

DPSL Differential Pressure Switch (Liquid)



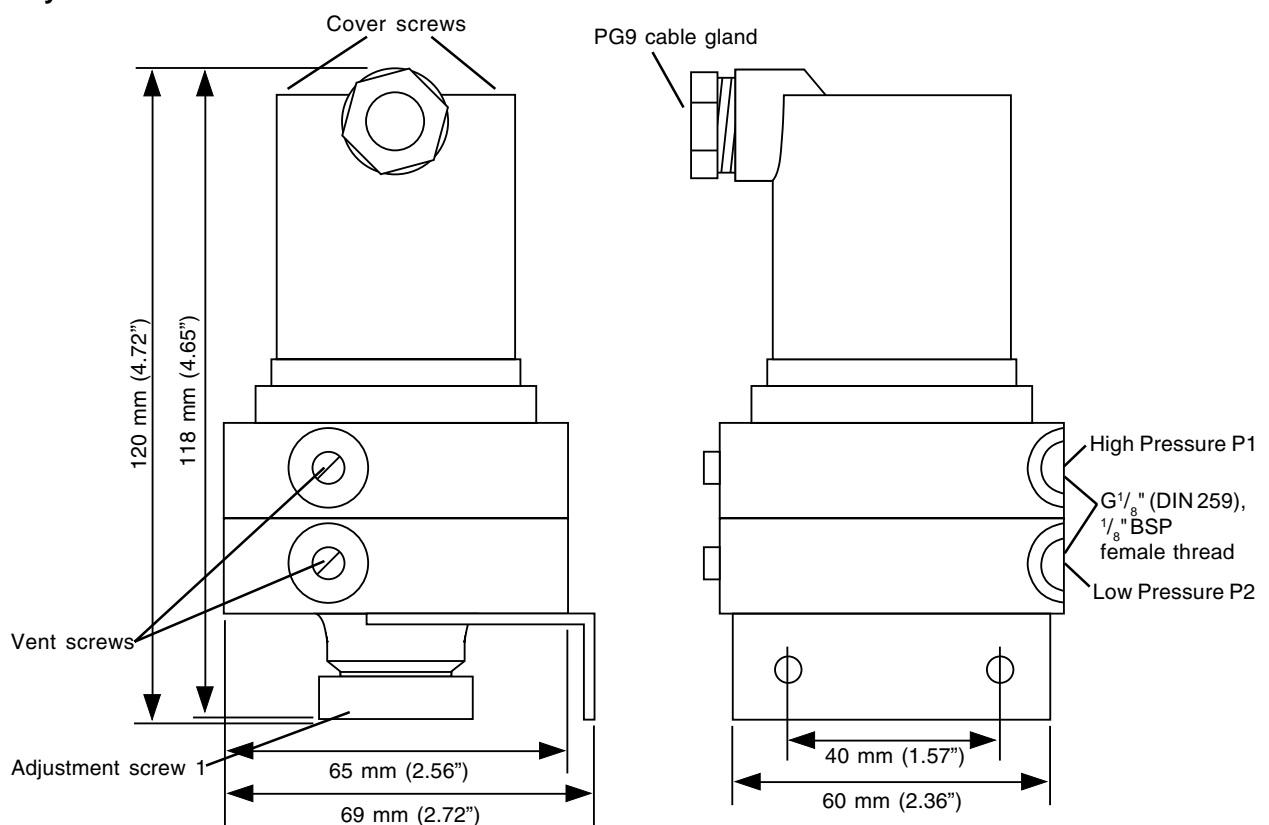
Description

Differential pressure, vacuum, and overpressure switch suitable for monitoring neutral and slightly aggressive liquids and gases. Suitable for pump status, flow, and filter condition monitoring, it can be used as a flow switch if fitted across an orifice plate. Extremely rugged construction with overpressure (10/20 bar) safety margin.

