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
## Submersible Level Transmitter

### Input Level Range

<table>
<thead>
<tr>
<th>Nominal pressure, Gauge</th>
<th>mW</th>
<th>0.5</th>
<th>1</th>
<th>2.5</th>
<th>3.5</th>
<th>5</th>
<th>7</th>
<th>10</th>
<th>20</th>
<th>35</th>
<th>70</th>
<th>100</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominal pressure, Absolute &amp; SG</td>
<td>mW</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>20</td>
<td>35</td>
<td>70</td>
<td>100</td>
</tr>
<tr>
<td>Permissible Overpressure</td>
<td>mW</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>21</td>
<td>21</td>
<td>60</td>
<td>105</td>
<td>210</td>
<td>210</td>
</tr>
</tbody>
</table>

### Input Temperature Range

| Temperature Range | -20°C to +60°C |

### Output Signal & Supply Voltage

<table>
<thead>
<tr>
<th>Wire system</th>
<th>Output</th>
<th>Supply Voltage</th>
</tr>
</thead>
<tbody>
<tr>
<td>3-wire SDI-12</td>
<td>6 – 40V dc</td>
<td></td>
</tr>
</tbody>
</table>


### 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
**S12S**
Submersible Level Transmitter

**Wiring Designation**

<table>
<thead>
<tr>
<th>Color</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Red</td>
<td>Positive Supply</td>
</tr>
<tr>
<td>Blue</td>
<td>Negative Supply</td>
</tr>
<tr>
<td>Yellow</td>
<td>SDI-12 Output</td>
</tr>
<tr>
<td>Green</td>
<td>Cable Screen</td>
</tr>
<tr>
<td>White</td>
<td>Transmitter Body</td>
</tr>
</tbody>
</table>

**Outline Drawing**

![Outline Drawing](image)

**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/](http://www.sdi-12.org/) for further information!
Website

www.SensorsONE.co.uk

Email

enquiries [at] SensorsONE.co.uk

QR Code

Save the SensorsONE website address to your mobile smartphone by scanning this QR code