

# DATA SHEET

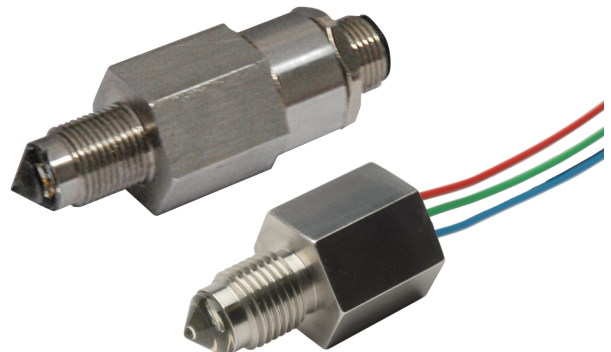
## Liquid Level Switches

### Optomax Industrial Glass Series

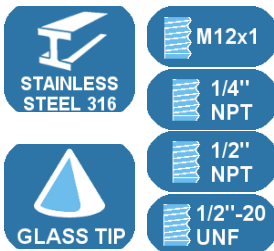


#### FEATURES

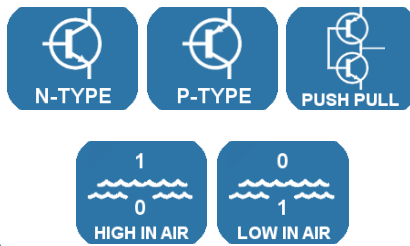
- Liquid level switches that can detect the presence or absence of oil or water based liquids
- Corrosion resistant, 316L stainless steel housing with hardened glass tip; suitable for harsh environments
- Compact size, wide operating temperature and pressure, choice of mounting threads and terminal connections



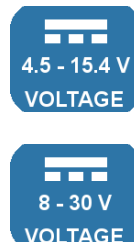
#### Housing / Mounting



#### Output Type / Logic



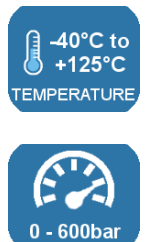
#### Supply Voltage



#### Output Current



#### Temp. / Pressure



#### BENEFITS

- Direct high current switching
- Industrial supply voltages
- Direct load drive design
- High pressure
- High temperature
- Tank level control; fill/empty
- Leak detection
- Pump control
- Sump level switching
- Overfill protection



#### APPLICATIONS



#### OUTPUT VALUES

**Output Voltage<sup>b</sup> (Vout): Iout = 1A**

**Vs = 4.5—15.4V<sub>DC</sub>**

Output High

Output Low

Vout = Vs - 1.5V max

Vout = 0V + 0.5V max

**Output Voltage<sup>b</sup> (Vout): Iout = 1A**

**Vs = 8—30V<sub>DC</sub>**

Output High

Output Low

Vout = Vs - 1.8V max

Vout = 0V + 0.7V max



#### TECHNICAL SPECIFICATIONS

Supply voltage (Vs)	4.5V <sub>DC</sub> to 15.4V <sub>DC</sub>
or	8V <sub>DC</sub> to 30V <sub>DC</sub>
Supply current (Is)	2.5mA max. (Vs = 15.4V <sub>DC</sub> )
or	7.5mA max. (Vs = 30V <sub>DC</sub> )
Output sink and source current (Iout)	Up to 1A
Operating temperature <sup>a</sup>	-40°C to +125°C (-40°F to +257°F)
Storage temperature	-40°C to +125°C (-40°F to +257°F)
Operating pressure	0 to 600bar (0 to 8700psi)
Housing material	316L Stainless steel with glass tip
Switch termination	Flying leads or M12 connector

Other sensor options available on request, email:

[technical@sstsensing.com](mailto:technical@sstsensing.com)

**Need help? Ask the expert**

**Tel: + 44 (0)1236 459 020  
and ask for "Technical"**



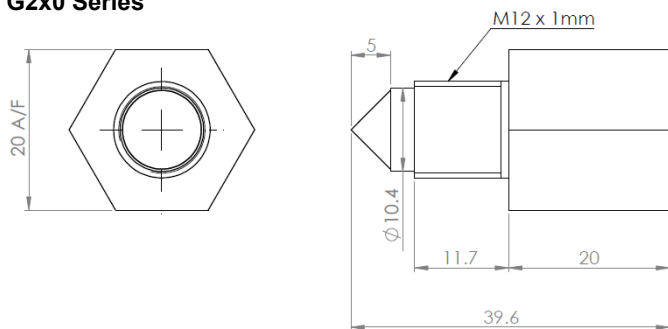
#### NOTES

- a) Not suitable for use in freezing liquid or high condensing environments such as steam.  
b) Voltages applicable to output value stated.

