

# ST-765SS-Br

## Inline pH + Bromine Sensor for Cooling & Process Water

### Description

The Pyxis ST-765SS-Br is a stainless-steel multi-parameter membrane-less sensor based on unique electrochemical principles to determine Bromine plus pH and temperature of water. This sensor incorporates Pyxis' advanced technology in the field of bare-gold electrochemical detection. The ST-765SS-Br can simultaneously compensate for temperature and pH in the measurement of Bromine based on real-time conditions present in the application of use. This unique internal compensation results in a highly accurate oxidizer measurement consistent with DPD wet chemistry methodology as high as a pH of 9.0+ and is compliant with USEPA – 334.0 and ISO-7393 guidelines.

The ST-765SS-Br sensor offers a replaceable, front loading reference electrode assembly that has been independently developed by Pyxis Lab eliminating the shortcomings associated with membranes and gel replacement while offering reduced polarization time on startup with an electrode life span potential of up to 2-years. The flat front-end design of the ST-765SS-Br makes this platform less prone to contamination or fouling and is easy to clean. The ST-765S-Br sensor body is composed of 304 stainless steel and is well suited for aggressive environments.

The ST-765SS-Br sensor offers 2x 4-20mA and RS-485 Modbus outputs and is Bluetooth 5.0 enabled when used in conjunction with the MA-CR Bluetooth Adapter. This four-electrode composite sensor provides three measured parameters including Bromine, pH and temperature with one sensor equipped with fully integrated 2x 4-20mA and RS-485 Modbus outputs. ST-765SS-Br is uniquely designed for rapid and precise monitoring of cooling and process water applications utilizing Bromine. It should only be used in conjunction with the FR-300-PLUS self-brushing flow reservoir for challenging or dirty water applications.

### Key Features

- Real-Time pH + Oxidizer (0-5ppm) Detection
- Dual 4-20mA Outputs (Oxidizer + pH) and RS-485
- Bluetooth Enabled when used with MA-CR Adapter Wireless uPyxis Calibration
- Integrated RTD & pH Compensation to pH 9.0+ of the Oxidizer Value
- Replaceable EH-765 Reference Electrode Assembly – Simple Maintenance



**ST-765SS-Br**  
Bromine + pH Sensor



**EH-765**  
Replacement Electrode  
for all ST-765SS Series

### Common Applications

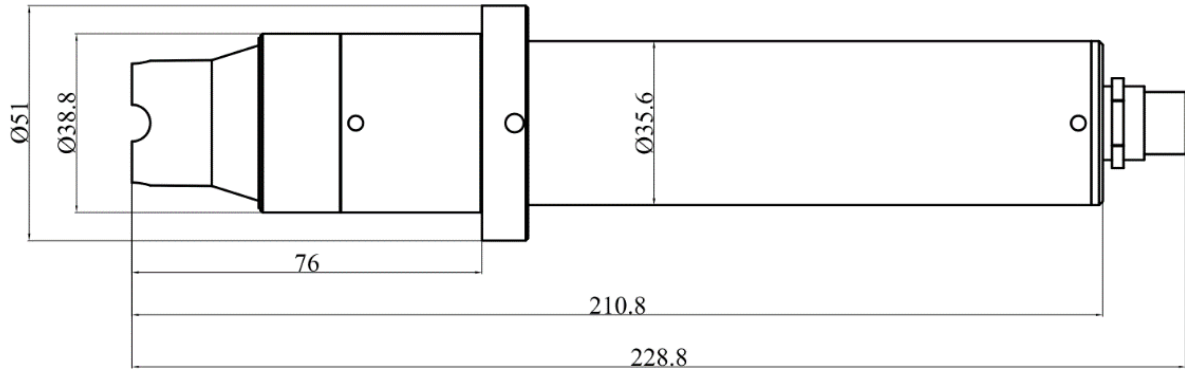
- Cooling Water
- Food & Beverage Process Water
- Industrial Process Water

