



# 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°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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## Submersible Level Transmitter

## 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 &amp; 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) <math><\pm 0.06\% / FS (BFSL)</math>

Setting Errors (offsets) Zero: <math><\pm 0.25\% / FS</math>, Span: <math><\pm 0.25\% / FS</math>

## Temperature Sensor Performance

Accuracy <math><\pm 0.5^{\circ}C</math>

Temperature sensor resolution <math><\pm 0.01^{\circ}C</math>

## Permissible Temperatures &amp; Thermal Effects

Media temperature -20°C to +60°C (non-freezing)

Storage temperature -20°C to +70°C

Compensated temperature range 20°C  $\pm$  25°C

Total thermal error band <math><\pm 0.1\% / FS</math>

## 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 <math><250\mu A</math> when idle

<math><4mA</math> when active

Weight Transmitter: 300g including nose cone

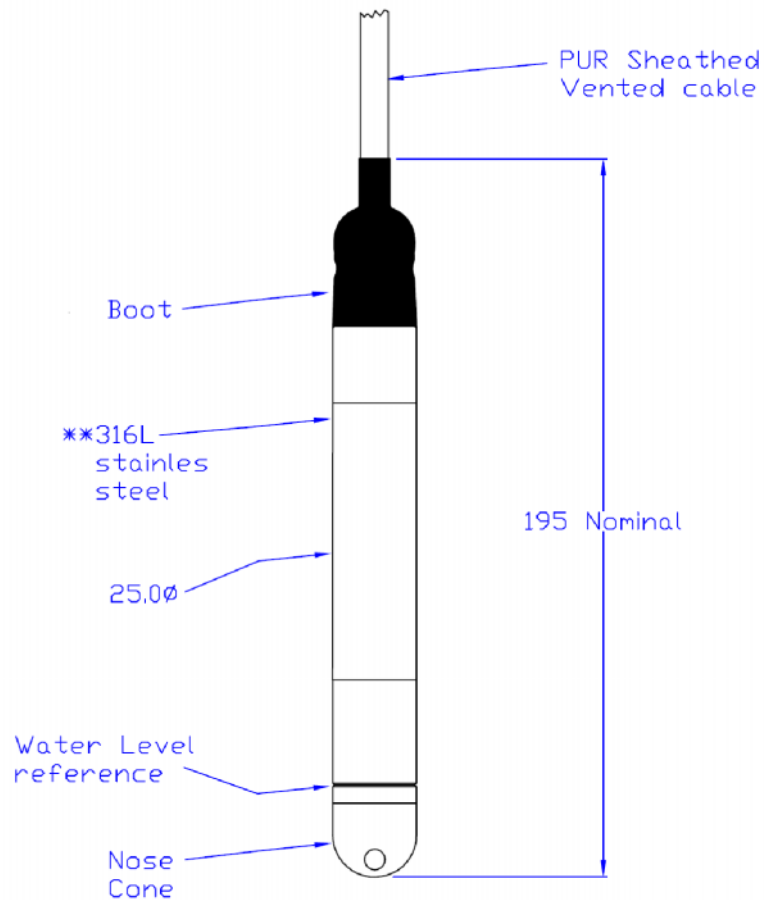
Cable: 48g per mtr

Installation position Any

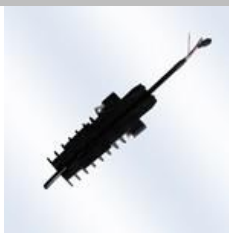
#### Wiring Designation

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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