

## OLS7 SERIES

### OPTICAL LIQUID LEVEL SENSOR 1/4"NPT MOUNT



The OLS7 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.

#### Features

- Low cost sensors for general liquid sensing
- High reliability optical sensing
- External mount via 1/4"NPT 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

## SPECIFICATIONS

#### Technical

|                                     |                             |
|-------------------------------------|-----------------------------|
| <b>Mounting Style</b>               | External                    |
| <b>Mounting Thread</b>              | 1/4" NPT                    |
| <b>Body Material</b>                | Polysulfone UDEL 1700       |
| <b>Temperature Range</b>            | -25 to +80°C/-40° to +125°C |
| <b>Maximum Pressure</b>             | 7bar                        |
| <b>Tightening Torque for Fixing</b> | 1.5Nm/13.26lbs in           |
| <b>Cable Length - Standard</b>      | 25cm                        |
| <b>Wire Size</b>                    | 24AWG                       |
| <b>Cable Conductor Material</b>     | Tinned copper               |
| <b>Wire Sheath Material</b>         | PTFE                        |
| <b>Wire Temperature Rating</b>      | 125°C                       |
| <b>Sealing Gasket</b>               | Not supplied                |

#### Electrical

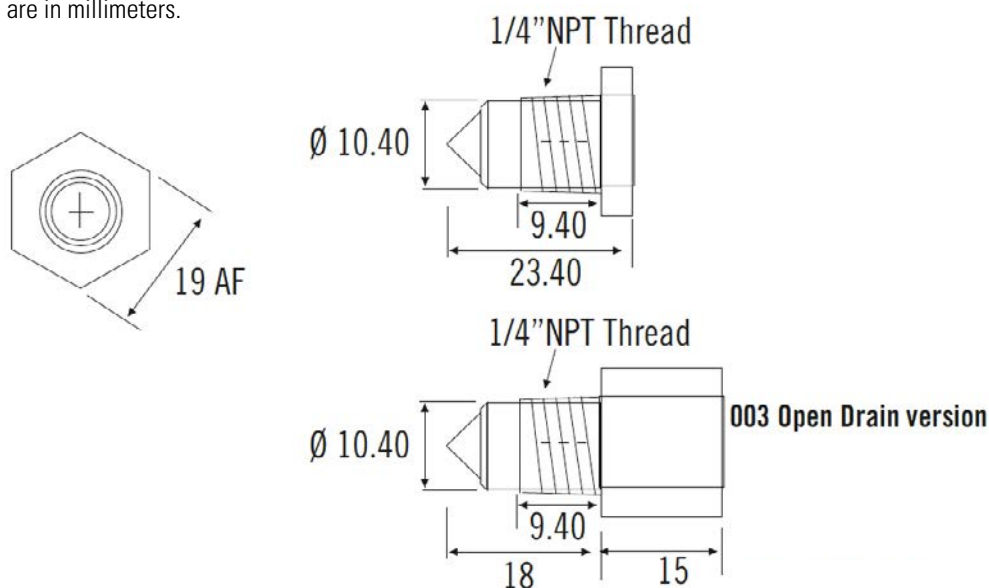
|                                              |            |                                                                                                          |
|----------------------------------------------|------------|----------------------------------------------------------------------------------------------------------|
| <b>Supply Voltage (Vs)</b>                   | <b>Vdc</b> | 4.5 to 15.4 or 10 to 28                                                                                  |
| <b>Supply Current Max (Is)</b>               | <b>mA</b>  | 2.5 (Vs = 15.4Vdc)                                                                                       |
| <b>Output Type</b>                           |            | Voltage High or Low                                                                                      |
| <b>Output Voltage (Vout) @ Iout = 100mA</b>  |            | Output High Vout = Vs-1V max<br>Output Low Vout = 0.5Vmax                                                |
| <b>Output Sink &amp; Source Current Iout</b> |            | 100mA max or 1A                                                                                          |
| <b>Sensor Connections</b>                    |            | Red= supply + ve,<br>Blue= common(OV),<br>Green or Green/White= Output<br>(see wiring diagrams overleaf) |

|                        | Mount   | Temp Range °C | Supply Volts V | Output      |            |
|------------------------|---------|---------------|----------------|-------------|------------|
| <b>OLS700D3SH</b>      | 1/4"NPT | -25 to +80    | 5 to 15dc      | High in air | Volts      |
| <b>OLS700D3LSH</b>     | 1/4"NPT | -25 to +80    | 5 to 15dc      | Low in air  | Volts      |
| <b>OLS710D3SH</b>      | 1/4"NPT | -40 to +125   | 5 to 15dc      | High in air | Volts      |
| <b>OLS710D3LSH</b>     | 1/4"NPT | -40 to +125   | 5 to 15dc      | Low in air  | Volts      |
| <b>OLS710D324-003</b>  | 1/4"NPT | -40 to +125   | 10 to 28dc     | High in air | Open drain |
| <b>OLS710D3L24-003</b> | 1/4"NPT | -40 to +125   | 10 to 28dc     | Low in air  | Open drain |

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

## DIMENSIONS

All dimensions are in millimeters.