### Specifications

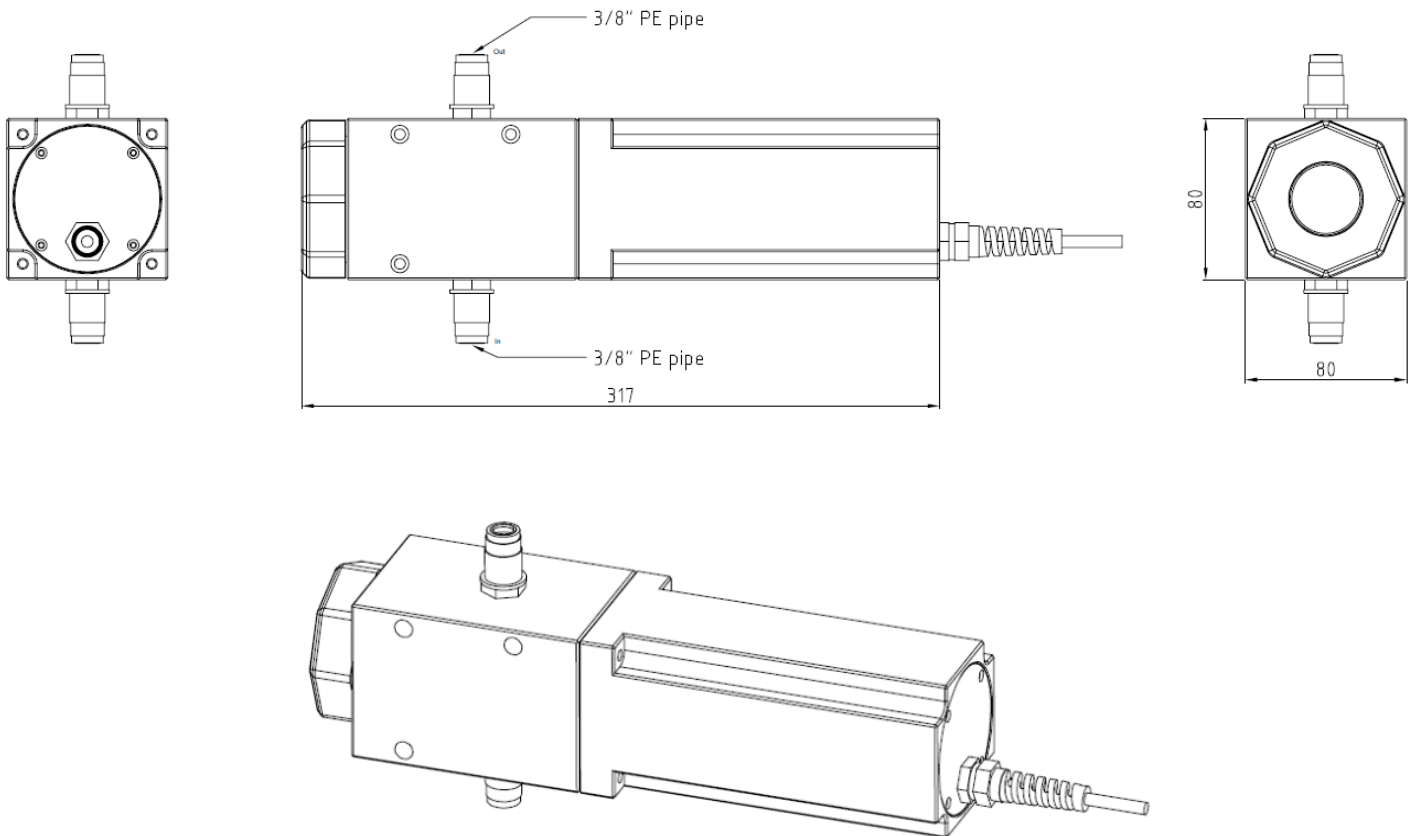
Item	ST-765SS-Br
P/N	59643
Sensor Body Material	304SS
Oxidizer Range	0.00-5.00 ppm Bromine
Oxidizer Precision	± 0.01mg/L or 1% of the value w/pH compensation up to 9.0+
pH Range	0-14
pH Precision	±0.01 pH
Sample Inlet Pressure	7.25 – 30 psi (0.05 – 0.2MPa)
Installation	FR-300-PLUS Magnetic Coupling Brushing Flow Reservoir
FR-300-PLUS Suggested Flow Rate	200 – 800 mL/minute
FR-300-PLUS Sample Inlet /Outlet	3/8 - inch OD
FR-300-PLUS Operation	24VDC/2.5W Powered Constant ON Mode for Relay Control and RS-485
FR-300-PLUS Rotational Speed	200 RPM – Motorized Brush Preset for Constant Operation
Sensor Power Supply	22 – 26VDC, Power Consumption 2W
Storage Temperature	-7 °C – 60 °C (20 – 140 °F)
Outputs	Dual Isolated 4 – 20 mA Analog Outputs + Isolated RS-485 Digital Output
Dimension (L x D)	Length 8.3 inch (210.8 mm), body diameter 1.4 Inch (35.6 mm)
Weight	530 g (1.16lbs)
Maximum Sensor Pressure	100 psi (6.9 Bar) – Sensor Only
Operating Temperature	4 °C – 49 °C (40 – 120 °F)
Wet Material	UPVC
Rating	IP67, Fully Dustproof & Waterproof
Selectivity	Non-Selective / Cross Sensitive to other Oxidizing Species
Compliance	EPA 334.0 / ISO 7393
Regulation	CE Marked / RoHS
Cables Included	MA-4.9CR Cable (8Pin Adapters – 1.5m) MA-1.5CR Cable (8 Pin Adapter / Flying Leads – 1.5m)
Typical Electrode Service Life	2 Years
Electrode Warranty	6 Months
Sensor Body Warranty	13 Months

