



DATA SHEET

OXIPANEL

IK-765-B Series Auto-Brushing Oxidizer + pH Analyzers

Product Description

The IK-765-B Series are dual-parameter inline water analyzers specifically designed as a 'Turn-Key' monitoring solution for challenging water applications including cooling water, food & industrial process water, raw water & treated wastewater effluent applications. The IK-765-B Series offers highly accurate, real-time measurement, display & data logging of two oxidizer measurement formats as well as pH & temperature utilizing proprietary Pyxis Lab® smart sensor technology, coupled with a UC-50 micro display & data logging terminal. The IK-765-B also incorporates a uniquely designed 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 IK-765-B Series is offered in a convenient and easy to integrate panel mounted format for rapid installation and simple maintenance.

The IK-765-B Series is offered in three sensor formats depending on the desired oxidant being measured. The panel design is equipped with the proprietary ST-765SS Series of smart sensors, capable of measuring Free Chlorine (FCL) or Chlorine Dioxide (CLO) in addition to pH & temperature of the sample water. The sensor design is membrane free & based on unique principles incorporating advanced technology in the field of bare-gold electrochemical detection. The ST-765SS-FCL (Free Chlorine) & ST-765SS-CLO (Chlorine Dioxide) measure the oxidant level & pH simultaneously while performing temperature & pH compensation. These panels are also equipped with the FR-300 Plus brushing flow assembly to ensure constant electrode cleanliness & UC-50 terminal prewired to the ST-765SS sensor in RS-485 format with a sensor diagnostics & calibration interface. This unique platform provides highly accurate measurement consistent with DPD wet chemistry methodology as high as pH 9.0+ & meets EPA-334.0 as well as ISO-7393 compliance.

Turn-Key Installation

The IK-765-B requires a small installation footprint, offers auto-brush cleaning with simple maintenance & is specifically designed for use in challenging industrial cooling & process applications. The analyzers sensor data may be downloaded via USB or connected to a receiving device via RS-485 output or (1) 4–20mA output from the UC-50 terminal. Users may utilize the (2) 4–20mA outputs directly from the ST-765SS sensor for terminating to an alternative controller or device, while the sensor is simultaneously connected to the UC-50 in RTU.



Features

Pyxis Lab® ST-765SS-FCL (Free Chlorine + pH/Temperature) and ST-765SS-CLO (Chlorine Dioxide + pH/Temperature) are three-parameter composite sensors used for the measurement of residual Free Chlorine or Chlorine Dioxide, pH & Temperature in compliance with EPA 334.0 & ISO-7393 Guidelines. The sensors advanced PCB offers built-in temperature & pH parameter compensation (up to pH 9.0+) algorithms eliminating the need for a supplemental pH sensor & controller. Unique Bare-Gold electrode technology for residual oxidizer measurement eliminates membranes & electrolyte solution replenishment commonly associated with conventional sensors. The ST-765SS Series has a uniquely designed flat bubble pH electrode design for reduced fouling potential. Reduce your maintenance & cost versus colorimetric chlorine measurement or conventional electrochemical sensors by utilizing a replaceable electrode head (EH-765) for this sensor, allowing for years of reliable service. The ST-765SS Series may be calibrated in-situ after cleaning via DPD Free Chlorine or Chlorine Dioxide wet chemistry test measurement of active sample.



The FR-300 Plus is a magnetic coupling motorized brush flow assembly that provides an inline mechanical cleaning of the ST-765SS enabling sensor accuracy in challenging industrial cooling & process waters. This device enhances the convective mass transport of the oxidizer analyte to the sensor surface eliminating the need for precision flow control. The FR-300 Plus also provides supplemental deactivation protection of the bare-gold electrode for long-life, stability and accuracy. The brushing frequency & rotational speed may be controlled via RS-485 from the UC-50 terminal. The FR-300 Plus contains a 'chemical detergent injection port' in the assembly housing allowing for the optional injection of cleaning agents at the brush head for extremely challenged waters containing oils or grease. The FR-300 Plus may be operated at a broad range of sample flow from 200 & 800mL per minute with an inlet pressure of ≤ 30 psi. The outlet flow line may be diverted to drain or returned to an atmospheric tank/sump within the process itself for reuse.

