

[DATA SHEET](#)

## OXIPANEL PLUS

### ***Brushing Oxidizer + pH Analyzer with Flow Control for Industrial Water***

#### ***Product Description***

The OXIPANEL-PLUS IK-765-BP series are pre-mounted inline multi-parameter analyzers with integrated ultrasonic flow control specifically designed as a 'Turn-Key' monitoring solution for challenging water applications including cooling water, food and industrial process water, raw water and treated wastewater effluent applications. The OxiPanel-PLUS series offer highly accurate, repeatable, and real-time measurement of multiple oxidizer species as well as pH, ORP and temperature utilizing proprietary Pyxis Lab smart sensor technology, coupled with a Pyxis UC-80 color touch screen display/data logging terminal and the Pyxis FS-100 ultrasonic flowmeter with regulating valve. The OxiPanel-PLUS also incorporates the uniquely designed FR-300-PLUS automated mechanical brush flow assembly to maintain optimum sensor electrode cleanliness in the most challenging water where conventional membrane amperometric or wet chemistry analyzers would fail.

The OxiPanel-PLUS IK-765-BP series are offered in four sensor formats depending on the desired oxidant being measured. The panel design is equipped with the propriety Pyxis ST-765SS Series smart sensor platform based on application needs. The ST-765SS Series sensors measure Free Chlorine (FCL), Total Chlorine (TCL), Bromine (Br) or Chlorine Dioxide (CLO) in addition to pH, ORP and temperature of the sample water. This Pyxis sensor design is membrane-free and based on unique principles incorporating Pyxis' advanced technology in the field of bare-gold electrochemical detection. All versions of the ST-765SS-Series sensor measure the oxidant level and pH simultaneously while performing temperature and pH compensation for the measurement of oxidant based on conditions present in the application of use. Each OxiPanel-PLUS panel is also equipped with the FR-300-PLUS mechanical brushing flow assembly to ensure constant electrode cleanliness and the UC-80 color touch screen display and data logging terminal. This unique platform with internal sensor compensation results in a highly accurate oxidizer measurement consistent with DPD wet chemistry methodology as high as pH 9.0+ and meets EPA-334.0 and ISO-7393 compliance. The OxiPanel-PLUS series also offers the FS-100 ultrasonic flow sensor and motor valve control module providing precise measurement and control of the incoming water sample flow based on user defined setpoint without the challenges commonly associated with mechanical flow measurement in dirty water applications.

