S12S

Submersible Level Transmitter with Silicon sensor and SDI-12

- Highly stable piezo-resistive pressure sensor
- Accuracy: <±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-resisitive 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 <±0.1% over -5 to +45°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

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Technical Datasheet

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

Output Signal & Supply Voltage

Wire system	Output	Supply Voltage
3-wire	SDI-12 (version 1.3, http://www.sdi-12.org/)	6 – 40V dc

Level Sensor Performance

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

Temperature Sensor Performance

Accuracy	<±0.5°C
Temperature sensor resolution	<±0.01°C

Permissible Temperatures & Thermal Effects

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

Electrical Protection

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

Materials

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

Miscellaneous

Current consumption	<250µA when idle <4mA when active
Weight	Transmitter: 300g including nose cone Cable: 48g per mtr
Installation position	Any

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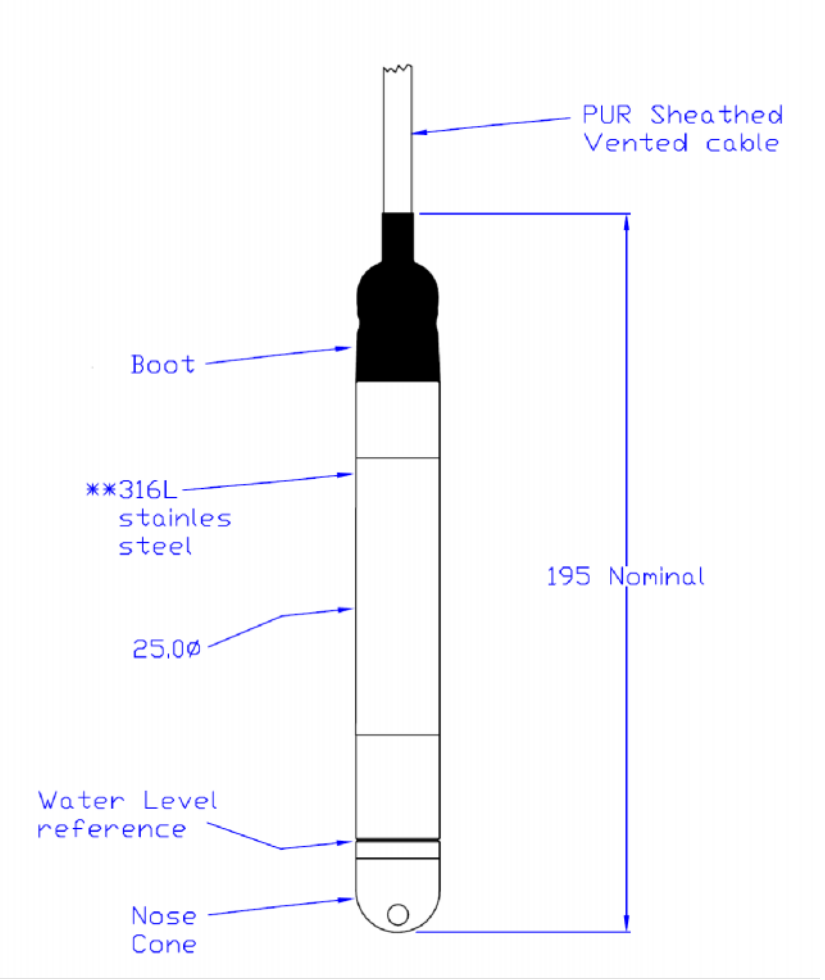
Wiring Designation

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!

SensorsONE
Pressure Measurement Instrumentation

Website

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