IK-765SS-SO3

Inline Sulfite + pH Analyzer for Chlorine/Oxygen Scavenger

Product Description

The IK-765SS-SO3 is a dual-parameter inline water analyzer specifically designed as a 'Turn-Key' monitoring solution for clean water applications to monitor Sulfite in water commonly used in water and process applications for scavenging of Chlorine and Oxygen. The IK-765SS-SO3 offers highly accurate, real-time measurement, display and data-logging of Sulfite (SO3), pH and Temperature utilizing proprietary Pyxis Lab smart sensor technology, coupled with a Pyxis UC-80 touch screen display and data logging terminal. The IK-765 series is offered in a convenient and easy to integrate panel mounted format for rapid installation and simple maintenance.

The IK-765 Sulfite/pH analyzer is equipped with the propriety Pyxis ST-765SS-SO3 smart sensor design which is membrane-free and based on unique principles and incorporates Pyxis' advanced technology in the field of bare-gold electrochemical detection. The sensor measures the Sulfite level and pH simultaneously while performing temperature and pH compensation for the measurement of the reducing agent based on conditions present in the application of use. The IK-765SS-SO3 panel is also provided with the ST-007 stainless steel flow reservoir with inlet rotameter, digital flow meter and UC-80 display/data logging terminal prewired to the sensor in RS-485 modbus format with fully integrated sensor diagnostics and calibration interface.

IK-765SS-SO3

This unique platform with internal sensor compensation is factory calibrated by Pyxis Lab using precise Sulfite concentration standards in an Argon purged environment resulting in highly accurate Sulfite detection consistent with Titration, Colorimetry or Fluorescence methodology as high as 100ppm. *NOTE* For boiler feedwater and blowdown sulfite measurement, the IK-765SS-SO3 panel must be installed downstream of a sample cooler.*

Turn-Key Installation

All Pyxis IK-765 series analyzers require a small installation footprint, offer simple operation and maintenance and are specifically designed for use in chlorine or oxygen scavenger residual monitoring applications. The analyzer may also be integrated with the optional Pyxis PowerCloud™ 4G remote gateway, which can upload on-site analyzer data to a cloud server in real time and allow for additional sensor/device inputs for cloud access. Contact Pyxis Lab for details on PowerCloud™ and Pyxis Cloud™.

Typical Applications

- RO Feedwater Chlorine Removal
- Sanitary Water Chlorine Removal
- Boiler Feedwater Oxygen Scavenger Monitoring
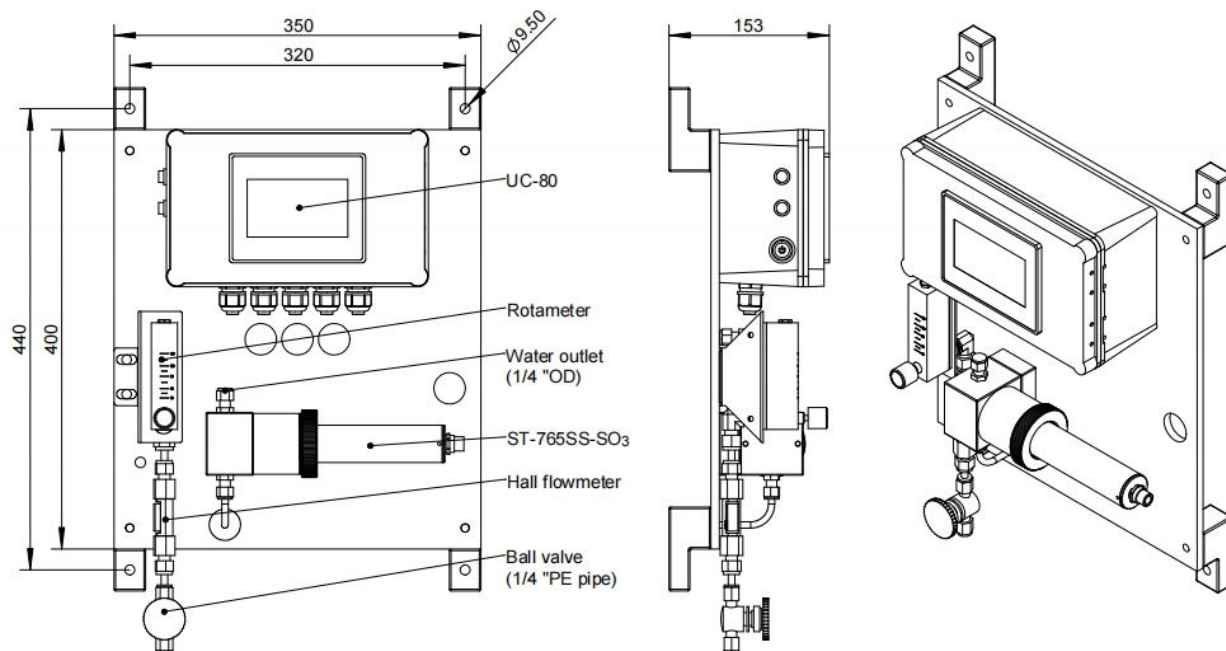- Boiler Blowdown Oxygen Scavenger Monitoring

