

# ST2

## SENSOR TRANSMITTER & POWER SUPPLY

**WIRELESSLY CONNECTS SENSORS WITH THE PT2 ANALYZER**

**Optical Dissolved Oxygen—Suspended Solids—pH—ORP**

The Insite Instrumentation Group ST2 will wirelessly connect any series 20 sensor with the PT2 process analyzer. Compatible sensors include DO, SS, pH, and ORP sensors. The system allows for flexible and economical process monitoring and control. The DO sensor does not need membranes, fill solutions, nor replaceable sensor caps. The SS sensor is based on near infrared technology, eliminating inaccuracies caused by changes in the process color. The pH electrodes are flat glass, double reference junction with temperature compensation. The ORP electrodes are flat glass, double reference junction. Both pH and ORP electrodes feature a quick disconnect design that makes changing electrodes a snap and reduces down time due to electrode maintenance. The ST2 allows for any sensor to be set up for automatic self-cleaning which significantly reduces maintenance and increases sensor reliability.

The ST2 has an outdoor line of sight range of up to one mile. If the PT2 is mounted indoors, the closest ST2 should be within 600 feet. The ST2 combines with other ST2's and the host PT2 to form a ZigBee compliant RF network with self-healing mesh technology ensuring trouble-free communications. This significantly reduces installation costs as there is no need for interconnecting cable or conduit.

The ST2 has a DC power on/off switch to allow for safe connect/disconnect of any series 20 sensor. A rotary switch allows the user to determine which of 16 channels to use. Another rotary switch is used to set the address of the ST2 so that it can be identified within the network. The ST2 has two isolated 4 to 20 milliamp outputs that can be spanned to any range within a specific sensors measuring range. There is one setpoint relay that can be used as a switch or as an alarm. Another relay is dedicated to controlling the self-cleaning of the sensor.



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# ST2 SPECIFICATIONS

<b>Measuring Ranges</b>	DO — 0 to 25 ppm SS — 0 to 30,000 mg/l pH — 2 to 12 pH ORP- +/- 2000mV
<b>Response Time</b>	95% in less than 60 seconds
<b>Sensor Check</b>	Automatic self diagnostics
<b>Outputs</b>	Two Isolated 4 to 20 ma One setpoint relay One cleaning relay
<b>Memory Backup</b>	All user settings stored in nonvolatile memory
<b>Display</b>	LED on/off indication LED transmit indication
<b>Communications</b>	ZigBee compliant RF with self-healing mesh technology 16 Channel options
<b>Ambient Temperature</b>	minus 20 degrees C to 70 degrees C
<b>Ambient Humidity</b>	0 to 100 percent
<b>Input Power</b>	100 to 240 VAC, 50/60 Hz, 250 mA 25 Watt (fused)
<b>Enclosure Rating</b>	NEMA 4X, IP65, Polycarbonate ABS
<b>Approvals</b>	FCC Part 15.247
<b>Cerification</b>	CE
<b>Mounting</b>	Handrail or surface
<b>Dimensions</b>	7.125 x 7.125 x 2.375 inches (181 x 181 x 61 mm)
<b>Weight</b>	Approximately 1.5 pounds

**20**  
**Series**

Wireless Communications



DO SS pH ORP

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