

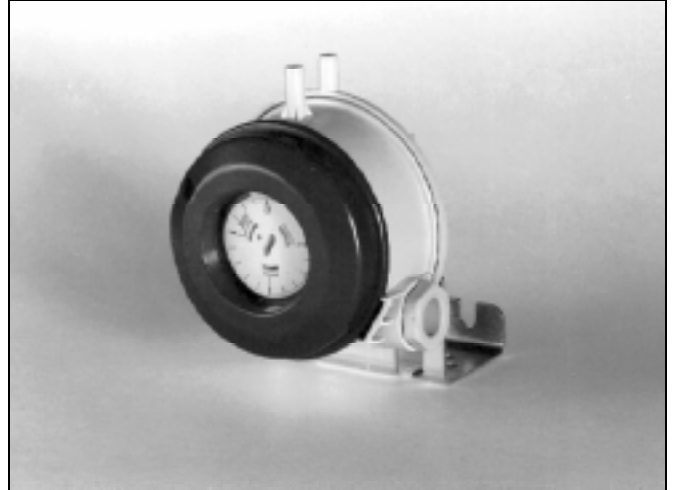
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## **AIR DIFFERENTIAL PRESSURE SWITCH**

Specification No. 131-X-XXX\*

Differential Pressure Switch, monitoring non-inflammable and non-aggressive gases. Typical applications are filter dirty and fan run/stop detection.

\* For the full specification number replace the 4X's with the appropriate figures from the TYPE column in the table on Page 2.



**SPECIFICATION**

Type	Adjustment Range for Trip Pressure (mbar)		Maximum Operating Pressure
	from	to	
SPA 1401	0.2 mbar	3.0 mbar	50 mbar
SPA 1402	1.0 mbar	10.0 mbar	50 mbar

**Electrical Rating:** 1A 250Vac (Resistive)  
0.5A 250Vac (Inductive)

**Ambient Temperature Limits:** Storage: -25 +85°C  
Operation: -20 +85°C

**Differential:** Adjustable

**Repeatability:** SPA 1401  $<\pm 0.025$  mbar  
SPA 1402  $<\pm 0.05$  mbar

**CONSTRUCTION**

**Housing:** Plastic. Flammability rating UL94-HB. This product is not suitable for use in environments where a fire hazard exists since the plastic used does not have self-extinguishing properties.

**Cable Entry:** PG-11 for cables of 8-10mm outside diameter

**Electrical Connections:** 3 off Screw terminals

**Accessories:** 122-3-601 Fitting kit (containing 2 meters of PVC tubing and 2 duct mounting pitot tubes)

**Protection Class:** IP54

**Pressure Connection:** 2 plastic tubes with inside diameter of 6mm.

**INSTALLATION**

The SPA1401/SPA1402 must be positioned where it will not be exposed to corrosive or flammable atmospheres or vibration.

Observe Ambient Temperature Limit of -20° to +85°C

**Mounting Considerations**

The preferred orientation of the switch is VERTICAL. (See Fig.1) The pressure ports must NOT point up as there is a risk of condensation entering the SPA pressure switch. If it is mounted horizontally, the trip and reset pressure will be about 11 pascals away from that shown on the adjustment scale.

To enable vertical positioning a bracket is supplied.

**Pressure Connection**

The optional fitting kit 122-3-601 contains 2 meters of PVC tubing and 2 duct mounting pitot tubes. The pitot tubes are fitted to the duct with 3mmØ self tapping screws. (See Fig.2)

It is recommended that pressure lines should be of 6mm inside diameter plastic tubing, being thick enough to avoid kinking. To monitor differential pressure, connect the low pressure supply to port marked P2, and the high pressure supply to port P1.

The switch can also monitor absolute pressure by leaving either the low or high pressure port open to the atmosphere.

**Electrical Connections**

Rotating the gland nut seals the cable entry.

The standard switch connections are screw terminals.

**Switch Pressure Setting**

After removing the cover, rotate the pressure selection knob until the desired trip pressure is in line with the pointer.