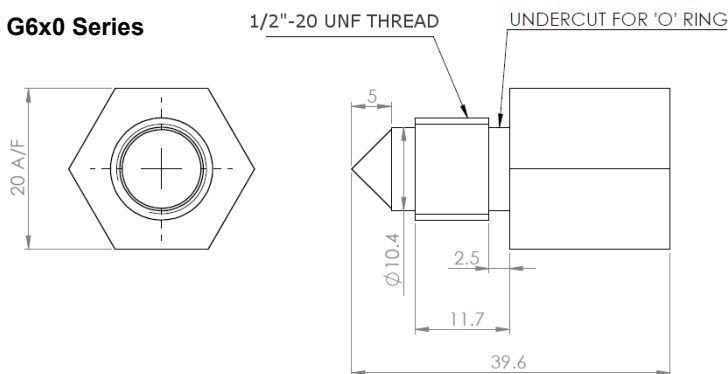
## OUTLINE DRAWING

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

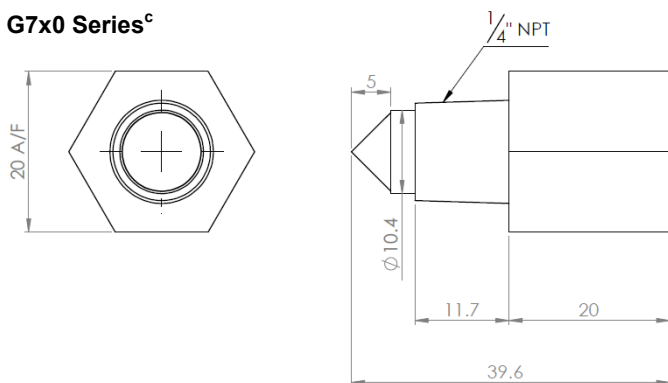
### G2x0 Series<sup>c</sup>



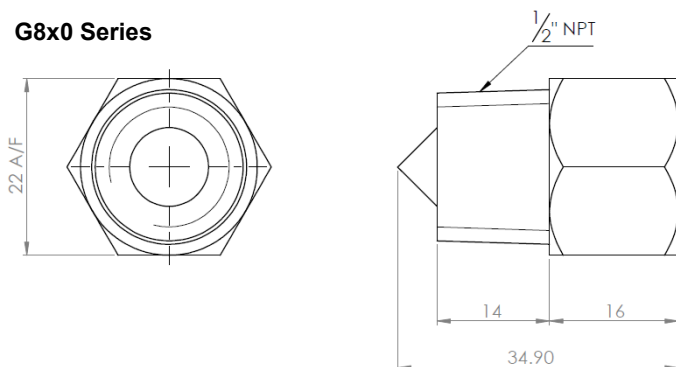
### G6x0 Series



### G7x0 Series<sup>c</sup>



### G8x0 Series



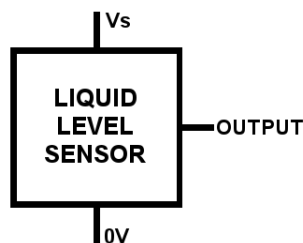
## HOUSING SPECIFICATIONS

	Housing Series	
	G2x0	G6x0
Thread <sup>d</sup>	M12x1 with hex nut	1/2\"-20 UNF with O-ring
Pressure <sup>e</sup>	100 bar / 1450 psi maximum	
Tightening Torque <sup>f</sup>	3 Nm / 26.5 in-lbs maximum	

	Housing Series	
	G7x0	G8x0
Thread <sup>d</sup>	1/4\" NPT	1/2\" NPT
Pressure <sup>e</sup>	100 bar / 1450 psi maximum	600 bar / 8702 psi maximum
Tightening Torque <sup>f</sup>	3 Nm / 26.5 in-lbs maximum	

