# DATA SHEET Liquid Level Switches



# **Optomax Digital Series**

# FEATURES

- Liquid level switches that can detect almost any liquid type; oil or water based
- Choice of material; Polysulfone (standard) or Trogamid®
- Choice of threads



## Housing/ **Mounting** M10x1 M12x1 1/4"











#### Supply Voltage



#### **Output** Current



Temp





### **BENEFITS**

- Low power
- Low cost
- Compact design

Supply voltage (Vs)

Supply current (Is)

current (lout)

Output sink and source

Operating temperatures

\* TECHNICAL SPECIFICATIONS

### **OUTPUT VALUES**

Output Voltage<sup>c</sup> (Vout): lout = 100mA

Output High Vout = Vs - 1.5V max **Output Low** Vout = 0V + 0.5V max

**PWM** 

Duty cycle in air 25% ± 10% 75% ± 10% Duty cycle in liquid 2kHz ± 10% Frequency

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

#### 100mA

Standard: -25°C to +80°C

 $4.5V_{DC}$  to  $15.4V_{DC}$ 

Extended: -40°C to +125°C

 $4.5V_{DC}$  to  $5.5V_{DC}$  (PWM output) 2.5mA max. (Vs = 15.4V<sub>DC</sub>)

Standard: -30°C to +85°C Storage temperatures

Extended: -40°C to +125°C Polysulfone or Trogamid®

Housing materiala, b 24AWG, 250mm PTFE Sensor termination wires, 8mm tinned

**Need help? Ask the expert** Tel: + 44 (0)1236 459 020 and ask for "Technical"

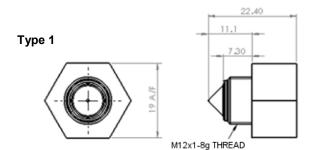




- Above +85°C, Trogamid is suitable for use in water based liquids. Oil based liquids can cause deformation of the sensing tip and must be tested for compatibility.
- Before use check that the fluid in which you wish to use these devices is compatible either with Polysulfone or Trogamid®.
- Voltages applicable to output value stated.

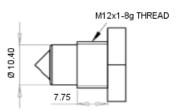
## OUTLINE DRAWING

All dimensions shown in mm. Tolerances =  $\pm 1$ mm.

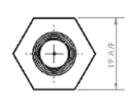


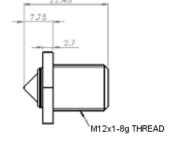
Type 2





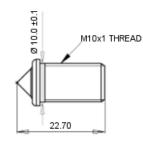
Type 3





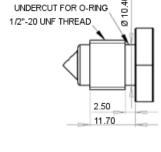
Type 5

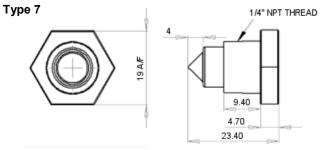




Type 6





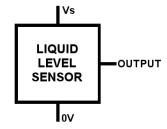




|                       | Housing Series                |        |        |
|-----------------------|-------------------------------|--------|--------|
|                       | Type 1                        | Type 2 | Type 3 |
| Thread                | M12x1-8g <sup>d</sup>         |        |        |
| Pressure <sup>g</sup> | 7 bar / 101 psi maximum       |        |        |
| Tightening<br>Torque  | 1.5 Nm / 13.26 in-lbs maximum |        |        |

|                       | Housing Series                |                          |                       |
|-----------------------|-------------------------------|--------------------------|-----------------------|
|                       | Type 5                        | Type 6                   | Type 7                |
| Thread                | M10x1                         | 1/2"-20 UNF <sup>e</sup> | 1/4" NPT <sup>f</sup> |
| Pressure <sup>g</sup> | 20 bar / 209<br>psi max.      | 7 bar / 101 psi maximum  |                       |
| Tightening<br>Torque  | 1.5 Nm / 13.26 in-lbs maximum |                          |                       |