Features

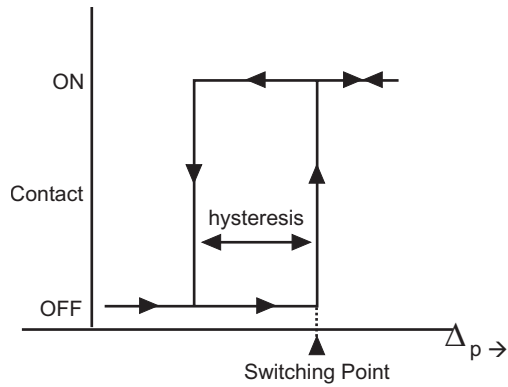
- Switching element isolated from medium.
- High overpressure safety margin.
- Adjustable mounting bracket.
- PG9 cable gland.
- Easy to adjust switching point and hysteresis.

Physical



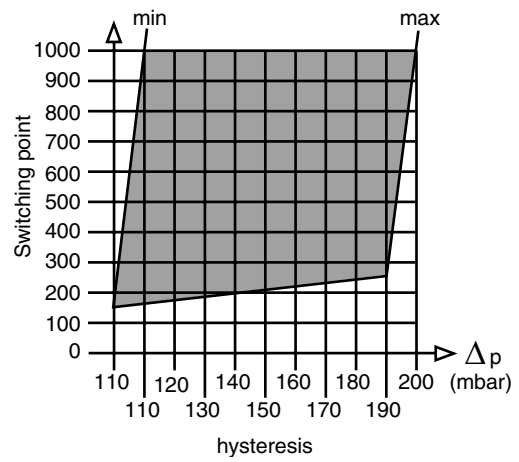
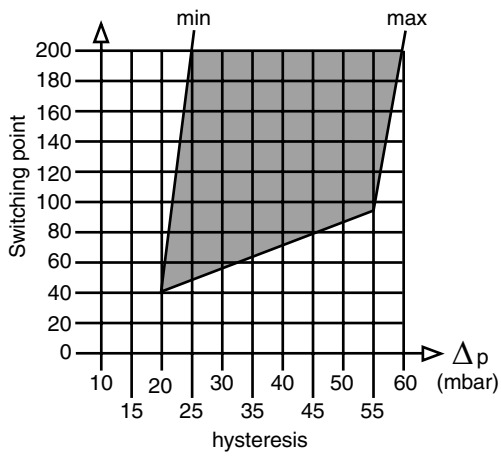
FUNCTIONALITY

The pressure difference is applied across a rubber (EPDM) diaphragm whose movement is transmitted to the changeover contact.



Switch 1 sets the switching point and switch 2 sets the hysteresis (i.e. distance between contacts).

Graphs of possible switching point against hysteresis are shown below for both ranges of sensor.



INSTALLATION

- Install sensor in any position (but for liquid media vent screws should be at the top (i.e. connections down)).
- Adjust switching point and hysteresis in installed position.
- Secure adjustment screws with varnish.
- Connect to Trend controller digital input.
- Test system.

Notes:

Do not allow sediments into the sensor. The sensor should not be mounted so that the direction of oscillation coincides with the sensor's central axis.

A very high switch frequency causes the contacts to heat and hence reduces contact life. A pulsating pressure may cause oscillation of the sensor parts, and hence a reduction of sensor life by abrasion; a small orifice can be used to dampen the pulses.