*\*NOTE\* Specifications are subject to change without notice.*

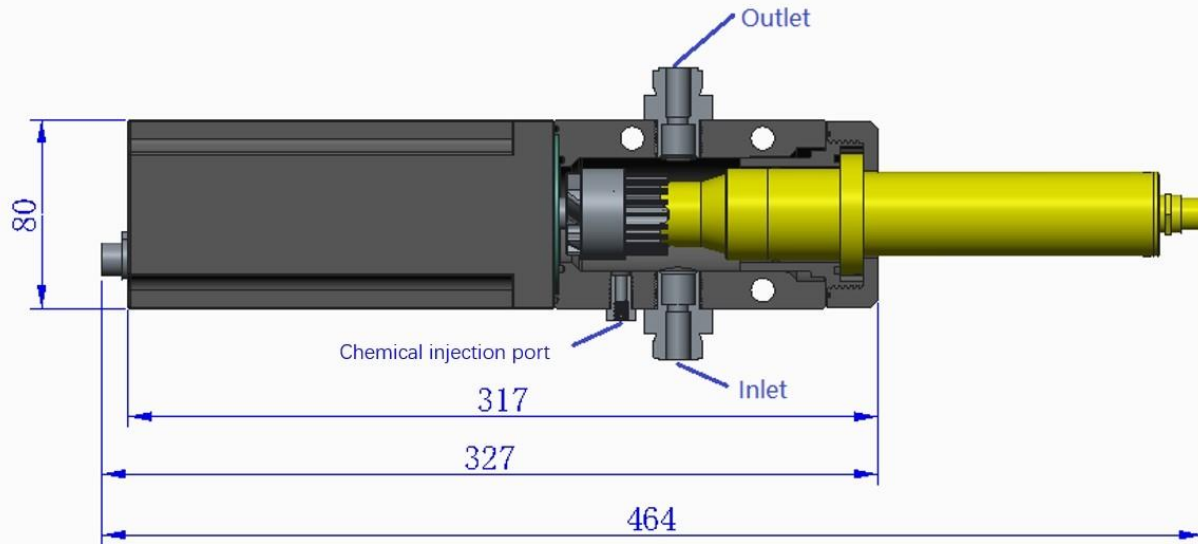
Dimensions of ST-765SS-Br (mm)



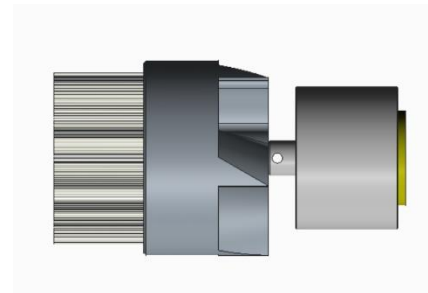
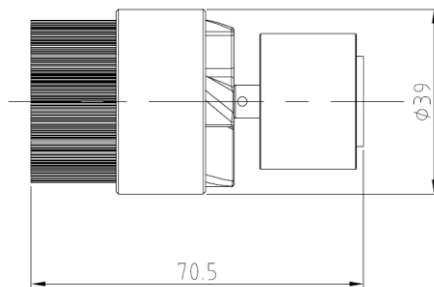
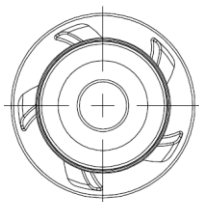
FR-300-PLUS Dimensions (mm)