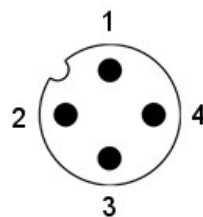
## ELECTRICAL INTERFACE OPTIONS

### Flying Leads



Wire	Designation
Red	Vs
Green	Output
Blue	0V

### M12 Connector



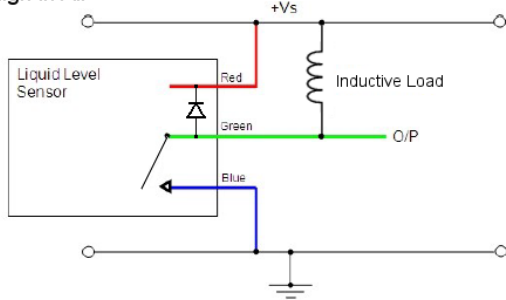
Pin	Designation
1	Vs
2	Not connected
3	0V
4	Output



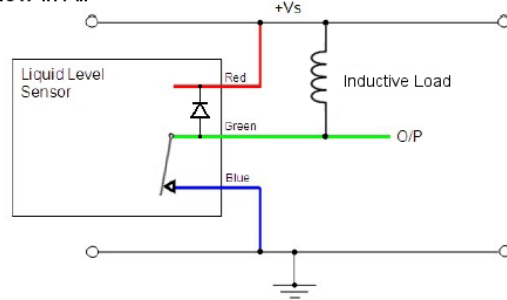
- c) Standard switch dimensions shown; when fitted with M12 connector, the overall length of the switch is 63.6mm.  
d) Refer to mounting information on [page 4](#).  
e) When correctly sealed.  
f) Do NOT over-tighten as this can permanently damage the switch.

In order to suit any application, these switches have been designed with various output circuit configurations. They are identified by the 3-digit output type code in the part number as shown in [Order Information](#).

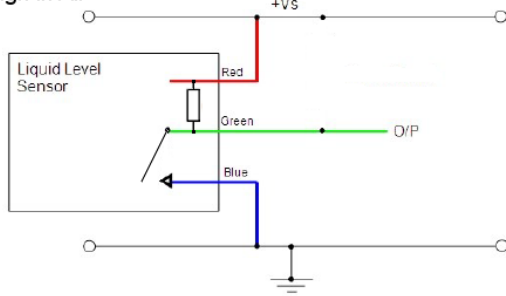
**N-Type with Flyback Protection Diode  
High in Air**



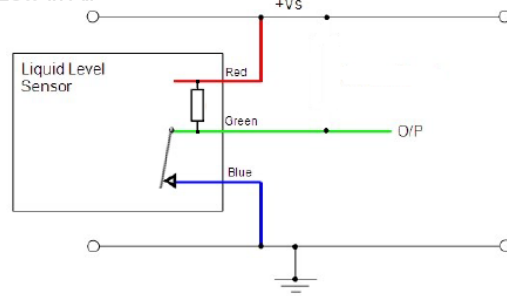
**N-Type with Flyback Protection Diode  
Low in Air**



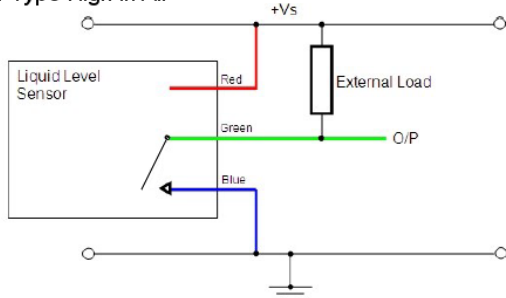
**N-Type with Internal 10kΩ Pull-Up Resistor  
High in Air**



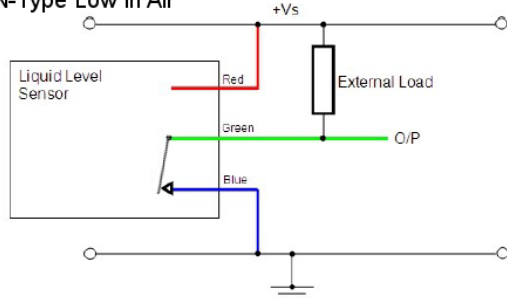
**N-Type with Internal 10kΩ Pull-Up Resistor  
Low in Air**



