

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 5 - Convertible with quick-disconnect receptacle
Suffix E - Sensor or cable length	1 - 15 feet 2 - 30 feet 9 - Special

Options:

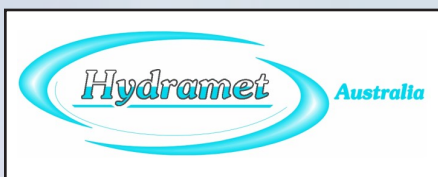
05-0057	Sensor regeneration kit (P1, R1, R2)
05-0067	Sensor regeneration kit (P2)
09-0034	pH 4.00 buffer, 1000 mL
09-0035	pH 7.00 buffer, 1000 mL
09-0036	pH 10.00 buffer, 1000 mL
09-0042	200 mV solution, 500 mL
09-0043	600 mV solution, 500 mL
05-0056	Quinhydrone powder, 5 grams
00-0048	Junction box
07-0100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

Notes

1. Insertion & Sanitary Styles must use 316 SS body material and are only available in these sensor styles.
2. Sensor with integral connector is not waterproof and is for indoor use only.
3. Suffix D-5 requires sensor cable P/N 03-0029



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