

OLS2 Series

Optical liquid level sensor - External M12 mount



The OLS2 series is a liquid level sensor for single point liquid level detection.

The sensor has an infra-red emitter and detector aligned within an accurately shaped cone to give good optical coupling when the sensor is in air. This coupling is greatly reduced, when the sensor is immersed in liquid, as the infra-red light escapes through the liquid rather than being reflected back to the detector.

The sensor has a transistor output, so can be configured by the user for particular applications.

Output is via TTL compatible push pull output.

- **Low cost sensors for general liquid sensing**
- **High reliability optical sensing**
- **External mount via M12x1 thread**
- **Standard temperature range -25°C to +80°C**
Extended temperature range -40°C to +125°C
- **High and Low output versions**
- **Resistant to false triggering caused by foaming**

Technical Specification

| | | | |
|------------------------------|-----------------------------|--------------------------|---------------|
| Mounting style | External | Cable length - standard | 25cm |
| Mounting thread | M12x1 | Wire size | 24AWG |
| Body material | Polysulfone UDEL 1700 | Cable conductor material | Tinned copper |
| Temperature Range | -25 to +80°C/-40° to +125°C | Wire sheath material | PTFE |
| Maximum pressure | 7bar | Wire temperature rating | 125°C |
| Tightening torque for fixing | 1.5Nm/13.26lbs in | Sealing gasket | Not supplied |
| Mounting hole | 12mm | | |

Note. LLPK1 - 'O' ring and M12 nut kit - is available as an optional extra.

Electrical Specification

| | | | | |
|------------------------------------|--|--------------------|------------|----------------|
| Supply Voltage (Vs) | Vdc | 4.5 to 15.4 | or | 10 to 28 |
| Supply Current Max (Is) | mA | 2.5 (Vs = 15.4Vdc) | | |
| Output type | Voltage High or Low (L in part number indicates low) | | | |
| Output Voltage (Vout) @ Iout=100mA | Output High | Vout = Vs-1V max | Output Low | Vout = 0.5Vmax |
| Output Sink & Source Current Iout | 100mA max | or | 1A | |

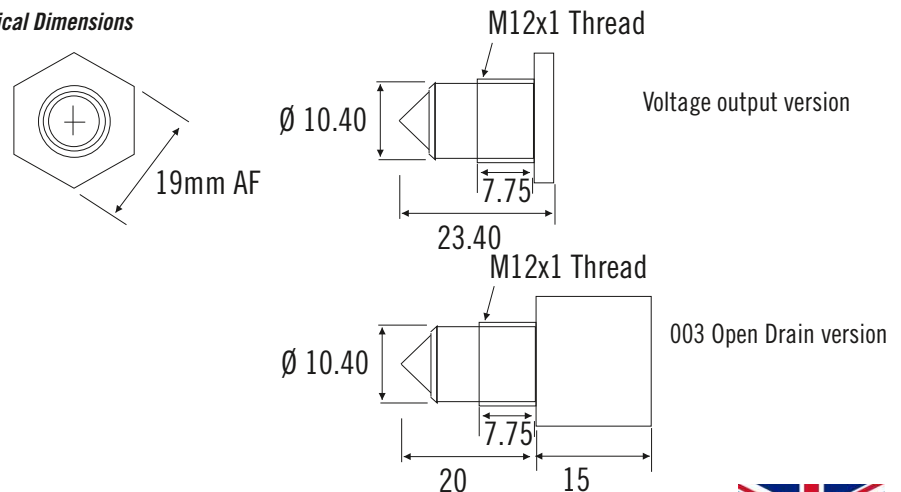
Sensor connections Red= supply +ve, Blue= common(0V), Green= Output (see wiring diagrams overleaf)

Standard Parts

| Standard Parts | Mount | Temp Range °C | Supply Volts V | Output |
|-----------------|-------|---------------|----------------|------------------------|
| OLS200D3SH | M12x1 | -25 to +80 | 5 to 15dc | High in air Volts |
| OLS200D3LSH | M12x1 | -25 to +80 | 5 to 15dc | Low in air Volts |
| OLS210D3SH | M12x1 | -40 to +125 | 5 to 15dc | High in air Volts |
| OLS210D3LSH | M12x1 | -40 to +125 | 5 to 15dc | Low in air Volts |
| OLS210D324-003 | M12x1 | -40 to +125 | 10 to 28dc | High in air Open drain |
| OLS210D3L24-003 | M12x1 | -40 to +125 | 10 to 28dc | Low in air Open drain |

Custom versions can be made for particular applications. Please contact Cynergy3 with your requirements.

