

DW-2030P Series

Multi-Parameter Analyzer for Bottled & Beverage Water

Product Description

The DW-2030P series is a multi-parameter inline water analyzer specifically designed as a 'Turn-Key' monitoring solution for clean beverage/water applications including bottled Spring and Reverse Osmosis drinking water, beverage manufacturing as well as primary/secondary water supply networks. The DW-2030P series offers highly accurate, real-time measurement, display and data-logging of Ultra-Low Turbidity, Free-Residual Chlorine, pH, Conductivity, Total Dissolved Solids and Temperature utilizing proprietary Pyxis Lab smart sensor technology, coupled with a Pyxis touch screen display and data logging terminal. The DW-2030P series is offered in a convenient and easy to integrate panel mounted format for rapid installation and simple maintenance.

The DW-2030P series analyzer integrates three unique Pyxis smart sensors. The ST-765SS-FCL measures Free-Residual Chlorine, pH and temperature of the sample water. This sensor is membrane-free and based on unique principles incorporating Pyxis' advanced technology in the field of bare-gold electrochemical detection. The ST-765SS-FCL sensor may be field calibrated to measure free or total chlorine while simultaneously measuring pH and performing oxidizer temperature and pH compensation based on 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 pH 9.0+ and is EPA-334.0 and ISO-7393 compliant.

The LT-739 ultra-low turbidity sensor offers a unique flat surface distal end in a quartz glass plate, allowing for extended cleanliness, easy-maintenance and prevention of air bubble interference. With a detection range of up to 40 NTU and an industry low resolution of 0.002 NTU when used with the FT-100 tee assembly, the LT-739 sensor is designed for optimal accuracy and performance with a wide range of turbidity water samples from raw influent to treated effluent. The LT-739 uses 90° surface scatter configuration and Warm White Light (LED) and is EPA-180.1 compliant. The ST-720 sensor provides a four-graphite electrode design with precision accuracy in a broad range of detection from 1 to 100,000 $\mu\text{S}/\text{cm}$. with user conversion programming for display as TDS (Total Dissolved Solids).

The DW-2030P analyzer requires a small installation footprint and offers simple operation and maintenance and is specifically designed for use in beverage and drinking water applications. The analyzer is also available with an optional Pyxis CloudLink™ 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. See specifications for details.



Figure 1 – DW-2030P Series

Typical Applications

- Bottled Spring Water
- Bottled RO Water
- Beverage Production
- Drinking Water & Secondary Water Supply