## Features

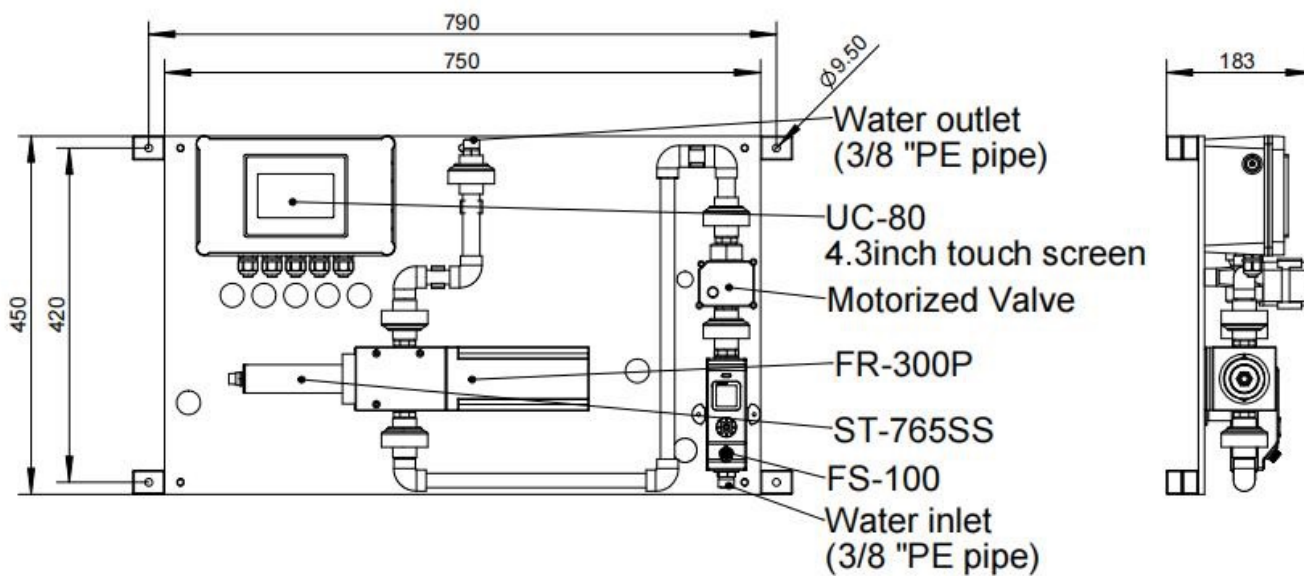
- The Pyxis ST-765SS-FCL (Free Chlorine + pH/Temperature/ORP), ST-765SS-TCL (Total Chlorine + pH/Temperature/ORP), ST-765SS-Br (Bromine + pH/Temperature/ORP) and ST-765SS-CLO (Chlorine Dioxide + pH/Temperature/ORP) are multi-parameter composite sensors used for the measurement residual Free Chlorine, Total Chlorine, Bromine or Chlorine Dioxide as well as pH, ORP and temperature in compliance with USEPA 334.0 and ISO-7393 guidelines. 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 residual oxidizer measurement eliminates membranes and electrode 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 and cost versus colorimetric chlorine measurement or conventional electrochemical sensors by utilizing Pyxis 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, Total Chlorine, Bromine or Chlorine Dioxide wet chemistry test measurement of active sample.
- The Pyxis FR-300-PLUS is a magnetic coupling motorized brush flow assembly that provides an inline mechanical cleaning of the ST-765SS Series bare gold electrode enabling sensor accuracy in challenging industrial cooling and process waters. This unique device enhances the convective mass transport of the oxidizer analyte to the sensor surface eliminating the need for precision flow control commonly required for other amperometric sensors on the market. The FR-300-PLUS also provides supplemental deactivation protection of the bare gold electrode for long life, stability, and accuracy. The brushing operation of the FR-300-PLUS is activated by the pre-mounted FS-100 ultrasonic flow meter included on the OxiPanel-PLUS Series analyzers. The FR-300-PLUS also 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 industrial waters containing oils and grease. The FR-300-PLUS may be operated at a broad range of sample flow from 200 and 800mL per minute with an inlet pressure of 7.5 - 60 psi. The FR-300-PLUS outlet flow line may be diverted to atmospheric tank/sump within the process itself for reuse or to a lower pressure zone of the recirculating water network.
- The Pyxis FS-100 is a state-of-the-art ultrasonic flowmeter that operates on the principle of transit time difference with a measurement range of 0 – 3,000 mL/min and resolution of 1mL. The sensors advanced PCB design offers built-in temperature compensation to eliminate the effect of temperature with instantaneous, accumulated, and controlled water flow based on user setpoint within the sensor itself. The sample flow rate is controlled via PID logic from the flow sensor to the pre-mounted motor valve on the OxiPanel-PLUS analyzer.
- Each OxiPanel-PLUS is provided with one UC-80 display which powers the ST-765SS Series sensor, FR-300-PLUS, FS-100 and valve based on the user programmed flow setpoint and system operation. UC-80 touch screen display/data logger provides sensor calibration & diagnostic interface with 3x 4-20mA, RS-485 and TCP output with dual 24 VDC relays (Active or Passive).
- The OxiPanel-PLUS contains the Pyxis 4G CloudLink™ and global SIM card as a comprehensive data gateway to cloud device for live mobile APP trend view, data download and reporting. Contact Pyxis for details.

