

# Liquid Level Sensor

7010 Liquid Level Sensor

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## Quickstart guide

7010 – All Variants

### Thank you

May we take this opportunity to thank you for purchasing this sensor.

The 7010 liquid level sensor is a precision measurement device designed to give accurate data over many years of continuous operation. Observing a few simple steps will not only get the sensor up and running in short time, but will ensure you get the best from the sensor.

We also highly recommend a visit to the Gill website [www.gillsc.com/support](http://www.gillsc.com/support) where you can view or download a full instruction manual and also download the GSlevel software application specifically designed to optimise operation of the sensor.

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[gillsc.com](http://gillsc.com)

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### A few Do's & Don'ts:

- DO** check you have the correct length of sensor for the tank, observing a minimum of 5mm clearance to the bottom of the tank and clearance above for access.
- DO** check the sensor has the correct mounting flange (either 5 Bolt and 1.125"UNF, 5 Bolt & 1.25"BSP fitting or 2" NPT fitting) for the installation.
- DO** check the details to ensure you have a sensor with the correct output for your system (0-10V or 4-20mA).
- DON'T** attempt to cut the sensor to length or bend the sensor. Both actions will result in the sensor failing and will invalidate the warranty.
- DON'T** use the sensor in a tank that is not adequately vented.
- DON'T** immerse the flange or cable in the liquid to be measured.

*\*Please note, images and diagrams in this document are for illustrative purposes only.*

### What you need to install this product:

1. A hole above the deepest part of the tank with the appropriate fitting to match the sensor (5 Bolt, UNF threaded, BSP threaded, NPT threaded).
2. O-ring or gasket dependant on model (supplied with the sensor)
3. PTFE or pipe sealant dependant on model (not supplied)
4. 5 x M5 bolts & fixings (length dependant on tank wall thickness)
5. Adjustable spanner (50.0mm A/F for NPT version)
6. Torque wrench

### Fitting the Sensor:

There are four different options for installing the sensor into the tank with three methods of sealing them. These are as follows;

- 5 Bolt SAE mounting using the supplied gasket to seal the tank.
- 1.125" UNF threaded mounting with either the gasket or O-ring
- 1.25" BSP threaded mounting with either the gasket or O-ring
- 2" NPT threaded fitting with either PTFE or pipe sealant.

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### SAE 5-Bolt fitting

The sensor should be fitted with the supplied gasket (see Fig 2). Place the gasket black side up on a cleaned mounting surface, position the sensor and fit and tighten the fixing bolts (Fig 1) to a torque of 10Nm.

### Gasket fitting

Prepare a hole in the tank according to the fitting type, UNF or BSP (see Fig 3).

Fit the gasket on the cleaned mounting surface, with the black side facing upwards (see Fig 2). Tighten the sensor using a 59.5mm A/F spanner to a torque of 50Nm.

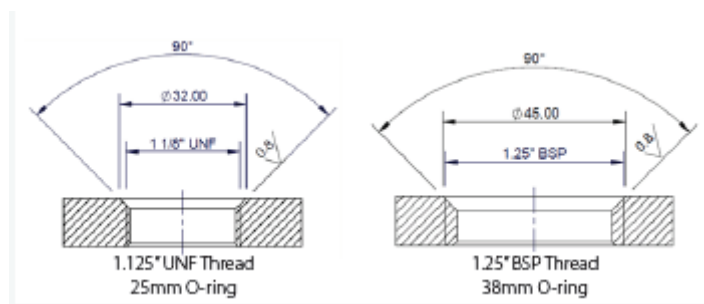


Fig 3

### O-Ring fitting

Prepare a hole in the tank according to the fitting type UNF or BSP (see Fig 4).

Fit the O-ring over the mounting thread so that it is sitting in the groove on the underside of the sensor flange (see Fig 5). Tighten the flange using a adjustable spanner to a torque of 50Nm.

