



### 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:

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

#### IP65 Versions:

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

#### Accessories

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

>10<sup>6</sup> 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:

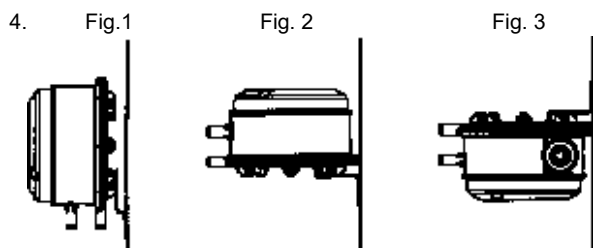


At the end of the products useful life please dispose as per the local regulations. Do not dispose of with normal household waste. Do not burn.



## Installation

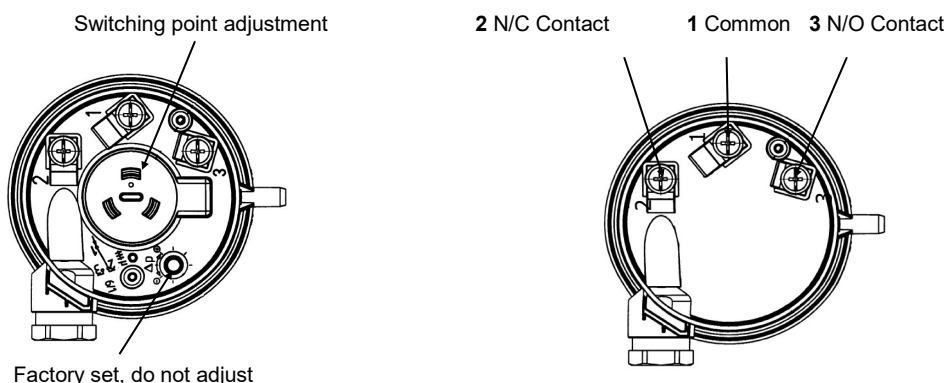
1. The PA-DPS-9x should only be installed by a competent, suitably trained technician, experienced in installation with hazardous voltages. (>50Vac & <1000Vac or >75Vdc & 1500Vdc)
2. Ensure that all power is disconnected before carrying out any work on the PA-DPS-9x.
3. It is recommended that the unit 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.



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.



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



### CAUTION

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

## 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:

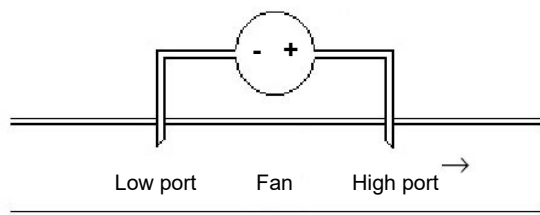
The switch can be used across a fan to provide proof of air flow and hence fan status. **Fig. 1** shows how to connect the High and Low pressure ports:

Filter status monitoring:

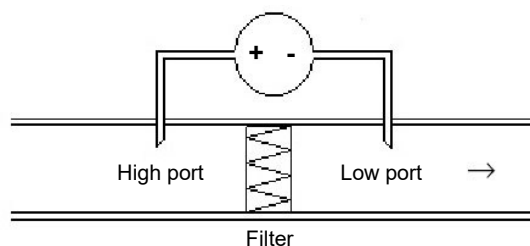
The switch can be used across a filter to provide dirty filter status. **Fig. 2** shows the connections for this application.

## Applications

**Fig. 1**

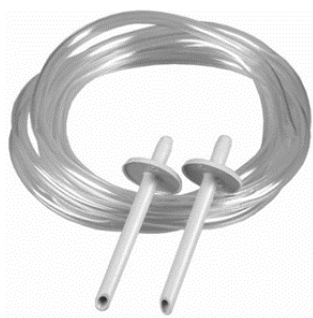


**Fig. 2**

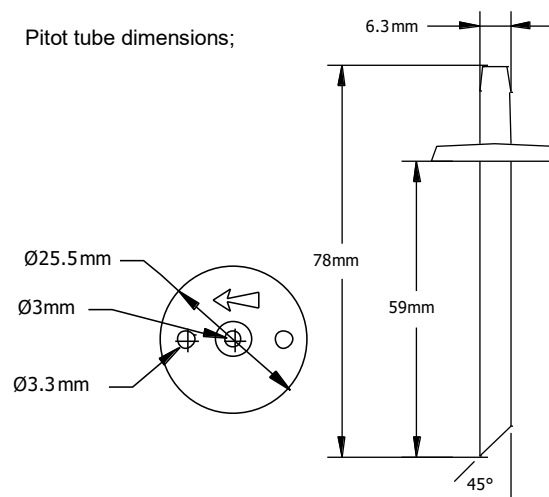


## Duct Fixing Kit

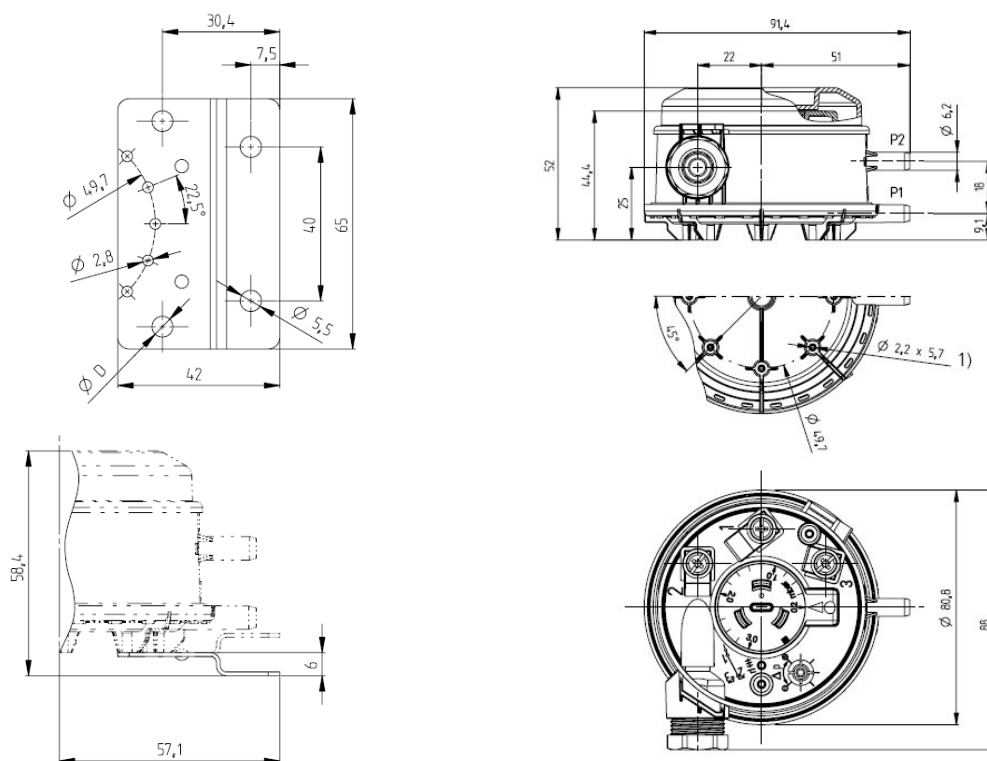
A 'duct fixing kit' is supplied with the PA-DPS-9x, consisting of 2m of 5mm i/d plastic tubing, 2 x pitot tubes and 4 x fixing screws.



Pitot tube dimensions:



## Dimensions



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

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