ST-724 / ST-725 / ST-728
Ultra-Low Inline Conductivity Sensors

Description

The Pyxis Lab ST-724, ST-725 and ST-728 are industrial grade in-line ultra-low conductivity sensors specially designed for pure and ultra-pure water applications. They can be used for ultra-low conductivity measurement of pure water, ultra-pure water and deionized water including Boiler Feedwater and Condensate, RO and EDI/EDR process water, Ion Exchange, Distillation, Semi-Conductor Cleaning, Degas conductivity and other process applications. These are 'smart sensors' with a built-in transmitter supporting digital and analog signal outputs and are designed to simplify field installation, calibration and operation. The sensors offer simple ¾" MNPT threaded installation or installation in the Pyxis inline Tee assemblies and are constructed with a Hastelloy electrode tip and stainless-steel body. The ST-724, ST-725 and ST-728 sensors can be wirelessly calibrated with **uPyxis** app for mobile or desktop devices when used with the MA-CR Bluetooth adapter. The sensors both offer two 4-20mA Analog outputs, one for conductivity and one for temperature, as well as RS-485 Modbus output for a broad array of installations that desire to connect the smart sensor directly to receiving controller, PLC or DCS network. Both sensors have built-in RTD for the automatic compensation of sample temperature.

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Ultra-Low Conductivity Sensors*

Typical Applications

- Ultrapure EDI / EDR / Ion Exchange Applications
- Conventional RO/ Feedwater / Condensate Purity Water Applications
- Temperature – Utilization for All Application Types
- Broad Versatility Operating Temperature & Pressure
- Desired Direct Connection Applications to PLC, Controller or DCS
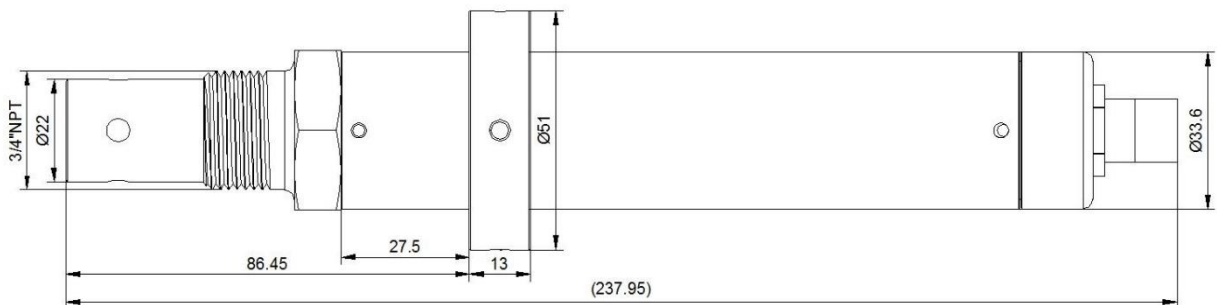- Multi-Drop Modbus Sensor Installations direct to PLC or DCS

Features

- Two 4-20 mA Analog outputs temperature and conductivity
- RS-485 Digital output for conductivity and temperature
- Calibration and diagnostics by **uPyxis App** via Pyxis MA-CR Bluetooth Adapter
- Rugged all Stainless Steel and Hastelloy construction
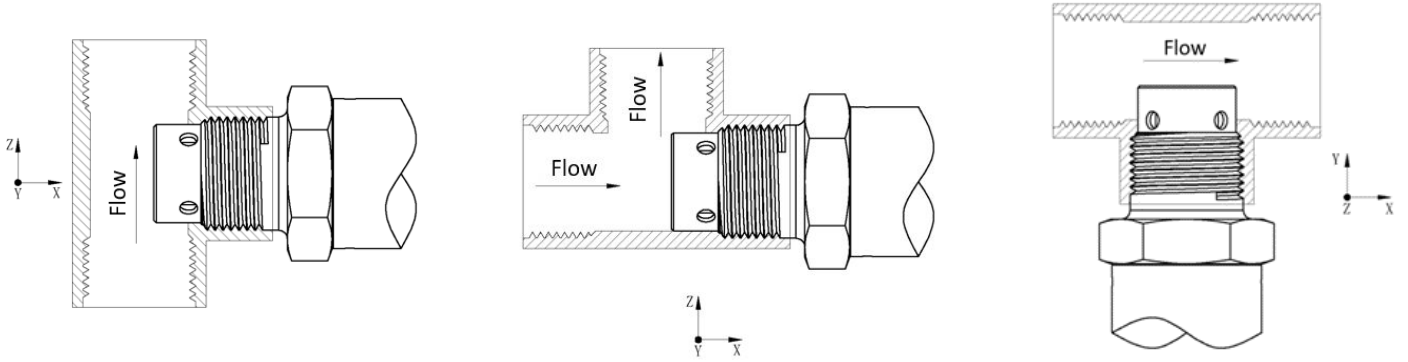- Two Sensor Range Options Available

