FEATURES

- Liquid level switches that can detect almost any liquid type; oil or water based
- Large load output; high switching currents
- Choice of threads and terminal connections

BENEFITS

- Robust stainless steel housing
- Suitable for use within aggressive environments
- Larger mounting threads; standard or custom

TECHNICAL SPECIFICATIONS

Supply voltage (Vs) 4.5Vdc to 15.4Vdc (±5%) or 10Vdc to 45Vdc (±5%)
Supply current (Is) 15mA max. (Vs = 12Vdc) or 35mA max. (Vs = 45Vdc)
Output sink and source current (Iout) 100mA max. (15.4Vdc) or 800mA max. (45Vdc)

Operating temperatures Standard: -25°C to +80°C
Extended: -40°C to +125°C
Storage temperatures Standard: -30°C to +85°C
Extended: -40°C to +125°C
Housing material Stainless Steel with Polysulfone tip
Sensor termination Various; refer to page 2

OUTPUT VALUES

Output Voltage (Vout): Iout = 100mA
Vs = 4.5—15.4Vdc
Output High Vout = Vs - 1.5V max
Output Low Vout = 0V + 0.5V max

Output Voltage (Vout): Iout = 800mA
Vs = 10—45Vdc
Output High Vout = Vs - 1.8V max
Output Low Vout = 0V + 0.7V max

Other sensor options available on request, email: technical@sstsensing.com

NOTES

a) Before use check that the fluid in which you wish to use these devices is compatible with Stainless Steel and Polysulfone.
When sealed correctly.

NOTES

OUTLINE DRAWING

All dimensions shown in mm. Tolerances = ±1mm.

Cable

Brad Harrison micro

Flying Leads

Note: ‘X’ can equal 0.5, 1.0 or 3.0 metres.

HOUSING SPECIFICATIONS

Installation drawings and 3D (.step) files available on the product webpage.

<table>
<thead>
<tr>
<th>Thread</th>
<th>1/2” BSPP</th>
<th>3/8” BSPP</th>
<th>1/2” NPT</th>
<th>3/4”-16 UNJF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pressure</td>
<td>25 bar / 363 psi maximum</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sensor Termination</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cable: 0.5m, 1m or 3m lengths (IP67)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M12x1 Brad Harrison micro (IP67)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flying leads: 24AWG, 0.2m PTFE wires, 8mm tinned (IP65)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

ELECTRICAL INTERFACE

Cable

Liquid Level Sensor

<table>
<thead>
<tr>
<th>Wire</th>
<th>Designation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Red</td>
<td>Vs</td>
</tr>
<tr>
<td>White</td>
<td>Output</td>
</tr>
<tr>
<td>Black</td>
<td>0V</td>
</tr>
</tbody>
</table>

Brad Harrison micro

<table>
<thead>
<tr>
<th>Pin</th>
<th>Designation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Vs</td>
</tr>
<tr>
<td>2</td>
<td>Not connected</td>
</tr>
<tr>
<td>3</td>
<td>0V</td>
</tr>
<tr>
<td>4</td>
<td>Output</td>
</tr>
</tbody>
</table>

Flying Leads

Liquid Level Sensor

<table>
<thead>
<tr>
<th>Wire</th>
<th>Designation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Red</td>
<td>Vs</td>
</tr>
<tr>
<td>Green</td>
<td>Output</td>
</tr>
<tr>
<td>Blue</td>
<td>0V</td>
</tr>
</tbody>
</table>
In order to suit any application, these sensors have been designed with various output circuit configurations.

4.5V—15.4V\text{DC}

**Digital Output High in Air**

![Digital Output High in Air Diagram](image)

**Digital Output Low in Air**

![Digital Output Low in Air Diagram](image)

10V—45V\text{DC}

**N-Type High in Air**

![N-Type High in Air Diagram](image)

**N-Type Low in Air**

![N-Type Low in Air Diagram](image)

**P-Type High in Air**

![P-Type High in Air Diagram](image)

**P-Type Low in Air**

![P-Type Low in Air Diagram](image)

**Push Pull High in Air**

![Push Pull High in Air Diagram](image)

**Push Pull Low in Air**

![Push Pull Low in Air Diagram](image)

**CAUTION:** Take care when connecting loads. The minimum load impedance should not exceed Vs/max output current.

**Note:** Shorting the output to Vs or 0V will result in irreparable damage to the sensor.
ORDER INFORMATION

Generate your specific part number using the convention shown below. Use only those letters and numbers that correspond to the sensor and output options you require — omit those you do not.

<table>
<thead>
<tr>
<th>Housing Material</th>
<th>Output Type / Logic</th>
<th>Housing Type</th>
<th>Operating Temp.</th>
<th>Termination</th>
<th>Internal Seal Washer</th>
</tr>
</thead>
<tbody>
<tr>
<td>A Polysulfone tip</td>
<td>1 Push Pull High in Air (100mA, 4.5-15.4V)</td>
<td>2 Stainless Steel 3/8” BSPP</td>
<td>0 -25 °C to +80°C</td>
<td>D M12x1 Brad Harrison (IP67)</td>
<td>1 Nitrile rubber</td>
</tr>
<tr>
<td></td>
<td>3 Push Pull High in Air (800mA, 10—45V)</td>
<td>4 Stainless Steel 1/2” BSPP</td>
<td>1 -40 °C to +125°C</td>
<td>I Cable 0.5m (IP67)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>5 N-Type High in Air (800mA, 10—45V)</td>
<td>6 Stainless Steel 1/2” NPT</td>
<td>5 Cable 1.0m (IP67)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>7 P-Type High in Air (800mA, 10—45V)</td>
<td>8 Stainless Steel 3/4”-16 UNJF</td>
<td>7 Cable 3.0m (IP67)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: Not all combinations are configurable and minimum order quantities (MOQs) may apply in some cases. Please contact SST Sensing for details; email: technical@sstsensing.com

CAUTION

Do not exceed maximum ratings and ensure sensor(s) are operated in accordance with their requirements.

Carefully follow all wiring instructions. Incorrect wiring can cause permanent damage to the device.

SST Sensing Ltd recommend using alcohol based cleaning agents. Do NOT use chlorinated solvents such as trichloroethane as these are likely to attack the sensor material.

Failure to comply with these instructions may result in product damage.

INFORMATION

As customer applications are outside of SST Sensing Ltd.’s control, the information provided is given without legal responsibility. Customers should test under their own conditions to ensure that the equipment is suitable for their intended application. Before use, check that the fluid in which you wish to use these devices is compatible with Stainless Steel and Polysulfone.

For technical assistance or advice, please email: technical@sstsensing.com

General Note: SST Sensing Ltd. reserves the right to make changes to product specifications without notice or liability. All information is subject to SST Sensing Ltd.’s own data and considered accurate at time of going to print.