



ST-500W 'Direct Insert' PTSA Sensor for Walchem® or Alternate Tee

Product Description

The ST-500W is a stainless steel inline PTSA Pyxis smart sensor uniquely designed to be directly inserted into the Walchem® and alternative fluorometer tee assemblies. Since the alternative fluorometers commonly used in the water treatment industry have very similar dimensions as the Walchem tee design, the ST-500W design allows drop-in installation into both designs of inline tee assemblies without the need for plumbing modifications of equipment already in use.

The ST-500W is identical in internal design and function as the world-class ST-500 Series inline PTSA sensor platform offering the industry a proprietary design for the direct measurement of PTSA (Pyrenetetrasulfonic Acid, CAS# 59572-10-0) utilizing LED UV light sources (365nm ex/ 410nm em) and is specifically designed for use in industrial cooling water and process water treatment applications.

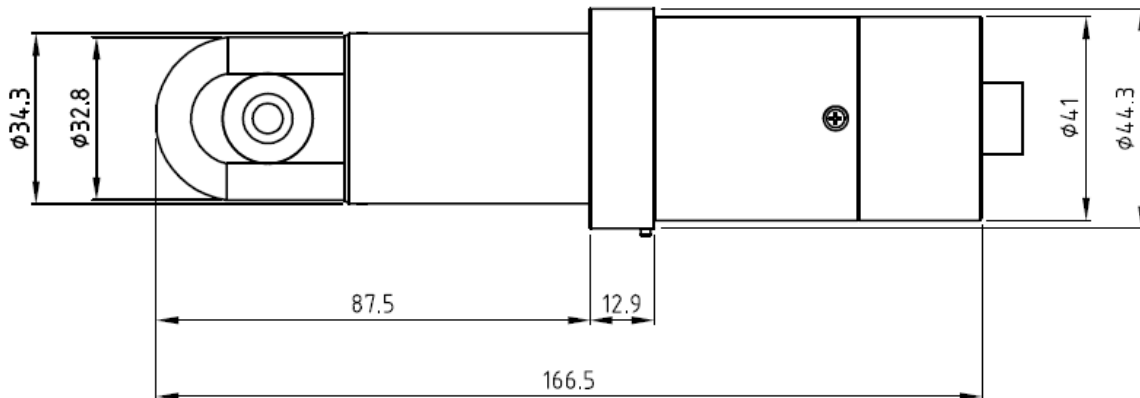
The ST-500W offers Pyxis proprietary algorithms to determine the concentrations of PTSA while measuring sample turbidity and color in highly contaminated waters (ie. <150 NTU and 10 ppm Fe) for internal compensation. The ST-500W offers a combination of 4-20mA as well as RS-485 Modbus output signals in 8-Pin cable format and is Bluetooth Enabled for wireless cleanliness diagnostics and calibration when used with MA-CR or PowerPACK Series Bluetooth Adapters and the uPyxis APP for Mobile or Desktop devices. The ST-500W comes equipped with 1.5m (4.9ft) bulk-head cable with quick adapter as well as 1.5m (4.9ft) flying lead cable with quick adapter, enabling rapid wiring to any microprocessor controller, PLC or DCS system.

