TurbiTechw^2 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 860nm

FEATURES

Fully automatic Self Cleaning
Flexible Mounting System
Large Optical Surface

BENEFITS

Automated Aeration Control
Low Cost of Ownership

COMPATIBLE MONITOR

7300w^2 Monitor

ALTERNATIVE SENSORS

TurbiTechw^2 LA
SoliTechw^2 IL

The TurbiTechw^2 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 biological processes. Further, the membrane tanks provide extremely space efficient solids separation and do not require a clarifier in the system.

The TurbiTechw^2 HR sensor is suitable for monitoring solids in higher ranges than the standard LA version of the sensor due to it's 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.

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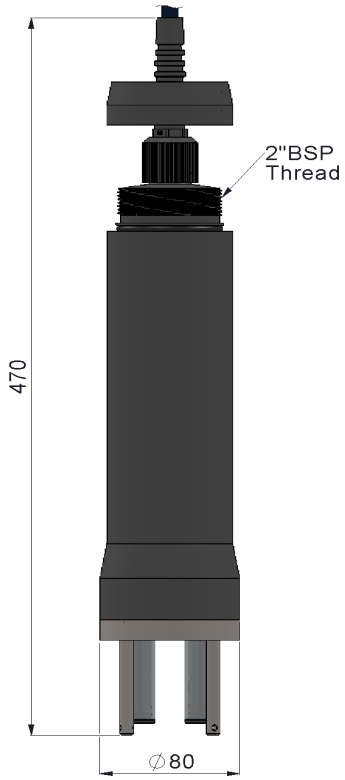

Physical	
Weight	2.2 kg (inc 10 metres of cable)
Protection Class	IP68
Enclosure Material	Black Acetal Co-Polymer
Cable Entries	Integral Cable Gland
Wetted Parts	Black Acetal, 316 Stainless Steel, Glass, Polyurethane, Nitrile
Cable Type	4 core, 2 Twisted Pair, 5mm O/D Polyurethane Coated
Cable Length	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
Interface to Monitor	
Power Supply	12 VDC from Monitor
Type	RS485
Measurement	
Range	0 - 50,000 mg/l Not suitable for measuring <5,000mg/l
Accuracy	+/-5% of reading or 250mg/l whichever is greater
Display Resolution	1 mg/l
Repeatability	+/-1% of reading
Measurement Principle	Light Attenuation
Wavelength/Frequency	860nm Infrared
Pressure Rating (Depth)	1Bar or 14.5 psi
Flow Rate	Not suitable for Inline use – see SoliTechw²IL Not affected by flowrate, avoid dead spots and extreme turbulence
Suspended Solids Ranges	The actual measuring range will depend on the nature of the sample being monitored.
Mounting	
Installation Type	Dip
Mounting Shaft	1.0 to 3 metres in 1 metre increments
Handrail Attachment	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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