### **ELECTRICAL INTERFACE**



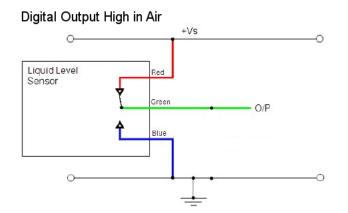
| Wire  | Designation |  |
|-------|-------------|--|
| Red   | Vs          |  |
| Green | Output      |  |
| Blue  | 0V          |  |

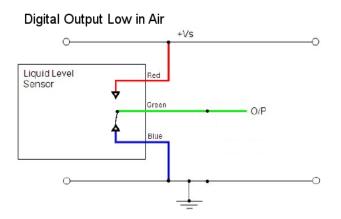


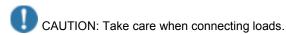
- d) Types 1, 2 and 3 can be sealed with washers and locknuts.
- e) Type 6 should be sealed with Parker 3-905 type o-ring.
- f) Type 7 should be sealed with PTFE tape.
- g) When correctly sealed.



In order to suit any application, these sensors have been designed with various output circuit configurations.







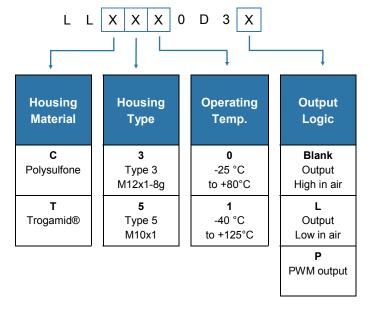
The minimum load impedance should not exceed Vs/max output current.

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

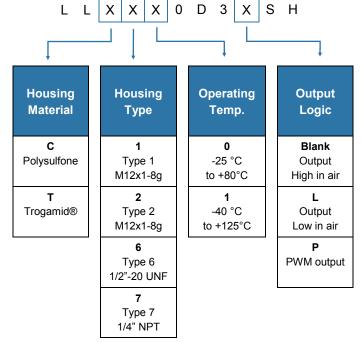


Generate your specific part number using the convention shown opposite. Use only those letters and numbers that correspond to the sensor and output options you require — omit those you do not.

#### Sensor mounted from inside vessel



#### Sensor mounted from outside vessel



#### Notes:

- Type 3 and Type 5 sensors are mounted internally.
- Types 1, 2, 6 & 7 sensors are mounted externally.
- SH suffix applicable to Types 1, 2, 6 & 7 sensors only; omit from Type 3 and Type 5 sensor part numbers.

Please contact SST Sensing for details; email: technical@sstsensing.com



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 Polysulfone or Trogamid®.

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.



### **X-ON Electronics**

Largest Supplier of Electrical and Electronic Components

Click to view similar products for Liquid Level Sensors category:

Click to view products by SST Sensing manufacturer:

Other Similar products are found below:

FSH-21 FSH-25 FSH-34 FSH-35 FSV-31 FSV-35 RSF54H100R1/8 LRNH31S41 F03-16SFC-10M F03-16PE-5M F03-16PT-5M SCN-1518SC LL103000 LRNR31N01 F03-16PT-2M MS03-PP F03-16SF-10M KSL-100-1 LS01-1A66-PP-2000W LS01-1B66-PP-500W LS02-1B85-PP-5000W LS03-1A85-PP-500W LS03/DL-1A85-PA-500W EL-10N EL-3N LL01-1AA01 59630-1-T-02-F LS04-1B66-2-500W LFFS 011 PS-3S (Q) T0-SKF-0.5 T0-SKF-10 T0-SKF-5 VNI3 CLE2P VNI1 LBFS 0111 LFFS 014 KSL-35-PP KSL-88-PP KSL-99-1 LS02-1A85-PP-500W LS02-1B85-PP-500W LS03-1A85-PA-500W MIC 1000-20 700670 BAF147B002-00A0 DFT-110 DFT-220