

Suspended Solids Sensor Submersible Design



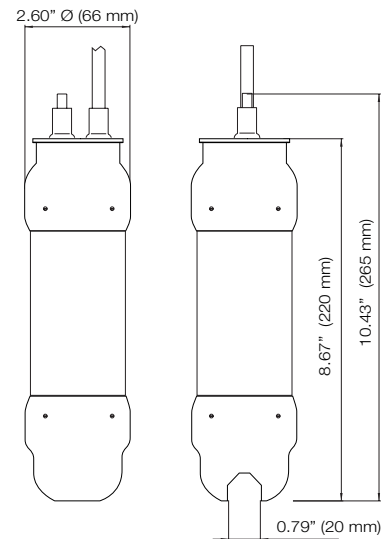
- **Wide application range**
 - Monitor suspended solid in raw sewage, primary clarifier effl., MLSS, RAS, filtrate, centrate, backwash, sewer losses, etc.
 - Measures up to 30,000 ppm (depending on type of solids)
- **Low maintenance**
 - Heavy duty stainless steel sensor head
 - Wide 0.79" (20 mm) measuring gap
 - Flushing system with no moving parts
- **Stable measuring principle**
 - Built-in LED compensation loop to alleviate frequent recalibration of sensor
 - Temperature compensation loop
 - Measurement by 880 nm NIR-light
- **Easy to use**
 - Self-instructing menu
 - Calibration with lab test in ppm (mg/l)

The ITX Suspended Solids Sensor is the ultimate tool for effective process control. The sensor is used for continuous measurement of suspended solids in aeration basins (MLSS), return sludge troughs, SBR-systems, raw sewage, primary clarifier effluent and sewer monitoring in industrial plants. The sensor is an integral part of controlling solids retention time (SRT) or sludge

age. The measuring principle is a single beam of pulsed NIR-light. The LED light source pulses at 880 nm and has a guaranteed life of at least three years. In each installation the meter is calibrated using actual lab tests for up to five sample points. An automatic cleaning system with built-in flushing nozzles ensures accurate measurements with little maintenance.

Technical specifications

| | | |
|----------------------------|---|---|
| Material | 316SS (SIS2343) | The sensor is manufactured in stainless steel which limits corrosion. The head of the sensor is designed to achieve the highest self-cleaning effect. |
| Weight | 3.5 lbs (1.6 kg) | |
| Cable | 33 ft (10 m) | The cable shield is made of Hytrel and is highly resistant to aggressive materials and fluids. |
| Enclosure | NEMA 6 (IP 68) | |
| Process temp. | 32 - 140°F (0 - +60°C) | |
| Measuring Principle | Straight transmission | The detected measuring signal is inversely logarithmical proportional to the consistency or suspended solids. |
| | 0.79" (20 mm) measuring line | Particals will not be stucked. Lens in glass. |
| Measuring range | Min 0 - 100 ppm (mg/l) Max 0 - 30 000 ppm (mg/l) | Depending on type of solids |
| | GaAs, Diod 880 nm | ITX measures transmitted light which facilitates a zero-point calibration. At 880 nm no colours can be seen which eliminates a source of error. |
| Accuracy | ±0,5% FS | |
| Repeatability | ±200 ppm (mg/l) Typically for 0-5 000 ppm (mg/l) | |
| Mounting | In liquid | Immersion of sensor in liquid, see accessories for alternatives. |
| Cleaning | Air or water | Flush pressure max 87 psig (6 bar). For air 29 psig (2 bar) is usually sufficient. |
| Flushing hose | 5/16" black pvc, 33' (10 m) | |
| Sealing | EPDM/Viton | |
| Accessories | | Mounting bracket for handrail. Telescopic rod, 5 - 12 ft (1.5 - 4 m) incl. transmitter holder. Solenoid valve for flushing. Other mounting arrangements. |



ITX20

BB2 Control Box All our sensors in the X-series can be combined and connected to a Control Box; BB2. The BB2 is equipped with the latest in communication protocols for compatibility with a wide array of automation systems. The control box comes with two 4 - 20 mA outputs as standard.

It can support up to four sensors for 4 - 20 mA or Profibus DP output signals. Relay outputs in the BB2 are used for high and low alarms or to provide a pulse for automatic cleaning for sensors with that function. Further information can be found in our leaflet for BB2.

