DATA SHEET

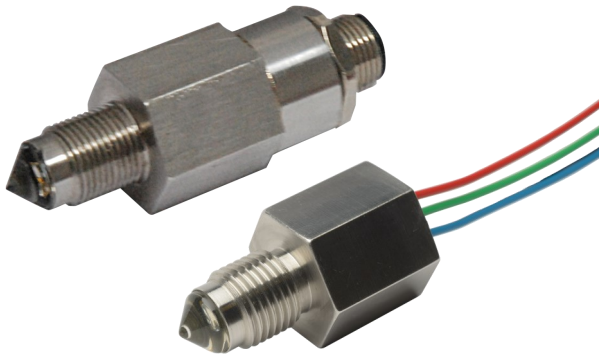
Liquid Level Switches

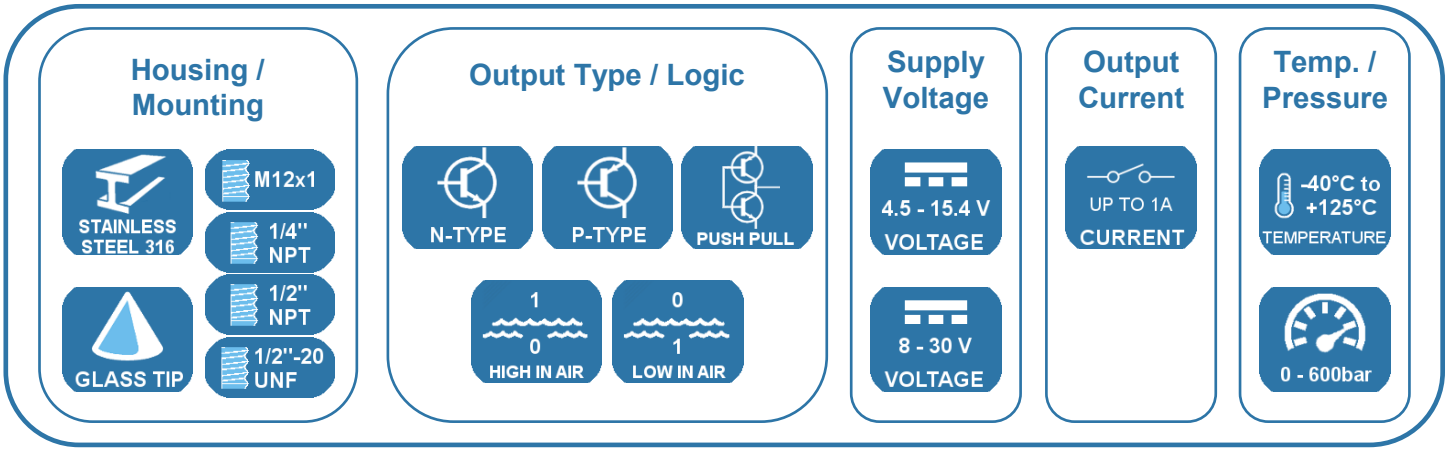
Optomax Industrial Glass Series

DESIGN • MANUFACTURE • CUSTOMISE • CONFIGURE

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





BENEFITS

- Direct high current switching
- Industrial supply voltages
- Direct load drive design
- High pressure
- High temperature

APPLICATIONS

- Tank level control; fill/empty
- Leak detection
- Pump control
- Sump level switching
- Overfill protection

OUTPUT VALUES

Output Voltage[b] (Vout): Iout = 1A
Vs = 4.5—15.4V_{DC}

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

Output Voltage[b] (Vout): Iout = 1A
Vs = 8—30V_{DC}

Output High	Vout = Vs - 1.8V max
Output Low	Vout = 0V + 0.7V max

TECHNICAL SPECIFICATIONS

Supply voltage (Vs)		4.5V_{DC} to 15.4V_{DC}
	or	8V_{DC} to 30V_{DC}
Supply current (Is)		2.5mA max. (Vs = 15.4V_{DC})
	or	7.5mA max. (Vs = 30V_{DC})
Output sink and source current (Iout)		Up to 1A
Operating temperature[a]		-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

