

Replace unreliable sensors & cut maintenance costs.



The Q22 Specialty pH/ORP sensors are designed for use with all non-ATI analyzer systems and generic panel meters, allowing these end users to utilize the same robust features of the standard ATI Q25 sensors. The sensors are classified as either Universal or Loop-Powered, depending on the output selected.

The Universal sensors emulate standard, non-amplified combination sensors and are designed to interface with all non-ATI pH/ORP analyzers. The sensors require no power supply as the preamplifier is powered by an internal lithium battery. The pH sensor outputs a mV signal in the range of either -500 to +500 mV or 0 to 2 VDC; both are linear over the 0 to 14 pH range. The ORP sensor outputs a mV signal that

ranges from -1000 to +1000 mV. These sensors may be used as replacement sensors for use with all non-Quantum analyzers.

The Loop-powered sensors require an external 7-30 VDC power supply and provide a 4-20 mA output signal for direct connection to generic panel meters, data acquisition systems, or other devices that accept a current input. The sensor includes integral temperature compensation of the pH signal, so no temperature output is provided. The sensor output is uncalibrated, therefore, the receiving instrument must be capable of providing user calibration of the pH or ORP signal on a periodic basis.

System Features

Differential-Style Sensor: The reference element is a second glass pH electrode immersed in a reference buffer solution. This glass reference system allows the sensor to be used in applications that poison conventional pH or ORP sensors.

PEEK® or 316SS Sensor Body Construction: All sensor housings are constructed of either PEEK®, a high performance thermoplastic that provides outstanding mechanical strength and chemical resistance, or 316 stainless steel.

Replaceable Sensor Saltbridge: A large volume, dual junction saltbridge is used to maximize the in-service time of the sensor. The replaceable saltbridge allows for easy and inexpensive sensor regeneration.

Integral Preamplifier: The integral preamplifier is encapsulated in the body of the sensor. This creates a low impedance signal output which ensures stable readings in harsh environments, and maximizes the distance between sensor and analyzer.

Multiple Electrode Types: Sensor electrodes are user-specified to ensure measurement reliability and maximum sensor lifetime. The type of pH electrode can be selected for optimal performance. The metal ORP electrode is either platinum or gold, depending on the process chemicals.

Model Q22 Sensor Specifications

| | |
|-----------------------------------|---|
| Measuring Range: | 0 to 14 pH; 0 to +1000 mV or ± 1000 mV |
| Sensitivity: | 0.002 pH; 0.2 mV |
| Stability: | 0.02 pH; 2 mV (per 24 hours, non-cumulative) |
| Wetted Materials | PEEK®, ceramic, titanium, glass, Viton®, EDPM Platinum or Gold : ORP 316 Stainless Steel with sanitary or insertion body styles |
| Temperature Compensation: | Pt100 or Pt1000 RTD |
| Sensor Cable: | 6 conductor plus 2 shields, HDPE Jacket |
| Temperature Range: | -5 to 95°C (23 to 203°C) |
| Pressure Range: | 0 to 100 psig |
| Max. Flow Rate: | 10 feet (3 meters) per second |
| Max. Sensor to Analyzer Distance: | 3000 feet (914 meters): Universal 1000 feet (305 meters): Loop powered |
| Sensor Body Options: | 1" NPT convertible 1¼" insertion 1½" or 2" sanitary-style |
| Shipping Weight: | 1 pound (0.45 kilogram) |

Ordering Information: Model Q22-A-B-C-D-E Sensor

Suffix A - Electrode Type

- P1 - pH: Industrial glass
- P2 - pH: Municipal glass
- P3 - pH: Antimony metal (HF use only)
- R1 - ORP: Platinum metal
- R2 - ORP: Gold metal

Suffix B - Temperature Compensation Element

- 1 - Integral
- 2 - Pt 1000
- 3 - Pt 100

Suffix C - Output

- 1 - ± 500 mV (pH); 0 - 1000 mV (ORP)
- 2 - 0 to 2 VDC
- 3 - 4 to 20 mA

Suffix D - Sensor style

- 1 - Convertible-style, PEEK
- 2 - Insertion-style, 316SS
- 3 - 1½" Sanitary-style, 316SS
- 4 - 2" Sanitary-style, 316SS

Suffix E - Sensor or cable length

- 1 - 15 feet
- 2 - 30 feet
- 9 - Special

Options:

- 05-0057 Sensor regeneration kit (P1, R1, R2)
- 05-0067 Sensor regeneration kit (P2)
- 09-0034 pH 4.00 buffer, 1000 mL
- 09-0035 pH 7.00 buffer, 1000 mL
- 09-0036 pH 10.00 buffer, 1000 mL
- 09-0045 pH 6.87 buffer, 500 mL
- 09-0037 pH 9.18 buffer, 500 mL
- 09-0042 200 mV solution, 500 mL
- 09-0043 600 mV solution, 500 mL
- 05-0056 Quinhydrone powder, 5 grams
- 00-0048 Junction box
- 07-0100 NEMA 4X junction box
- 31-0057 Sensor interconnect cable

Notes

1. Integral temperature compensation is available with 4-20 mA output only.



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