

# IL55BV2 Sludge Density 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 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 sensor is suitable for a variety of applications including the auto desludging 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.

Partech recommend the IL55BV2 sensor when it is likely that the sensor will need to be removed from the process without depressurising and draining the line, the ball valve mechanism will allow the sensor to be withdrawn quickly and safely. In applications that demand a higher pressure rating the IL55 sensor is recommended.

The sensor is to be used with a Partech 7200 Monitor, full details are available on the appropriate data sheet or from your Partech representative.



The IL55BV2 Sensor is intended for in-line measurement of solids in water. It uses Infrared Light at 960nm and operates using the Back-Scatter Principle. The light is transmitted and received through a lens that is optically split.

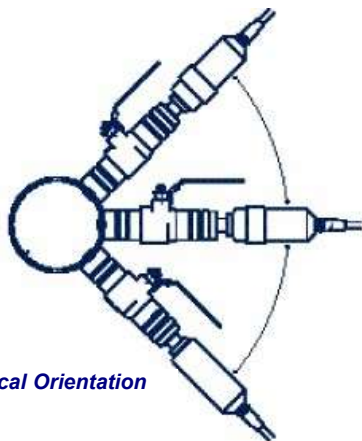
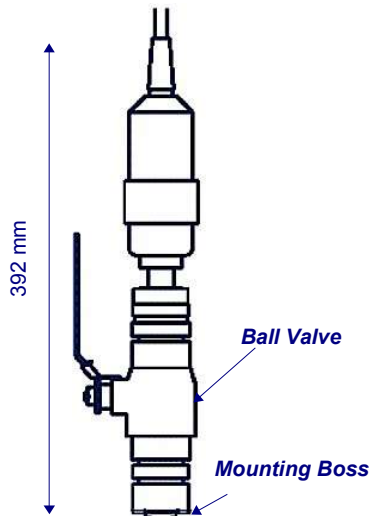
The sensor has a very wide operating range and is suitable for monitoring Inlet Solids, Returned Activated Sludge, Mixed Liquor Solids as well as Sludge Density in the outlet pipe of Final and Primary Settlement Tanks, Sludge Thickener and Clarifiers. The infrared measurement principle allows the sensor to work in applications where entrained air prevents the use of ultrasonic sensors.

The sensor incorporates a ball valve that allows the sensor to be withdrawn from the process under pressure.

#### **Associated Products**

- 7200 Monitor
- IL55 Sensor
- Mounting Bosses
- Pipe Sections

# IL55BV2 Sludge Density Sensor



Typical Orientation

### Part Numbers

118510 IL55BV2 Sensor

171320 Mounting Boss for IL55BV2 Sensor

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.



Publication No: 164860 Rev 1  
The company reserves the right to alter the specification without prior notice. E&OE

### Physical

Weight	7.2 kg (inc 10 metres of cable)
Dimensions	392 mm long
Enclosure Rating	IP68
Enclosure Material	Black Acetal Co-Polymer
Cable Entries	Integral Cable via Cable Gland
Wetted Parts	316 Stainless Steel, Glass
Cable Type	3 core, 5mm O/D Polyurethane Coated
Cable Length	10 metres standard, 100 metres maximum
Service Requirement	No routine servicing Will require manual cleaning frequency application dependent

### Environmental Data

Operating Temperature	0 to 60°C
Storage Temperature	-20 to 60°C
Location	Indoor/Outdoor

### Power Supply

Voltage	12VDC from 7200 Monitor
---------	-------------------------

### Interface to Monitor

Type	0 - 5 mA (linearised by Monitor)
------	----------------------------------

### Measurement Characteristics

Accuracy	+/-5% FSD on real sample
Resolution	Dependent on range setting, typically +/- 2% FSD
Repeatability	+/-1% FSD on real sample
Measurement Principle	Back Scatter
Wavelength/Frequency	960 nm Infrared
Response Time	0.5 seconds - damping provided by monitor
Pressure Rating	2 BarG
Flow Rate	Not affected by flowrate
Maximum Range	0 - 5%SS or 0 - 50,000 mg/l
Minimum Range	0 - 1,000 FTU

### Software

Remote Programming	No
--------------------	----

### Mounting

Installation Type	In-Line via Mounting Boss, alternatively a flanged pipe section can be provided
-------------------	---

### Approvals

EMC	EN50082-1 (1994) Residential, Commercial, Light Industry
EMC Directive	89/336/EEC
Low Voltage Directive	73/23/EEC



Thank you for reading this data sheet.

For pricing or for further information, please contact us at our UK Office, using the details below.



**UK Office**

**Keison Products,**

**P.O. Box 2124, Chelmsford, Essex, CM1 3UP, England.**

**Tel: +44 (0)1245 600560**

**Fax: +44 (0)1245 600030**

**Email: [sales@keison.co.uk](mailto:sales@keison.co.uk)**

Please note - Product designs and specifications are subject to change without notice. The user is responsible for determining the suitability of this product.