

OS7 – High Performance Optical Liquid Level

The OS7 High Range optical fluid level switch offers larger mounting threads and robust stainless steel housings that can survive in aggressive environments. A microcontroller based sensor incorporates an infra-red LED and phototransistor which are optically coupled by the tip when the sensor is in air. A range of N and P type output configurations can sink or source up to 800mA, all of which can be configured to output a high or low signal in either a wet or dry state. A stainless steel housing and a polysulfone tip provides excellent chemical resistance.

OS7

This optical sensor is capable of withstanding high and low temperatures and with options for high switching currents. With multiple output configurations and several thread types available, or, the OS7 can be supplied with custom thread types.

Output Sink / Source Current	Operating Temp	Max Pressure
100 to 800 mA	- 40 to 125° C	363 psi

Sensor Termination: M12 Brad Harrison Micro (IP67) | Cable: 0.5 m, 1 m or 3 m (IP67) | 24 AWG, 0.2 m PTFE wires, 8 mm tinned (IP65)



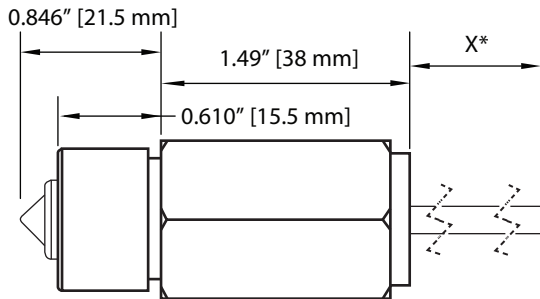
Supply Voltage (Vs)	4.5 V _{DC} to 15.4 V _{DC} (+/- 5%) or 10 V _{DC} to 45 V _{DC} (+/- 5%)
Current (Is)	15mA max (Vs=12 V _{DC}) or 35mA max (Vs=45 V _{DC})
Output Sink & Source Current (Iout)	100mA max (15.4V _{DC}) or 800mA max (45V _{DC})

This optical level sensor is extremely accurate for point level detection, offering larger mounting thread options and made from robust stainless steel designed for aggressive environments. Optical liquid sensors operate accurately in any size tank, and are designed with a very robust construction permitting use in a wide variety of demanding applications. As a result optical sensors are a go-to option for leak detection. The monitoring and prevention of leaks is critical for service interruptions, to protect equipment and is critical to many industries. Optical sensors are non contact level sensing, they can be mounted inside or outside of any tank, ideal for industrial applications because they are compatible with most fluids and chemicals.

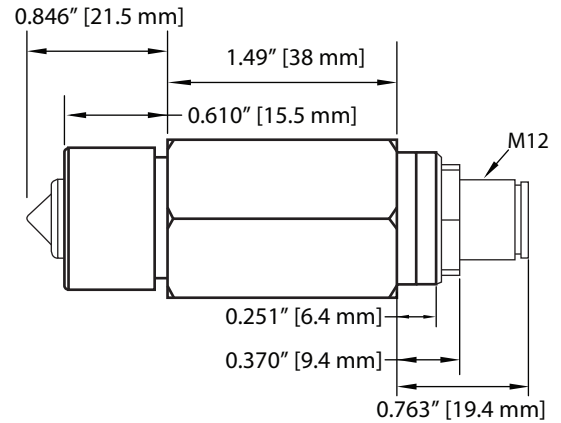
Outline Drawings & Housing Series

Cable (IP67)

*X can equal 0.5, 1, & 3 m

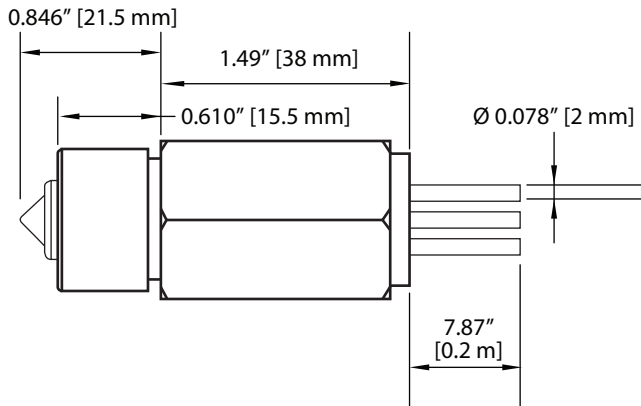


Brad Harrison Micro (IP67)



Flying Leads

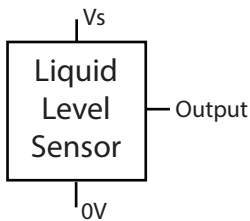
24 AWG, PTFE wire, 8 mm tinned - IP65



Thread	1/2" BSP	3/8" BSP	1/2" NPT	3/4" - 16 UNJF
Pressure	25 bar / 363 psi MAX			

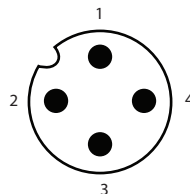
Electrical Interface

Cable



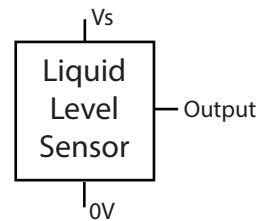
Wire	Designation
Red	Vs
White	Output
Black	0V

