



## IK-765P-DCL Dechlorination Analyzer for Measurement of Chlorine, Sulfite & pH

### **Product Description**

The IK-765P-DCL inline residual Chlorine and Sulfite panel is a multi-parameter inline water analyzer specifically designed as a 'Turn-Key' monitoring solutions for clean water applications that require constant validation of chlorine removal prior to membrane or other critical to quality system applications. This proprietary technology offers highly accurate and simultaneous measurement, display, and data-logging of Chlorine (user selected as Free or Total Chlorine), Sulfite residual, pH, Temperature, and sample flow rate utilizing proprietary Pyxis Lab smart sensor technology, coupled with a Pyxis UC-80 touch screen display and data logging terminal. The IK-765P-DCL is offered in CPVC construction enabling its use in both Fresh Water and Sea Water monitoring applications. This analyzer design is a convenient and easy to integrate panel mounted solution for rapid installation and simple maintenance.

The IK-765P-DCL analyzer panel design is equipped with the propriety Pyxis ST-765 Series smart sensor configured to simultaneously measure oxidizer as Free or Total Chlorine and Sulfite concentration while also measuring pH and temperature of the sample water for refined compensation. Additionally, the analyzer is equipped with the Pyxis FS-100 ultrasonic flow sensor for real time, precise sample flow measurement and regulation.

The ST-765 Series sensor design is membrane-free and based on unique principles and incorporates Pyxis' advanced technology in the field of bare-gold electrochemical detection. The ST-765P-DCL (CPVC) sensor include on this analyzer measures the oxidant level, sulfite level and pH simultaneously while performing temperature and pH compensation for the measurement of oxidant based on conditions present in the application of use. This technology can provide significant value in a variety of water and process applications helping to extend equipment life and performance while improving regulatory compliance.

## Typical Applications

- Pre-Ion Exchange Chlorine Removal (Demin, Softening, Mixed Bed)
- Pre-Filter Chlorine Removal (UF, NF)
- Pre-Membrane Chlorine Removal (Reverse Osmosis)
- Chlorine Removal in Clean Process Water Applications

## Turn-Key Installation

The IK-765P-DCL analyzer requires a small installation footprint, with simple maintenance and is specifically designed for use in clean water and process applications. Each panel is also provided with ST-001 (CPVC) Inline Flow Tee Assembly and inlet gate valve for flow adjustment and the Pyxis FS-100 ultrasonic flow meter for precise sample flow measurement. The UC-80 display/data logging terminal is pre-wired to the FS-100 and ST-765P-FCL sensor in RS-485 Modbus format with fully integrated sensor data logging, diagnostics, and calibration interface. This unique platform results in a constant and highly accurate oxidizer measurement consistent with DPD wet chemistry methodology as well as simultaneous Sulfite residual to provide the most rapid visibility and response to dichlorination control verification, eliminating extreme costs associated with RO equipment downtime and membrane damage.