Features

- Pyxis Lab's advanced research and development sensor technologies to achieve highly accurate and stable measurement of Sulfite, pH and Temperature.

- Pyxis ST-765SS-SO3 is a three-parameter composite sensor used for the measurement residual Sulfite, pH and temperature consistent with Titration, Colorimetry and Fluorometry methodologies. The sensors advanced PCB offers built-in temperature and pH parameter compensation (up to pH 9.0+) algorithms eliminating the need for a supplemental pH sensor and controller. Unique Bare-Gold electrode technology for Sulfite measurement eliminates membranes and electrode solution replenishment. The ST-765SS Series has a uniquely designed flat bubble pH electrode design for reduced fouling potential. Reduce your maintenance and cost versus conventional electrochemical sensors by utilizing Pyxis replaceable Electrode Head (EH-765) for this sensor allowing for years of reliable service. The ST-765SS-SO3 is precisely calibrated by Pyxis Lab in an Argon purged Sulfite solution with known concentration. This sensor may be calibrated in-situ after cleaning via conventional wet chemistry test measurement of active sample.

- Pyxis ST-007 Single-Sensor inline stainless steel flow cell provides a Sulfite demand-free environment for the safe installation and accurate operation of the ST-765SS-SO3 sensor. The inlet and outlet to the ST-007 are 316L stainless steel with SwageLok fittings in ¼-inch OD. The IK-765SS-SO3 panel is also equipped with inlet PRV, Rotameter and digital Hall Effect inlet flow meter for precise control and recording of the recommended flow range of 200-400 mL/minute. The outlet flow should be diverted to drain or the inlet of the pretreatment system for those desiring NSF compliance.

- Simple sensor removal and replacement. The ST-765SS Series sensors are connected to the Pyxis display/data logger via RS-485 modbus (RTU) allowing for integrated sensor calibration interface and diagnostics within the display screen.

- Convenient and simple to install Back-Panel (IK-765) for rapid and easy installation. Truly a plumb and power to go platform with intense factory setup, testing and sensor calibration prior to shipment.

