PA-DPS-8x Differential Air Pressure Switch

Features and Benefits

- Close switching differential
- Duct fixing kit included
- 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.

Product Codes

PA-DPS-88	20 to 300Pa Air DP switch
PA-DPS-83	50 to 500Pa Air DP switch
PA-DPS-85	200 to 1000Pa Air DP switch

Accessories

PA-DPS-B	Right Angle Mounting Bracket
DFK	Duct fixing kit
TEE	Tee piece air pressure (pack of 10)
PITOT	Aluminium pitot tubes (pair)
PA-TUBE-CLEAR	Clear tube 8mm o/d x 1.5mm wall, 30m reel
PA-TUBE-RED	Red tube 8mm o/d x 1.5mm wall, 30m reel
PA-TUBE-BLUE	Blue tube 8mm o/d x 1.5mm wall, 30m reel

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

Specification

Measurement ranges:	
PA-DPS-88	20 to 300Pa
PA-DPS-83	50 to 500Pa
PA-DPS-85	200 to 1000Pa
Differential:	
PA-DPS-88	10Pa
PA-DPS-83	20Pa
PA-DPS-85	100Pa
Maximum pressure	5000Pa
Pressure connections	6mm ID push-on tubing
Electrical rating	1.5A (0.4) @ 250Vac Approval Switch according to VDE0630 UG1652
Connections	Via 6.3mm crimp-type sockets
Cable entry	M20
Material	Plastic moulding
Dimension	130 x 130 x 99mm
Ambient:	
Temp	-20 to +85°C°C
RH	0 to 95% non-condensing
Protection	IP54
Country of origin	Germany
Conformity	LVD, CE & UKCA Marked

WEEE Directive:

At the end of the products useful life please dispose as per the local regulations.
Do not dispose of with normal household waste.
Do not burn.

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

Measurement and data acquisition solutions

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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.

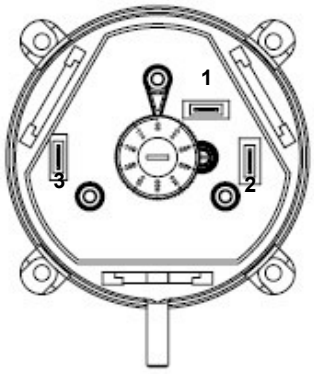
4. Remove the cover by unscrewing the single screw and terminate at the crimp-type sockets as required and set the desired switching pressure on the setting knob using a screwdriver.

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

6. 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

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

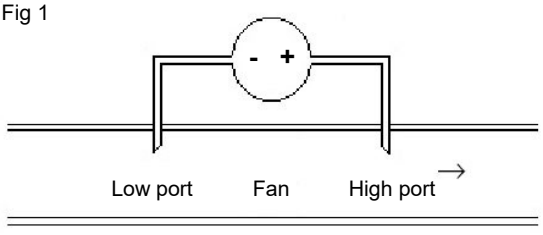
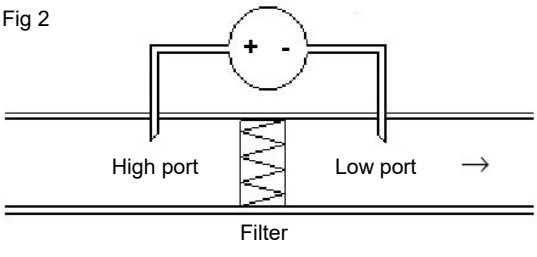


Fig 2



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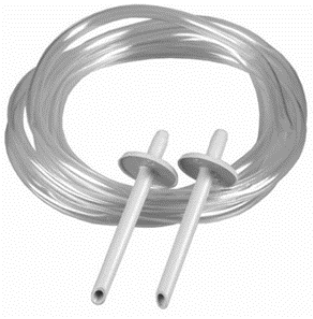
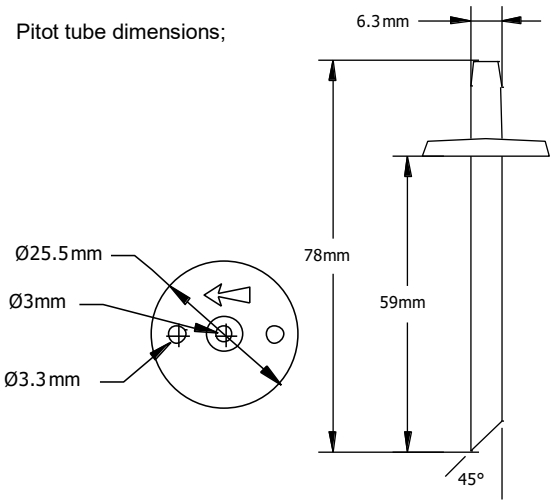
Duct Fixing Kit

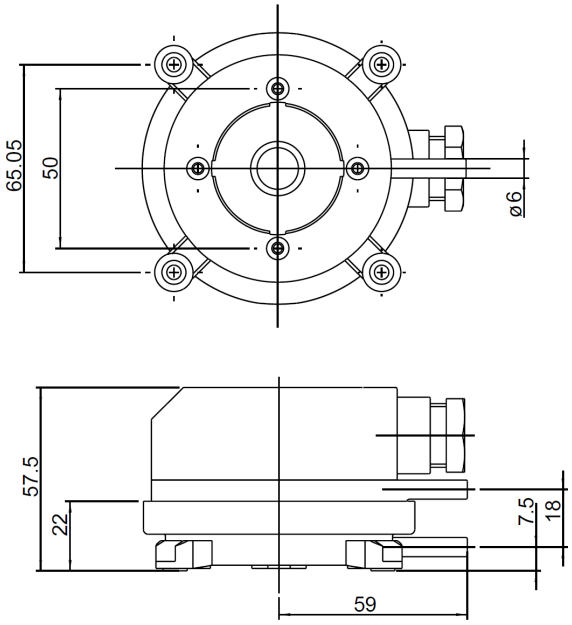
A 'duct fixing kit' is supplied with the PA-65-x,
consisting of 2m of 5mm i/d plastic tubing, 2 x pitot tubes and 4 x fixing screws.

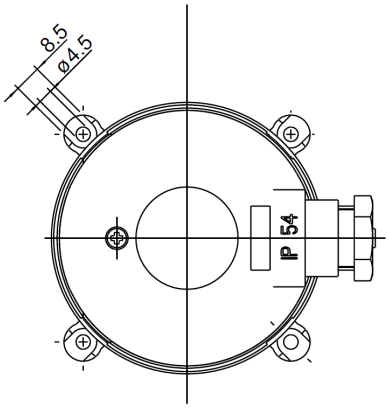


Pitot tube dimensions;



Dimensions





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