



IL55BV2 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

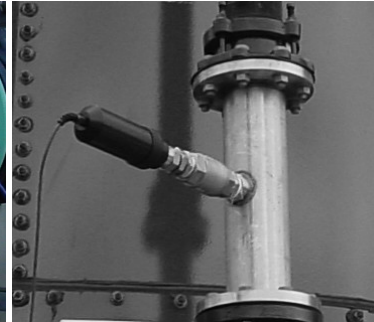
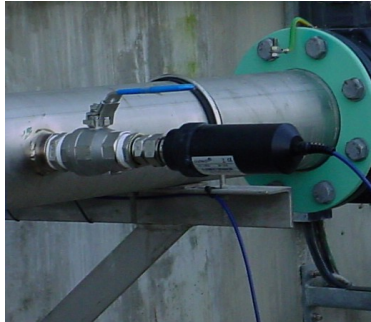
Reduced sludge transportation costs
Allows fully automatic tank de-sludging
Improved sludge treatment

COMPATIBLE MONITOR

7200 Monitor

ALTERNATIVE SENSOR

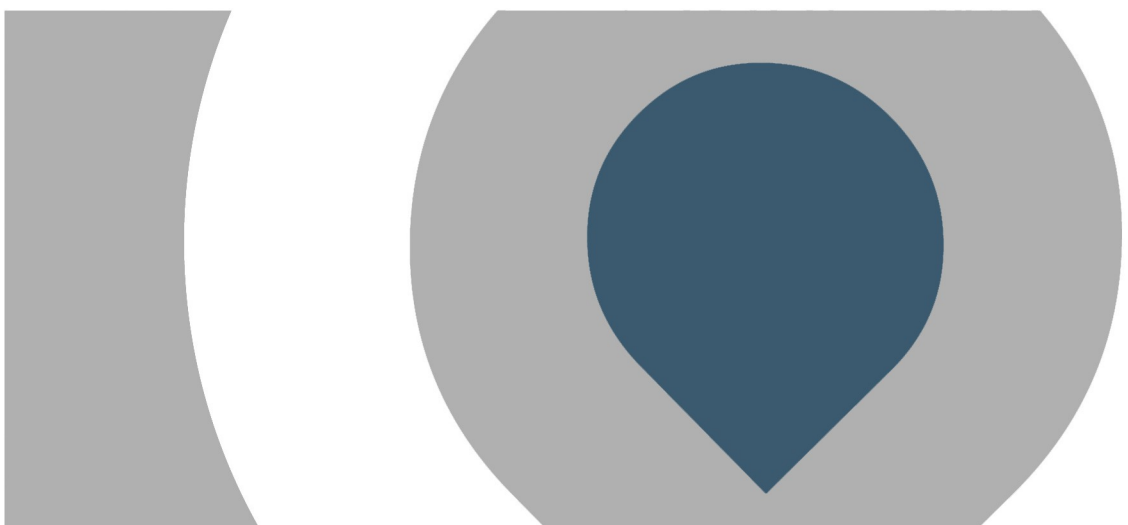
IL55



The IL55BV2 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 use 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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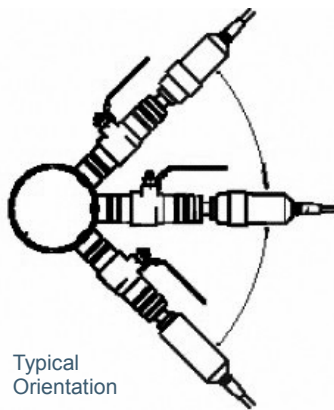
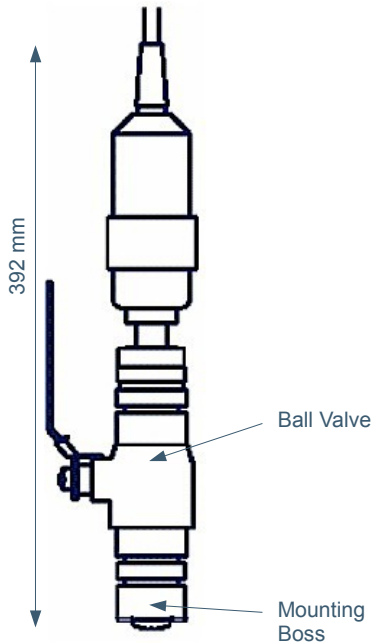




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Physical

Weight
Dimensions
Enclosure Rating

4.2 kg (inc 10 metres of cable)
392 mm long
Sensor Body: IP65
Optical Housing: IP68

Enclosure Material
Cable Entries
Wetted Parts
Cable Type
Cable Length
Service Requirement

Black Acetal Co-Polymer
Integral Cable via Cable Gland
316 Stainless Steel, Sapphire
3 core, 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
Power Supply
Voltage

0 to 60°C
-20 to 60°C
Indoor/Outdoor

12VDC from 7200 Monitor

Interface to Monitor

Type

0 - 5 mA (linearised by Monitor)

Measurement Characteristics

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

+/-5% of reading
Dependent on range setting, typically +/- 2% of reading
+/-1% of reading
Back Scatter
960 nm Infrared
0.5 seconds - damping provided by monitor
2 BarG
Not affected by flowrate
0 - 5%SS or 0 - 50,000 mg/l
0 - 0.5% or 0-500mg/l

Software

Remote Programming

No

Mounting

Installation Type

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

Publication No: I64860DS-Iss10
The company reserves the right to alter the specification without prior notice. E&OE

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