**Pyxis**® x **LinkedIn**

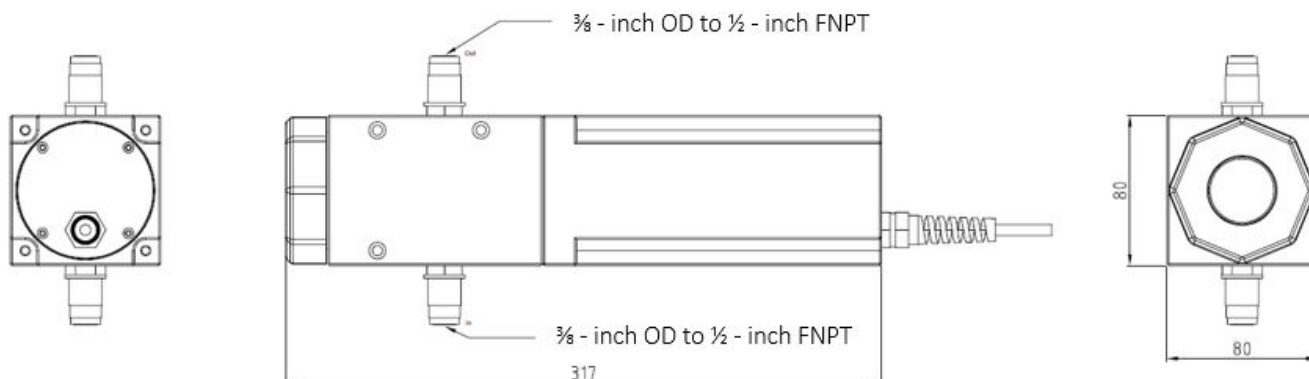
*Follow us to keep up on product launches & more!*  
[linkedin.com/company/pyxislab](https://www.linkedin.com/company/pyxislab)

<b>Item</b>	<b>IK-765SS-FCL-BP</b>	<b>IK-765SS-CLO-BP</b>	<b>IK-765SS-Br-BP</b>	<b>IK-765SS-TCL-BP</b>
<b>Part Number</b>	41771	44376	48076	47004
<b>Sensor Model</b>	ST-765SS-FCL	ST-765SS-CLO	ST-765SS-Br	ST-765SS-TCL
<b>Oxidizer Measured</b>	Free Chlorine	Chlorine Dioxide	Bromine	Total Chlorine
<b>Sensor</b>				
<b>Sensor Body Material</b>	304 Stainless Steel			
<b>Oxidizer Range</b>	0.00–5.00ppm			
<b>Oxidizer Precision</b>	±0.01mg/L or 1%; pH Compensation up to 9.0			
<b>pH/ORP Range</b>	0.00–14.00 (±0.01 pH); -1,500 – +1,500mV (±1.0mV ORP)			
<b>Measurement Interval</b>	Continuous			
<b>Sensor Response Time</b>	T95≤60s - Oxidant / T96≤5s - pH			
<b>Sensor Install Method</b>	FR-300 Plus Magnetic Coupling Brush Flow Reservoir Assembly - INCLUDED			
<b>Sensor Flow Interlock</b>	Sensor Powers Down when in Auto-Mode if Flow <50mL/min and ON when >200mL/min			
<b>Sample Op. Temp.</b>	4–49 °C (40–120 °F)			
<b>Sample Inlet Pressure</b>	7.25–60psi (0.05–0.413MPa)			
<b>Inlet/Outlet Line Size</b>	3/8in OD inserted into 1/2in FNPT Port			
<b>FS-100</b>				
<b>Measurement Method</b>	Ultrasonic Flow Detection			
<b>Rated Flow Range</b>	0–3,000mL/min			
<b>Resolution/Max Error</b>	1mL/min or ±2% of the value			
<b>Display</b>	1.44" Color LCD 128x128 Resolution			
<b>Flow Reg. Valve Control</b>	4–20mA from FS-100 (Internally Connected)			
<b>FR-300</b>				
<b>FR-300 Flow Rate</b>	200–800mL/min (User uses FS-100 to set this parameter)			
<b>FR-300 Flow Interlock</b>	Brush Motor turns OFF when in Auto-Mode if Flow <50mL/min and ON when Flow >200mL/min			
<b>FR-300 Rotation Speed</b>	200RPM, Motorized Brush			
<b>UC-80</b>				
<b>Display</b>	4.3in LCD Color 480x272 Pixel Resolution / Resistive Touch			
<b>Input</b>	RS-485 Modbus - RTU			
<b>Output</b>	3x 4–20mA / RS-485 Modbus RTU / Modbus-TCP			
<b>Relay</b>	2x Relays (Passive Output or Active Output - User Selected)			
<b>Data Storage</b>	Built-In 128MB of RAM for Storing up to 1-Million Data/Event Records			
<b>USB</b>	1x USB Host for Data Downloading and Screen Upgrade			
<b>Relative Humidity</b>	20–90% (No Condensation)			
<b>Altitude</b>	<6,561 ft (<2,000m)			
<b>PANEL</b>				
<b>Panel Power Supply</b>	90–260VAC / 50–60 Hz; 60W USA Type B Plug			
<b>Storage Temperature</b>	-4–158 °F (-20–70 °C)			
<b>Dimension</b>	Panel 450H x 750W x 180D mm			
<b>Approximate Weight</b>	Panel ~ 10kg			
<b>Panel Wet Material</b>	Polycarbonate/304SS/316SS/Glass/Gold/Platinum/CPVC/PTFE/POM/ABS/PEEK/PET/NBR			
<b>Rating</b>	IP-65 Panel Display / IP-67 Sensors			
<b>Compliance</b>	EPA-334.0 / ISO-7393			
<b>Regulation</b>	CE Marked / RoHS / UKCA			
<b>Selectivity</b>	Non-Selective, Cross Sensitive to Other Oxidizing Species			
<b>Warranty</b>	6 Months Electrode / 13 Months Sensor Body and Panel			
<b>Electrode Service Life</b>	2 Years			
<b>Brush Life</b>	12–18 Months depending on Application			
<b>Pyxis 4G LTE Gateway</b>	Included & Activated On Request with Enrollment – Contact Pyxis Lab, I for details			