Features Continued

Simple sensor removal & replacement. The ST-765SS Series sensors are connected to the display/data-logging terminal via RS-485 Modbus (RTU) allowing for integrated sensor calibration interface & diagnostics within the display screen. Convenient & simple to install Back-Panel (IK-765-B Series) for rapid & easy installation. Truly a plumb & power to go platform with intense factory setup, testing & sensor calibration prior to shipment.

UC-50 micro-display/data logging interface with sensor calibration integrated. The UC-50 display & data logging terminal offers (1) 4–20mA Input & Output as well as RS-485 with remote diagnosis & parameter adjustment.



Sensor Specifications

Item	IK-765SS-FCL-B	IK-765SS-CLO-B
<i>P/N</i>	42169	42170
<i>Sensor Body</i>	304SS	304SS
<i>Sensor Name</i>	ST-765SS-FCL	ST-765SS-CLO
<i>Oxidizer Measured</i>	Free Chlorine	Chlorine Dioxide
<i>Oxidizer Range</i>	0.00–5.00ppm	0.00–5.00ppm
<i>Oxidizer Precision</i>	±0.01mg/L or 1%	±0.01mg/L or 1%
<i>pH Range</i>	0–14	0–14
<i>pH Precision</i>	±0.01 pH	±0.01 pH
<i>Operating Temp</i>	4-40 °C (40-104 °F)	4-40 °C (40-104 °F)
<i>Inlet Pressure</i>	7.25-30psi	7.25-30psi
<i>Response Time</i>	T95≤60s (≤5s pH)	T95≤60s (≤5s pH)
<i>Measure Interval</i>	Continuous	Continuous
<i>Installation</i>	FR-300+ Reservoir	FR-300+ Reservoir
<i>Selectivity</i>	Non-Selective, Cross Sensitive to Other Species	Non-Selective, Cross Sensitive Other Oxidizing Species

FR-300 Plus Specifications

Item	IK-765SS-FCL-B	IK-765SS-CLO-B
<i>Suggest Flow Rate</i>	200-800mL/minute	200-800mL/minute
<i>Sample Inlet/Outlet</i>	3/8 - inch OD	3/8 - inch OD
<i>Operation</i>	RS-485 Preset via UC-50	RS-485 Preset via UC-50
<i>Rotational Speed</i>	100-400RPM - Adjustable	100-400RPM - Adjustable

