PA-DPS-8x

Air Differentail Pressure Switch

Features:

- Close switching differential
- Duct fixing kit included

Benefits:

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

Technical Overview

The PA-DPS-8x 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.

For pricing or any further information, please contact Omni Instruments Ltd.

Measurement and data acquisition solutions

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Specification:

Measurement ranges:

PA-DPS-88	20 to 300Pa (0.08 to 1.2"w/c)
PA-DPS-83	50 to 500Pa (0.20 to 2"w/c)
PA-DPS-85	200 to 1000Pa (0.8 to 4"w/c)

Differential:

PA-DPS-88	10Pa (0.04"w/c)
PA-DPS-83	20Pa (0.08"w/c)
PA-DPS-85	100Pa (0.4"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
Dimension	130 x 130 x 99mm (5.12 x5.12 x 3.90")

Ambient:

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

Protection	IP54
Country of origin	Germany

CE

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

Part Codes:

PA-DPS-88
  20 to 300Pa (0.08 to 1.2"w/c) Air DP switch

PA-DPS-83
  50 to 500Pa (0.20 to 2"w/c) Air DP switch

PA-DPS-85
  200 to 1000Pa (0.8 to 4"w/c) Air DP switch

Accessories
PA-DPS-B
  Right Angle Mounting Bracket

DFK
  Duct Fixing Kit

TEE
  Tee-Piece (pack of 10)

PA-TUBE-8MM
  PVC Tube 8mm o/d x 1.5mm Wall, 30m Reel

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

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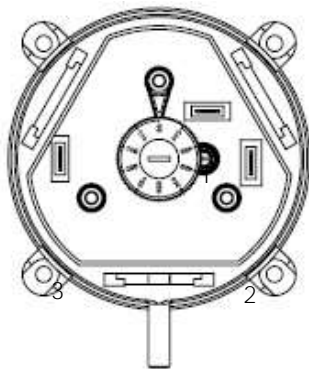
Installation:

1. The PA-DPS should only be installed by a competent, suitably trained technician, experienced in installation with hazardous voltages. (>50Vac & <1000Vac or >75Vdc & 1500Vdc)

2. Ensure that all power is disconnected before carrying out any work on the PA-DPS.

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. Remove the cover by unscrewing the single screw.

5. Terminate at the crimp-type sockets as required and set the desired switching pressure on the setting knob using a screwdriver.

6. Replace the cover and tighten the single screw, it is possible to move the cable entry in steps of 120°.

7. 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 PA-DPS 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

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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.
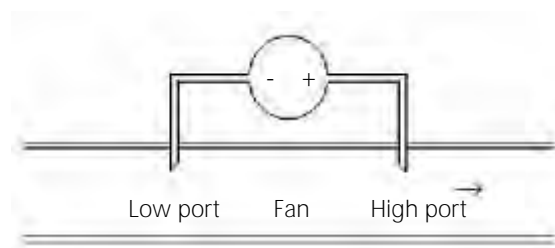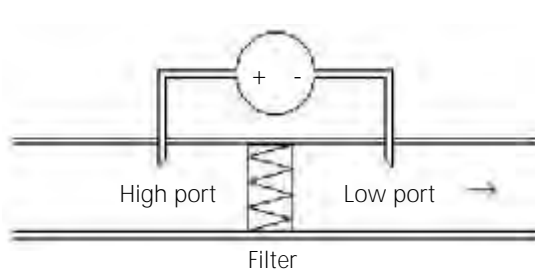
Fig. 1

Low port   Fan   High port
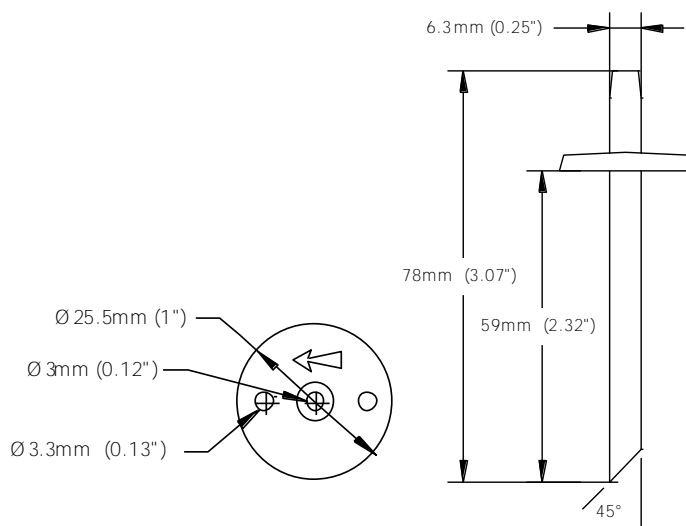
Fig. 2

High port   Low port

Filter

Duct Fixing Kit:

