

AIR DIFFERENTIAL PRESSURE



Features:

- Close switching differential
- IP65 housing option
- Duct fixing kit included

Benefits:

- Switching point easily adjusted with scale in Pascals
- Conduct entry can be rotated in steps of 120°
- One screw needed for housing cover

Technical Overview:

The PS00105 range of air differential pressure switches are suitable for low differential pressure switching applications, and are ideal for providing indication of fan status or 'filter dirty' conditions in air, non-combustible, non-aggressive gases in air conditioning and ventilating installations. The switching knob is mounted under the cover to avoid tampering.

Specification:

Measurement ranges:

- PS0010590 20 to 200Pa (0.08 to 0.80" w/c)
- PS0010591 50 to 500Pa (0.20 to 2" w/c)

Differential:

- PS0010590 10Pa (0.04" w/c)
- PS0010591 20Pa (0.08" w/c)

Maximum pressure: 5000Pa (20" w/c)

Pressure connections: 6mm ID push-on tubing

Electrical rating: 1.5A (0.4) @ 250Vac

Approvals: Switch according to VDE0630 UG1652

Connections: Via 6.3mm crimp-type sockets

Cable entry: PG11

Material: Plastic moulding

Dimensions:

- IP54: See page 5
- IP65: 130 x 130 x 99mm (5.12 x 5.12 x 3.90")

Ambient:

- Temp: -20 to +85°C (-4 to +185°F)
- RH: 0 to 95% non-condensing

Protection: IP54 or IP65

Country of origin UK

Part Numbers:

IP54 Versions;

- PS0010590: 20 to 200Pa (0.08 to 0.80" w/c) Air DP switch
- PS0010591: 50 to 500Pa (0.20 to 2" w/c) Air DP switch

A 'duct fixing kit' is supplied with the PS00105, consisting of 2m (6.56ft) of 6mm i/d plastic tubing, 2 x pitot tubes and 4 x fixing screws (see page 4).




The products referred to in this data sheet meet the requirements of 2006/95/EC

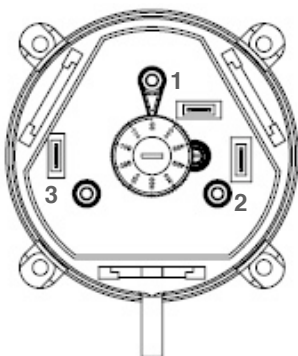
Installation:

1. The PS00105 should only be installed by a competent, suitably trained technician, experienced in installation with hazardous voltages. ($>50\text{Vac}$ & $<1000\text{Vac}$ or $>75\text{Vdc}$ & 1500Vdc).
2. Ensure that all power is disconnected before carrying out any work on the PS00105.
3. Fix the switch to a suitable flat surface, maximum diameter of the screws must not be bigger than 8mm. Do not over tighten the screws, in order to avoid deformation of the devices base.
Mount the pressure switch with the pressure connections pointing downwards, to drain condensation moisture which might occur.
Mount the pressure switch horizontally (electrical connectors pointing upwards) only, if no condensate can form. In this position, the switching values are approximately 20Pa higher as indicated on the scale.
4. When using the IP65 housing option, it is recommended that the unit be mounted with the cable entry at the bottom. If the cable is fed from above then into the cable gland at the bottom, it is recommended that a rain loop be placed in the cable before entry into the housing.
5. Remove the cover by unscrewing the single screw.
6. Terminate at the crimp-type sockets as required and set the desired switching pressure on the setting knob using a screwdriver.
7. Replace the cover and tighten the single screw, it is possible to move the cable entry in steps of 120° .
8. Push the pressure tubing onto the pressure ports on the unit. Ensure that the Hi and Lo ports have been correctly identified.
 - P1 (+) Over pressure measurement
 - P2 (-) Vacuum Measurement
 - P1 & P2 Differential pressure measurement

CAUTION

 The PS00105 will be damaged if subjected to excessive pressure. Do NOT test the unit by blowing into the inlet ports.

Connections:



- 1: N/C Contact
- 2: N/O Contact
- 3: Common

Applications:

If the switch is to be used for filter status monitoring, the pitot tube ends should be cut square. If the switch is to be used for fan status monitoring, the ends of the pitot tube should be cut at an angle of 45°

Fan status monitoring: The switch can be used across a fan to provide proof of air flow and hence fan status. Fig. 1 shows how to connect the High and Low pressure ports:

Filter status monitoring: The switch can be used across a filter to provide dirty filter status. Fig. 2 shows the connections for this application.