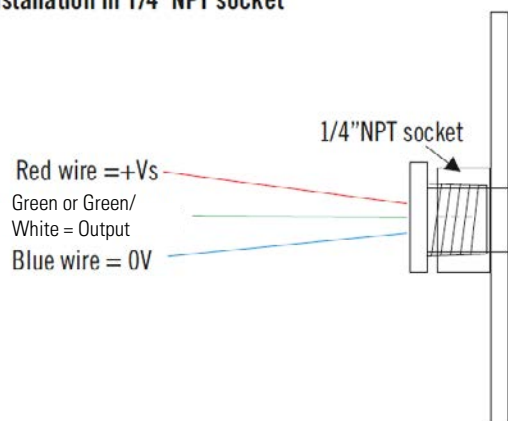
## INSTALLATION

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 1/4"NPT thread connection.

The sensor should be screwed into a 1/4"NPT socket and should not be overtightened.

### Installation in 1/4"NPT socket



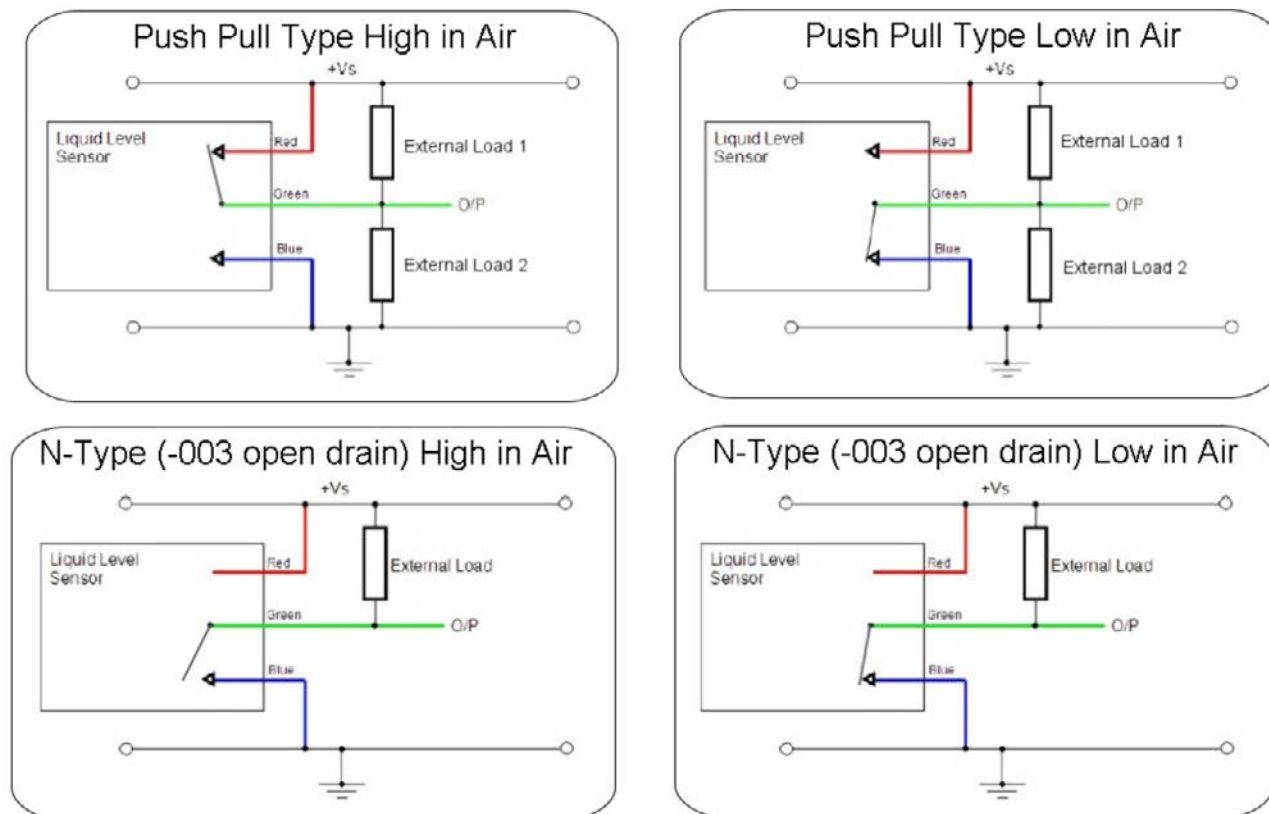
## Cleaning

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.

## Electrical Connections



Made in the UK

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