



# TurbiTechw<sup>2</sup> LA

## Suspended Solids Sensor

PRODUCT DATASHEET

### APPLICATIONS

Mixed Liquor  
Aeration Basin  
Oxidation Ditch  
Returned Activated Sludge  
Surplus Activated Sludge

### MEASUREMENT PRINCIPAL

Light Attenuation  
Wavelength 860nm

### FEATURES

Fully automatic Self Cleaning  
Flexible Mounting System  
Large Optical Surface

### BENEFITS

Automated Aeration Control  
Low Cost of Ownership

### COMPATIBLE MONITOR

7300w<sup>2</sup> Monitor

### ALTERNATIVE SENSORS

TurbiTechw<sup>2</sup> HR  
SoliTechw<sup>2</sup> IL



The TurbiTechw<sup>2</sup> LA Sensor has been designed for use in aeration systems typically monitoring Mixed Liquor Suspended Solids also known as Activated Sludge where solids are typically in the range of 2,000 to 5,000 mg/l. The sensor can also measure Returned Activated Sludge (R.A.S.), Surplus Activated Sludge (S.A.S.) and Suspended Solids or Turbidity in any higher range application.

The large optical surface and sample volume combine to ensure that the sensor is providing information that is reliable and representative of the solids present in the process. Deposits of fats and grease on the sensing area do not prevent the sensor from measuring, unlike sensors with small optical surfaces. In addition the sensor incorporates a self cleaning mechanism that ensures that the optical surfaces are kept clean at all times, the cleaning system is designed to avoid problems with ragging and does not smear the optical system. The cleaning system ensures that manual intervention on a routine basis is not required, the sensor should simply be checked as part of general site housekeeping.

The TurbiTechw<sup>2</sup> LA Sensor uses infrared light at 860nm and operates using the Light Attenuation Principle. The cleaning mechanism is then sealed by 2 Nitrile 'H' Rings that finish the cleaning process. The Nitrile seals can be exchanged for Viton if the process media dictates. The cleaning process is automatically initiated by the 7300w<sup>2</sup> Monitor at a user determined frequency. The cleaning process takes only 90 seconds, which means that the sensor is available for 99.5% of the time with a 6 hourly cleaning cycle.



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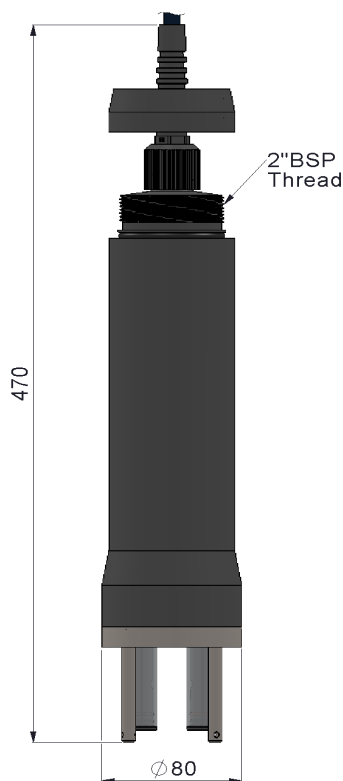
Rockhill Business Park, Higher Bugle, St Austell, Cornwall, UK, PL26 8RA



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#### Physical

Weight  
Protection Class  
Enclosure Material  
Cable Entries  
Wetted Parts  
Cable Type  
Cable Length  
Service Requirement

#### Environmental Data

Operating Temperature  
Storage Temperature

#### Interface to Monitor

Power Supply  
Type

**Measurement**  
Range

Accuracy  
Display Resolution  
Repeatability  
Measurement Principle  
Wavelength/Frequency  
Pressure Rating (Depth)

Flow Rate

Suspended Solids Ranges

2.2 kg (inc 10 metres of cable)

IP68

Black Acetal Co-Polymer

Integral Cable Gland

Black Acetal, 316 Stainless Steel, Glass, Polyurethane, Nitrile

4 core, 2 Twisted Pair, 5mm O/D Polyurethane Coated

10 metres standard, 100 metres maximum

Automatic Self Cleaning

Seal Service every 3500 cleans (application dependent)

0 to 50°C

-20 to 60°C

12VDC from Monitor

RS485

0-20,000 mg/l

Not suitable for measuring <1,000mg/

5% of reading or 50mg/l whichever is greater

0.01mg/l

+/-1% of reading

Light Attenuation

860nm Infrared

1 Bar or 14.5 psi

Not suitable for Inline use –see SoliTechw<sup>2</sup>IL

Not affected by flow rate, avoid dead spots and extreme turbulence

The actual measuring range will depend on the nature of the sample being monitored. For processes normally operating at 10,000 mg/l or more should the HR version of this sensor should be considered. Processes that use carbon will provide higher than expected readings and the HR version of the sensor should be used.

Dip

1.0 to 3 metres in 1.0 metre increments

Contact Partech for a full range of mounting options

#### Order Codes

Part No	Description
223617	TurbiTechw <sup>2</sup> LA Sensor (Cable Length: 10 metres, Nitrile Seals)
223873	TurbiTechw <sup>2</sup> LA Sensor (Cable Length: 10 metres, Viton Seals)

#### Mounting

Installation Type  
Mounting Shaft  
Handrail Attachment

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The company reserves the right to alter the specification without prior notice. E&OE



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