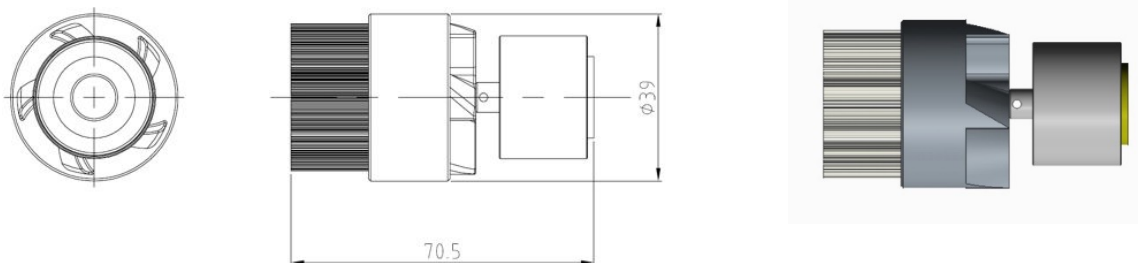
## OXIPANEL+ IK-765-BP Series Panel Dimensions (mm)



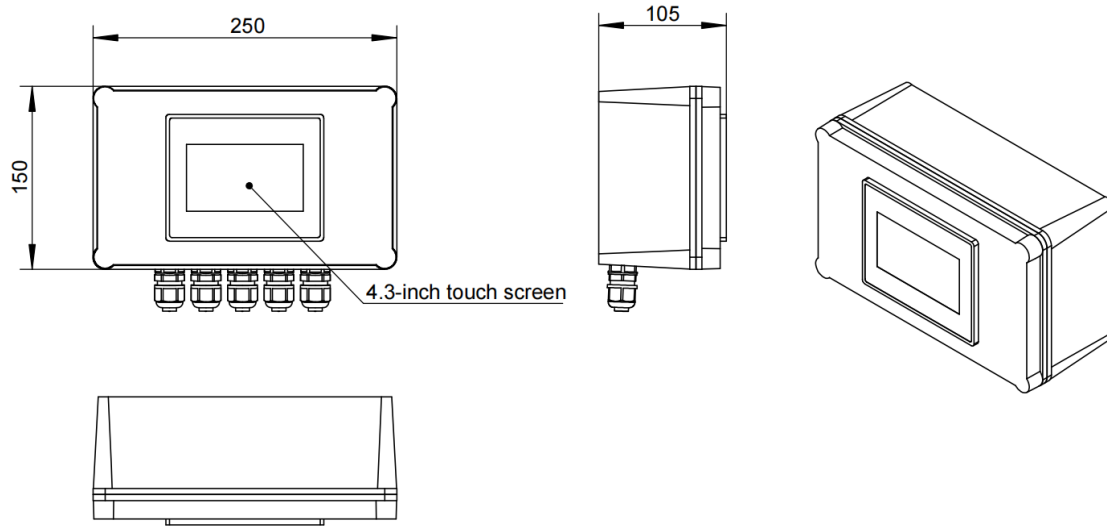
## FR-300-Plus Flow Reservoir Dimensions (mm)