Features

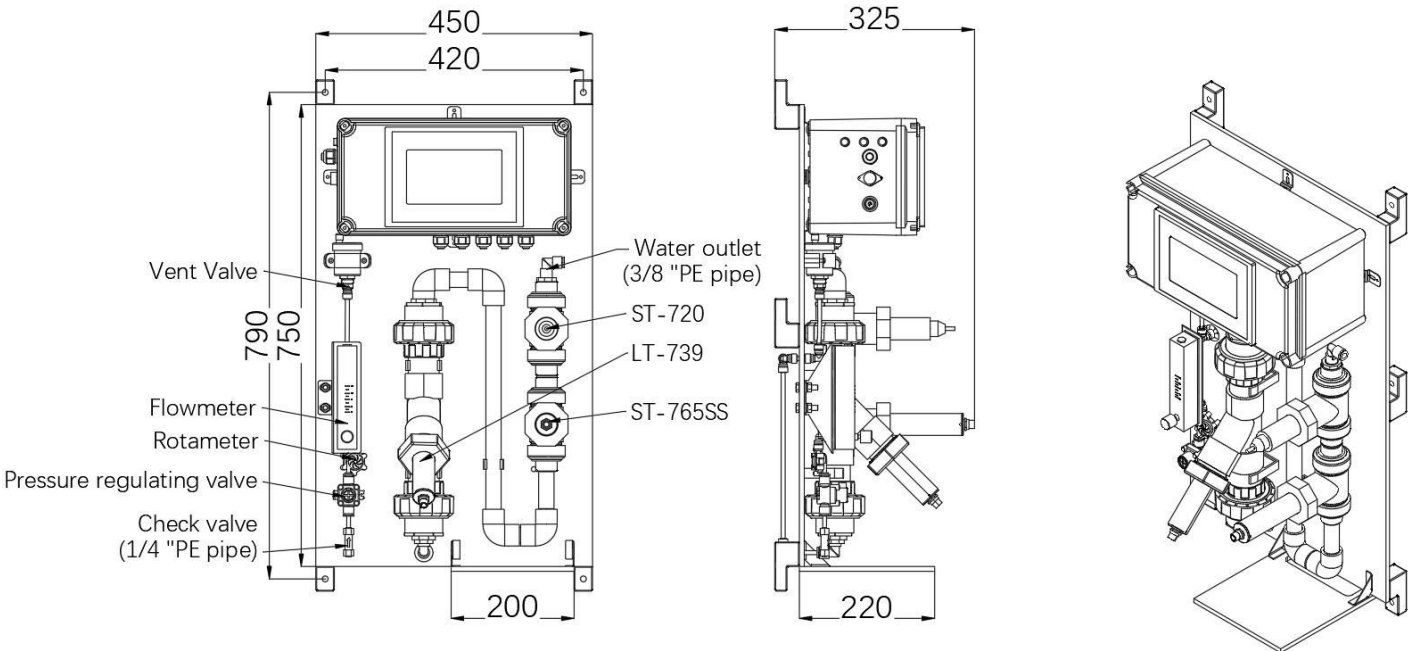
- Pyxis Lab's advanced research and development sensor technologies to achieve highly accurate and stable measurement of Turbidity, Free-Residual Chlorine, Conductivity (TDS), pH and Temperature.
- Pyxis LT-739 (EPA) ultra-low resolution turbidity sensors offer a detection light source using warm white LED in 90-degree surface scatter format in accordance with USEPA 180.1 standards. The turbidity sensor is mounted in the unique Pyxis FT-100 flow Tee for reduced footprint while enabling a resolution of 0.002 NTU. The LT-739 offers simple calibration via the Pyxis LT-SOLID-CAL Solid State Turbidity Calibration Kit (no Formazin needed) or the Pyxis L-CAL Portable Liquid Turbidity Calibration Kit (uses 500mL per calibration).
- Pyxis ST-765SS-FCL three-parameter composite sensor is used for the measurement residual free-residual chlorine, pH 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 chlorine measurement eliminates membranes and electrode solution replenishment commonly associated with conventional sensors. The ST-765SS-FCL 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-FCL may be calibrated in-situ after cleaning via DPD Free or Total Chlorine wet chemistry test measurement of active sample.
- Pyxis ST-720 inline conductivity sensor offers an industrial design with 4-graphite flat surface electrode. This unique design enables superior accuracy, consistency and extended sensor life with limited maintenance and cleaning. The ST-720 also offers integrated RTD temperature compensation and an extended detection range of 1 to 100,000 $\mu\text{S}/\text{cm}$. The sensor reading may be displayed as conductivity or Total Dissolved Solids (TDS) based on user preference and manual programmed conductivity to TDS ratio on the display data logging terminal.
- The inline Pyxis sensors are installed using the uniquely designed ST-001 and FT-100 inline tee assemblies providing a compact design and bottom-up flow ensuring constant sensor flooding. The water sample inlet line contains an integrated PRV, Rotameter, Air Vent Valve and Hall Effect Contact flow meter allowing the users to finely adjust, set and digitally record the bypass flow rate to the recommended flow range of 600–1,000mL/minute. The recommended maximum inlet pressure of DW-2030P Panel is 30psi and discharge should be directed to drain. Sensors are connected to the 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 panel (DW-2030P) for rapid and easy installation. Touch screen display/data logger interface with sensor calibration integrated. Display/data logger offers 2x 4-20mA I/O as well as RS-485 and TCP-IP with remote diagnosis and parameter adjustment. Pyxis CloudLink™ 4G Gateway version available.

