

ST-720 / ST-726

High Range Conductivity Smart Sensors

Description

The ST-720 and ST-726 are uniquely designed industrial-grade inline conductivity sensors launched by Pyxis Lab Inc. that adopt the latest sensing technology with greatly improved detection range, accuracy and stability with anti-interference capabilities designed for use in complex environments. The built-in transmitter supports both digital and analog signal output, designed to simplify on-site installation, calibration and use of operation. The ST-720 and ST-726 both contain a 4-graphite electrode configuration with a scale of 1-100,000 $\mu\text{S}/\text{cm}$ and 10-300,000 $\mu\text{S}/\text{cm}$ respectively, allowing it to be less prone to fouling and deposition when used in challenging applications. Both maintain conductivity accuracy and precision without the need of frequent calibrations and within a 1.5% $\mu\text{S}/\text{cm}$ precision level. ST-720 and ST-726 both contain an embedded Pt-100 RTD temperature sensor allowing for auto-temperature compensation. The unique flat surface also makes sensor cleaning and calibration very easy. Each sensor is provided with the ST-001 in-line Tee in $\frac{3}{4}$ " FNPT format. ST-720 and ST-726 may also be installed in submersed applications while using the Pyxis MA-102S Submersion Adapter. Both sensors offer two 4-20mA output signals (temperature and conductivity) with integrated transmitter as well as RS-485 modbus digital output. As with all Pyxis sensors, the ST-720 and ST-726 can be easily diagnosed, cleaned and calibrated in wireless format when used with the MA-WB or PowerPACK Series Bluetooth adapters and the **uPyxis APP** for mobile or desktop devices.



*ST-720 Series Sensor
with ST-001 Inline Tee*

Typical Applications

- Industrial Water Applications
- Process Water Applications
- Surface Water Monitoring
- Wastewater / Stormwater Monitoring

Features

- Large/Dynamic Range 1-100,000 $\mu\text{S}/\text{cm}$ and 10-300,000 $\mu\text{S}/\text{cm}$
- 2X 4-20mA & RS-485 Output (7-Pin) for Temperature & Conductivity
- Conductivity Value Compensated Based on Measured Temperature to Nominal Value = 25°C
- Wireless Diagnosis & Calibration via uPyxis APP for Mobile or Desktop Devices
- Cell Constant - K Factor = 0.3

Specifications

Items	ST-720	ST-726
Part Number	53101	53114
Conductivity Range Output	1-100,000 $\mu\text{S}/\text{cm}$, $\pm 10\mu\text{S}/\text{cm}$ or 1.5%	10-300,000 $\mu\text{S}/\text{cm}$, $\pm 10\mu\text{S}/\text{cm}$ or 1.5%
Temperature Range Output	0 - 100°C (32 – 212°F) $\pm 0.2\%$ of the value	
Sample Temperature	0 - 49°C (32 – 120°F)	
Cell Constant (K)	0.3	
Sample Pressure	0 - 100 PSI	
Power	12 – 36 VDC, 1W	
Storage Temperature	-4 - 140 °F	
Output Signal	2X 4-20mA and RS-485 Modbus (Temperature & Conductivity)	
Dimension	172mm (6.8 in) long / 36mm (1.44 in) diameter	
In-Line Installation	Includes Pyxis Tee (ST-001), $\frac{3}{4}$ inch socket or threaded FNPT with union	
Submersed Installation	Accessory Pyxis Submersion Adapter (MA-102S),	
Body Material	CPVC	
Rating	IP67	
Regulation	CE, RoHS	

*With Pyxis' continuous improvement policy, this specification is subject to change without notice.

Cleaning & Calibration

The ST-720 and ST-726 conductivity 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-720 and ST-726 can be wirelessly diagnosed, cleaned and calibrated using the **MA-WB** or **PowerPACK** Series Bluetooth adapters and the **uPyxis** APP for Mobile or Desktop.

See instructional video attached. https://www.youtube.com/watch?v=nzlwOH0A2_o



Figure 1 – MA-WB Bluetooth Adapter (left) / uPyxis Mobile APP (center) / Pyxis Conductivity Standard & Probe Cleaner (right)

Accessories

Pyxis PYXIS INLINE SENSOR ACCESSORIES - SELECT*A*GUIDE Pyxis		
Accessory Name/Description	Part Number	Photo
Pyxis ST Series Cleaning Kit <i>(includes 500mL Sensor Cleaner / Qtips & Pipe Cleaners)</i>	SER-01	
Pyxis Conductivity Calibration Standard - 1,000 uS/cm <i>(500mL Bottle)</i>	57008	
0.75" NPT Inline Sensor Tee Assembly <i>(All ST Series Sensors)</i>	50704	
2.0" NPT Inline Sensor Tee Assembly <i>(All ST Series Sensors)</i>	50756	
3.0" NPT Inline Sensor Tee Assembly <i>(All ST Series Sensors)</i>	50775	
ST-002 Inline Sensor Removal PLUG <i>(Allows ST Sensor Removal)</i>	ST-002	
ST Series Sensor Tee Replacement O-Ring <i>(All ST Series Tee's)</i>	MA-150	
ST Series Submersion Adapter Kit <i>(Submersible Kit for all ST-Series Sensors)</i>	MA-102S	
MA-WB Bluetooth Adapter for All ST Series Sensors <i>(4-20mA & RS-485)</i>	MA-WB	
MA-485 USB Adapter for All ST Series Sensors <i>(4-20mA RS-485)</i>	MA-485	
Bluetooth PC to Handheld Adapter <i>(For uPyxis Firmware Updates)</i>	MA-NEB	
PowerPack 1 <i>(Single Channel Power Supply w/Bluetooth)</i>	MA-BLE-1	
PowerPack 4 <i>(Four Channel Power Supply w/Bluetooth)</i>	MA-BLE-4	
MA-1100 <i>(24" Flying Lead Cable for All ST Sensors)</i>	MA-1100	
MA-C10 <i>(10' Extension Cable for All ST Sensors)</i>	50738	
MA-C50 <i>(50' Extension Cable for All ST Sensors)</i>	50705	