



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

Sludge Density, Suspended Solids and Turbidity 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

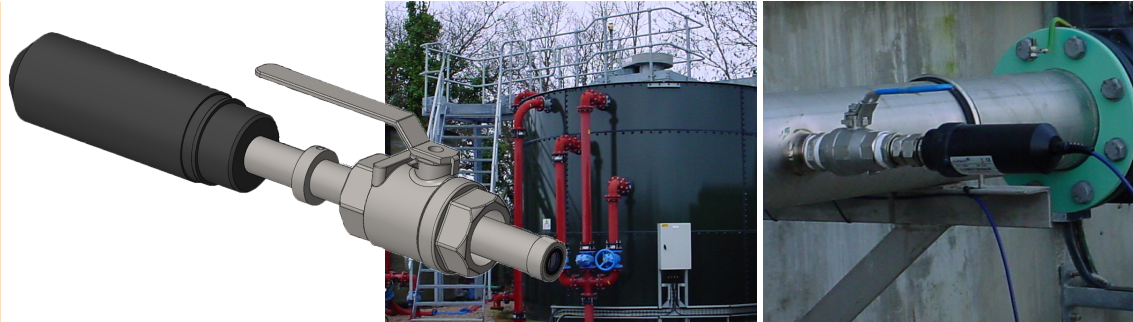
Reduced sludge transportation costs  
Allows fully automatic tank de-sludging  
Improved sludge treatment

## COMPATIBLE MONITOR

7300w<sup>2</sup> Monitor

## ALTERNATIVE SENSOR

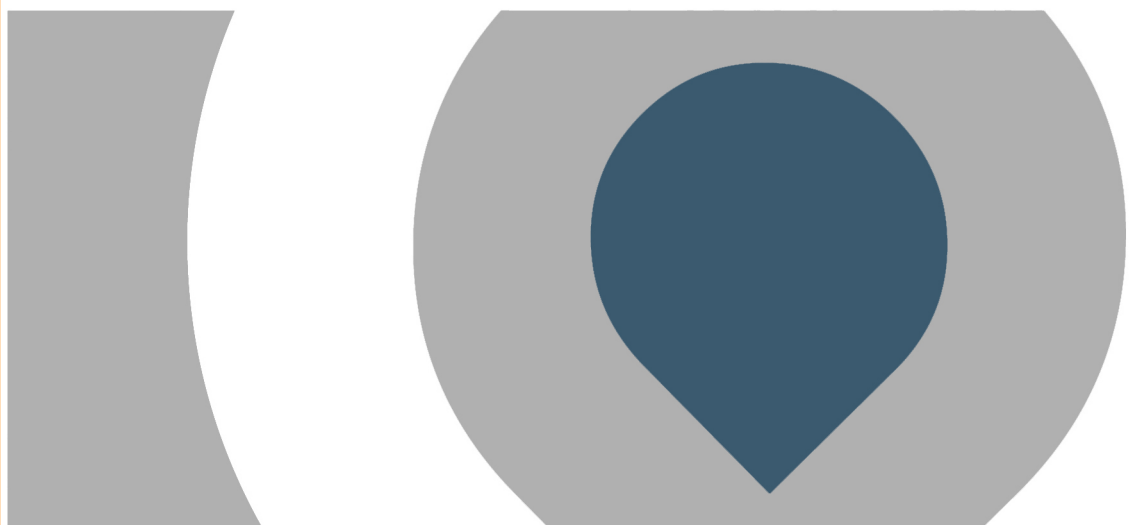
TurbiTechw<sup>2</sup> LA  
TurbiTechw<sup>2</sup> HR



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 the 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 960nm, 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.



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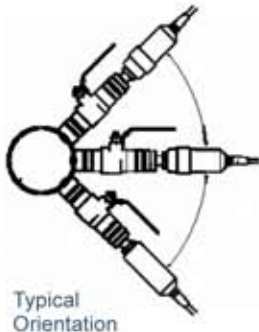
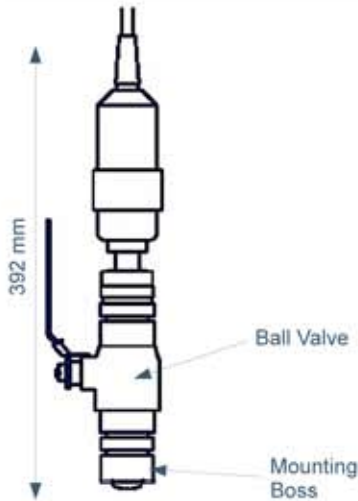




# SoliTechw<sup>2</sup> Sensor

## Sludge Density, Suspended Solids and Turbidity Sensor

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### Order Codes

Part No	Description
223614	SoliTechw <sup>2</sup> IL Sensor (Range: 0-5 %SS, Cable Length: 10 metres)
223890	SoliTechw <sup>2</sup> IL Sensor (Range: 0-5 %SS, Cable Length: 20 metres)
223891	SoliTechw <sup>2</sup> IL Sensor (Range: 0-0.5 %SS, Cable Length: 10 metres)
223892	SoliTechw <sup>2</sup> IL Sensor (Range: 0-0.5 %SS, Cable Length: 20 metres)

Publication No: I32250DS-Iss03  
 The company reserves the right to alter the specification without prior notice. E&OE

### Physical

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

7.2 kg (inc 10 metres of cable)  
 392 mm long  
 IP68  
 Black Acetal Co-Polymer  
 Integral Cable via Cable Gland  
 316 Stainless Steel, Sapphire  
 4 Core, 2 Twisted Pair, 5mm O/D Polyurethane Coated  
 10 metres standard, 100 metres maximum  
 No routine servicing  
 Will require manual cleaning frequency application dependent

### Environmental Data

Operating Temperature  
 Storage Temperature  
 Location

0 to 60°C  
 -20 to 60°C  
 Indoor/Outdoor

### Power Supply

Voltage

12VDC from 7300w<sup>2</sup> Monitor

### Interface to Monitor

Type

RS485

### Measurement Characteristics

Accuracy  
 Resolution  
 Repeatability  
 Measurement Principle  
 Wavelength/Frequency  
 Response Time  
 Pressure Rating  
 Flow Rate

+/-5% FSD on real sample  
 Dependent on range setting, typically +/- 2% FSD  
 +/-1% FSD on real sample  
 Back Scatter  
 960 nm Infrared  
 0.5 seconds - damping provided by monitor  
 2 Bar  
 Not affected by flowrate, sample should be mixed avoiding laminar flow  
 0 – 5%SS or 0 – 50,000 mg/l  
 0 – 0.5%SS or 0 – 5,000 mg/l

### Software

Remote Programming

No

### Mounting

Installation Type

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

Distributed in Australia By:



12 Carl Court, Hallam. Vic. 3803. Australia  
 03 8795 7711 | www.fluidquip.com.au | fluidquip@fluidquip.com.au