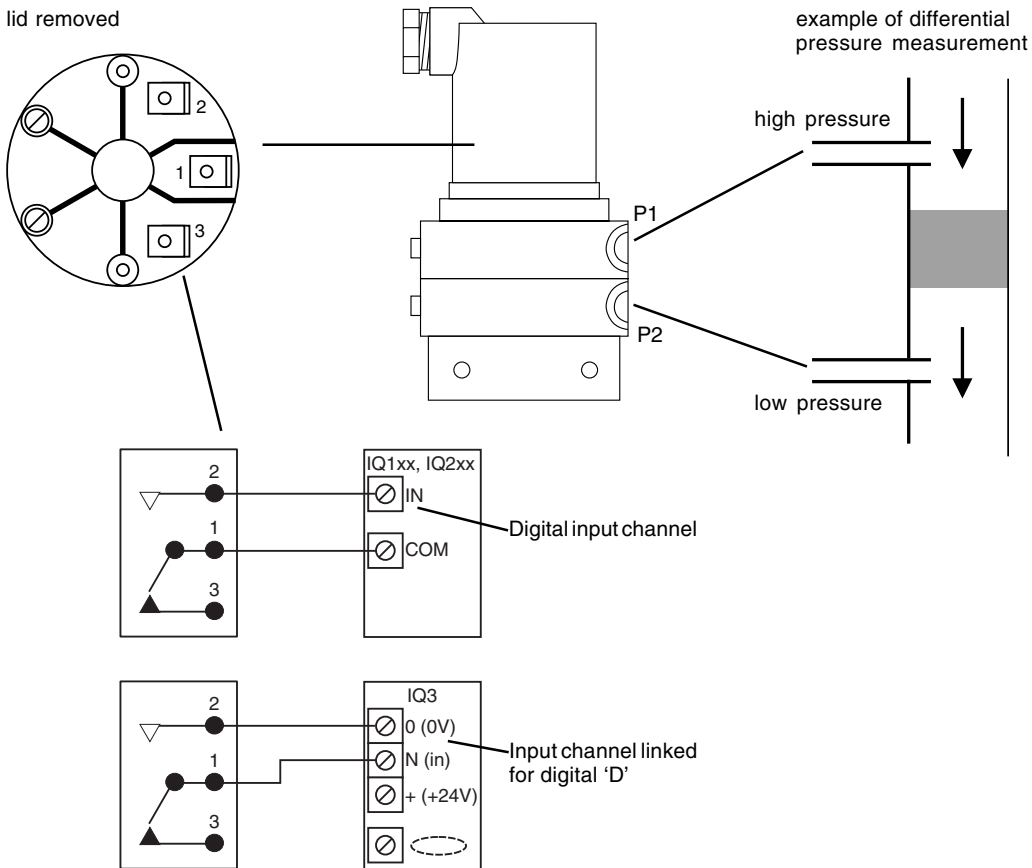
A very slow changing pressure (e.g. over some months) may cause a reduction in contact rating by 30-50%. A capacitor may be connected in parallel to reduce contact wear.

If used for flow sensing, ensure there are no valves between sensing points. The sensor mounting bracket may be moved so that the sensor position may be rotated about its central axis before mounting.


Full installation instructions are given in the DPSL Installation Instructions, TG101762.

CONNECTIONS

top view - lid removed



DISPOSAL



WEEE Directive :

At the end of their useful life the packaging and product should be disposed of by a suitable recycling centre.

Do not dispose of with normal household waste.

Do not burn.

ORDER CODES

- DPSL/L Liquid differential pressure switch, single pole changeover, 40 to 200 mbar
 DPSL/H Liquid differential pressure switch, single pole changeover, 150 to 1000 mbar

SPECIFICATIONS

Setting range	
DPSL/L	:40 to 200 mbar
DPSL/H	:150 to 1000 mbar
Maximum Operating Pressure	
DPSL/L	:10000 mbar
DPSL/H	:20000 mbar
Cable gland	:PG9 thread (female in body)
Contact	:single pole changeover rated 250 Vac at 1 A (resistive) or 0.5 A (motor loading).
Life	:>10 ⁶ switching cycles.
Smallest switching difference	:3 mbar
Repeatability	:± 5% of switching point (± 0.4 mbar minimum)
Materials	
Case	:brass
Cover	:plastic
Diaphragm	:EPDM
Weight	:1000 g (2.2 lbs)
Electrical Connections	:screw terminals
Pressure Connections	:G ¹ / ₈ " (DIN 259), 1/ ₈ " BSP female thread; (P1 > P2)
Protection	:IP54
Dimensions	:118 mm x 65 mm x 65 mm (4.65" x 2.56" x 2.56") 120 x 69 x 65 mm (4.72" x 2.72" x 2.56") (inc bracket)
Temperature (ambient and medium)	:-10 to 80 °C (14 °F to 176 °F)

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