Fitting a 4-20mA transducer to a Swordfish controller.

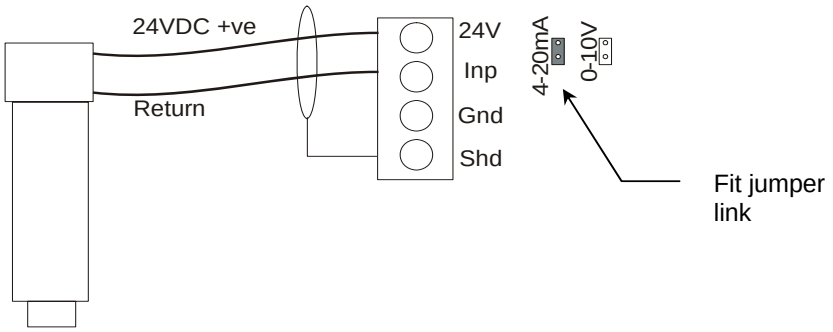
The built in ribbon cable transducer is fitted to the underside of the Swordfish enclosure with a ¼" BSP female connection. This transducer is rated to 1700kPa (250 psi) with a maximum over pressure rating for spike pressure of 3150kPa (450psi).

To use any other transducer apart from the standard unit requires the disconnection of the original ribbon cable connected from the standard transducer and the Swordfish PCB.

The 4 – 20mA input requires "JUMPER" link to be fitted to the relevant posts. This allows the system to read the correct input from the transducer. 4-20 mA is a standard analogue signal from a pressure transducer, to use this input note the wiring requirements on the PCB. Techsys supply a standard 2-wire 4-20mA 25Bar transducer as an option should the original transducer fail. Use the connection configuration below for the 4-20mA transducer.

Wire colours for the Techsys PT25-mA-2C HW. (Shield is not required)

Pink – 24VDC
White - Return



After fitting the transducer, calibration will be required.

Transducer Zero
XXXXX

Transducer Zero

The Transducer Zero adjusts the zero offset in the pressure sensor. Remove all pressure in the system and then trim the display using the ENTER and UP or DOWN keys to set the reading to "0". There are buffers in the system so the transition to the new reading may take some time to settle so wait for 5 seconds before accepting the adjustment. If Swordfish senses that the zero input is lower than can be accepted, a message will come up on the screen stating "Value too Low". If this message comes up, increase the setting using the ENTER and UP keys.
This procedure is the same for all Analogue inputs and is not available unless ANALOGUE is selected in the SENSING INPUT screen.

Adjust Pressure
XXXXX

Adjust Pressure

The calibration of the analogue sensors is achieved by adjusting the pressure reading on this screen to match a reading from a pressure gauge. This is normally factory set but can be adjusted to suit specific requirements.
Once the system pressure has stabilized, press the ENTER key and either UP or DOWN keys to match the reading on this screen to suit a pressure gauge reading. Once the readings are matched the system pressure is calibrated.

There are buffers in the system so the transition to the new reading may take some time to settle so wait for 5 seconds before accepting the adjustment.

This procedure is the same for all Analogue inputs and is not available unless ANALOGUE is selected in the SENSING INPUT screen.