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

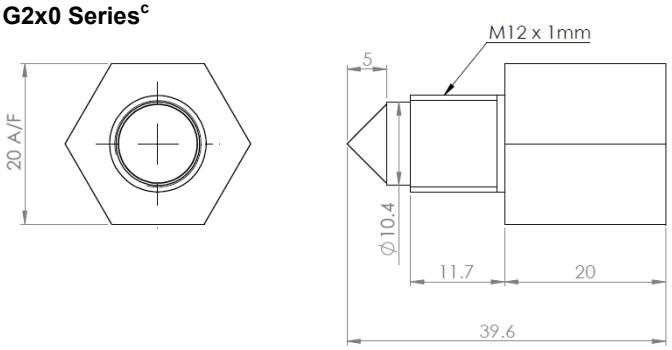
NOTES

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

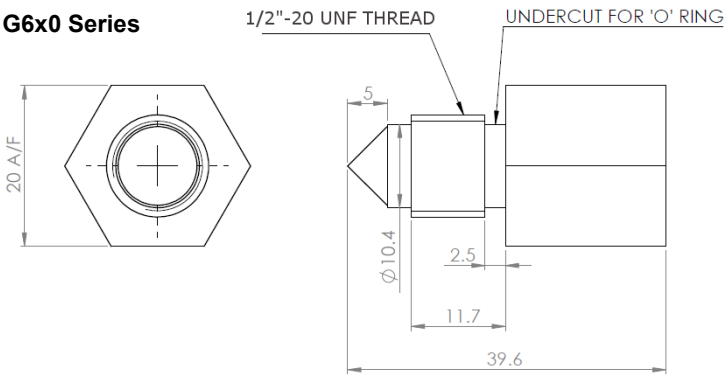
OUTLINE DRAWING

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

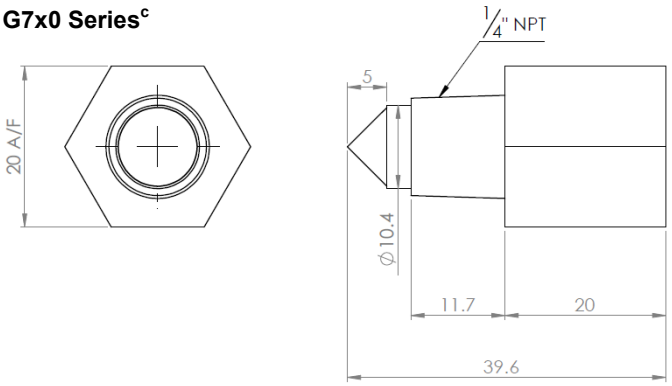
G2x0 Series[c]



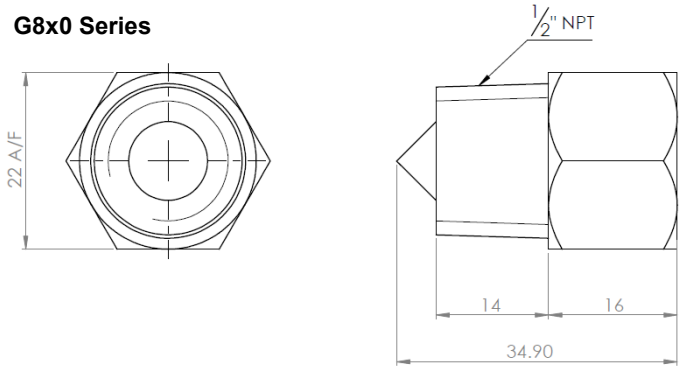
G6x0 Series



G7x0 Series[c]



G8x0 Series



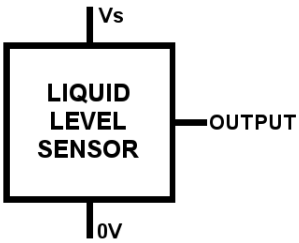
HOUSING SPECIFICATIONS

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

	Housing Series	
	G7x0	G8x0
Thread[d]	1/4” NPT	1/2” NPT
Pressure[e]	100 bar / 1450 psi maximum	600 bar / 8702 psi maximum
Tightening Torque[f]	3 Nm / 26.5 in-lbs maximum	