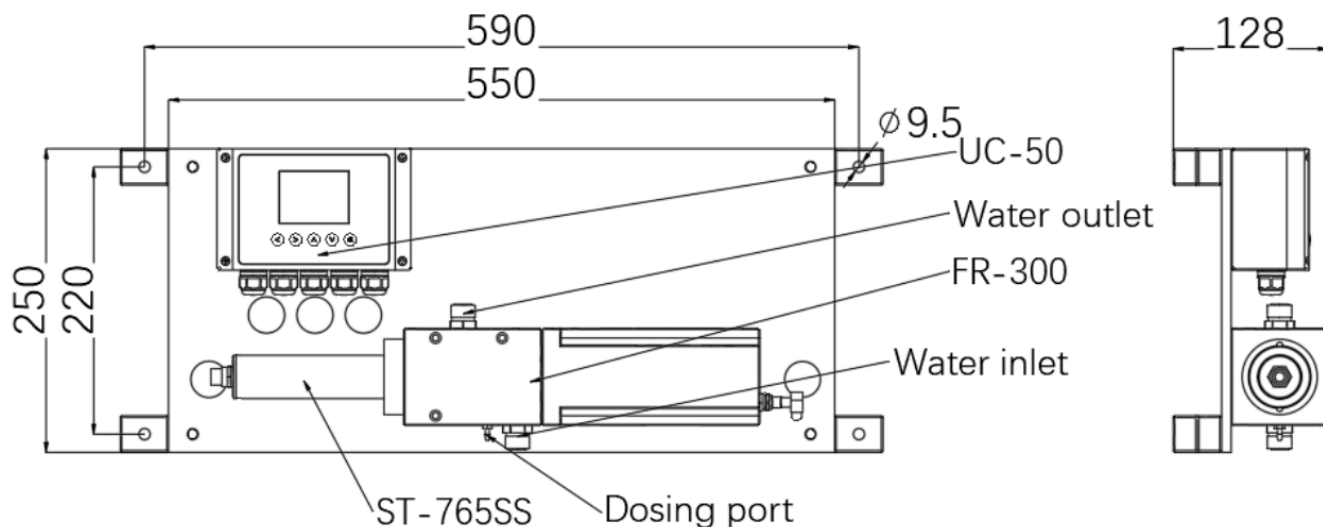
UC-50 Specifications

Item	IK-765SS-FCL-B	IK-765SS-CLO-B
Display	2.8" Color 320x240 Resolution	
Input	(1) 4–20mA / RS-485 Modbus RTU	
Output	(2) 4–20mA from ST-765SS / RS-485 Modbus RTU / (1) Contact Relay	
Relay	(1) Channel Relay Output 24VDC / 10W Max Available	
Data Storage	32M Flash	
USB	(1) USB Host for Data Downloading	
Relative Humidity	5–95% (No Condensation)	
Altitude	<6,561ft (<2,000m)	