## Features

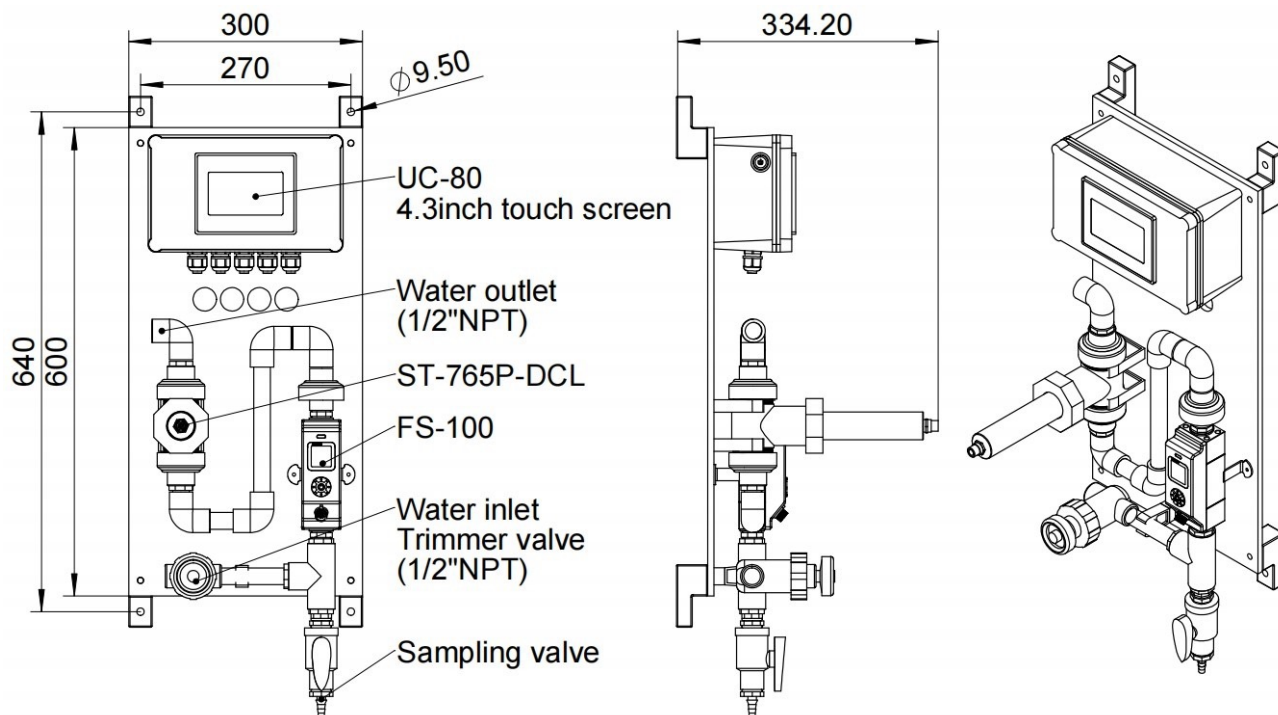
- *ST-765P-DCL (CPVC Free or Total Residual Chlorine + Sulfite + pH + Temperature) is a multi-parameter composite sensor used for the measurement Free or Total Residual Chlorine, Sulfite, pH, and Temperature in compliance with USEPA 334.0 and ISO-7393 guidelines. This sensors advanced PCB offers built-in 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 and Sulfite measurement eliminates burn-in time, membranes and electrode solution replenishment commonly associated with conventional Chlorine sensors. The ST-765 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 Dual Gold Electrode Head (EH-765-01) for this sensor allowing for years of reliable service. The ST-765SS Series may be calibrated in-situ when clean via DPD Free/Total Chlorine or Sulfite wet chemistry test measurement of active sample.*
- *The inline Pyxis sensor is installed using the uniquely designed ST-001 (CPVC) inline tee assembly providing a compact design and bottom-up flow ensuring constant sensor flooding. The water sample inlet line contains an integrated gate valve and FS-100 ultrasonic flow sensor capable of precisely measuring flow within 1mL/min of precision, allowing the users to finely adjust and record the sample flow rate to the recommended flow range of 200–800mL/minute. The recommended maximum inlet pressure of IK-765P-DCL analyzer is 60psi and discharge should be directed to drain. The sensor is connected to the UC-80 display/data logger via RS-485 Modbus (RTU) allowing for integrated sensor calibration interface and diagnostics within the display touch screen.*
- *Convenient and simple to install back-panel 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 display/data logger interface with sensor calibration integrated. Display/data logger offers 3x 4-20mA outputs, RS-485, Modbus TCP and 2x-24VDC Relays. Pyxis NB-IOT card is preinstalled and may be activated upon user enrollment for wireless data to cloud transmission.*