**SWITCHING DIAGRAM**

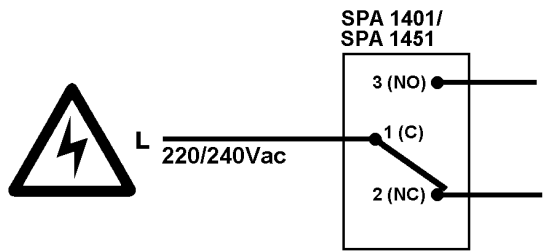


Fig.3

**MOUNTING ORIENTATION**

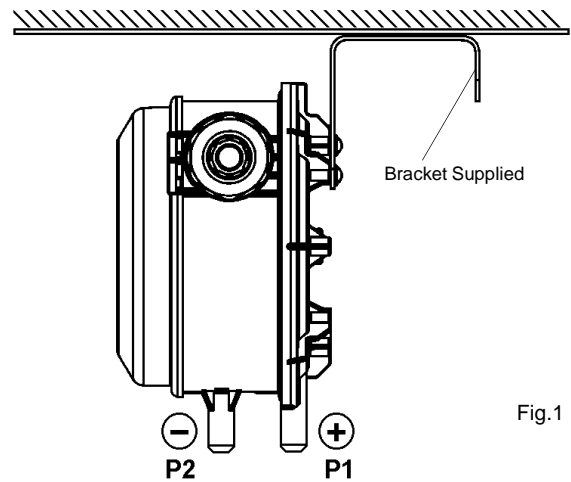


Fig.1

**FITTING KIT (OPTIONAL)  
122-3-601**

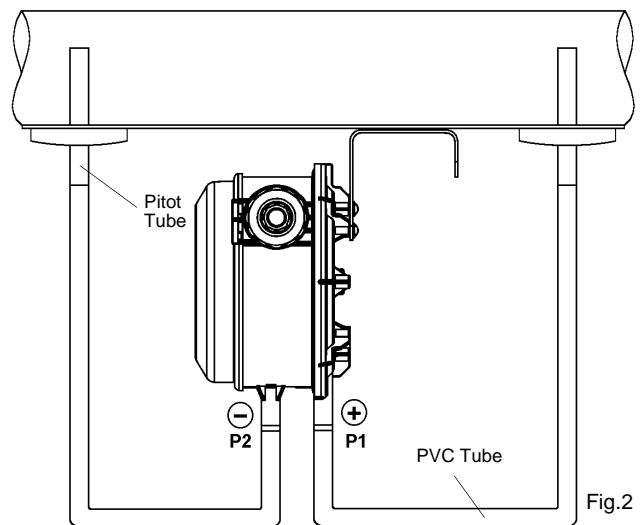
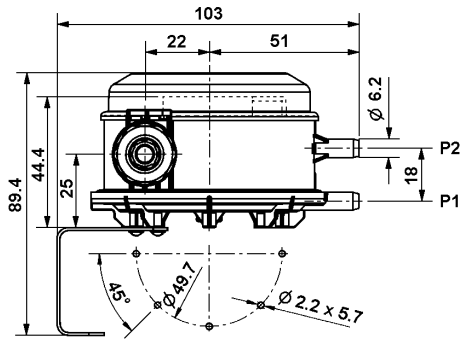


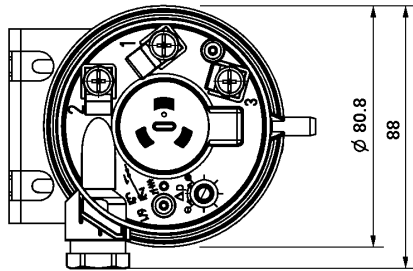
Fig.2

## DIMENSIONS DRAWING



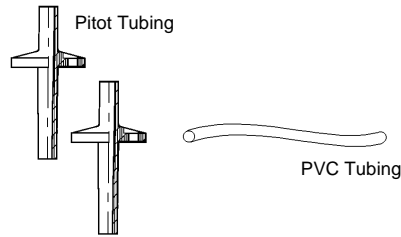
Dimensions in mm

Weight 190g



Allow sufficient clearance  
for access to the cable entry.

## Fitting Kit 122-3-601 (Optional)



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**CAUTION**

- This is a mains operated device. Local wiring regulations and usual safety precautions must be observed. Note earthing requirements.
- Preferred mounting position is VERTICAL. If mounted horizontally, the trip and reset pressure will be about 11 pascals away from that shown on the adjustment scale.
- The pressure ports must **NOT** point up as there is a risk of condensation entering the SPA pressure switch.
- Observe maximum ambient temperature.
- Interference with those parts under sealed covers renders the guarantee void.
- Design and performance of Satchwell equipment are subject to continual improvement and therefore liable to alteration without notice.
- Information is given for guidance only and Satchwell do not accept responsibility for the selection of its products unless information has been given by the Company in writing relating to a specific application.
- A periodic system and tuning check of the control system is recommended. Please contact your local Satchwell service office for details.