

# TurbiTechw<sup>2</sup> HR

## High Range Suspended Solids Sensor

PRODUCT DATASHEET

### APPLICATIONS

Membrane Batch Reactors  
Mixed Liquor  
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

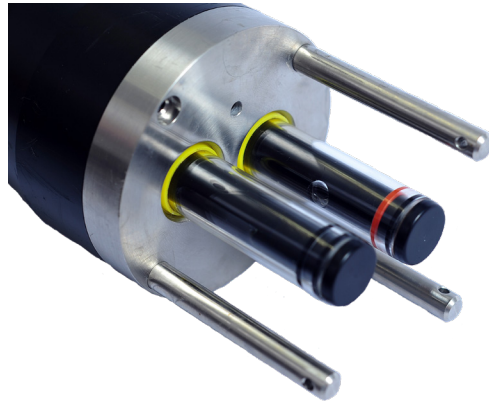
Automated Aeration Control  
Low Cost of Ownership

### COMPATIBLE MONITOR

7300w<sup>2</sup> Monitor

### ALTERNATIVE SENSORS

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



The TurbiTechw<sup>2</sup> HR Sensor has been specifically designed for use in wastewater treatment systems where high levels of suspended solids are desirable in the aeration phase. Membrane Batch reactors typically run with MLSS values in the region of 8,000 to 14,000 mg/l. MLSS concentrations promote numerous process benefits, including stable operation, complete nitrification, and reduced biosolids production reducing biological volume requirements (and associated footprint) to only 20-30 percent of conventional processes. Further, the membrane tanks provide extremely space efficient solids separation and do not require a clarifier in the system.

The TurbiTechw<sup>2</sup> HR Sensor is suitable for monitoring solids in higher ranges than the standard LA version of the sensor due to its shorter path length. 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.





# TurbiTechw² HR

## High Range Suspended Solids Sensor

### PRODUCT SPECIFICATION

#### Physical

Dimensions  
Weight  
Protection Class  
Enclosure Material  
Cable Entries  
Wetted Parts

Cable Type  
Cable Length  
Service Requirement

#### Environmental Data

Operating Temperature

#### Interface to Monitor

Power Supply  
Sensor Output

#### Measurement

Range  
Accuracy  
Limit of Detection  
Minimum Operating Range  
Measurement Principle  
Wavelength  
Pressure Rating (Depth)  
Flow Rate  
Units

#### Mounting

Installation Type  
Mounting Shaft  
Handrail Attachment

470 x Ø80 mm  
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, 9 mm O/D Polyurethane Coated  
10 metres standard, 100 metres maximum  
Automatic Self Cleaning  
Seal Service every 3500 cleans (application dependent)

0 to +50°C

12VDC from Monitor  
ModTechw², RS485

0 - 50,000 mg/l  
±5% of measured value or 250 mg/l whichever is greater  
250 mg/l  
0 - 5,000 mg/l  
Light Attenuation  
860 nm Infrared  
1Bar or 14.5 psi  
Not affected by flow rate, avoid dead spots and extreme turbulence  
User Selectable mg/l, g/l, ppm, %SS, FAU

The actual measuring range will depend on the nature of the sample being monitored.

Dip  
1.0 to 3 metres in 1 metre increments  
Contact Partech for a full range of mounting options

#### Order Codes

##### Part No Description

223882 TurbiTechw² HR Sensor  
(Cable Length: 10 metres, Nitrile Seals)

223883 TurbiTechw² HR Sensor  
(Cable Length: 10 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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