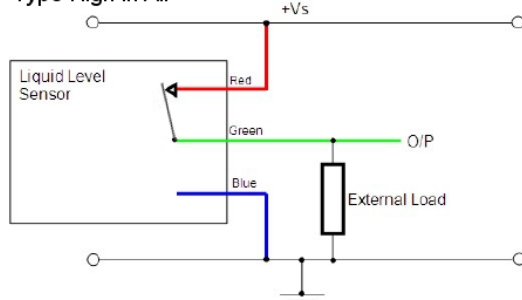
**N-Type High in Air**



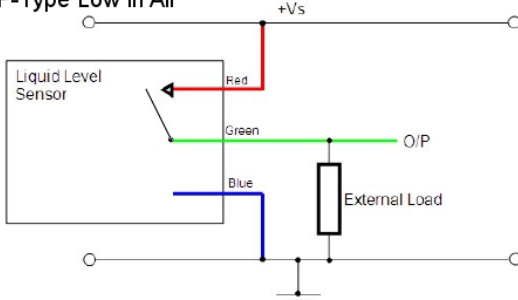
**N-Type Low in Air**



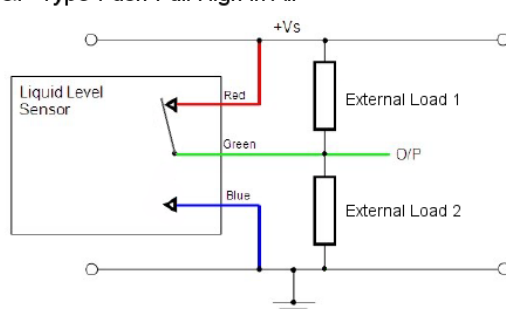
**P-Type High in Air**



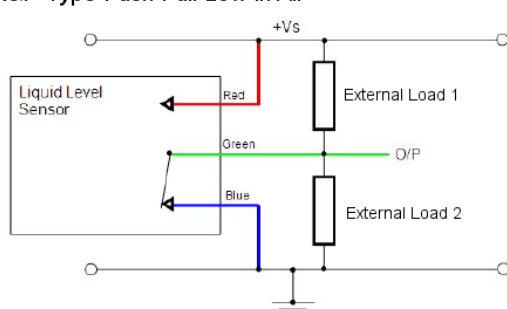
**P-Type Low in Air**



**N&P-Type Push Pull High in Air**



**N&P-Type Push Pull Low in Air**



**CAUTION:** Take care when connecting loads.

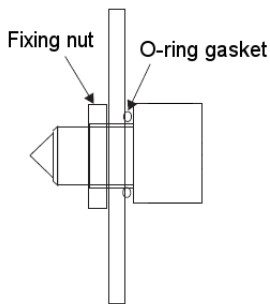
The minimum load impedance should not exceed  $V_s/\text{max output current}$ .

**Note:** Shorting the output to  $V_s$  or  $0V$  will result in irreparable damage to the switch.

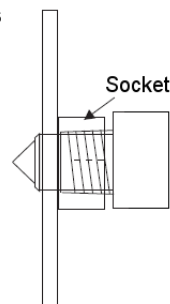


**NOTE:** Fixing nut and O-ring available separately; email: [technical@sstsensing.com](mailto:technical@sstsensing.com) for details.

## G2x0 & G6x0 Series



## G7x0 & G8x0 Series

 **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.

L L G X 1 0 D 3 X X X - X X X - X

Housing Type	Output Logic	Supply Voltage	Output Type	Termination
<b>2</b> 2x0 series M12x1	<b>L</b> Output Low in air	<b>24</b> 8-30V <sub>DC</sub>	<b>001</b> N-Type with flyback	<b>Blank</b> Flying Leads 24AWG 0.2mm
<b>6</b> 6x0 series 1/2"-20 UNF	<b>Blank</b> Output High in air	<b>Blank</b> 4.5-15.4V <sub>DC</sub>	<b>002</b> N-Type with 10kΩ pull-up	<b>D</b> M12 4-pin male connector (IP67)
<b>7</b> 7x0 series 1/4" NPT			<b>003</b> N-Type	
<b>8</b> 8x0 series 1/2" NPT			<b>004</b> P-Type	
			<b>005</b> N&P Push Pull	

Other sensor options available on request, email: [technical@sstsensing.com](mailto:technical@sstsensing.com) for details.

**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 glass.

**For technical assistance or advice, please email:**  
[technical@sstsensing.com](mailto: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.

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