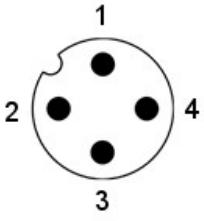
ELECTRICAL INTERFACE OPTIONS

Flying Leads



Wire	Designation
Red	Vs
Green	Output
Blue	0V

M12 Connector



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

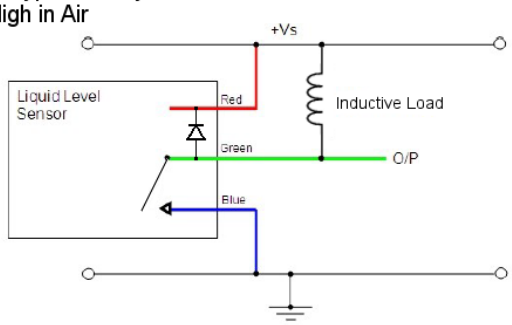
NOTES

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.

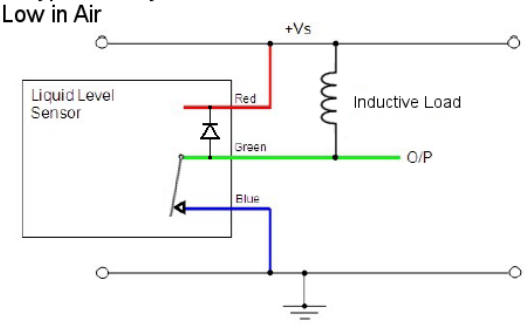
CIRCUIT DIAGRAMS

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.

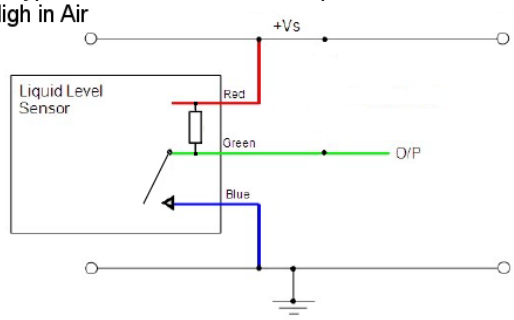
N-Type with Flyback Protection Diode
High in Air



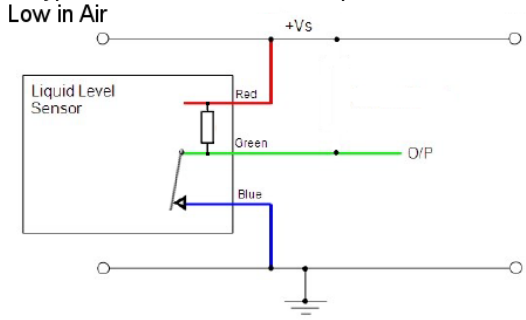
N-Type with Flyback Protection Diode
Low in Air



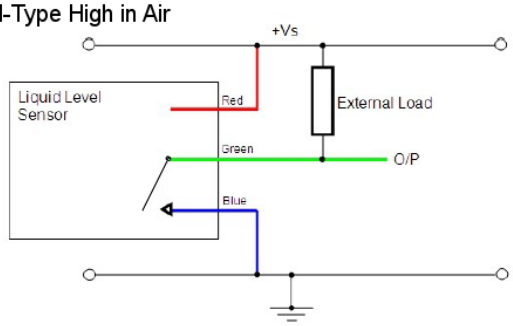
N-Type with Internal 10kΩ Pull-Up Resistor
High in Air



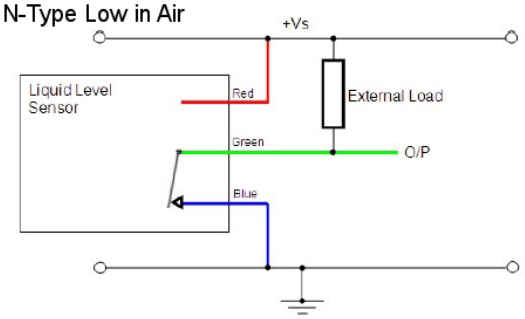
N-Type with Internal 10kΩ Pull-Up Resistor
Low in Air



