

# LevelPro

Robust level sensors for varied applications

## Quickstart guide



Thank you for purchasing this sensor.  
This short guide will help to get the sensor installed and operational.

Further information, including the full manual is available on our website at [www.gillsc.com/support](http://www.gillsc.com/support).

**Safety Warning, This equipment is not ATEX certified and has not been designed for use in areas which fall within the scope of the ATEX directive. If an area of intended usage is within the scope of the ATEX directive, then contact Gill Sensors & Controls Ltd for further information.**

[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 NPT versions
4. 5 x M5 bolts & fixings (length dependant on tank wall thickness)
5. Adjustable spanner 59.5mm A/F (50.0mm A/F for NPT versions)
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.

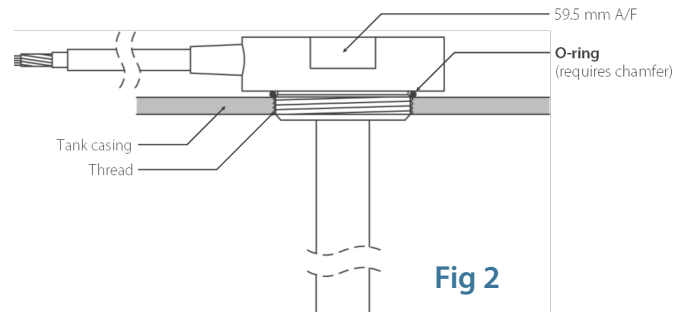
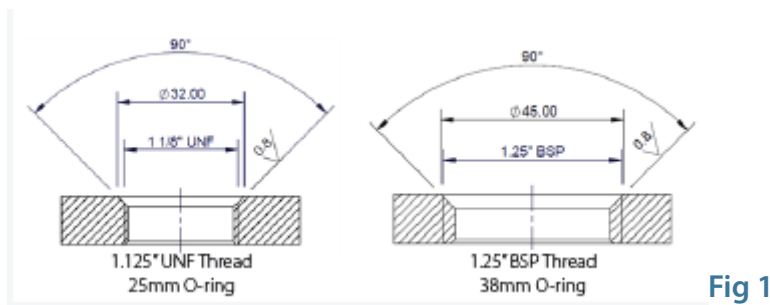
### Fitting notes

- The sensor must be fitted to a flat surface to reach into the deepest part of the tank.
- The sensor may be installed at an angle of up to 45° from vertical with in-tank support considered for sensors over 500mm long.
- Please ensure sufficient clearance above the sensor for servicing purposes.

### O-Ring fitting

Prepare a hole in the tank according to the fitting type UNF or BSP (see Fig 1).

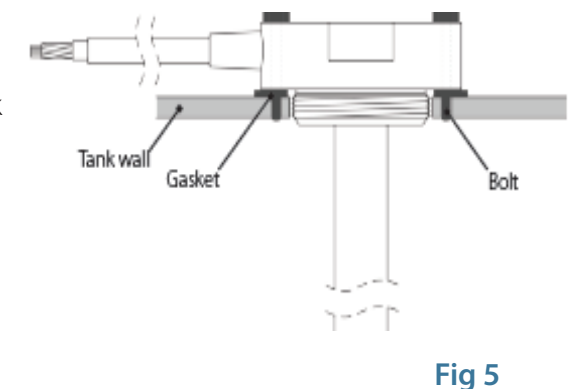
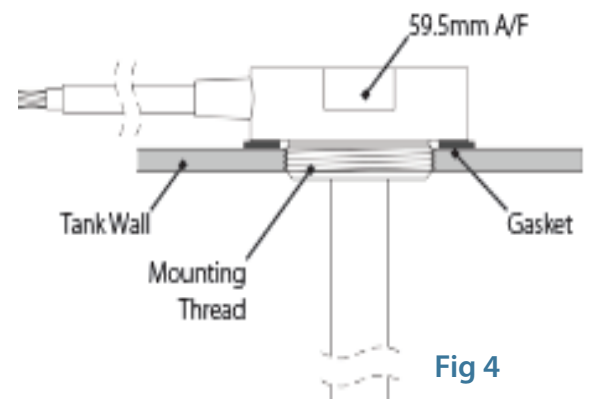
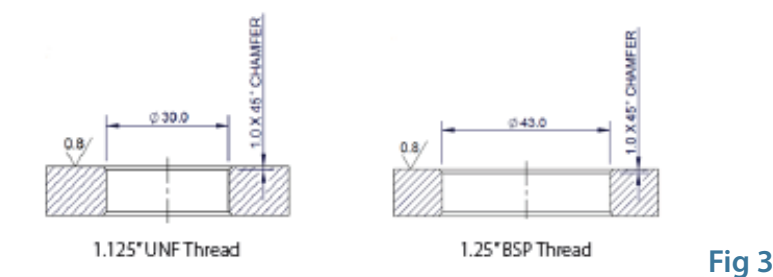
Fit the O-ring over the mounting thread so that it is sitting in the groove on the underside of the sensor flange (see Fig 2). Tighten the flange using a adjustable spanner to a torque of 50Nm.



### Gasket fitting

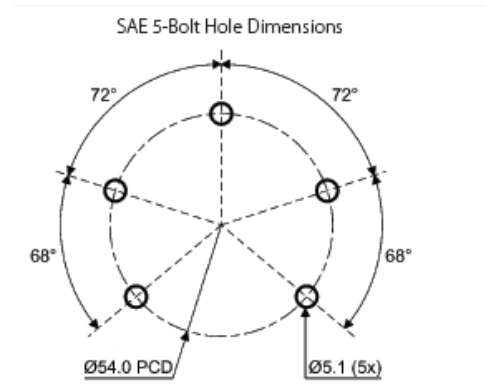
Prepare a hole in the tank according to the fitting type, UNF or BSP (see Fig 3).

Fit the gasket on the cleaned mounting surface, with the black side facing upwards (see Fig 4). Tighten the sensor using a adjustable spanner to a torque of 50Nm.



### SAE 5-Bolt fitting

The sensor should be fitted with the supplied gasket placed black side up on a cleaned mounting surface. Place the sensor on top of the gasket and tighten the fixing bolts to a torque of 10Nm (Fig 5). For bolt hole dimensions see (Fig 6).










### 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 7).

Apply PTFE or pipe sealant to the threads and tighten using an adjustable 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		

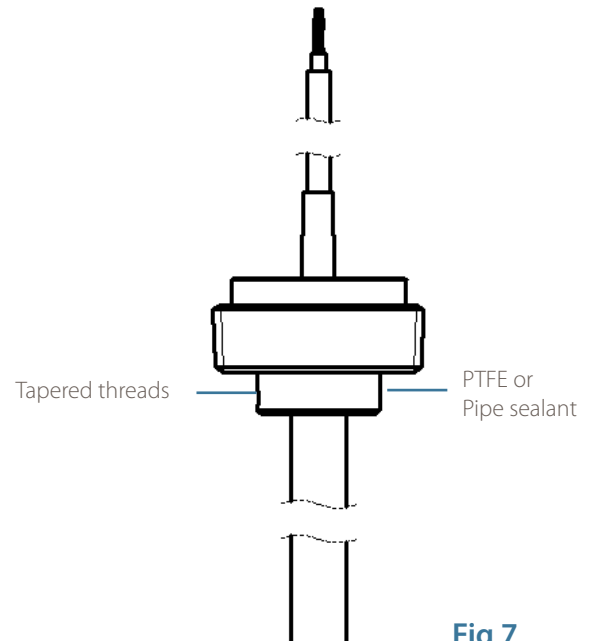


Fig 7

### 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).