



S12S

Submersible Level Transmitter with Silicon sensor and SDI-12

- Highly stable piezo-resistive pressure sensor
- Accuracy: $<\pm 0.1\%$ FS Total Error
- ranges from 0.5mWG to 100mWG
- Gauge, Sealed Gauge or Absolute reference
- Level and Temperature output as standard

The S12S hydrostatic submersible level transmitter, has a stainless steel piezo-resistive silicon pressure sensor offering the ability to measure low pressure ranges from as little as 0.5mWG to be measured accurately. The use of a silicon sensor improves the resolution and stability of the device and offers a higher level of overall accuracy compared to other sensing technologies. Every device is temperature compensated and calibrated and supplied with a traceable serial number and calibration certificate. The electronics incorporate a microcontroller based electronics circuit, this means there are no adjusting pots and therefore the electronics are very stable. Every device is compensated and calibrated to a total error band of $<\pm 0.1\%$ over -5 to $+45^{\circ}\text{C}$. As well as the level measurement the device outputs the temperature value also.

The options available on the S12S Level transmitter include the following :

- ❑ Pressure range and engineering units
- ❑ Pressure reference (G, SG or Abs)
- ❑ Cable material
- ❑ O ring seal material

Suitable for the following applications:

- ❑ River and reservoir level
- ❑ Tank and vessel level
- ❑ Borehole level
- ❑ Environmental monitoring
- ❑ V-notch weir flow measurement

S12S Submersible Level Transmitter

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Input Level Range

Nominal pressure, Gauge	mW	0.5	1	2.5	3.5	5	7	10	20	35	70	100
Nominal pressure, Absolute & SG	mW	-	-	-	-	-	-	-	20	35	70	100
Permissible Overpressure	mW	10	10	10	10	10	21	21	60	105	210	210

Input Temperature Range

Temperature Range	-20 to +60°C
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Output Signal & Supply Voltage

Wire system

3-wire

Output

SDI-12

(version 1.3, <http://www.sdi-12.org/>)

Supply Voltage

6 – 40V dc

Level Sensor Performance

Accuracy (Non-linearity & hysteresis)	<±0.06% / FS (BFSL)
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Setting Errors (offsets)	Zero: <±0.25% / FS, Span: <±0.25% / FS
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Temperature Sensor Performance

Accuracy	<±0.5°C
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Temperature sensor resolution	<±0.01°C
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Permissible Temperatures & Thermal Effects

Media temperature	-20°C to +60°C (non-freezing)
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Storage temperature	-20°C to +70°C
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Compensated temperature range	20°C ±25°C
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Total thermal error band	<±0.1% / FS
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Electrical Protection

Supply reverse polarity protection	No damage but also no function
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Lightning Protection	Internally fitted
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Electromagnetic compatibility	CE Compliant
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Materials

Housing material	316L Stainless Steel
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'O' ring seals	Viton
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Diaphragm	316L Stainless Steel
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Media wetted parts	Housing, diaphragm and 'O' ring seal
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Miscellaneous

Current consumption	<250µA when idle
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<4mA when active

Weight	Transmitter: 300g including nose cone
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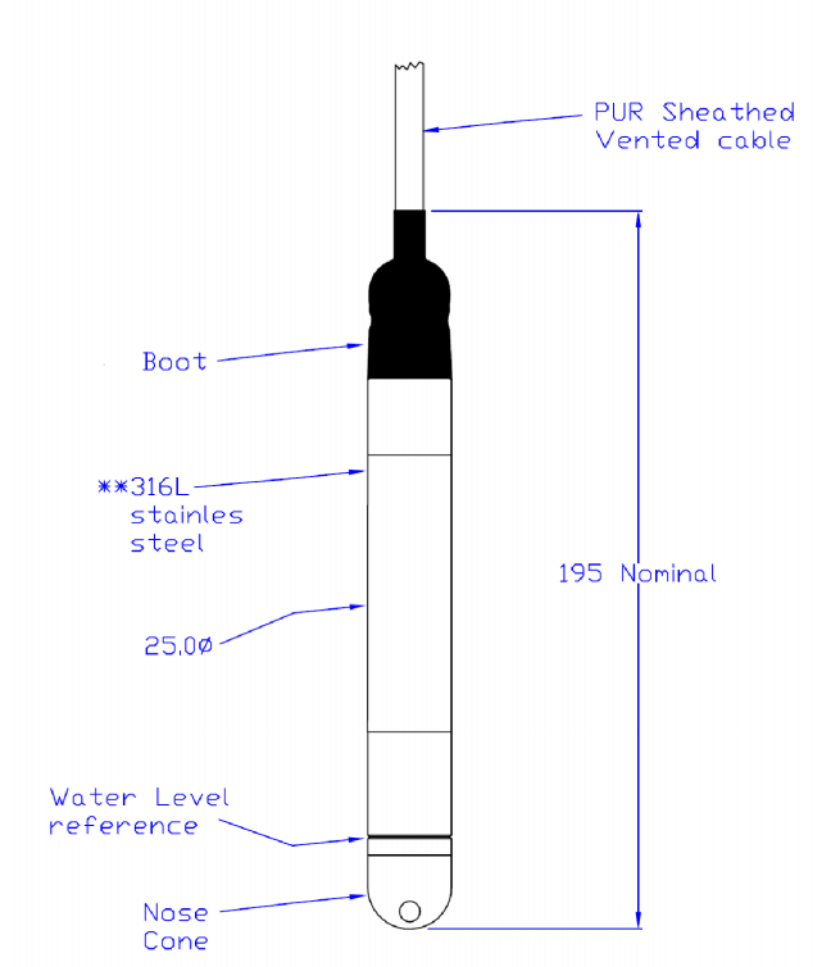
Cable: 48g per mtr

Installation position	Any
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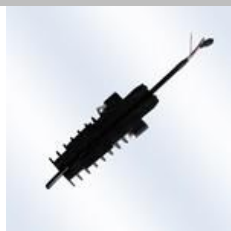
Wiring Designation

Red	Positive Supply
Blue	Negative Supply
Yellow	SDI-12 Output
Green	Cable Screen
White	Transmitter Body

Outline Drawing



Accessories



Cable support hanger



Cable Terminal Box with Vent



Wall mounted digital indicator

Supported Commands

Devices can be addressed 0 through to 9, refer to SDI-12 spec at <http://www.sdi-12.org/> for further information!



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