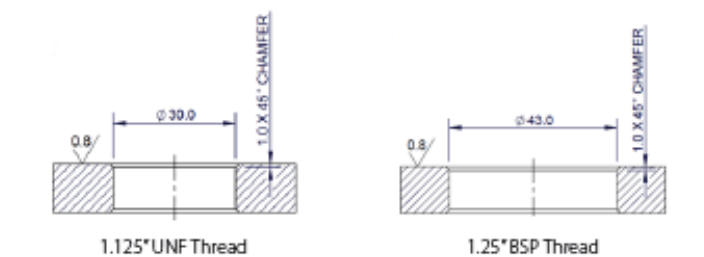


Fig 4

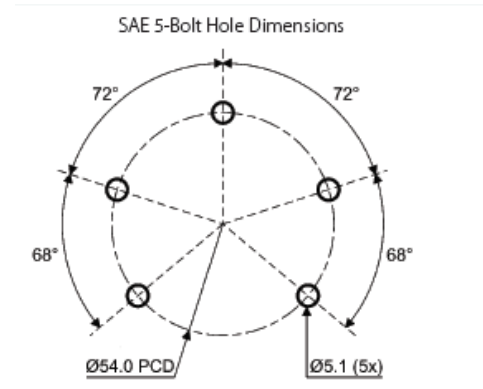


Fig 1

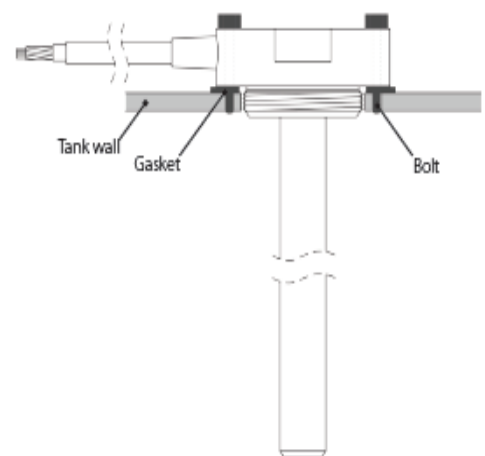


Fig 2

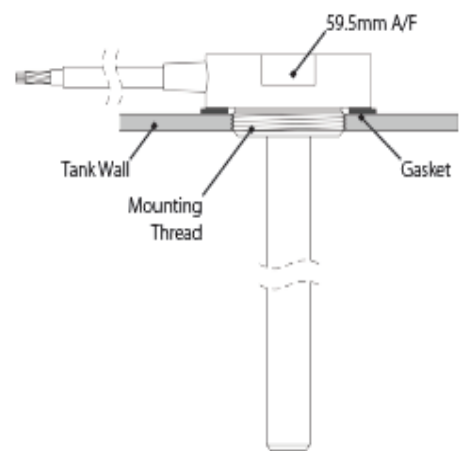


Fig 5

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### Tapered NPT sensor fitting

Fitting the NPT sensor does not require the use of either the O-ring or gasket. NPT fittings use a tapered thread design to seal the threads rather than the sealing surfaces around them (see Fig 6).

Apply PTFE or pipe sealant to the threads and tighten using a 50.0A/F spanner.

### Electrical Connection

Once the sensor is installed in to the tank, connect the sensor using the diagram below.

			VOLTAGE	CURRENT
	Red	DC Power Supply	+5 to +32V DC	+9 to +32V DC
	Black	Ground		
	Orange	Primary Output	+0.25 to +4.75V	4 to 20 mA
	Yellow	Secondary Output	Switch	Switch
	White	Tx		
	Green	Rx		
	Silver	Drain wire		

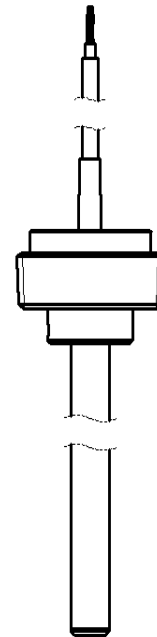


Fig 6

### Optimising Sensor Operation

For further adjustment over the set up, download the GSlevel software from the Gill website, [www.gillsc.com/support](http://www.gillsc.com/support) and connect using an R232 to USB cable (available separately from Gill Sensors & Controls Ltd).