- UC-80 touch screen color display/data logger prewired to the Pyxis sensor via RS-485 with calibration interface. Display/data logger offers 2x 4-20mA, RS-485 and TCP Modbus output with remote diagnosis and parameter adjustment. Pyxis PowerCloud™ 4G Gateway available as an optional accessory.
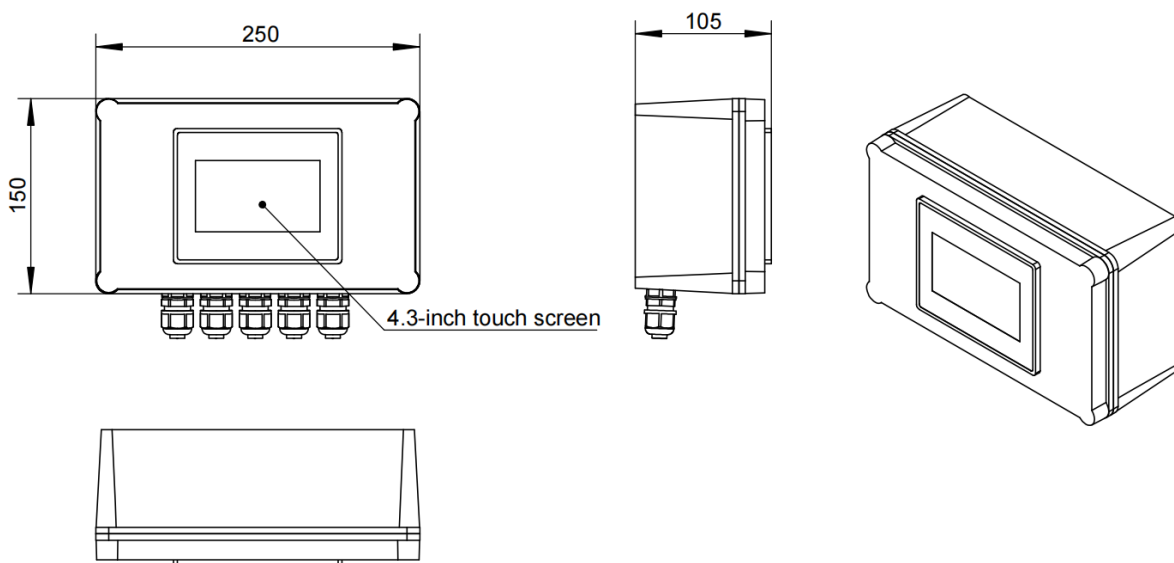
Specifications

Item	IK-765SS-SO3
P/N	42163
Sensor Body Material	304SS
Sensor Name	ST-765SS-SO3
Sulfite Range	0.00-100.00 ppm Sulfite (auto-range)
Sulfite Precision	± 1.0mg/L or 1% of the value w/pH compensation up to 9.0+
pH Range	0-14
pH Precision	± 0.01 pH
Sample Operating Temperature	4 °C – 40 °C (40 – 104 °F)
Sample Inlet Pressure	7.25 – 30 psi (0.05 – 0.2MPa)
Sensor Maximum Pressure	100 psi (6.9 Bar)
Sensor Response Time	T95≤60s – Oxidizer / T95≤5s - pH
Measurement Interval	Continuous
Installation	ST-007 (316L) Flow Cell w/PRV-Rotameter-Hall Effect Flow Meter Included
ST-007 Minimum Flow Rate	200 mL/minute
ST-007 Maximum Flow Rate	400 mL/minute
ST-007 Sample Inlet	1/4 - inch OD
ST-007 Sample Outlet	1/4 - inch OD
Panel Power Supply	96-260VAC / 50-60 Hz; 200 W
Panel Storage Temperature	-4 – 158 °F (-20 – 70 °C)
Panel Operating Temperature	32 – 122 °F (-0 – 50 °C)
UC-80 Display	4.3-inch LCD Color 480 x 272 Pixel Resolution / Resistive Touch
UC-80 Input	RS-485 Modbus – RTU
UC-80 Output	2 x 4-20 mA / RS-485 Modbus-RTU / Modbus-TCP
UC-80 Data Storage	Built-In 1GB of Ram for Storing up to 1-Million Data/Event Records
UC-80 USB	1 x USB host, for data downloading and screen upgrade
UC-80 Relative Humidity	20% - 90% (No Condensation)
UC-80 Altitude	<6,561 feet (<2,000 Meter)
Dimension (H x W x D)	Panel (IK-765SS-O3) 440H x 350W x 153D mm
Approximate Weight	Panel (IK-765SS-O3) ~ 15 kg
Wet Material	316L Stainless Steel / Polycarbonate
Rating	IP-65 Panel-Display / IP-67 Sensor
Selectivity	Non-Selective / cross sensitive to other oxidizing species
Compliance	EPA 334.0 / ISO 7393
Regulation	CE Marked / RoHS
Typical Electrode Service Life	2 years
Electrode Warranty	6 Months
Sensor Body Warranty	13 Months