Specifications

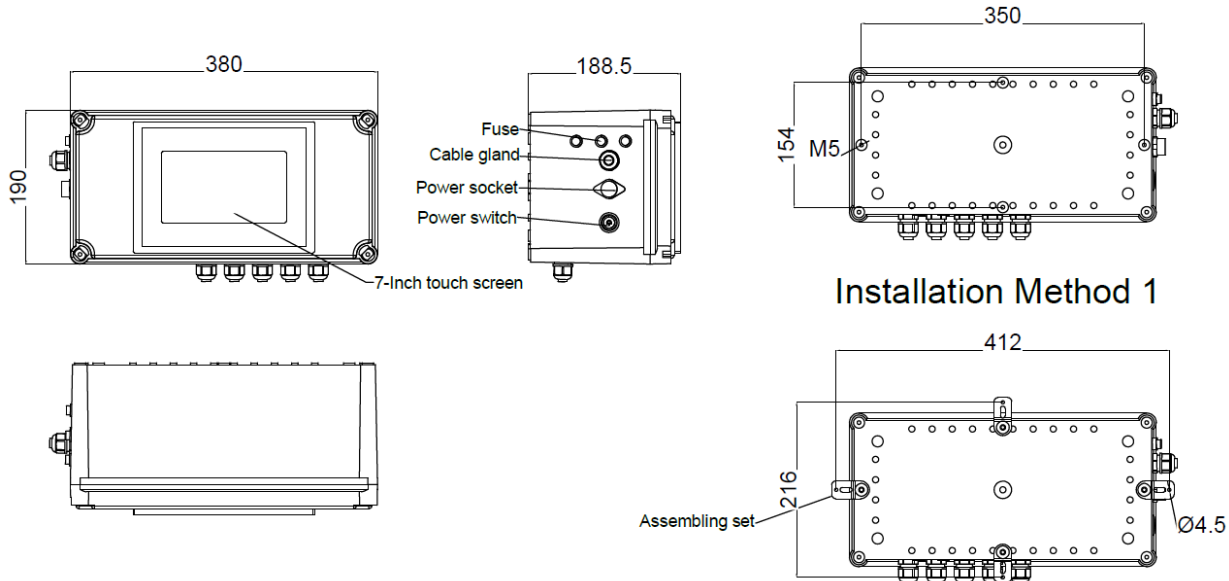
Item	DW-2030P-US	DW-2030P-US-G
P/N	42164	42168
Turbidity Source / Wavelength	LED / Warm White	
Turbidity Dual Range	0.000 – 10.000 / 10.00 - 40.00 NTU	
Free-Residual Chlorine Method	Bare Gold - Electrochemical Method	
Free-Residual Chlorine Range	0.01 –5.00 ppm as Free-Residual Chlorine	
Selectivity	Non-Selective, Cross Sensitive to other oxidizing species	
pH Range	0.01 – 14.00 pH	
Conductivity Method	4-Graphite Electrode	
Conductivity Range	1 – 100,000 μ S/cm	
Measurement Accuracy	0.001NTU or \pm 1% Full Scale \pm 0.01 ppm or 1% Full Scale w/pH compensation to 9.0 \pm 0.01 pH \pm 1.5% μ S/cm Conductivity	
Minimum Resolution	0.002 NTU 0.01 ppm 0.01 pH 1.0 μ S/cm Conductivity	
Response Time	4s after immersion - Turbidity T95 \leq 60s – Free Chlorine T95 \leq 5s – pH T95 \leq 5s – Conductivity	
Compliance	EPA-180.1/334.0	
Measurement Interval	Continuous Measurement	
Display	7-inch LCD Color Industrial Capacitive Touch Screen	
Storage Capacity	Built-In 4GB of Ram for Storing up to 1-Million Data/Event Records	
Power Requirement	96-260VAC / 50-60 Hz; 10A Fuse; 200 W	
Output	2 x 4-20 mA / RS-485 Modbus - RTU / Modbus TCP	
Input	2 x 4-20 mA / RS-485 Modbus - RTU	
USB	1 x USB host, for data downloading and screen upgrade	
Internet	RJ-45 socket, Modbus-TCP	
Panel Operational Temperature	40 – 113°F (4-45 °C)	
Storage Temperature	Instrument: -4 – 131°F (-20 – 55°C) / Sensors 32 – 122°F (0 – 50°C)	
Sample Water Temperature	40 – 104°F (4-40°C)	
Sample Water Pressure	7.25 – 30 psi (0.05 – 0.2Mpa)	
Sample Water Flow Rate	600-1,000mL / Minute	
Sample Line Size	¼-inch Inlet / ⅜-inch Outlet	
Rating	IP-65 Panel-Display / IP-67 Sensors	
Regulation	CE / RoHS	
Relative Humidity	20% - 90% (No Condensation)	
Altitude	<6,561 feet (<2,000 Meter)	
Dimensions (HxWxD)	Panel (DW-2030P) 790H x 450W x 280D mm	
Approximate Product Weight	DW-2030P ~ 15 kg	
Pyxis 4G CloudLink™	NA	Included
CloudLink™ Bands	NA	Global (B1/2/3/4/5/7/12/13/14/20/28/66/7)
CloudLink™ Protocols	NA	IP/TCP/UDP/HTTP/HTTPS/Modbus

NOTE -Specifications may change without notice. Pyxis Sensor Manuals can be found at www.pyxis-lab.com/shop

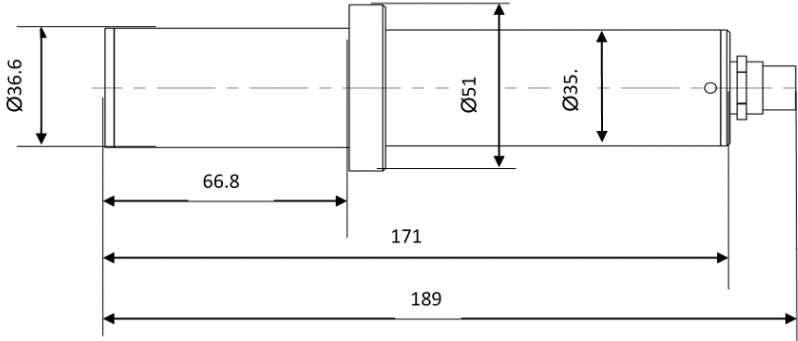
DW-2030P Series Panel Dimensions (mm)