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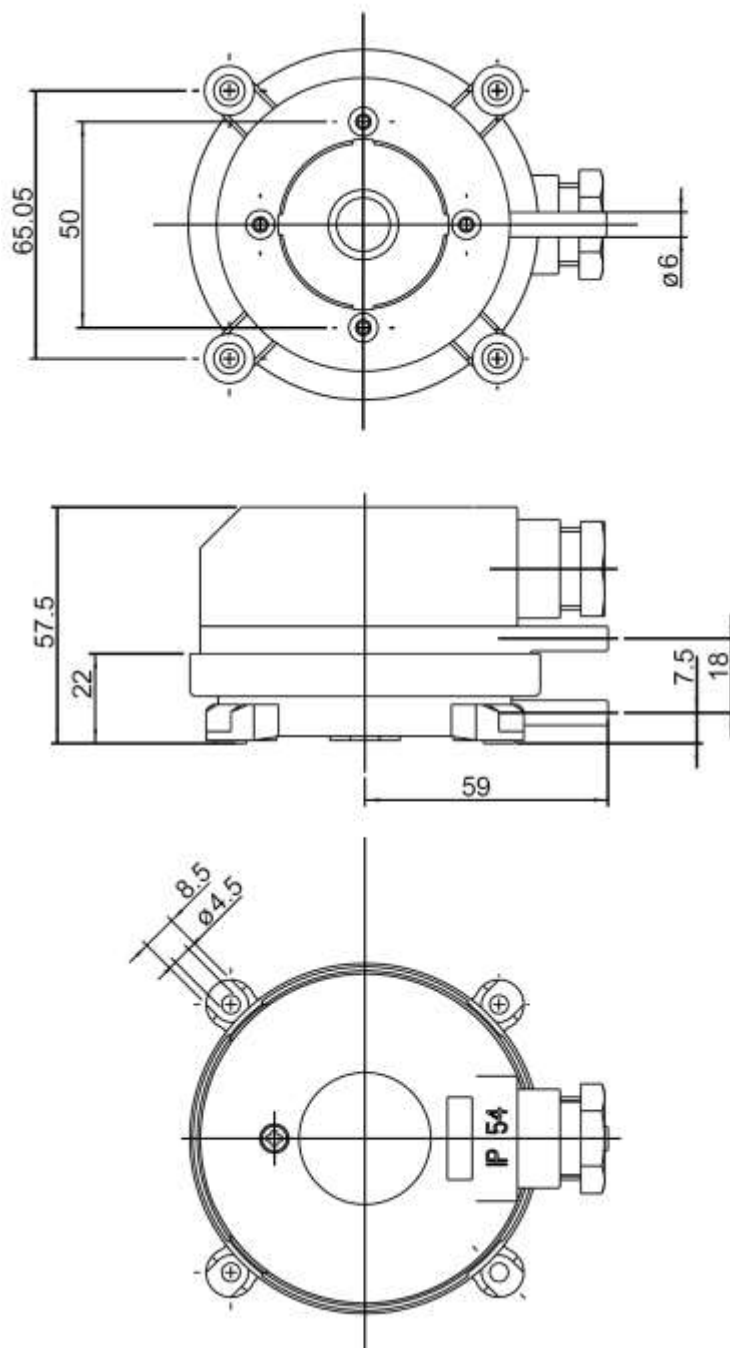
Pitot tube dimensions;

6.3mm (0.25")

78mm (3.07")

59mm (2.32")

Ø 25.5mm (1")
Ø 3mm (0.12")
Ø 3.3mm (0.13")

45°

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Dimensions:

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