

WORKING INSTRUCTIONS

TROJAN RANGE

This working instruction leaflet covers the following range of switches:-

PF251 - Medium Pressure Switch
PF252 - Medium Pressure Switch
PF253 - High Pressure Switch
PF254 - High Pressure Switch
TF169 - Temperature Switch with Thermowell
TF170 - Temperature Switch without Thermowell
FF502 - Flow Switch

HEALTH AND SAFETY AT WORK ACT 1974

WARNING

Your attention is drawn to the electrical potential that will be present if the terminal cover is removed while the switch is connected to a live supply. The electrical supply must be isolated prior to removal of the terminal housing cover.

Similarly, on pressurised process systems, prior to removal of an instrument it should be isolated from the pressurised medium or the system pressure should be relieved.

Precautions must be taken with regard to the possible operating temperatures present when performing adjustment.

The units must be specified, installed and operated by competent personnel, and their use be limited to within the published specifications. (All hazardous area models must be installed in accordance with BS EN 60079-14).

Unauthorised modification, repair, or operation outside the specified limits may invalidate the warranty. Servicing should only be carried out by qualified personnel.

On pressure devices, should pulsation or surges be anticipated, then a suitable pressure snubber should be fitted.

Pressure Switches - Element/primary seal failure.
In the event of the above the process medium will be prevented pressurising the main body and will be vented to atmosphere via a 2mm vent hole.

The process medium temperature should not be allowed to exceed that stated in the product data and under the "OPERATING TEMPERATURES" section in this document. If process temperatures in excess of those stated are possible, then the switch should be remote mounted via a length of tubing or pipe.

Pressure & Differential Pressure Switches - Various process entries are available, and the installation will vary dependent on exact type. It is recommended that PTFE tape is used on tapered fittings and the use of the correct size of bonded seal on parallel fittings.

Temperature Switches - These are usually provided either with a thermowell having a male screwed connection or a flange to a recognised international standard or with a male screwed fitting allowing the bare sensing probe to come into contact with the process medium.
Suitable pipe sealant or flange gasketing should be incorporated when installing to ensure a good leak free fit.

The standard materials used in the construction of the **Trojan** series are as follows:-

Main Body and Outer Cover - Black Anodised Aluminium LM25TF
Terminal box - Glass Reinforced Polyester
Wetted Parts - 316 stainless steel or Monel 400.
Diaphragm & 'O' Rings (Pressure Switches) - Nitrile or Viton®.
Thermowells (Temperature Switches) - 316 stainless steel. (other materials available).
Pushrod and Spring Caps - Stainless steel.
External fasteners - Stainless steel.
Internal Fasteners and springs - Zinc plated carbon steel.
Flow plates - Phenolic resin or Gunmetal.

The operating temperature restrictions for the **Trojan** series are as follows:-

Ambient :
Operational (all models) -50°C to +65°C.
Special (on request) -50°C to +90°C

Storage:
-60°C to +90°C

Process:-

PF251, PF252, PF257 & PF258
-20°C to +150°C - Viton®
-40°C to +90°C - Nitrile

PF253 & PF254
-20°C to +150°C - Viton®
-40°C to +120°C - Nitrile

FF502 0 to +100°C

TF169 & TF170
Refer to temperature range specification.

These models have been designed for easy installation and mounting, either directly from the process entry, or using the fixing holes in the back plate. The conduit entry is to the top, process entry to the bottom, the terminal and adjustment access to the front.

When installing direct mounting pressure switches, particular care should be taken to ensure the internal ¼" nipple is not loosened during the positioning or tightening procedure. If the unit is likely to be subjected to high shock levels or physical loads then additional supports should be incorporated.

All models incorporate an EExe terminal box with 3 x 20mm conduit entry ports which must be plugged with a suitably certified gland when not utilised.

Connection details are provided on the inside of the terminal box cover and should be carefully studied and the correct mode of operation selected (i.e rising or falling as required).

Terminal cover should not be removed while the switch is live.

Terminals are suitable for cables (single or multi-strand) up to 2.5mm².

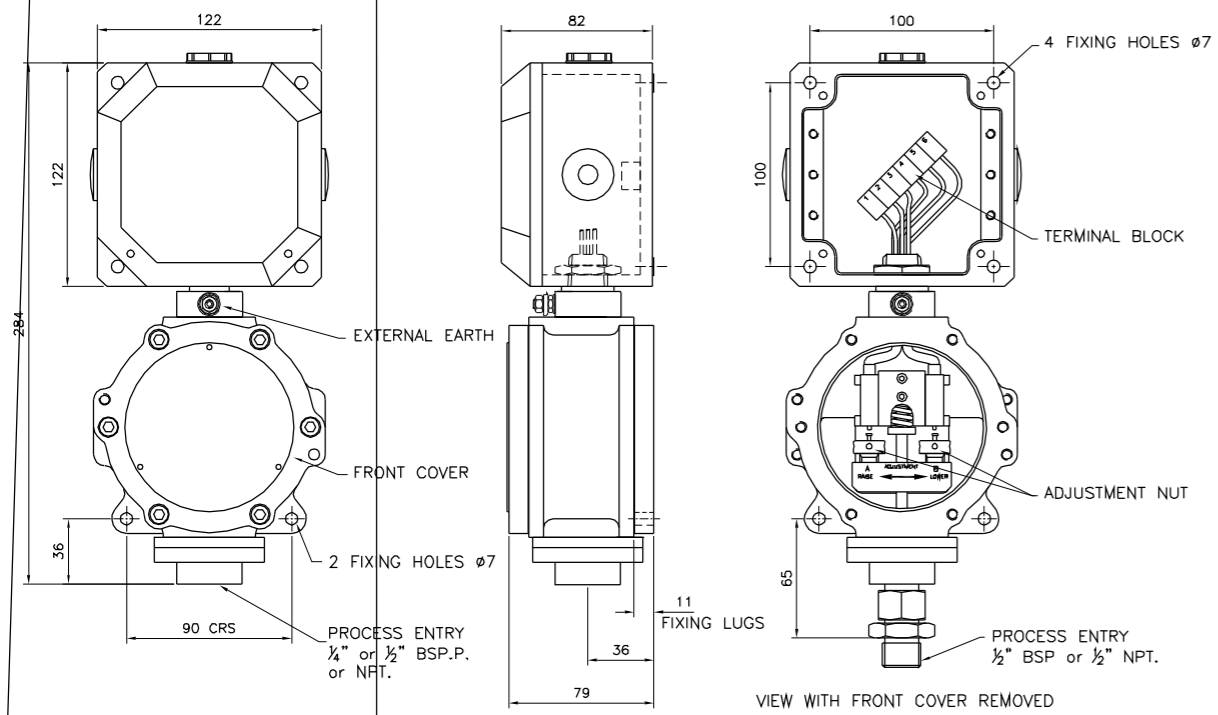
The front cover can be removed by unscrewing 6 x M6 cap head screws and using 2 screws in the jacking positions to ease off the front cover evenly.