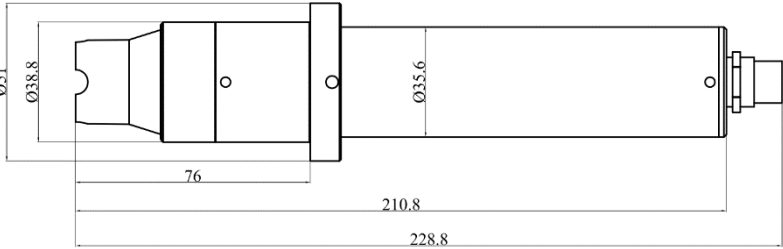
UC-100A Display/Data Logger Dimensions (mm)



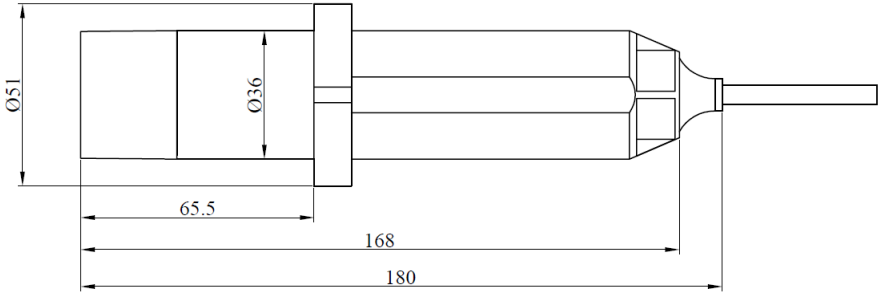
DW-2030P Series Sensor Dimensions (mm)



LT-739 Turbidity Sensor



ST-765SS-FCL Free/Total Chlorine + pH Sensor



ST-720 Conductivity/TDS Sensor

Order Information

	P/N
DW-2030P-US (<i>Beverage/Drinking Water Analyzer</i>)	42164
DW-2030P-US-G (<i>Beverage/Drinking Water Analyzer with CloudLink 4G Gateway</i>)	42168

Optional / Replacement Accessories Information

	P/N
LT-739 Ultra-Low Turbidity (<i>Warm White LED 0.000 - 40.00 NTU</i>)	53221
ST-765SS-FCL (<i>Free-Residual Chlorine + pH + Temperature Sensor w/Internal Compensation-Sensor Only</i>)	53607-NFR
ST-720 (<i>Conductivity 4-Graphite Electrode 1 – 100,000 μS/cm</i>)	53101
EH-765 (<i>Replacement Electrode Head for ST-765SS-FCL</i>)	53061
Air Vent Valve Assembly (<i>Replacement Air Vent Valve Assembly</i>)	50700-A54
Micro-Rotameter Kit Assembly (<i>Replacement 100-1,800mL/min</i>)	22876
Hall Effect Flow Meter (<i>Replacement Pulse Flow Meter ¼-inch 0.25-2.5L/Min</i>)	16008
ST-001 (<i>Replacement Inline Tee Assembly for ST-765 / ST-720 Sensors</i>)	50704
FT-100 (<i>Replacement Inline Tee Assembly for LT-739 Sensor</i>)	50780
FT-100-PLUS (<i>Self-Brushing Inline Tee Assembly for LT-739</i>)	16005
UC-100A (<i>Replacement Display & Data Logging Terminal</i>)	43054
L-CAL (<i>Portable Liquid Formazin Calibration Kit for LT-73X Series Sensors</i>)	53247
Pyxis Turbidity Calibration Std – 2.0 NTU (<i>4,000mL</i>)	57010-2L
Pyxis Turbidity Calibration Std – 10.0 NTU (<i>4,000mL</i>)	57010-10L
Pyxis Turbidity Calibration Std – 20.0 NTU (<i>4,000mL</i>)	57010-20L
Pyxis pH Combo Calibration Pack (<i>pH 4-7-10 Calibration Solution 3-Pack - 500mL ea.</i>)	57007
Pyxis Conductivity Calibration Std – 1,000 μ S/cm (<i>500mL</i>)	57008
SP-200 OxiPocket™ (<i>Pocket All-Oxidizing Disinfectants Colorimeter & Fluorometer</i>)	50802