

ST-750

Inline APHA-Hazen Color Sensor

For Municipal, Industrial & Environmental Water Applications

Product Description

The Pyxis ST-750 inline APHA (Hazen) color sensor is uniquely designed to measure the real-time color in water for use in municipal, industrial and environmental applications. The sensor uses the APHA-Hazen platinum-cobalt (also referred to as Chromaticity) method to measure the color in the sample water and is ideally suitable for clean water and lightly polluted water with a slight to pale yellow tint. This includes relatively clean surface water, groundwater, domestic/drinking water and industrial water. The ST-750 has a built-in primary light source and detector to measure the color content, in addition a built-in reference light source and detector are installed to compensate for mild levels turbidity interference.

The ST-750 offers a combination of fully integrated 4-20mA as well as RS-485 Modbus output signals and is Bluetooth® 5.0 Enabled for wireless cleaning and calibration when used with MA-WB or PowerPACK Series Bluetooth Adapters and the uPyxis APP for Desktop devices. The ST-750 is provided in UPVC with the standard Pyxis ST-001 inline ¾-inch FNPT Tee assembly, 1.5-meter bulk-head cable with quick adapter and 1.5-meter flying lead cable with quick adapter, enabling rapid wiring to any microprocessor controller, PLC or DCS system.

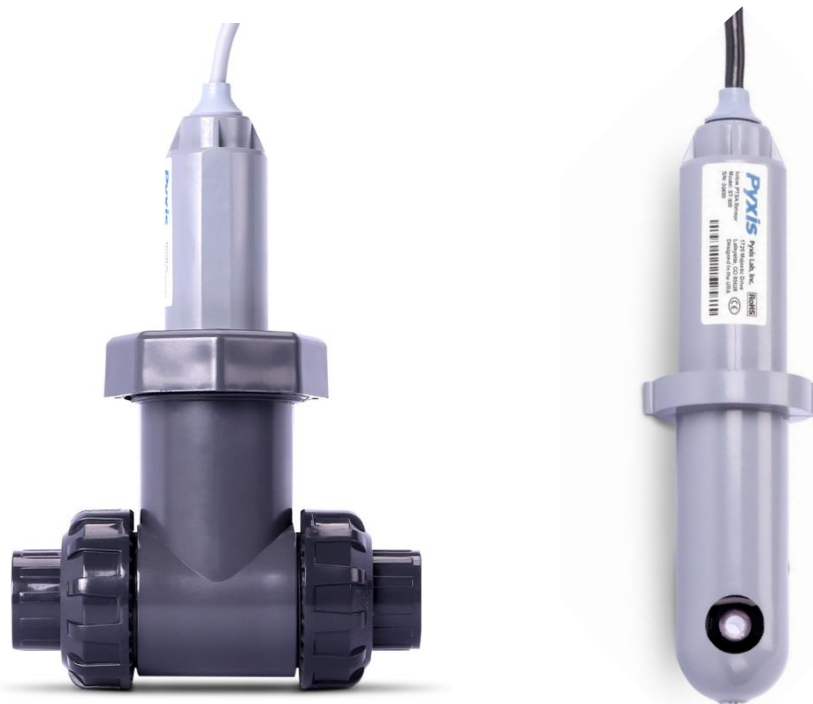
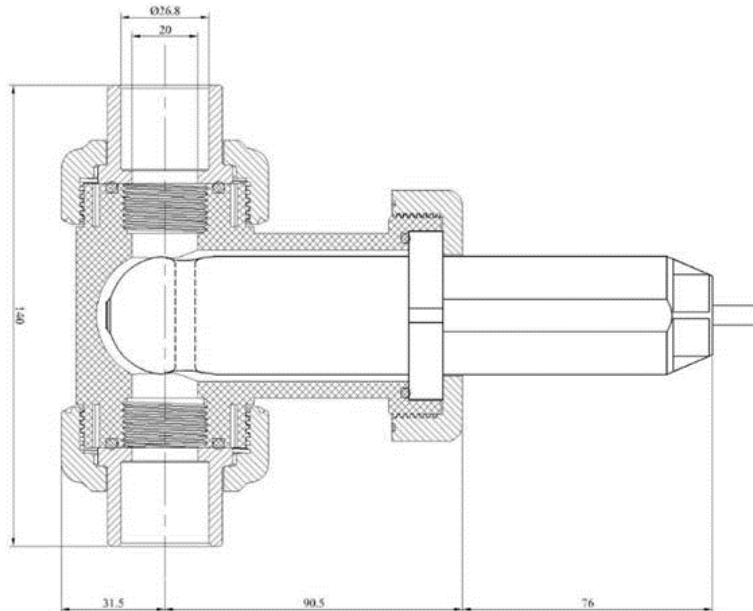


