 pH ORP: -2000 to +2000 mV	Wetted Materials LCP body, PVDF junction, Viton O-rings, glass electrode, and titanium ground rod
Temperature Range -5 to 95°C (23 to 203°F)	Weight ~1.3 lbs. (0.6 kg)
Max. Pressure 100 psig	
Sensitivity pH: < 0.005 pH ORP: < 0.5 mV	

**Subject to change without notice.*

See pages 15-70 for information on Hach laboratory and field pH instruments and chemistries.

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Principal of Operation

Hach's unique Differential Sensor Technology uses three measuring electrodes instead of the two in conventional pH sensors. The process electrode and standard electrode measure the pH differentially with respect to a third ground electrode.

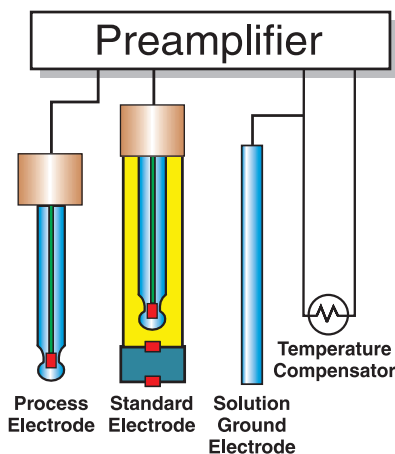
This technique is proven to provide unsurpassed accuracy, reduce reference junction fouling, and virtually eliminate ground loops. The benefit is greater reliability with less downtime and maintenance.

Differential Sensor Warranty

Hach Company offers the best sensor warranty in the industry on its Differential Sensors. We will replace any Differential Sensor that fails due to defects in materials or workmanship within one year from the date of shipment—and up to 30 months on a prorated basis for any failure



By replacing the salt bridge and standard cell solution, Hach Differential Sensors can be regenerated for repeated use. For salt bridges and standard cell solution, see page 460.



The Differential Sensor, with its built-in pre-amplifier, boosts the high impedance mV signals of the electrodes, providing a strong signal which can be transmitted up to 3,000 feet.

Popular pH/ORP Differential Sensor, 1-1/2 inch models

Prod. No.	Type	Body Material	Body Style	Electrode Material
6028P0	5-wire	LCP	Convertible	General purpose glass
6028P1	5-wire	LCP	Convertible	Antimony
6058P0	5-wire	LCP	Union-mount	General purpose glass
6022P0	5-wire	Ryton	Convertible	General purpose glass
6422P0	2-wire	Ryton	Convertible	General purpose glass
6458P0	2-wire	LCP	Union-mount	General purpose glass
6428P0	2-wire	LCP	Convertible	General purpose glass
2028R0	5-wire	Ryton	Convertible	Platinum ORP
2028R1	5-wire	Ryton	Convertible	Gold ORP
2058R0	5-wire	LCP	Union-mount	Platinum ORP

Sensor Accessories (order separately)

Interconnect Cables*

- 1W1055 For use with 5-wire sensors
- 1W0980 For use with 2-wire sensors

*Price/foot. Specify required length in whole feet.

Spare Union Adapters**

- 60G9753-101 LCP adapter
- 60G9753-301 Ryton adapter

**Each adapter includes two Viton O-rings and a retaining ring.

For additional accessories and mounting hardware options, visit: hach.com/ProcessPHSensors

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Find it here... Buy it today on hach.com

U.S. customers only.