FR-300-PLUS Component Schematic



FR-300-01 Replacement Brushing Assembly Dimensions (mm) & Image



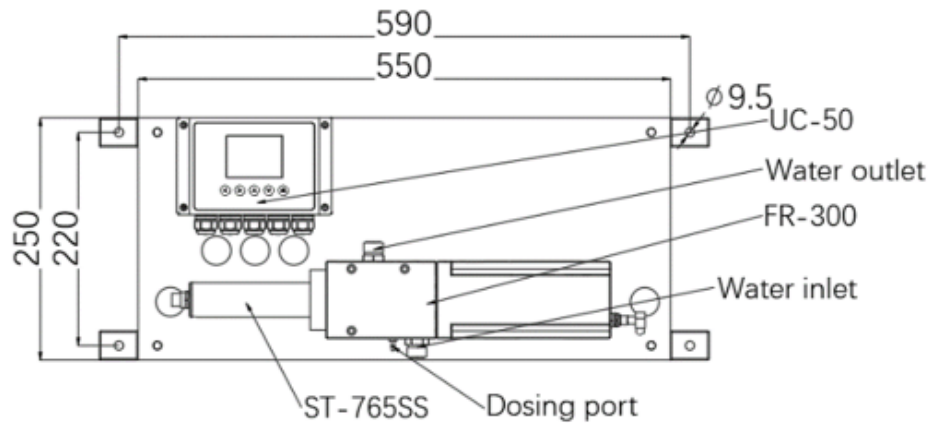
OxiPanel IK-765SS-Br (Bromine + pH + Temperature Online Monitoring Panel)

For customers desiring a “Turn-Key” analyzer, the IK-765SS-Br-B is a pre-assembled Bromine + pH + Temperature monitoring panel. The IK-765SS series offers highly accurate, real-time measurement, display and data-logging of Bromine, pH and Temperature utilizing proprietary Pyxis Lab smart sensor technology, coupled with a Pyxis UC-50 micro display and data logging terminal. The IK-765-Br-B also incorporates the a uniquely designed FR-300-PLUS automated mechanical brush flow assembly which is directly controlled via the UC-50 display to maintain optimum sensor electrode cleanliness in the most challenging of system water.

The UC-50 is a microprocessor display/data-logging terminal that has been preconfigured to connect Pyxis inline sensors with fully integrated calibration, scaling and measurement protocol. The user may also configure and calibrate the output signal through the UC-50 controller's screen.

Item	P/N	Description
OxiPanel IK-765SS-Br-B	44074	ST-765SS-Br Sensor + FR-300 PLUS Flow Reservoir + UC-50 Display/Data Logger

Image and Dimensions of IK-765SS Series (mm)



### uPyxis Mobile & Desktop APPS for Wireless Setup, Diagnostics & Calibration

The uPyxis APP manages all Pyxis portable meter and inline sensors on mobile and desktop devices, including Apple iPhones and Samsung Android smartphones. When connected to the Pyxis ST-765SS Series inline sensors, the uPyxis APP enables users to conduct a wireless probe calibration of pH and oxidizer from the touch of their smart device. The uPyxis direct calibration of the sensor eliminates unnecessary time wasted with calibrating the probe through the receiving controller and ensures the highest degree of accuracy and minimizes time spent in the field.

**\*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/>

For wireless access to all Pyxis devices via uPyxis, users will require the inline Bluetooth Adapter (P/N: MA-CR). Details can be found in the Order Information section of this Data Sheet.



#### Order Information

ST-765SS-Br (*Inline Bromine + pH Sensor 0 - 5.0ppm Stainless Steel*)

**P/N**

53643

#### Optional-Replacement Accessories

EH-765 (*ST-765SS Replacement Reference Electrode Assembly*)

53061

FR-300-PLUS (*Optional Auto-Brushing Flow Assembly For Dirty Water Applications*)

50700-A44

FRP-300-1 (*Replacement Brush Head for FR-300-PLUS*)

50700-A49

MA-AC-7US (*110VAC Power Supply Adapter for FR-300-PLUS with USA Plug*)

26398

MA-AC-7EU (*230VAC Power Supply Adapter for FR-300-PLUS with EU-DIN Plug*)

28787

NANO-FLOW (*Pyxis Ultrasonic Flow Measurement and Regulation Module*)

21329

MA-CR Bluetooth Adapter (*Optional 8-Pin Bluetooth Adapter for use with uPyxis APP*)

MA-CR

MA-50CR (*50-ft Cable Extension 8-Pin for ST765SS Series*)

50743

OxiPanel IK-765SS-Br-B (*Bromine + pH + Temperature Analyzer*)

44074

SP-200 OxiPocket™ (*Pocket All-Oxidizing Disinfectants Colorimeter & Fluorometer*)

50802