Figure 1 - ST-750 Color Sensor with ST-001 Inline Tee Assembly

Specifications

| Item | ST-750 |
|--------------------------|--|
| P/N | 53501 |
| Target | APHA / Hazen / Platinum-Cobalt Color |
| Output Range (4-20mA) | 0.10-30.0 Degrees (ppm Pt-Co) <i>uPyxis APP Adjustable up to 500 Degrees Maximum</i> |
| Lower Detect Limit | 0.10 Degrees |
| Resolution | 0.01 Degrees |
| Accuracy | ±2% of reading or 0.1 Degrees, whichever is greater |
| Methodology | Platinum-Cobalt Color / APHA Color / Hazen Color / Wavelength 365nm |
| Power Supply | 24 (±2) VDC, 65 mA |
| Outputs | Isolated 4-20mA Analog Output Isolated RS-485 Digital Output, Supporting MODBUS protocol |
| Dimension | Length 6.8 inch (172.7 mm), body diameter 1.44 Inch (36.6 mm) |
| Weight | 170 g (0.37lbs) |
| Installation | ST-001 Inline Tee ¾-inch FNPT with unions (Provided with each sensor) |
| Material | UPVC |
| Pressure | 100 psi (6.9 Bar) |
| Temperature | 4 °C - 40 °C (40 - 104 °F) Operating -7 °C - 60 °C (20 - 140 °F) Storage |
| Cable Length | 1.5m – 7Pin Bulkhead Cable w/ IP67 Adapter 1.5m – 7Pin Flying Lead Cable w/IP67 Adapter <i>Optional Extension Cables Available</i> |
| Calibration | Two-point calibration against DI water and known COLOR Standards |
| Rating | IP67 |
| Regulation | CE / RoHS |
| Method Compliance | ASTM-D1209 / ISO-6271 |

ST-750 Inline Tee Assembly Diagram (mm)



ST-750 Cleaning and Calibration

Pyxis Lab recommends cleaning and calibrating the ST-750 sensor at a minimum frequency of once per month. For clean water applications this period may be decreased. For heavily contaminated applications, cleaning and calibration may be considered more frequently. When powered by and connected to the MA-WB (7Pin) or PowerPACK Series Bluetooth Adapter options, the ST-750 sensor can be wirelessly accessed via Bluetooth from a desktop device using the **uPyxis DESKTOP APP**. The desktop APP features a live graphical display of the sensors value outputs for Color as well as a sensor calibration function. Once the sensor is properly cleaned it can then be calibrated with its Pyxis Calibration Standard (ie. DI Water for Zero and COLOR-30 for Slope Calibration). Contact service@pyxis-lab.com for support.

The latest version of uPyxis Desktop can be downloaded via the link below

<https://upyxis.pyxis-lab.com.cn/release/pc/uPyxis.Setup-latest.zip>



Figure 2 – MA-WB Bluetooth Adapter / COLOR-30 Calibration Std / uPyxis Desktop

Optional Accessories Information

| | P/N |
|--|----------|
| Color-30 APHA/Hazen Standard -30 Degrees (500mL) | 58000 |
| MA-WB Bluetooth/USB Adapter (Pyxis Bluetooth/USB Adapter for 7Pin Pyxis Sensors) | MA-WB |
| PowerPACK-1 (Single Chanel Auxiliary Power Supply w/Bluetooth For Pyxis Sensors) | MA-BLE-1 |
| PowerPACK-4 (Four Chanel Auxiliary Power Supply w/Bluetooth For Pyxis Sensors) | MA-BLE-4 |
| ST-001 Inline Tee Assembly Spare (3/4" FNPT Inline Tee For ST Probes) | 50704 |
| Pyxis Sensor Cleaning Kit (Includes Sensor Cleaner 500mL + Accessories) | SER-01 |
| MA-C10 (10' Extension Cable for 7Pin Pyxis Sensors) | 50738 |
| MA-C50 (50' Extension Cable for 7Pin Pyxis Sensors) | 50705 |