

Turbi-Tech 2000LS Suspended Solids or Turbidity Sensor



Partech Instruments is a specialist company providing analysers and instruments for monitoring and control in; wastewater, raw water, industrial effluent and surface water applications.

Whatever the application and whatever the location, Partech will supply an effective and efficient service and a support package tailored to suit the customer

The Turbi-Tech 2000LS Sensor is designed to monitor the levels of Suspended Solids or Turbidity typically found in Final Effluent from municipal and industrial wastewater treatment plants. It is also capable of monitoring solids in the intake to both effluent and drinking water treatment processes. The normal operating range is between 0 - 50 mg/l and 0 - 500 mg/l which can be extended for some applications.

The nephelometric operating principle also allows the sensor to monitor Turbidity. When suitably calibrated FTU's and NTU's can be applied as the measuring unit.

Monitoring of these key parameters requires sensors that are reliable and accurate, the Turbi-Tech 2000LS fills this requirement perfectly. The large optical surfaces and sample volume ensure that the information provided by the sensor is both representative of the process and tolerant of fouling.

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 Turbi-Tech 2000LS Sensor employs Infrared light at 860 nm using the 90° Light Scatter principle in accordance with ISO7027 (2000). The optics are housed in cylindrical glass tubes that are moved past a set of polyurethane wipers seals to carry out the cleaning process. 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.

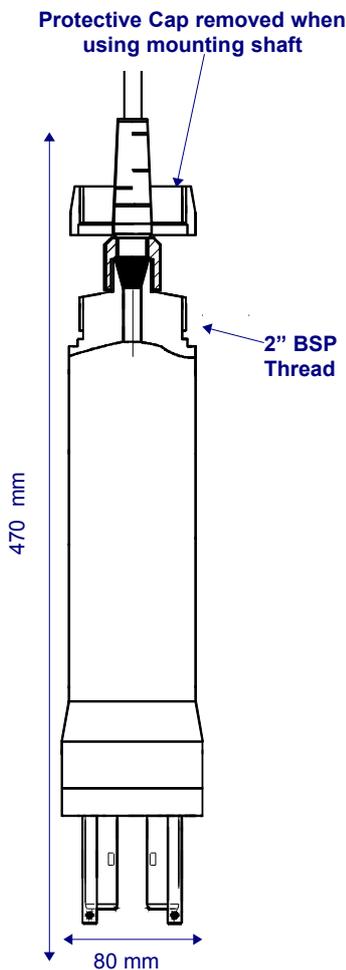
Associated Products

- 7200 Monitor
- Mounting Brackets
- Mounting Shafts
- Turbi-Tech 2000LA Sensor

When used with the 7200 Monitor the Turbi-Tech 2000LS sensor is MCERTS certified, the first on the market.



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Part Numbers

159400 Turbi-Tech 2000LS Sensor

171560 Conversion to Viton Seals

The measuring range will vary according to the nature of the solids being measured, the ranges quoted are based on typical solids from an activated sludge plant.



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

Physical

Weight	2.2 kg (inc 10 metres of cable)
Dimensions	80 mm diameter x 470 mm long
Enclosure Rating	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	6 core, 9mm 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

Power Supply

Voltage	12VDC from 7200 Monitor
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Interface to Monitor

Type	0 - 5 mA (Linearised by Monitor)
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Measurement Characteristics

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 Scatter
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

Maximum Range	0 - 500 mg/l or 0-1000 FTU
Minimum Range	0 - 50 mg/l or 0-50 FTU

Software

Remote Programming	No
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Mounting

Installation Type	Dip, Flowcell or Stilling Tube
Mounting Shaft	0.5 to 3 metres in 0.5 metre increments
Stilling Tube	Yes

Approvals

EMC Standard	EN61326:1998 EMC Requirements for Electrical Equipment for Measuring, Control and Laboratory use
EMC Directive	89/336/EEC
Low Voltage Directive	73/23/EEC
Machinery Directive	89/392/EEC