The factory set range and switch point setting is detailed on the internal label located inside the outer cover.

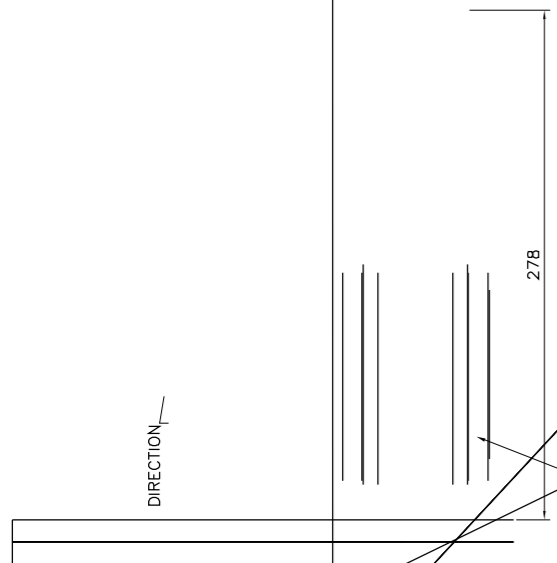
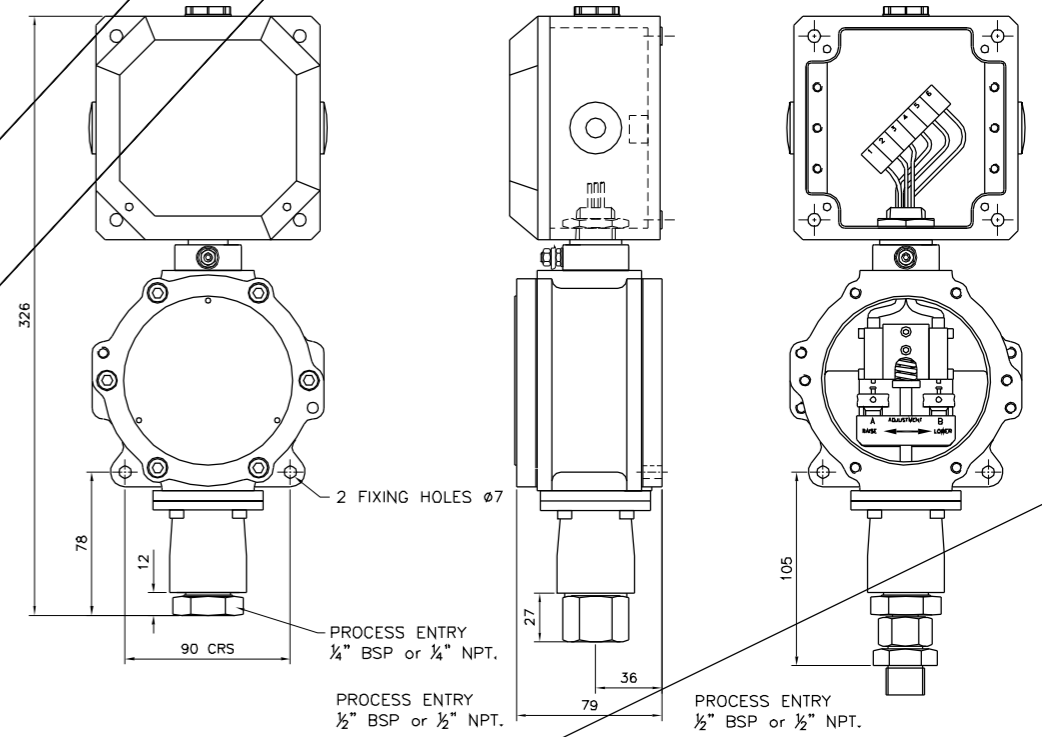
Adjustment can be made by rotating the adjustment screw assembly, with a suitable 3mm dia. pin or Allan key, until the desired set point is reached.

The new setting should be rechecked and the front cover replaced before reconnecting the electrical supply.

All of the above calibrations and settings can be performed by Pyro



PF251 MEDIUM PRESSURE



FLANGE DIMENSIONS AND DRILLINGS			
SIZE	15	20	80
A	108	108	152
B	57	57	102
C	65	75	160
D	24	24	24
FLANGE HOLES	4 x 14	4 x 14	8 x 18