



# SoliTechw<sup>2</sup> IL Sensor

## Sludge Density and Suspended Solids Sensor

PRODUCT DATASHEET

### APPLICATIONS

Primary and Final Settlement  
Sludge Thickening and Dewatering  
Sludge Import and Export  
RAS Control

### MEASUREMENT PRINCIPAL

Sapphire Optical Window  
180° Back Scatter  
Infrared 960 nm

### FEATURES

Ball Valve Mounting to allow removal  
under pressure  
Can be installed in existing pipework  
Insensitive to Entrained Air

### BENEFITS

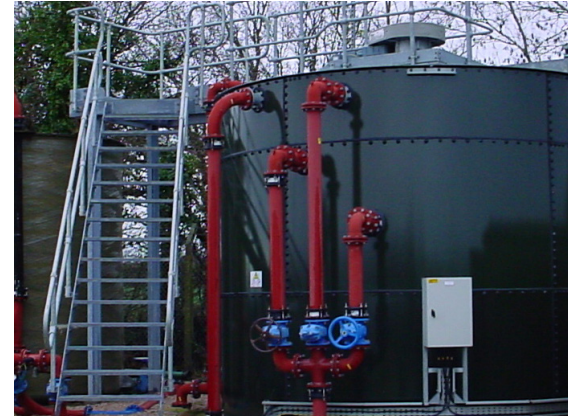
Reduced sludge transportation costs  
Allows fully automatic tank de-sludging  
Improved sludge treatment

### COMPATIBLE MONITOR

7300w<sup>2</sup> Monitor

### ALTERNATIVE SENSOR

TurbiTechw<sup>2</sup> LA  
TurbiTechw<sup>2</sup> HR



The SoliTechw<sup>2</sup> IL Sensor provides reliable and repeatable, continuous in-line measurement of sludge density, suspended solids and turbidity. The sensor is installed through a mounting boss onto any pipeline that is larger than 65 mm diameter, the sensing element is positioned flush with the inside wall of the pipe. This ensures that the optical surface is kept clean by the flow passing the sensor and that the sensor does not cause an obstruction to the flow. The optical element has a sapphire window, this offers excellent resistance to fouling and to damage caused by abrasion from particles in the flow.

The sensor is suitable for a variety of applications including the auto de-sludging of primary and final settlement tanks, where reliable sludge density measurement ensures that downstream treatment processes can operate at their optimum level. When detecting turbidity the sensor can give immediate warning of a filter failure or of contamination of a process by suspended particles. The sensor is also well suited to the monitoring of sludge at tanker intake points, giving an excellent indicator of the strength of the incoming liquor allowing both process adjustments and the charges to be applied to the tanker operator.

The sensor uses infrared back-scatter at 960 nm, the light is transmitted and received through a lens that is optically split. The infrared measurement principle allows the sensor to work in applications where entrained air prevents the use of ultrasonic sensors.

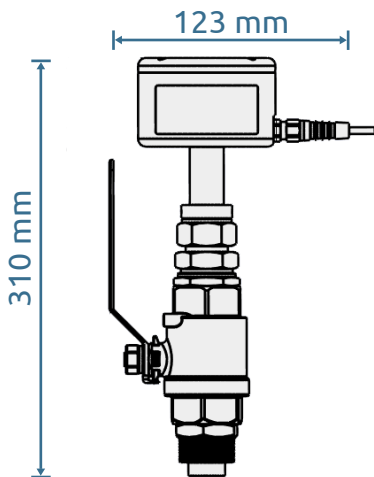
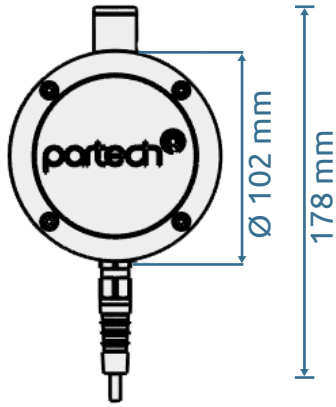
Call us on + 44(0) 1726 879800 [www.partech.co.uk](http://www.partech.co.uk)



# SoliTechw<sup>2</sup> IL Sensor

## Sludge Density and Suspended Solids Sensor

### PRODUCT SPECIFICATION



#### Order Codes

Part No	Description
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223614	SoliTechw <sup>2</sup> IL Sensor (Range: 0-50,000 mg/l, Cable Length: 10 metres)
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223890	SoliTechw <sup>2</sup> IL Sensor (Range: 0-50,000 mg/l, Cable Length: 20 metres)
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Publication No: 132250DS-Iss11

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

#### Physical

Dimensions  
Weight  
Enclosure Rating  
  
Enclosure Material  
Cable Entries  
Wetted Parts  
Cable Type  
Cable Length  
Service Requirement

310 mm long  
3.9 kg (inc 10 metres of cable and ball valve)  
Sensor Body: IP65  
Optical Housing: IP68  
Black Acetal Co-Polymer  
Integral Cable via Cable Gland  
316 Stainless Steel, Sapphire  
4 Core, 2 Twisted Pair, 5 mm O/D Polyurethane Coated  
10 metres standard, 100 metres maximum  
No routine servicing  
Will require manual cleaning frequency application  
dependent

#### Environmental Data

Operating Temperature

0 - 60°C

#### Interface to Monitor

Power Supply  
Sensor Output

12VDC from 7300w<sup>2</sup> Monitor  
ModTechw<sup>2</sup>, RS485

#### Measurement

Ranges  
Accuracy  
Measurement Principle  
Wavelength  
Pressure Rating  
Flow Rate

0 - 50,000 mg/l, 0 - 50 g/l, or 0 - 5 %SS  
±5% of reading or ±250 mg/l  
Back Scatter  
960 nm Infrared  
2 Bar  
Not affected by flowrate, sample should be mixed avoiding  
laminar flow

#### Mounting

Installation Type  
  
Process connection  
Minimum Line size

In-Line via Mounting Boss, alternatively a flanged pipe section can  
be provided  
1 1/4" BSP Male thread  
65 mm

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