Fig. 1

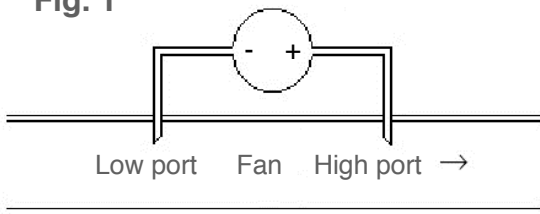
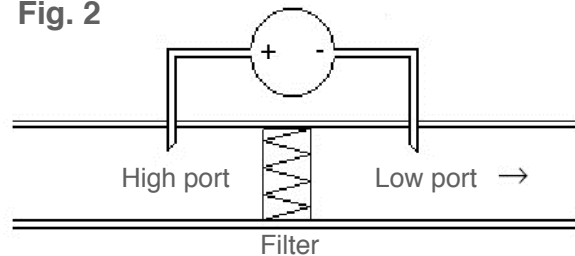


Fig. 2

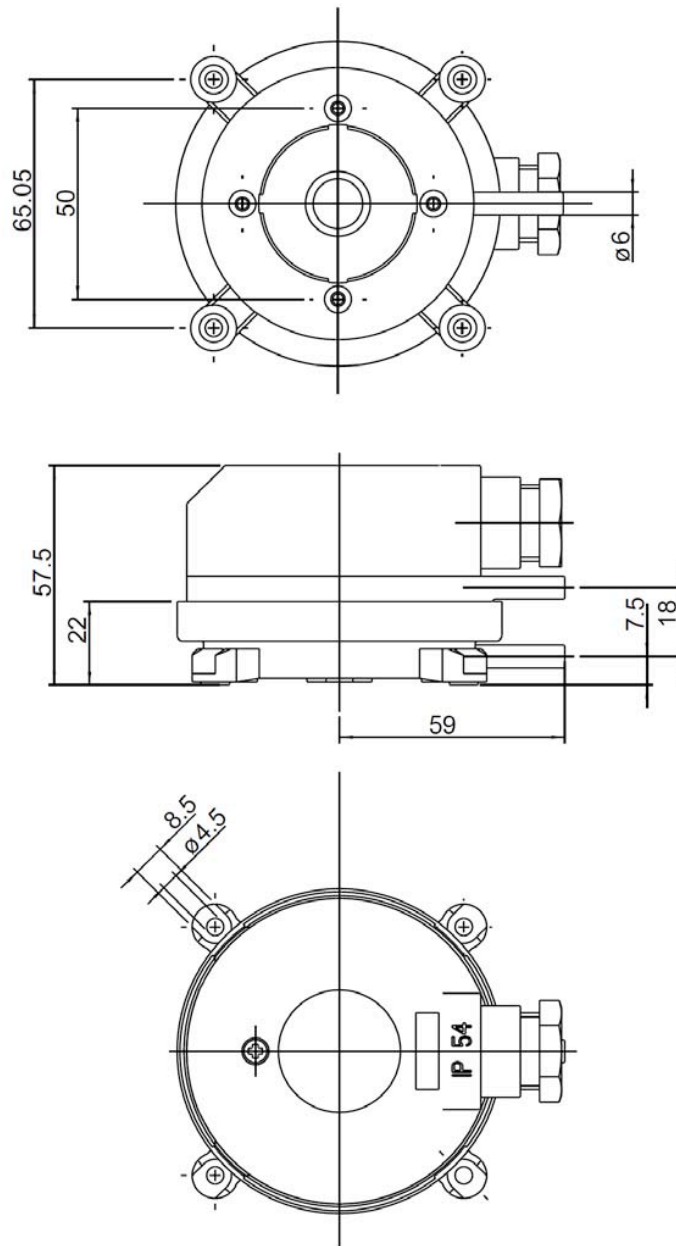


Duct Fixing Kit:

A 'duct fixing kit' is supplied with the PS00105, consisting of 2m (6.56ft) of 5mm i/d plastic tubing, 2 x pitot tubes and 4 x fixing screws.



Dimensions:



Whilst every effort has been made to ensure the accuracy of this specification, Tyrrell Products cannot accept responsibility for damage, injury, loss or expense from errors or omissions. In the interest of technical improvement, this specification may be altered without notice.

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