Specifications

Item	ST-724	ST-725	ST-728
P/N	10009	53108	53117
Conductivity Range	0.02-1,000.0 µS /cm	0.02-200.0 µS /cm	0.02-10.0 µS /cm
Conductivity Precision	± 0.2 µS/cm or ±1% *(<500 µS)*	± 0.1 µS/cm or 1% of value	
4-20mA Range for Temp	32 - 212 °F (0 - 100 °C)		
Temperature Precision	±1% of the value		
Cell Constant (K)	0.3		
Response	T90 = 92 Sec.		
Sample Pressure	Up to 100 psi (0.7 MPa)		
Power Supply	22 – 26V DC, Power Consumption 2W		
Dimension (L x W x H)	Length 8.46 inch (215 mm), body diameter 1.32 Inch (33.6 mm)		
Installation	¾" NPT or Pyxis ST-001 Inline Tee Assembly		
Body Material	304 stainless steel		
Weight	530 g (1.10 lbs)		
Operational Pressure	100 psi (6.9 Bar)		
Operating Temperature	40 - 120 °F (4 - 49 °C)		
Storage Temperature	20 - 140 °F (-7 - 60 °C)		
Outputs	8Pin - Isolated Dual 4 – 20 mA Analog Output & Isolated RS-485 Digital Output		
Wet Material	HASTELLOY		
Rating	IP67, Fully Dustproof & Waterproof		
Regulation	CE, UKCA, RoHS Marked		
Cable Length	5 ft (1.5 m) [§] - (Extension Cables Available)		

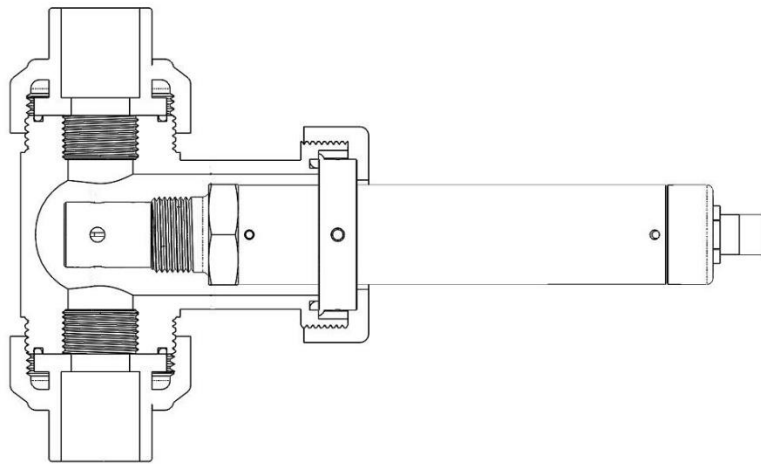## ST-724 / ST-725 / ST-728 Diagram (mm)
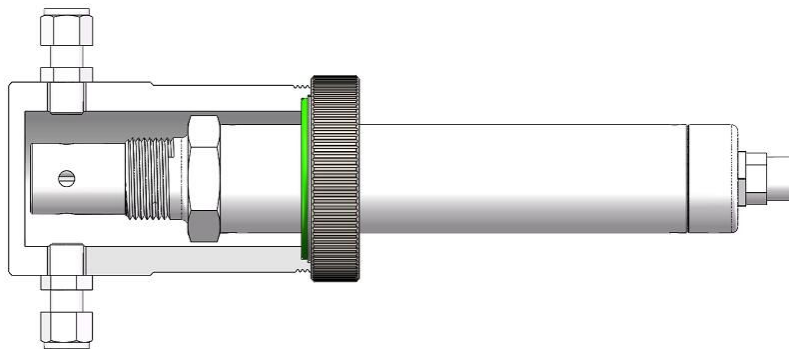
Proper Flow Installations

To maximize accuracy, it is critical the ST-724, ST-725 and ST-728 sensors be installed in a method to minimize air bubbles or entrainment. The flow direction should be as outlined below to ensure proper flooding of the sensor electrode

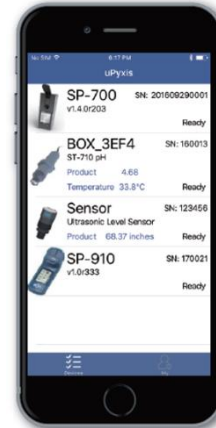

Proper Installation Using ¾-inch NPT Threaded Liquid End

Proper Installation Using ST-001 (CPVC) Inline Tee Assembly

Proper Installation Using ST-007 (Stainless Steel) Inline Tee Assembly

ST-724 / ST-725 / ST-728 Wireless Calibration via uPyxis APP

The uPyxis APP manages all Pyxis portable meter and inline sensors on mobile and desktop devices, including Apple iPhones and Samsung Android smartphones.   When the MA-CR Bluetooth Adapter accessory is connected to the Pyxis ST-724, ST-725 and ST-728 Ultra-Low Conductivity sensors, users may utilize the uPyxis APP to diagnose, clean and calibrate their sensor at both zero and slope points, preventing the need to calibrate the sensor through the receiving controller or PLC. *Note* The uPyxis Mobile APP is evolving rapidly and users can find the latest version at no cost on Apple iStore or Google Play.   The uPyxis Desktop APP may be downloaded at https://pyxis-lab.com/support-2/

ST-724 / ST-725 / ST-728 Sensors & MA-CR Bluetooth Adapter

Order Information   P/N

ST-724 *(0.02-1,000.00 us/cm Sensor – Stainless Steel)*   10009

ST-725 *(0.02-200.00 us/cm Sensor – Stainless Steel)*   53108

ST-728 *(0.02-10.00 us/cm Sensor – Stainless Steel)*   53117

Accessories   P/N

MA-CR *(Bluetooth Adapter for 8Pin Pyxis Sensors)*   MA-CR

MA-NEB *(Bluetooth/USB Adapter for use with Desktops)*   MA-NEB

ST-001 (CPVC Inline Tee Assembly)   50704

ST-007 (Stainless Steel Inline Tee Assembly)   50700-A51

UC-50 *(Display/Data Logging Terminal)*   43007

MA-10CR *(10ft Extension Cable w/8Pin Quick Adapters)*   50741