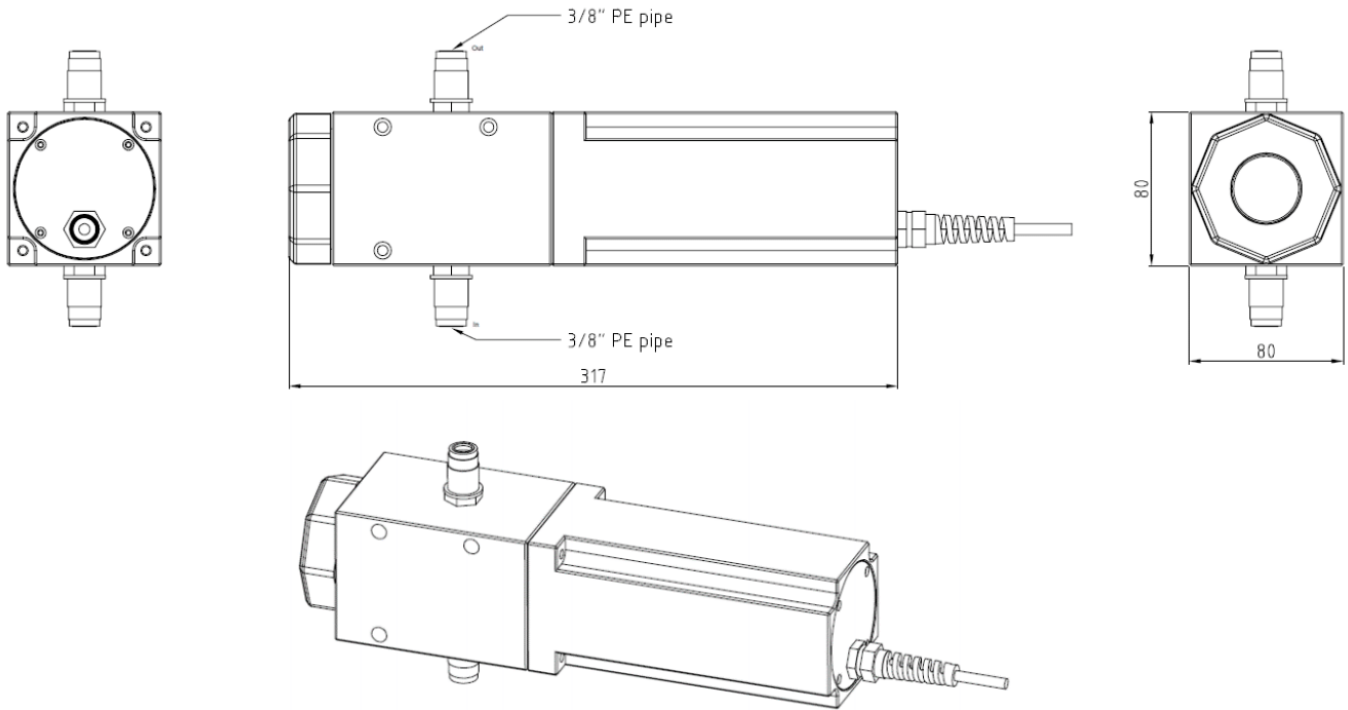
Panel Specifications

Item	IK-765SS-FCL-B	IK-765SS-CLO-B
Power Supply	110/240 VAC 50/60 Hz, 0.6A	
Storage Temp.	-4–158 °F (-20–70 °C)	
Operating Temp.	32–122 °F (0–50 °C)	
Dimensions	Panel 250H x 590W x 128D mm	
Approx. Weight	Panel ~ 8kg	
Wet Material	UPVC / Polycarbonate	
Rating	IP-65 Panel & Display / IP-67 Sensors	
Compliance	EPA 334.0 / ISO 7393	
Regulation	CE Marked / RoHS	
Electrode Life	2 Years	
Electrode Warranty	6 Months	
Sensor Warranty	13 Months	

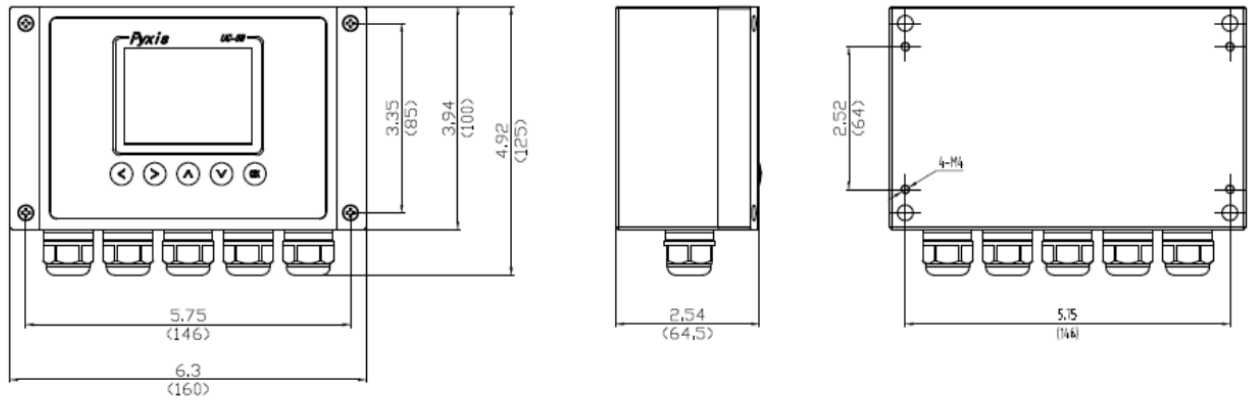
IK-765SS-B Panel Dimensions (mm)



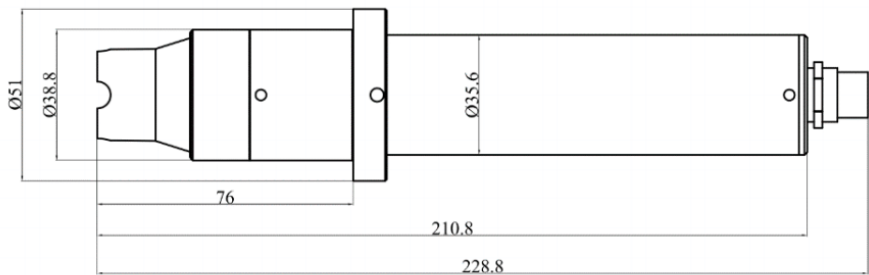
FR-300 Plus - Flow Reservoir Dimesnison (mm)



UC-50 Terminal Dimensions (mm)



IK-765SS Sensor Dimensions (mm)



ST-765SS-Series Oxidizer + pH Sensor

Order Information

IK-765SS-FCL-B (Auto-Brushing Free Chlorine Panel)

IK-765SS-CLO-B (Auto-Brushing Chlorine Dioxide Panel)

Part Number

42169

42170

Optional/Replacement Accessories Information

ST-765SS-FCL (Free Chlorine + pH + Temperature Sensor ONLY)

53607-NFR

ST-765SS-CLO (Chlorine Dioxide + pH + Temperature Sensor)

53608-NFR

EH-765 (Replacement Electrode Head for Sensor)

53061

FR-300 Plus (Auto-Brushing Flow Assembly Replacement)

50700-A44

FR-300-01 (Replacement Brush Head)

50700-A49

UC-50 Display & Data Logging Terminal

43007

SP-200 OXIPOCKET Handheld

50802

