MULTIPLE PARAMETERS

OptoDOSys: Series 20

Process Transmitter
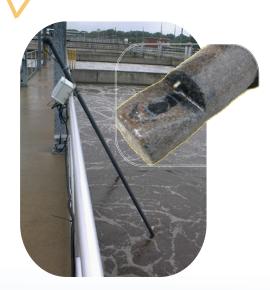
DO

SS

pH/ORP

Sensor Transmitter

The OptoDOSys_20 Series Wireless System comprises a Process Transmitter, Sensor Transmitters, and selection of sensors from DO Probes, SS Probes, and pH/ORP Probes.

The 20 Series System will support wireless communications with up to 16 probes in any combination and is designed for flexibility with economical process monitoring and control.

The **Process Transmitter** (PT 2) multi-channel analyzer is part of the unique 20 Series System that combines advanced electronics with the latest in sensor technology. The PT 2 will wirelessly communicate with up to 16 Sensor Transmitters (ST2) which work with any combination of DO, SS, pH, or ORP sensors. It has an outdoor line of sight range of up to one mile. If the PT 2 is mounted indoors the closest ST 2 should be within 600 feet. The PT 2 and its sensors form a ZigBee compliant RF network with self healing mesh technology. This ensures trouble-free communications. This significantly reduces installation costs as the there is no need for interconnecting cable or conduit.The back lit display can be programmed to show one, two, four, eight, or sixteen sensor readings continuously. If only one channel is displayed a trend graph of the last twenty four hours for that sensor will also be displayed. All sensor status and readings can be sent to the SCADA system or to a PLC via the two wire RS485 ModBus output.

PT 2 setup is simple, requiring only two settings to start wireless communications with a remote sensor. The **PT 2 ID** setting which is used to identify a PT 2 unit, and the **Sensor Address** which is used to identify a ST 2 unit. You can use the 20 Series Installation Worksheet to keep you settings organized.

The ST 2 links together with other ST 2's and the host PT 2 to form a network . It has a DC power on/off switch to allow for safe connect/disconnect of any 20 Series sensor. A rotary switch allows you to choose from 15 different **PT 2 ID**'s. Another rotary switch is used to set the **Sensor Address** of the ST 2 so that it can be identified within the network. The ST 2 has two isolated 4 to 20 milliamp outputs that can be spanned to any range within a specific sensors measuring range. There is one set point relay that can be used as a switch or as an alarm. Another relay is dedicated to controlling the self-cleaning of the sensor.

PT2 SPECIFICATIONS

Measuring Ranges DO — 0 to 25 ppm
   SS — 0 to 30,000 mg/l
   pH — 2 to 12 pH
   ORP- +/- 2000mV

Response Time 95% in less than 60 seconds

Sensor Check Automatic self diagnostics

Outputs   RS-485 Modbus
   RS-232 serial

Memory Backup All user settings stored in nonvolatile memory

Display   Backlit graphical LCD display with UV protection
   320 x 240 pixel resolution
   Viewing area 2.6 x 3.45 in (92 x 122 mm)
   Contrast adjustment via keypad
   Capable of continuously displaying all channels

Communications ZigBee compliant RF with self-healing mesh technology

Ambient Temperature minus 20 degrees C to 70 degrees C

Ambient Humidity   0 to 100 percent

Input Power   100 to 240 VAC, 50/60 Hz, 1A
   45 Watt (fused)

Enclosure Rating NEMA 4X, IP65, Polycarbonate ABS

Approvals   FCC Part 15.247

Cerification   CE

Mounting   Handrail or surface
   Sunscreen recommended for outdoor mounting

Dimensions   9.25 x 9.0 x 4.5 inches (235 x 229 x 115 mm)

Weight   Approximately 3.0 pounds

ST2 SPECIFICATIONS

Measuring Ranges DO — 0 to 25 ppm
   SS — 0 to 30,000 mg/l
   pH — 2 to 12 pH
   ORP- +/- 2000mV

Response Time 95% in less than 60 seconds

Sensor Check Automatic self diagnostics

Outputs   Two Isolated 4 to 20 ma
   One setpoint relay
   One cleaning relay

Memory Backup All user settings stored in nonvolatile memory

Display   LED on/off indication
   LED transmit indication

Communications ZigBee compliant RF with self-healing mesh technology
   16 Channel options

Ambient Temperature minus 20 degrees C to 70 degrees C

Ambient Humidity   0 to 100 percent

Input Power   100 to 240 VAC, 50/60 Hz, 250 mA
   25 Watt (fused)

Enclosure Rating NEMA 4X, IP65, Polycarbonate ABS

Approvals   FCC Part 15.247

Cerification   CE

Mounting   Handrail or surface

Dimensions   7.125 x 7.125 x 2.375 inches (181 x 181 x 61 mm)

Weight   Approximately 1.5 pounds