

# MODEL 25

## DATA SHEET

### SUSPENDED SOLIDS SENSOR

Near-infrared sensor— Self-cleaning optional—Five year sensor warranty

#### WIRELESS COMMUNICATIONS WITH THE ANALYZER

The Insite Instrumentation Group Model 25 suspended solids sensor is a unique product that combines advanced electronics with solid-state, optical sensing technology. The sensor is based on the field proven design of the Model 15 family of sensors with almost 3,000 units shipped. To this proven design, the Model 25 adds the ability to mount the sensors throughout the plant without having to deal with running conduit between the sensor and analyzer. This allows for significant savings on installation costs while also allowing maximum flexibility in sensor placement. No other suspended solids sensor can compare with the features and benefits of this revolutionary design.

#### UP TO SIXTEEN SENSORS CONNECTED TO ONE ANALYZER



**MODEL 25 SUSPENDED SOLIDS SENSOR**  
With MODEL ST2 TRANSMITTER

The Model 25 sensor connects to the Sensor Transmitter junction box (p/n ST2). The ST2 then communicates with the parent analyzer via a ZIGBEE compliant Rf module. There is an embedded antenna with an outdoor line of sight range up to one mile. When several sensor/ST2 pairs are installed they form a self-healing mesh network that increases reliability.

The sensors operate on the principle of single gap light absorption as a means of detecting the presence of suspended solids. The sensors utilize an infrared emitter to minimize color effects and compensates for emitter variations due to temperature by measuring source brightness. The sensors incorporate self-cleaning optics via air or water jet. Response time is 90% of full scale in less than 60 seconds. Sensor drift is less than 1% per year. Operating temperature range is 0 to 65 degrees C. Wetted materials are epoxy, polyurethane, PVC, or 316 SS.

**20 Series**

Wireless Communications



DO SS pH ORP



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# MODEL 25 SPECIFICATIONS

## Measuring Range

25L = 0 to 1,500 mg/l  
 25, 25T, 25PI , & 25HT = 250 to 30,000 mg/l

## Accuracy

25L = 5% of reading or 5 mg/l whichever is higher  
 25, 25T, 25PI , & 25HT = 5% of reading or 50 mg/l whichever is higher

## Stability

= 2% of reading

## Repeatability

= 2% of reading

## Sensor Check

Automatic self diagnostics

## Sensor Cable Length

33 feet (10 meters) standard

## Ambient Temperature

minus 20 degrees C to 70 degrees C



### MODEL 25 SUBMERSIBLE SENSOR

#### MLSS—RAS

The Model 25 sensor was designed to measure the solids concentrations in biological reactors, open RAS channels, and clarifier influent



### MODEL 25L SUBMERSIBLE SENSOR

#### CLARIFIER & PLANT EFFLUENT

The Model 25L sensor was designed to measure very low solids concentrations typically found in secondary clarifier and plant effluents.



### MODEL 25PI SENSOR

#### RAS

The Model 25PI sensor was designed to be inserted into a activated sludge return. The sensor is epoxy, polyurethane, and 316 SS.



### MODEL 25T SENSOR

#### MLSS—RAS

The Model 25T sensor was designed for sample bypass lines of mixed liquor or sludge return.



### MODEL 25HT SENSOR

#### RAS

The model 25HT sensor was designed to be inserted into a activated sludge return. The sensor is epoxy, polyurethane, and 316 SS.