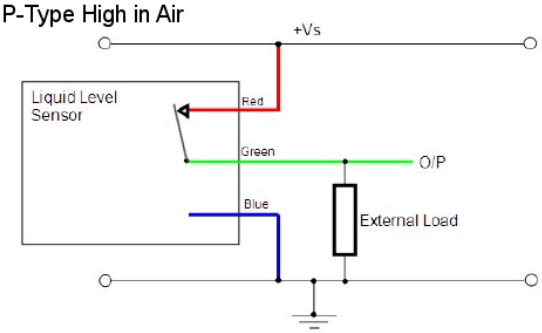
N-Type High in Air



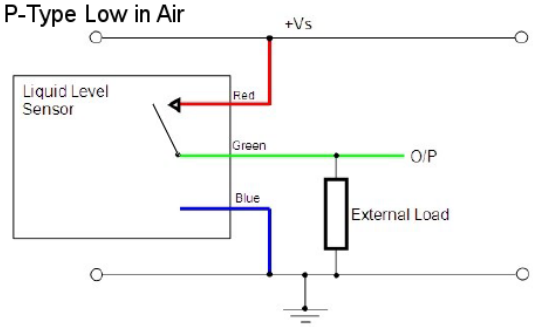
N-Type Low in Air



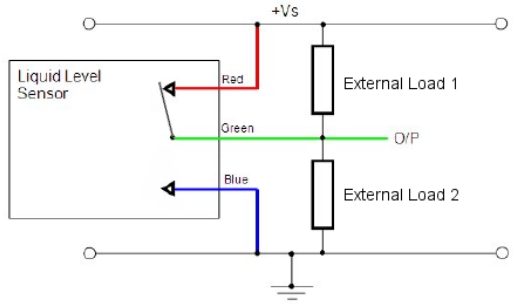
P-Type High in Air



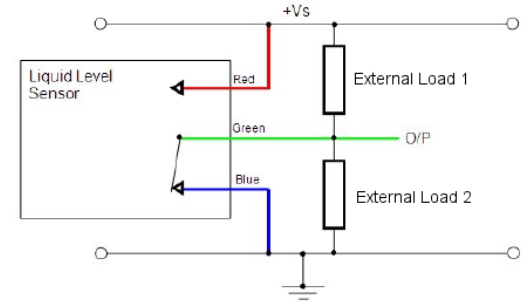
P-Type Low in Air



N&P-Type Push Pull High in Air



N&P-Type Push Pull Low in Air



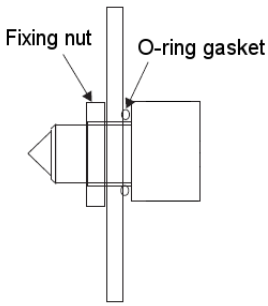
CAUTION: Take care when connecting loads.
The minimum load impedance should not exceed Vs/max output current.

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

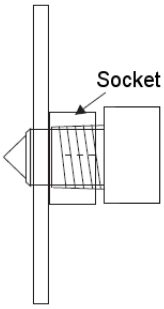
MOUNTING SPECIFICATIONS

NOTE: Fixing nut and O-ring available separately; email: 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
2 2x0 series M12x1	**L** Output Low in air	**24** 8-30V_{DC}	**001** N-Type with flyback	**Blank** Flying Leads 24AWG 0.2mm
6 6x0 series 1/2"-20 UNF	**Blank** Output High in air	**Blank** 4.5-15.4V_{DC}	**002** N-Type with 10kΩ pull-up	**D** M12 4-pin male connector (IP67)
7 7x0 series 1/4" NPT			**003** N-Type	
8 8x0 series 1/2" NPT			**004** P-Type	
			005 N&P Push Pull	

Other sensor options available on request, email: 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

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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