



# 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 860 nm

### 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

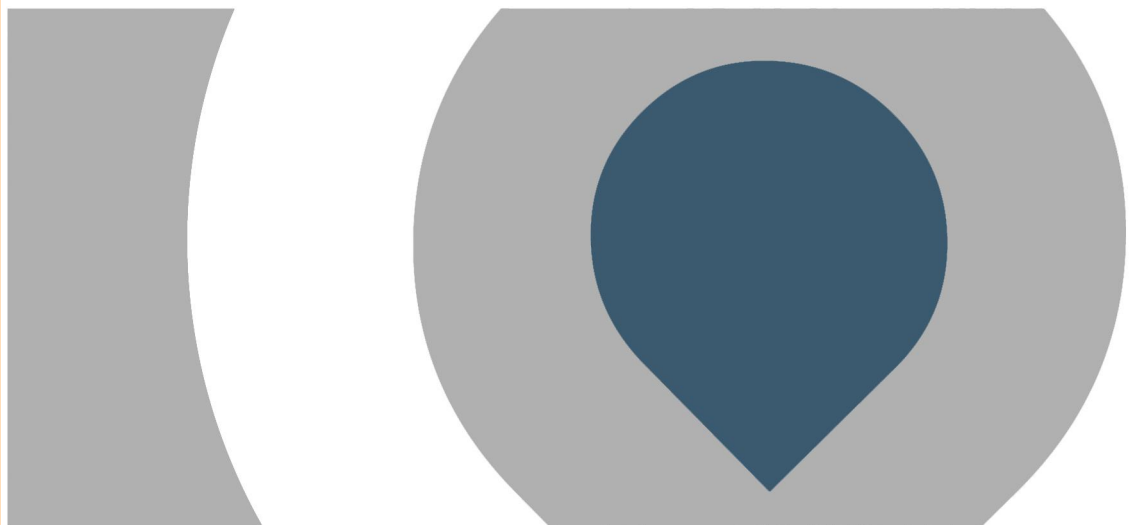
TurbiTechw<sup>2</sup> HR  
SoliTechw<sup>2</sup> ST



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 1,500 to 3,500 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 860 nm 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 5 hourly cleaning cycle.



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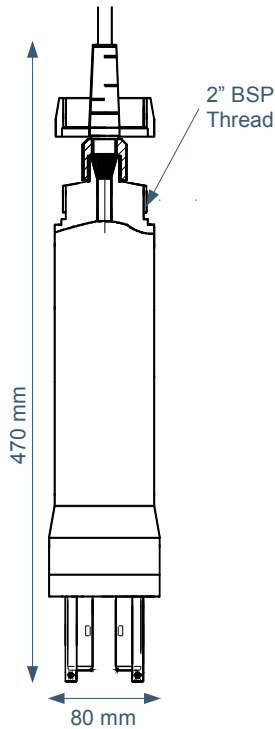




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### Physical

Dimensions	80 mm diameter x 470 mm long
Weight	2.2 kg (inc 10 metres of cable)
Protection Class	IP68
Enclosure Material	Black Acetal Co-Polymer
Cable Entries	Integral Cable Gland
Wetted Parts	Black Acetal, 316 Stainless Steel, Glass
Seal Material	Polyurethane and Nitrile (Viton option)
Cable Type	4 core, 2 Twisted Pair, 5mm O/D Polyurethane Coated
Cable Length	10 metres standard, 100 metres maximum
Service Requirement	Automatic Self Cleaning Seal Service every 3500 cleans (application dependent)

### Environmental Data

Operating Temperature	0 to 50°C
Storage Temperature	-20 to 60°C
Location	Indoor/Outdoor

### Interface to Monitor

Power Supply	12VDC from Monitor
Type	RS485

### Measurement

Accuracy	Better than +/-5% FSD on real sample
Resolution	Dependent on range setting, typically +/-2%
Repeatability	Better than +/-1% FSD on real sample
Measurement Principle	Light Attenuation
Wavelength/Frequency	860 nm Infrared
Response Time	0.5 seconds - damping provided by monitor
Pressure Rating (Depth)	10 mWC
Flow Rate	Not affected by flowrate, avoid dead spots and extreme turbulence
Range	0-4,000 to 0-20,000 mg/l 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 consider use of the HR version of this sensor. Processes that use carbon will provide higher than expected readings and the HR version of the sensor should be used.

### Mounting

Installation Type	Dip
Mounting Shaft	0.5 to 3 metres in 0.5 metre increments
Handrail Attachment	See Documents 132577DS, 223980DS, and 224567DS for options

### Order Codes

Part No	Description
223617	TurbiTechw <sup>2</sup> LA Sensor (Cable Length: 10 metres, Nitrile Seals)
223872	TurbiTechw <sup>2</sup> LA Sensor (Cable Length: 20 metres, Nitrile Seals)
223873	TurbiTechw <sup>2</sup> LA Sensor (Cable Length: 10 metres, Viton Seals)
223874	TurbiTechw <sup>2</sup> LA Sensor (Cable Length: 20 metres, Viton Seals)

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

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