ST-71X Series Industrial pH & ORP Sensors

Product Description

The Pyxis ST-710 series of pH and pH/ORP combined sensors are specifically designed to simplify installation, calibration and in-use operation in process water, industrial water, waste-water and cooling water applications. These sensors are uniquely designed to offer an embedded transmitter and can be utilized in both 4-20mA or RS-485 Modbus formats. When utilized in RS-485 Modbus format, these sensors also provide a temperature output signal. These features dramatically improve application possibilities allowing the ST-710 series of sensors to be directly connected to most OEM micro-processor- based controllers, PLC's and Distributed Control Systems.

The ST-710 series oversized platinum disk for ORP and the flat pH bubble sensing elements increase their resistance to highly turbid waters and contamination. The enlarged salt bridge design with large junction capacity also ensures a significantly longer sensor life with minimal maintenance.

These devices are ideally suited for hard to measure waters where conventional pH & ORP sensors would have otherwise failed or required high maintenance costs. The ST-710 series of sensors do not require electrode change out or Potassium Chloride (KCl) re-fill and are designed to be used until end of life and completely swapped out. Each sensor offers a six-foot cable 7-Pin quick adapter as well as a 1.5-foot flying lead wire with 7-pin adapter for rapid installation and replacement. The ST-710 series are provided with the ST-001 Pyxis standard ¾" NPT-CPVC installation Tee for in-line flow applications but may also be installed in submersed applications using the MA-102S Submersion Adapter Kit. Additionally, larger pipe size installation Tee's are available from Pyxis Lab.

ST-712
pH + ORP

ST-710
pH

ST-711
ORP

Typical Applications

- Industrial Process & Cooling Water
- Fresh / Brackish / Sea Water
- Raw / Influent Water
- Wastewater Effluent
- Surface Water / Storm Water

Features

- Industrial Process & Cooling Water
- Dual embedded transmitters – 4-20mA and RS-485 Modbus
- Compact design for small footprint ideally suited for industrial applications
- Tolerant to frozen conditions during shipment or storage for short periods
- Large junction capacity
- Longer service life and less maintenance
- Stainless solution on sensor tip for enhanced grounding issue prevention
- Bluetooth Accessible when used with MA-WB or PowerPACK Bluetooth Adapters
- Wireless Diagnosis and Calibration with uPyxis APP for Mobile or Desktop devices

Specifications

Item	ST-710	ST-711	ST-712
Part Number	53001	53002	53003
pH Range	0–14 with ATC ±0.01pH Unit Precision		
ORP Range	±1,500mV range with ±1.0mV Precision		
Response Time	95% within 5 sec		
Power Supply	12–36V DC, ~1W		
Output	4-20mA Isolated, RS-485 Isolated		
Connector	IP-67 Waterproof Connector/Cable - 1.5m (4.5ft)		
Operation Pressure	Up to 0.7MPa (100psi)		
Installation	ST-001 Standard 3/4inch NPT Tee Assembly, MA-102S Submersion Adapter		
Storage Temp.	-20–60 ºC (-4–140 ºF)		
Operational Temp.	40-120 ºF (4-49 ºC)		
Housing Material	CPVC		
Dimensions	6.8in (172.7mm) L x 1.44in (36.6mm) D		
Weight	0.37lbs (170g)		
Typical Service Life	2+ Years		
Warranty	13 Months from Shipment Date		
Regulation	CE/RoHS		

Order Information | Part Number

Order Information	Part Number
ST-710 pH Sensor	53001
ST-711 ORP Sensor	53002
ST-712 pH + ORP Sensor	53003

Optional/Replacement Accessories Information | Part Number

Optional/Replacement Accessories Information	Part Number
Inline Sensor Cleaning Kit	SER-01
pH Combo Calibration Solution Kit	57007
ORP Calibration Solution	57020
ST-001 Standard Pyxis Lab Tee Assembly	50704
ST-002 Tee Plug	ST-002
MA-102S Submersion Adapter	MA-102S
MA-WB Bluetooth® Adapter	MA-WB
MA-NEB USB Bluetooth® Adapter	MA-NEB
MA-1100 4.9' Flying Lead Cable	MA-1100
MA-C10 Extension Cable	50738
MA-C50 Extension Cable	50705
MA-C100 Extension Cable	50706

uPyxis® Diagnosis, Calibration & Historical Data Transfer

The ST-710 Series sensors are uniquely designed and highly stable. Simple maintenance cleaning and calibration of the sensors on a regular basis should enable very long operational life and accuracy. Cleaning and calibration frequencies are application dependent on the contaminant level of suspended solids, iron, manganese, oil, and bacteria, etc... When calibration is required, the ST-710 Series can be wirelessly diagnosed, cleaned and calibrated using the MA-WB or PowerPACK Series Bluetooth adapters and the uPyxis APP for Mobile or Desktop.

NOTE:

The uPyxis® mobile app is evolving rapidly and users can find the latest version at no cost on the Apple iStore or GooglePlay. The desktop version of the uPyxis® app can be downloaded at:

www.pyxis-lab.com/upyxis-app