Mechanical Dimensions



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Installation

The sensor can be mounted in either the side or the bottom of a tank. It must not be mounted in the top of a tank with the cone downwards.

This sensor requires a hole of 12mm minimum or an M12x1 thread socket connection. The hole should be in a flat surface and be free of burrs.

The sensor with suitable gasket should be inserted into the hole and a fixing nut fitted on the M12 thread on the inside of the tank. Alternatively the sensor can be screwed into a M12x1 socket. The sensor should not be over tightened.

Cleaning

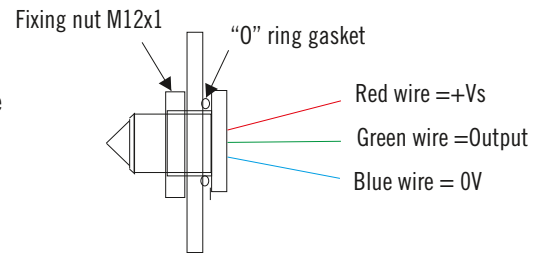
Proper fluids should be selected based on the type of contamination to be removed.

It is recommended that freon or alcohol based solvents are used.

DO NOT USE chlorinated solvents such as trichloroethylene as these are likely to attack the sensor housing material.

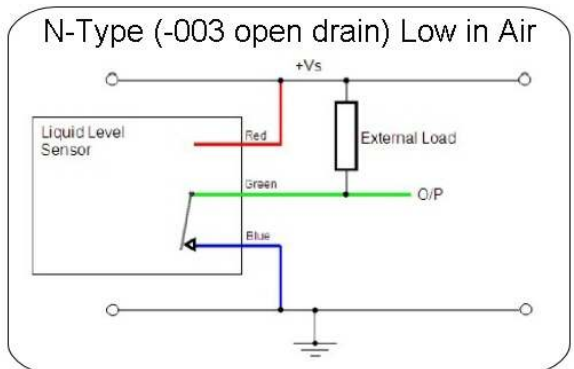
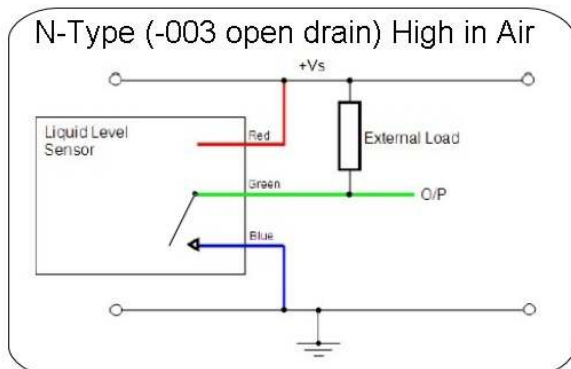
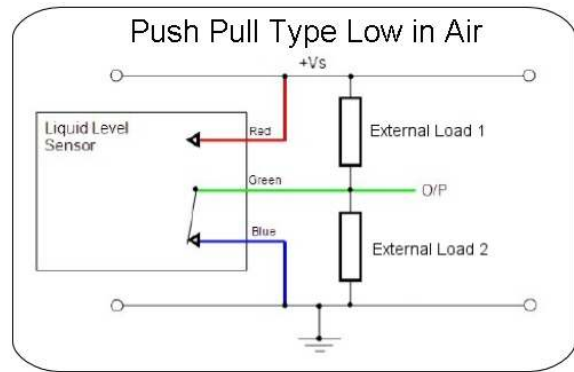
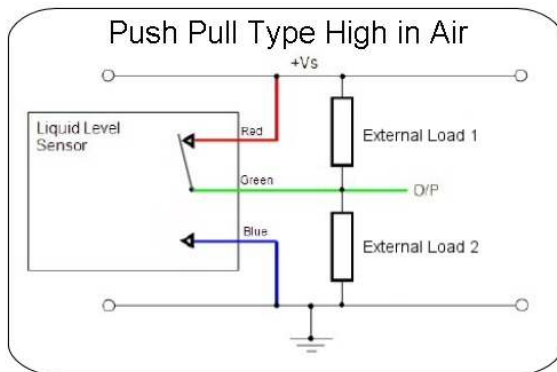
Liquid Media Compatibility

Check that the fluid in which you wish to use the sensor is compatible with Polysulfone.



Note. LLPK1 - Nitrile 'O' ring and Nickel plated brass M12 nut kit - is available as an optional extra.

Electrical Connections



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