Brad Harrison Micro



Wire	Designation
1	Vs
2	Not Connected
3	0V
4	Output

Flying Leads



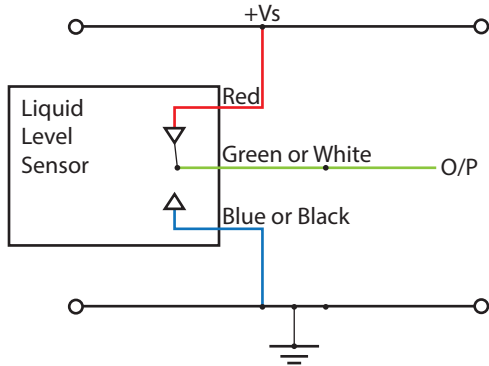
Wire	Designation
Red	Vs
Green	Output
Blue	0V

Circuit Diagrams

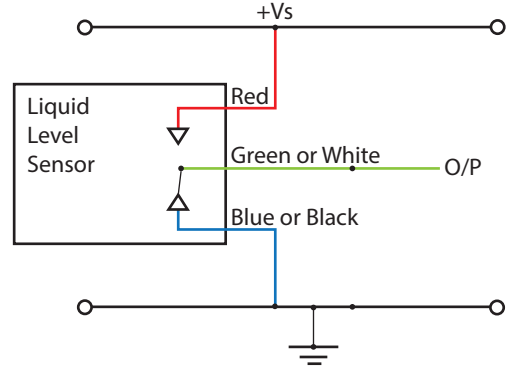
In order to suit any application, these sensors have been designed with various output circuit configurations. They are identified by the code at the end of the part number in the [Product Number Configuration](#) guide.

4.5 V - 15.4 V

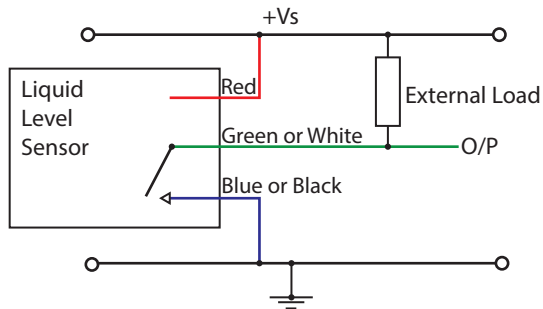
Digital Output High in Air



Digital Output Low in Air

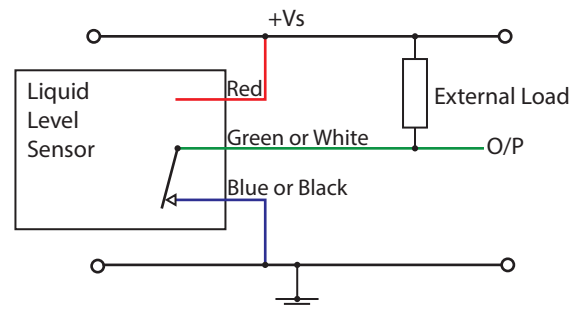


N-Type High in Air

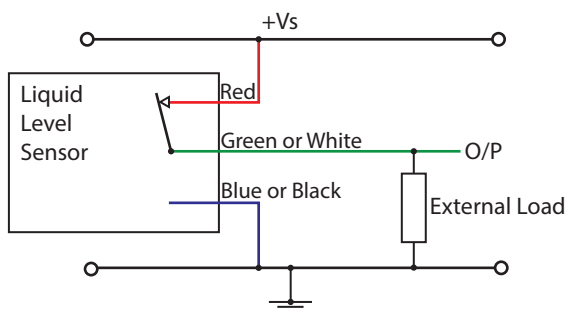


10 V - 45 V

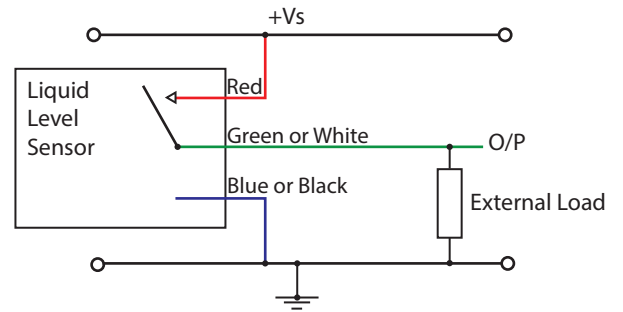
N-Type Low in Air



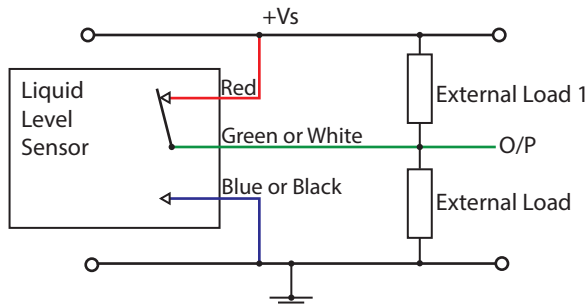
P-Type High in Air



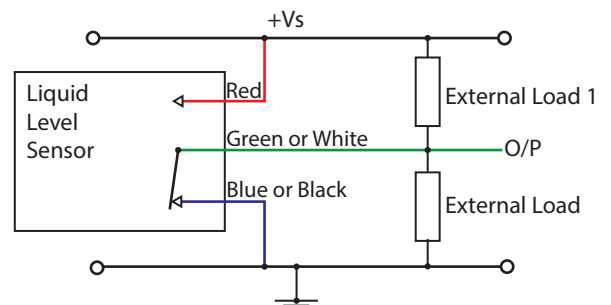
P-Type Low in Air



Push Pull High in Air



Push Pull Low in Air



Caution: Take care when connecting loads. The minimum load impedance should not exceed V_s/MAX output current.

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

Product Number Configuration

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.

