



Features and Benefits

- Close switching differential
- Duct fixing kit included
- Switching point easily adjusted with scale in Pascal's
- One screw needed for housing cover (IP65 version)

Technical Overview

The PA-DPS-9x range, are high sensitivity air differential pressure switches for low differential pressure switching applications. Suitable for use in air conditioning systems to provide an indication of fan status or 'filter dirty' condition.

The switching knob is mounted under the cover to avoid tampering. The scale is individually laser etched for high accuracy.

Product Codes

IP54 Versions:

PA-DPS-90 20 to 300Pa Air DP switch
PA-DPS-91 50 to 500Pa Air DP switch
PA-DPS-92 100 to 1000Pa Air DP switch

IP65 Versions:

PA-DPS-90W 20 to 300Pa Air DP switch
PA-DPS-91W 50 to 500Pa Air DP switch
PA-DPS-92W 100 to 1000Pa Air DP switch
PA-DPS-94W 500 to 2000Pa 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

Operating ranges:

Type	Adjustment range	Repeatability
PA-DPS-90(W)	20 - 300Pa	±2.5Pa
PA-DPS-91(W)	50 - 500Pa	±5Pa
PA-DPS-92(W)	100 - 1000Pa	±5Pa
PA-DPS-94W	500 - 2000Pa	±5Pa

Max. overload pressure on one side:

-30 to +75°C	75 7500Pa
-30 to +85°C	50 5000Pa

Pressure connections

6mm ID push-on tubing
P1 = Hi P2 = Lo

Electrical rating

5A(0.8A)/230Vac or 4A@30Vdc
Resistive (Inductive)

Service life

>10⁶ switching cycles

Connections

Screw terminals

Cable entry

PG11

Dimensions

81mm dia. x 52mm

Housing material

Plastic moulding

Fixing

Metal mounting bracket

Protection:

PA-DPS-9x IP54

PA-DPS-9xW IP65

Operating conditions:

Ambient medium -30 to +85°C

Storage -40 to +85°C

Installation category

IEC 664 Category II

Origin

Switzerland

Conformity

LVD, UL, 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-9x 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-9x.
3. It is recommended that the unit be mounted vertically, with the pressure ports pointing downwards (Fig. 1). If the unit is mounted horizontally (Fig. 2) with the cover uppermost, the switching points will be 11Pa higher than the scale reading. If the unit is mounted horizontally (Fig. 3) with the cover facing downwards, the switching points will be 11Pa lower than the scale reading.

4. Fig. 1



Fig. 2



Fig. 3

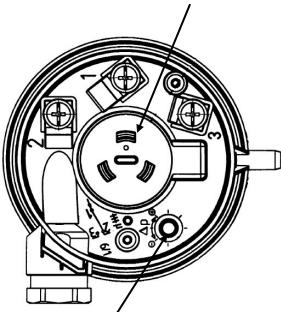


5. If mounted externally, it is recommended that the unit be mounted with the cable entry at the bottom. If the cable is fed from above then into the cable gland at the bottom, it is recommended that a rain loop be placed in the cable before entry into the housing.
6. Remove the cover by unscrewing the single screw and terminate as required and set the desired switching pressure on the setting knob using a screwdriver. Replace the cover and tighten the single screw.

CAUTION

The PA-DPS-9x will be damaged if subjected to excessive pressure. Do NOT test the unit by blowing into the inlet ports.

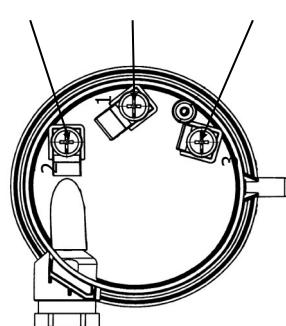
Switching point adjustment



Factory set, do not adjust

2 N/C Contact

1 Common 3 N/O Contact



7. Push the pressure tubing onto the pressure ports on the unit. Ensure that the Hi and Lo ports have been correctly identified.

- P1 (+) High pressure
- P2 (-) Low pressure



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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.