Sensor Specifications

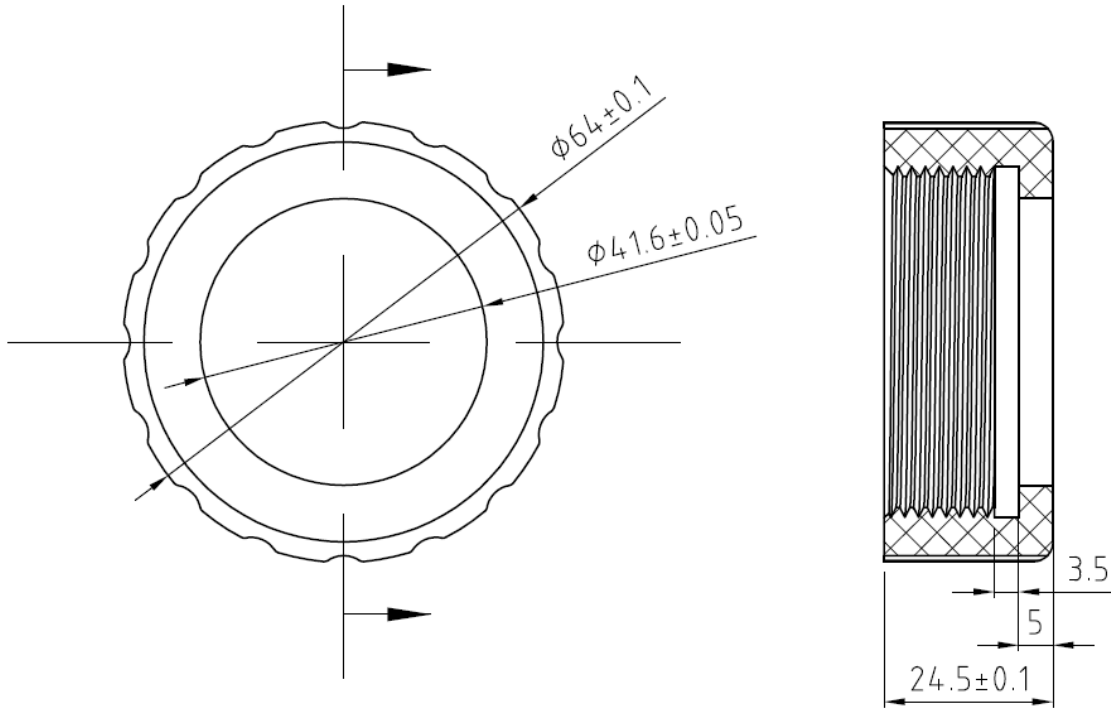
Item	ST-500W
P/N	58802
PTSA Range	0–200ppb
MAX Range	0–300ppb *Configurable via uPyxis®
Precision/Accuracy	±1ppb
Excitation/Emission	LED 365/410nm
Power Supply	22–26V DC, Power Consumption - 1W
Outputs	Isolated 4-20mA Analog Outputs & RS-485 Modbus - 8Pin
Installation	Walchem Tee & Alternative Fluorometer Tee
Items Included	1-Nut / 1-Oring for Walchem Tee / 1-Oring for Alternative Fluorometer Tee
Flow Range	0.25–8.0GPM
Weight	500g (1.1lbs)
Op. Pressure	≤100psi (6.9 Bar)
Op. Temperature	4-49 °C (40–120 °F)
Storage Temp.	-20–60 °C (-4–140 °F)
Material	304 Stainless Steel
Rating	IP-67, Fully Dustproof & Waterproof
Regulation	CE Marked + RoHS
Dimensions	Length 6.8 inch (172.7 mm), body diameter 1.44 Inch (36.6 mm)
Cable Length	1.5m 8-Pin Bulkhead Cable with Adapter / 1.5m 8-Pin Flying Lead Cable with Adapter

Walchem® is a register trademark of Iwaki America - Holliston, MA

Dimensions (mm)



Walchem/Alternative Tee Nut Dimensions (mm)



Cleaning & Calibration

Pyxis Lab® recommends cleaning and calibrating the ST-500W inline sensor 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-500W 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-CR (8Pin) or PowerPACK Series Bluetooth Adapter options, the ST-500W 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 a sensor cleanliness check and calibration function. The cleanliness check can be conducted rapidly to determine if a cleaning is required prior to sensor calibration. Once the sensor is properly cleaned it can be re-diagnosed to confirm the cleaning was effective and then calibrated with its Pyxis Calibration Standard (ie. PTSA-100). Contact service@pyxis-lab.com for support.



This screenshot shows the 'Slope Calibration' dialog box in the uPyxis app. It prompts the user to 'Put the probe into a solution with known PTSA concentration.' There is an input field containing '100' and buttons for 'Slope Calibrate' and 'Cancel'. Below the dialog, there is a 'Zero Calibration' button and a numeric keypad with digits 1-9 and function keys (ABC, JKL, MNO, PQRS, TUV, WXYZ).

This screenshot shows a table of sensor data and a 'Clean' status. The table lists 12 data points with their corresponding values and units. Below the table, the 'Diagnosis Condition' is 'Not Applicable'. A 'Cleanliness Check' button is highlighted in green and labeled 'Clean'. The status message reads: 'Probe is in good condition.' There is also a link to purchase a cleaning kit.

[1]	75	[mA]	9.33
[2]	22	[6]	2958
[3]	30	[7]	14
[4]	10	[8]	28
[5]	9	[9]	643
[10]	2944	[11]	967
[12]	27	[13]	645

This screenshot shows a 'Dirty' status for the sensor. The table of sensor data shows significantly lower values compared to the previous screenshot. The 'Diagnosis Condition' is 'Not Applicable'. A 'Cleanliness Check' button is highlighted in red and labeled 'Dirty'. The status message reads: 'Probe may be fouled, please clean the probe according to the instruction manual.' There is also a link to purchase a cleaning kit.

[1]	76	[mA]	4.00
[2]	22	[6]	3206
[3]	30	[7]	14
[4]	10	[8]	29
[5]	9	[9]	667
[10]	3	[11]	7
[12]	6	[13]	686

Order Information

Universal Nut Replacement

O-ring Replacement *(for Walchem Tee)*

O-ring Replacement *(for Alternative Fluorometer Tee)*

PTSA-100 *(PTSA Calibration Standard 100ppb / 500mL)*

MA-CR Bluetooth Adapter *(Bluetooth Adapter 8Pin)*

PowerPACK-1 *(Single Chanel Auxiliary Power Supply w/Bluetooth)*

MA-NEB Bluetooth/USB Adapter *(Enables uPyxis APP)*

Pyxis Probe Cleaning Kit

MA-10CR *(10' Extension Cable for 8Pin Pyxis Sensors)*

MA-50CR *(50' Extension Cable for 8Pin Pyxis Sensors)*

Part Number

23133

21501

26560

21001

MA-CR

MA-BLE-1

MA-NEB

SER-02

50741

50743