## Specifications

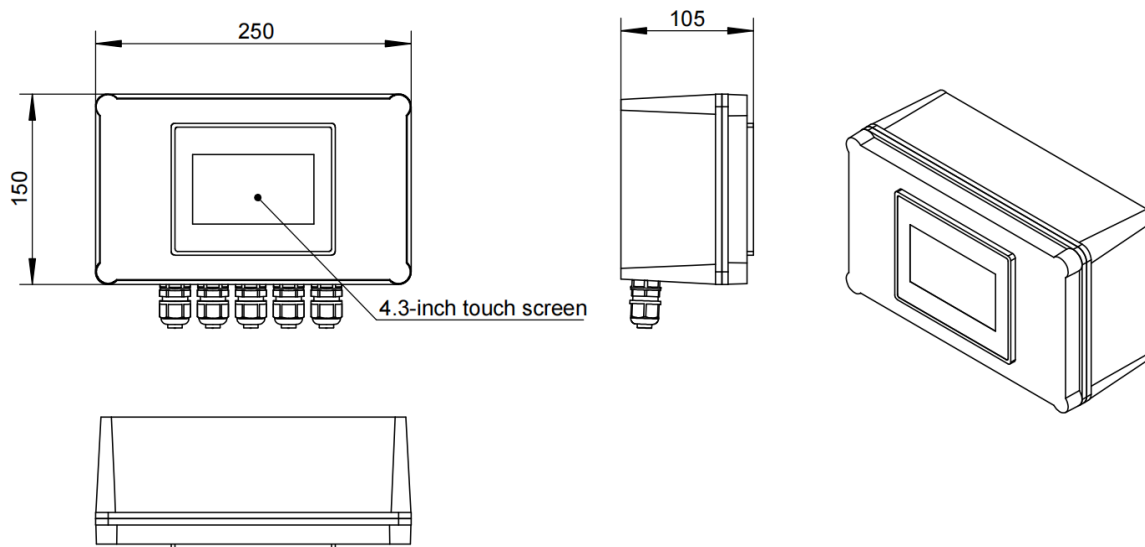
Item	IK-765P-DCL
P/N	49514
Sensor Name	ST-765P-DCL
Sensor Body Material	CPVC
Residual Chlorine Range	0.001–5.000mg/L
Chlorine Form	User Selected Free or Total Chlorine <sup>1</sup>
Sulfite Range	0.001–100.00mg/L (Default Range)
Precision	±0.01mg/L or 1% of the Value with pH Compensation up to 9.0+
pH Range	0.00–14.00
pH Precision	±0.1 pH
Sample Operating Temp.	4–49 °C (40–120°F)
Sample Inlet Pressure	7.25–60psi (0.05–0.4MPa)
Sensor Response Time	T95≤60s - Oxidizer / T95≤5s - pH
Measurement Interval	Continuous Measurement with FS-100 Ultrasonic Flow Meter
Installation	ST-001 CPVC Flow Cell
MIN Flow Rate	200mL/minute
MAX Flow Rate	800mL/minute
Sample Inlet	1/2" NPT
Sample Outlet	1/2" NPT
Power Supply	96–260VAC / 50–60Hz; 60W
Storage Temperature	-4–158 °F (-20–70 °C)
Operating Temperature	32–122 °F (0–50 °C)
UC-80 Display	4.3" LCD Color 480x272 Pixel Resolution / Resistive Touch
UC-80 Input	RS-485 Modbus - RTU
UC-80 Output	(3) 4-20mA Analog / 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) USB Host for Data Downloading and Screen Upgrade
UC-80 Relative Humidity	20–90% (No Condensation)
UC-80 Altitude	<6,561ft (<2,000M)
UC-80 Relay	(2) 24VDC Relays (Passive or Active Output - User Selected)
Dimensions	600mm H x 300mm W x 334mm D
Approx. Weight	~10kg
Plumbing Wet Material	CPVC
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 / UKCA
Electrode Service Life	2 Years
Electrode Warranty	6 Months
Sensor Warranty	13 Months
NB-IOT Gateway	Included & Activated with Enrollment - Contact Pyxis Lab®

<sup>1</sup>The Total Chlorine measures is *Virtual Total Chlorine* and does not incorporate Potassium Iodide Injection for "True" Total Chlorine EPA Compliance. Pyxis Lab® is consistently updating technology and specifications are subject to change without notice.

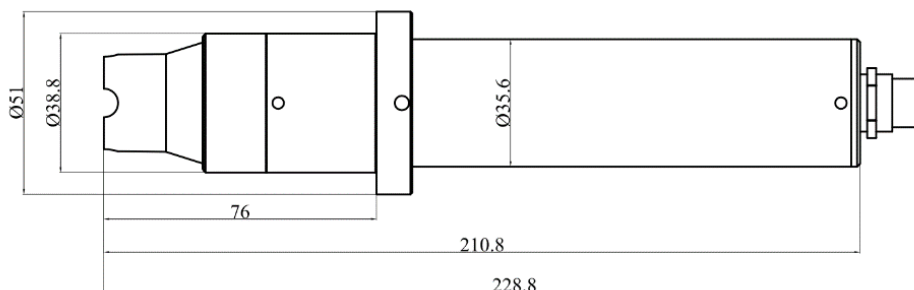
**Panel Dimensions - All CPVC for Fresh or Sea Water (mm)**



**UC-80 Display/Data Logging Terminal Dimensions (mm)**



**Sensor Dimensions (mm)**



## Order Information

IK-765P-DCL Residual Chlorine + Sulfite + pH Analyzer

## Part Number

49514

## Optional Accessories

ST-765P-DCL Residual Chlorine + Sulfite + pH Sensor

59907

EH-765-01 Replacement DCL Electrode Head

27918

ST-001 Standard Tee Assembly

50704

FS-100 Ultrasonic Flow Meter

54200

UC-80 Display & Data Logging Terminal

14003

pH Combo Calibration Kit

57007

Zero Oxidizer Calibration Standard Solution

21022

Sulfite Dropper Kit

TK35290-Z

Probe Cleaning Kit

SER-01

SP-200 OXIPOCKET™ Handheld Meter

50802

