Pyxis®

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DATA SHEET

ST-500 PTSA Inline Sensors

For Industrial Cooling & Membrane Water Applications

Product Description

The ST-500 Series inline sensor platform is a proprietary design for the direct measurement of PTSA (Pyrenetetrasulfonic Acid, CAS# 59572-10-0) ultilzing LED UV light sources (365nm ex / 410nm em) for use in industrial cooling water and process treatment applicaitons.

The ST-500 Series offer Pyxis Lab® proprietary algorithms to determine the concentrations of PTSA while measuring sample turbidity and color in highly contaminated waters (ie. ≤150NTU and 10ppm Fe) for internal compensation. The ST-500 Series offers a combination of 4–20mA as well as RS-485 Modbus output signals and is Bluetooth® enabled for wireless cleanliness diagnostics and calibration when used with the MA-WB or PowerPACK Series of Bluetooth® Adapters and the uPyxis® mobile and desktop app.

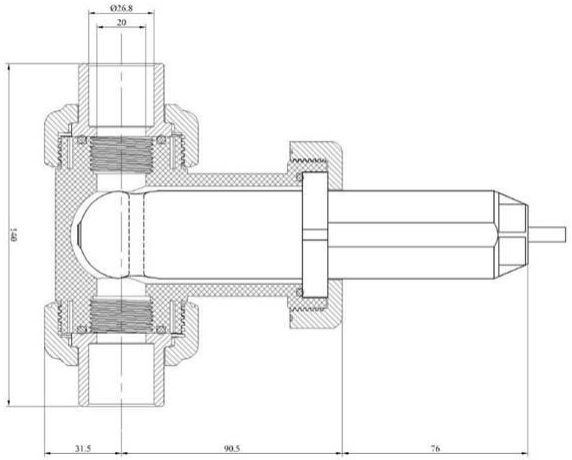
The ST-500 Series is provided in CPVC with the standard Pyxis Lab® ST-001 inline 3/4IN FNPT Tee Assembly, 5ft Bulk-Head Cable with Quick Adapter and 1.5ft Flying Lead Cable with Quick Adapter, enabling rapid wiring to any microprocessor controller, PLC or DCS system. The ST-500SS is offered in 304L Stainless Steel with 3/4IN FNPT ports for high pressure applications.

Contact Us at ***info@pyxis-lab.com*** for More Information...

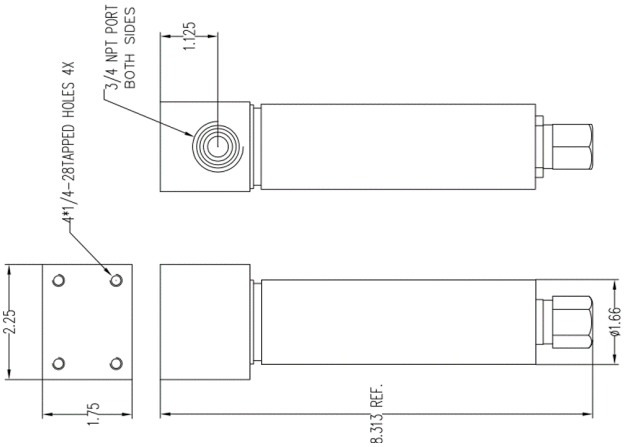
Specifications

Item	ST-500	ST-500RO	ST-500SS
Part Number	50661	50669	50700
PTSA Output Scale	0–200ppb	0–40ppb	0–200ppb
PTSA Max Range *via uPyxis®*	0–300ppb	0–40ppb	0–300ppb
PTSA Precision/Accuracy	±1ppb	±0.2ppb	±1ppb
Excitation/Emission	LED 365/410nm		
Power Supply	22–26VDC, Power Consumption - 1W		
Outputs	Isolated 4–20mA Analog & Isolated RS-485 Digital - 7Pin		
Installation	ST-001 Tee (Provided), 3/4in FNPT		3/4in FNPT Threading
Weight	170g (0.37lbs)		1,148g (2.5lbs)
Operational Pressure	100psi (6.9Bar)		290psi (20Bar)
Operational Temperature	4–49 °C (40–120 °F)		
Storage Temperature	-20–60 °C (40–120 °F)		
Material	CPVC		304 Stainless Steel
Rating	IP67, Dust-Proof & Water-Proof		
Regulation	CE Marked + RoHS		
Dimensions	6.8in (172.7mm) Length x 1.44in (36.6mm) Diameter		
Cable Length	5ft, Terminated with IP67 Adapter + 1.5ft Flying Lead		

ST-500/RO Assembly Diagram



ST-500SS Diagram



Optional Accessories	Part Number
ST-001 Spare Tee *(3/4in FNPT Inline Tee)*	50704
PTSA-100 *(PTSA Calibration Solution - 500mL)*	21001
Cleaning & Calibration Kit *(MA-WB + PTSA-100 + Cleanser)*	57013
MA-WB Bluetooth Adapter *(7-Pin Adapter)*	MA-WB
PowerPACK 1 *(Single Channel Power Supply w/ Bluetooth)*	MA-BLE-1
PowerPACK 4 *(Four Channel Power Supply w/ Bluetooth)*	MA-BLE-4
MA-NEB *(USB Bluetooth® Adapter for uPyxis® Desktop)*	MA-NEB
SP-350 PTSA Handheld *(0–300ppb)*	SER-02
MA-C10 *(10ft Extension Cable for 7-Pin Sensors)*	50206
MA-C50 *(50ft Extension Cable for 7-Pin Sensors)*	50738
	50705

Cleaning & Calibration

Pyxis Lab® recommends cleaning and calibrating the ST-500 Series inline sensors at a minimum frequency of once per month. For clean water applications this period may be increased. For heavily contaminated applications, diagnosis, cleaning and calibration may be considered more frequently. The ST-500 Series sensor contains internal hardware and algorithms that enable compensation of color and turbidity as well as sensor cleanliness diagnostics. When powered by and connected to the MA-WB (7Pin) or PowerPACK Series Bluetooth® Adapter options, the ST-500 Series sensor can both be wirelessly accessed via Bluetooth® from any mobile or desktop device using the uPyxis® app.

The app features a live graphical display of the sensors value outputs for PTSA as well as sensor cleanliness check and calibration function. The cleanliness check can be conducted rapidly to determine if a cleaning is required prior to sensor calibrtion. Once the sensor is properly cleaned it can be re-diagnosed to confirm the cleaning was effective and then calibrated with its corresponding Pyxis Lab® Calibration Standard (ie. PTSA-100). *Contact **service@pyxis-lab.com** for Support...*

Calibration & Diagnostics
*made easy with **uPyxis® App***

www.pyxis-lab.com/upyxis-app