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Applications

Fig. 1

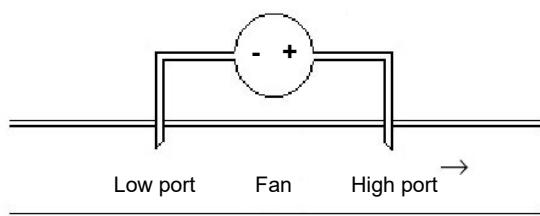
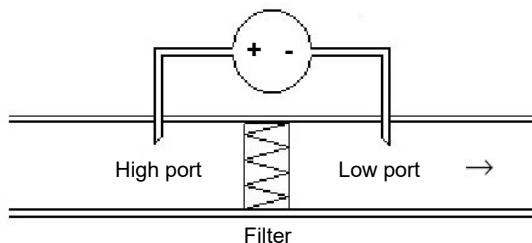
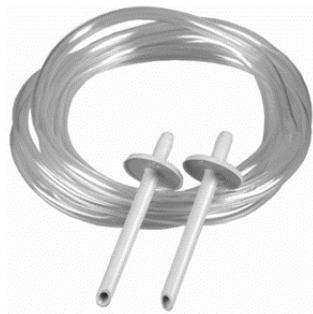


Fig. 2

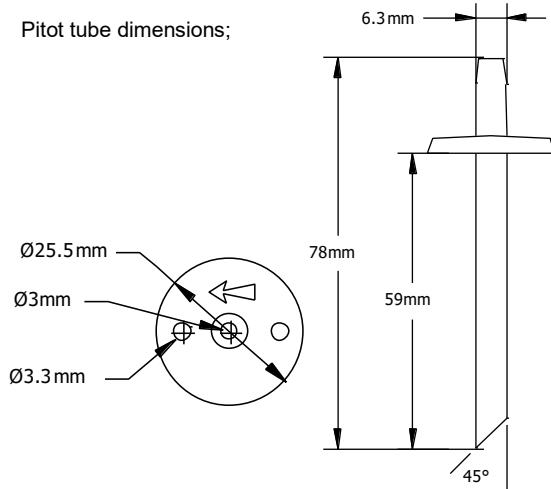


Duct Fixing Kit

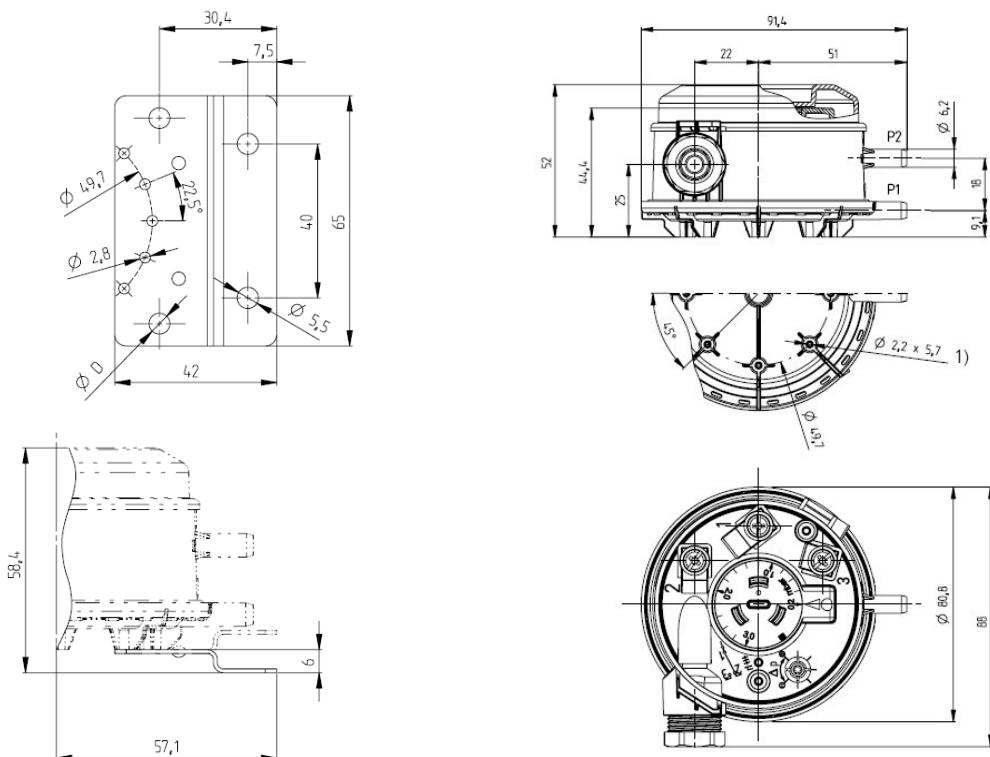
A 'duct fixing kit' is supplied with the PA-DPS-9x, consisting of 2m of 5mm i/d plastic tubing, 2 x pitot tubes and 4 x fixing screws.



Pitot tube dimensions;



Dimensions



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