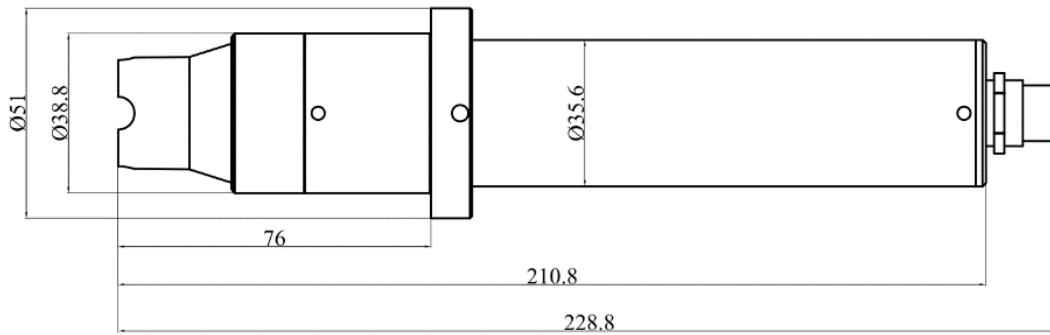
## FR-300-01 Flow Reservoir Replacement Brush Dimensions (mm)



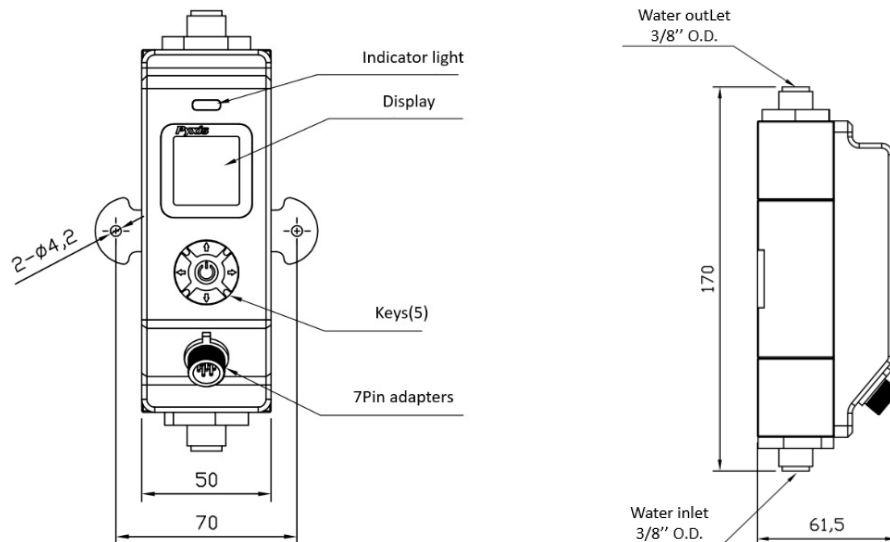
## UC-80 Display Dimensions (mm)



## ST-765SS Sensor Dimensions (mm)



## FS-100 Flow Meter Dimensions (mm)



## ***Order Information***

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

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

IK-765SS-Br-BP (Auto-Brushing Bromine Panel)

IK-765SS-TCL-BP (Auto-Brushing Total Chlorine Panel)

## ***Part Number***

41771

44376

48076

47004

## ***Optional/Replacement Accessories Information***

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

ST-765SS-Br (Bromine + pH + Temperature Sensor ONLY)

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

ST-765SS-TCL (Total Chlorine + pH + Temperature Sensor)

EH-765 (Replacement Electrode Head for Sensor)

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

FR-300-01 (Replacement Brush Head)

UC-80 Display & Data Logging Terminal

FS-100 Flow Sensor

Flow Regulating Motorized Valve with 4–20mA Control

pH Combo Calibration Kit

ORP 200mV Calibration Standard

Zero Oxidizer Calibration Standard

Pyxis Lab Probe Cleaning Kit

SP-200 OXIPOCKET™

## ***Part Number***

53607-NFR

59643

53608-NFR

53616

53061

50700-A44

50700-A49

14003

54200

21972

57007

57020

21022

SER-01

50802