NOTE - Pyxis Lab is consistently updating technologies, as such, specifications may change without notice.
Technical specifications on the ST-765SS Series sensors can also be found in their respective Operation Manuals.
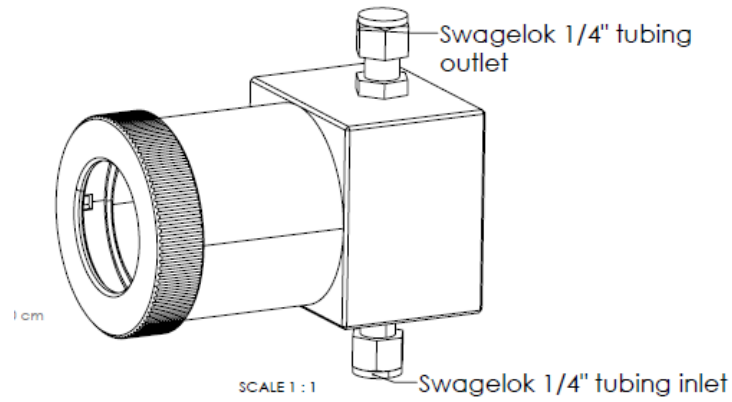*Contact info@pyxis-lab.com for details or www.pyxis-lab.com .*

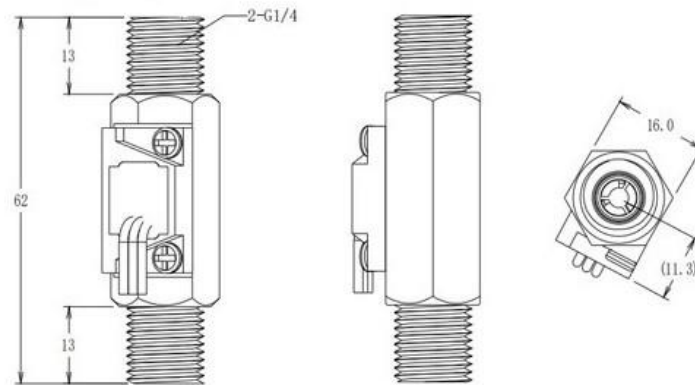## IK-765SS-SO3 Panel Dimensions (mm)

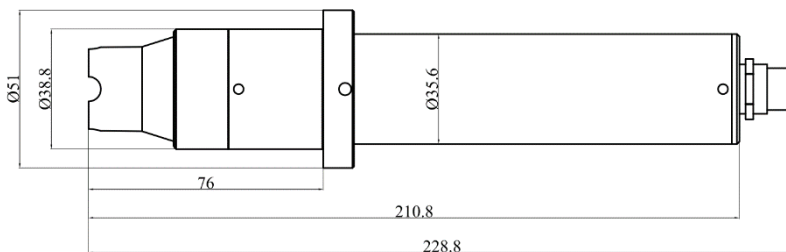## IK-765SS-SO3 - UC-80 Display/Data Logger Dimensions (mm)

IK-765SS Series ST-007 – Flow Cell Dimensions (mm)

Hall-Effect Digital Flow Sensor Dimensions (mm)

ST-765SS-SO3 Sensor Dimensions (mm)

ST-765SS-SO3 Sulfite + pH Sensor

Order Information   P/N

IK-765SS-SO3 *(Sulfite + pH + Temperature Analyzer)*   42163

Optional / Replacement Accessories Information   P/N

ST-765SS-SO3 *(Sulfite + pH + Temperature Sensor w/Internal Compensation)*   53624

EH-765 *(Replacement Electrode Head for ST-765SS-Series Sensors)*   53061

ST-007 *(Replacement ST-007 Stainless Steel Flow Cell)*   50700-A51

Rotameter Assembly Kit *(Replacement 0- 1.8LPM)*   22876

Stainless Steel Hall Effect Digital Flow Meter *(1/4-inch OD)*   22501

UC-80 Display + Data Logging Terminal *(Replacement)*   14003

Pyxis pH Combo Calibration Pack *(pH 4-7-10 Calibration Solution 3-Pack - 500mL ea.)*   57007

SP-200 OxiPocket™ *(Pocket All-Oxidizing Disinfectants Colorimeter & Fluorometer)*   50802