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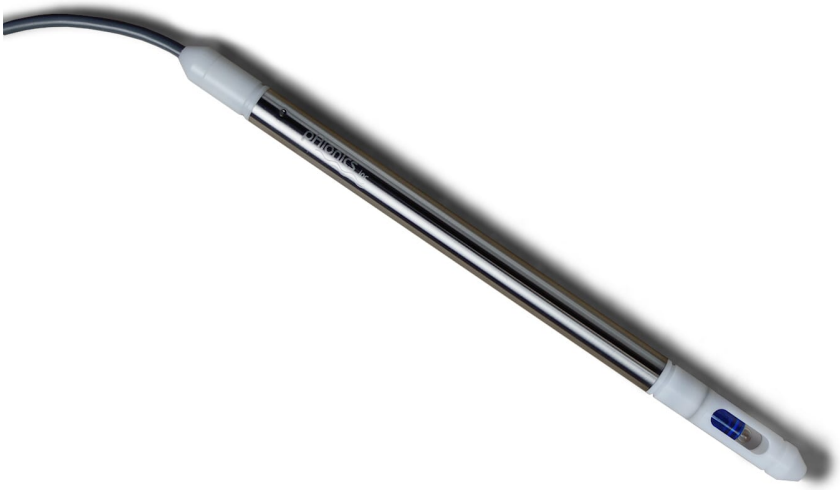
pHionics STs Series pH Water Quality Sensor

Product Images



Short Description

The pHionics STS Series pH sensor is meticulously engineered to meet your monitoring and control needs. **Low maintenance operation**, **rugged materials & seals**, and **ground loop elimination** all come standard. Just plug two wires into any pH monitoring/control system that accepts 4-20 mA inputs and **enjoy years of hassle-free operation.**

Description

The STs Series pH water quality sensor makes your job easier by providing years of trustworthy pH and temperature data via noise-resistant 4-20 mA signals.

The sensor has a large, double junction reference electrode for stable measurements over long periods of unmanned operation. In addition, our noise-reduction technology prevents ground loops and other forms of electrical interference for consistently accurate measurements.

A narrow diameter (0.75” or 1.9 cm) and fully sealed, submersible design allows the sensor to go anywhere you need to collect data while the durable, chemicalresistant housing and Kevlar-reinforced cable ensure many years (10+) of operation, even in polluted environments.

Key Features

- Large gel-filled, double-junction electrode providing stable 0-14 pH measurements for long periods of time
- Durable, chemical-resistant housing and cable
- Combination double-junction electrode with large reference reservoir
- Built-in 0-50°C temperature sensor (2nd channel)
- Chemical-resistant Delrin®, PVDF, and 316 Stainless Steel housing (Titanium optional)
- True 2-wire sensor for simple installation
- Solution ground
- Narrow diameter (0.75 inches or 1.9 cm)
- Removable electrode guard
- Fully submersible up to 70 psi
- Shielded, Kevlar®-reinforced, water-blocked polyurethane cable
- 4-20 mA signal capable of transmission up to 3 miles (with proper wire gauge)
- Automatic Temperature Compensation (2% per degree Celsius)
- Reversible Input Protection and Operation
- 2-second warm-up time
- Lowest power usage compared to other 4-20 mA pH sensors
- Isolated to prevent electrical interference and protect connected devices
- Signal conditioning to remove background noise.

Applications

- Groundwater Monitoring
- Agricultural Run-off
- Mining Pollution
- Industrial Effluent Monitoring
- Wastewater Treatment
- Environmental Remediation
- Aquaculture.

Built-To-Last

With proper care, these sensors are designed for many years of reliable pH monitoring in harsh conditions. The truly unique aspect of the STs Series is that every part, including the cable, is easily replaceable in the event of wear/damage. This considerably extends their lifespan to save your company money. It also keeps

waste out of landfills to support sustainable business practices.

Ground Loop Elimination

If you ever have a pH sensor sending erratic measurements and can't figure out why, then there may be a "ground loop". A ground loop occurs when the electrical circuit has multiple paths to ground that cause interference. This issue can be very difficult to detect and fix. The best way to avoid ground loops is with input/output electrical isolation, which is built into every pHionics sensor.

Low Maintenance

Very little is required to keep these sensors up. Just perform periodic calibrations and replace the electrode every few years. Electrode replacement is a 60-second procedure that is easily performed in the field without any tools.

Additional Information

Brand	pHionics
Country of Manufacture	United States

Explanation

Specifications

pH Sensor

Output	4-20 mA
pH Range	0-14 pH
Operational Temperature Range	0-70°C
Electrode Type	Silver/silver chloride, double junction, replaceable gel electrode
Transmitter Type	2-wire
Pressure Range	0-70 psi
Automatic Temperature Compensation	0-70°C
Isolation	600 VDC
Power Supply Voltage	8-40 VDC
Warm-up Time	2 seconds
Response time	95% < 5 seconds
Wetted Materials	316 Stainless Steel, Delrin®, Viton™, glass, epoxy
Length	14.25 in (36.20 cm)
Width	0.750 in (1.9 cm) maximum
Weight (No cable)	0.50 lbs (0.227 kg)
Linearity	±0.014 pH*
Accuracy	±0.014 pH*
Sensitivity	±0.01 pH
Stability	±0.03 pH per year
Repeatability	±0.01 pH

*After proper calibration

Temperature Sensor

Output	4-20 mA
Temperature Range	0-50°C
Accuracy	+/- 1°C
Linearity	+/- 0.5°C
Power Supply Voltage	7-40 VDC

Cable

Cable Material	Polyurethane
Type	4 conductor, Kevlar® reinforced, water blocked, shielded, twisted-pair wiring
Maximum Distance	3 miles
Resistance per 1000 ft (304.8 m)	26 Ohms
Replaceable?	Yes

pHionics products comply fully with all applicable EU Directives to bear the CE Mark.
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Ideal For	Professional