

P232A

Sensitive (differential) Pressure Switch for Air Flow

Product Bulletin

This (differential) pressure switch is used to sense flow of air, single or differential air pressure.

Typical applications include:

- Detect clogged filter
- Detect frost or ice build-up on air conditioning coils
- Air proving in heating or ventilation ducts.
- Maximum airflow controller for variable air volume system.
- Detect blocked flue or vent
- Monitor fan operation

This switch senses a change in the (differential) pressure (either velocity pressure or pressure drop across a restriction) as the airflow changes. The (differential) pressure is applied to the two sides of a diaphragm in the control.

The spring-loaded diaphragm moves and actuates the switch.

The series P232A can also be used to detect small positive gauge pressure by using only the high-pressure connection and leaving the lowpressure port open. Or to detect a vacuum by using only the low pressure connection and leaving the high-pressure port open to ambient pressure.



Features

- **One switch to measure relative pressure, vacuum or differential pressure**
Provides versatility to match various applications
- **Various accessories available**
Provides flexibility
- **Compact and durable construction**
Provides durability in combination with neutral gases
- **Easy mounting and wiring, various mounting possibilities**
Reduce installation time
- **Standard PG 11 nipple and optional DIN 43650 connector**
Provides flexibility in wiring connections
- **Accurate and stable switch point**
Provides high accuracy and repeatability
- **SPDT contact standard**
Can be used for “normally open” or “normally closed” applications



These controls are designed for use only as operating controls. Where an operating control failure would result in personal injury or loss of property it is the responsibility of the installer to add devices or systems that protect against, or warn of, control failure.

Contact function

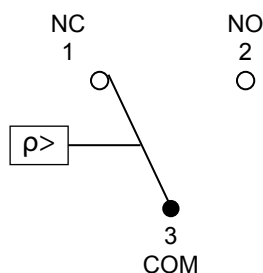


Figure 1

Adjustment

The scale values indicate the approximate switching point at increasing pressure (contacts 3-1 to open). If accurate setting is required, the approximate setting on the scale should be corrected by using a pressure gauge.

Type Number Selection Table

Order Number	Setpoint Range	Accessories included
P232A-B-AAC	0,2 to 1,6 in.WC	No

Note: Other models on request, range up to 20 in. WC.

Mounting

- Select a location where vibrations are minimal.
- When mounting in horizontal positions the following corrections should be taken into account.

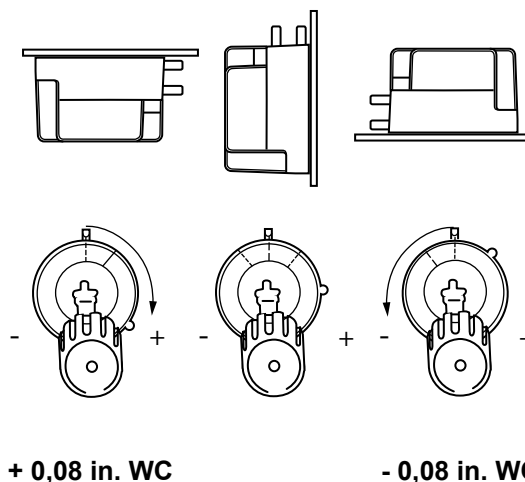


Figure 2

Repair and replacement

Repair is not possible. In case of a defective or improperly functioning control, please check with your nearest supplier. When contacting the supplier for a replacement you should state the type/model number of the control. This number can be found on the side of the control.

Accessories



BKT024N002R

Mounting Bracket for P233A/F



GMT008N600R

Duct mounting kit

Including:

- 2 m PVC tube 4/7 mm
- 2 grommets (drilling hole 16 mm)



FTG015N602R

Duct mounting kit (straight)

Including:

- 2 mounting screws
- O-ring



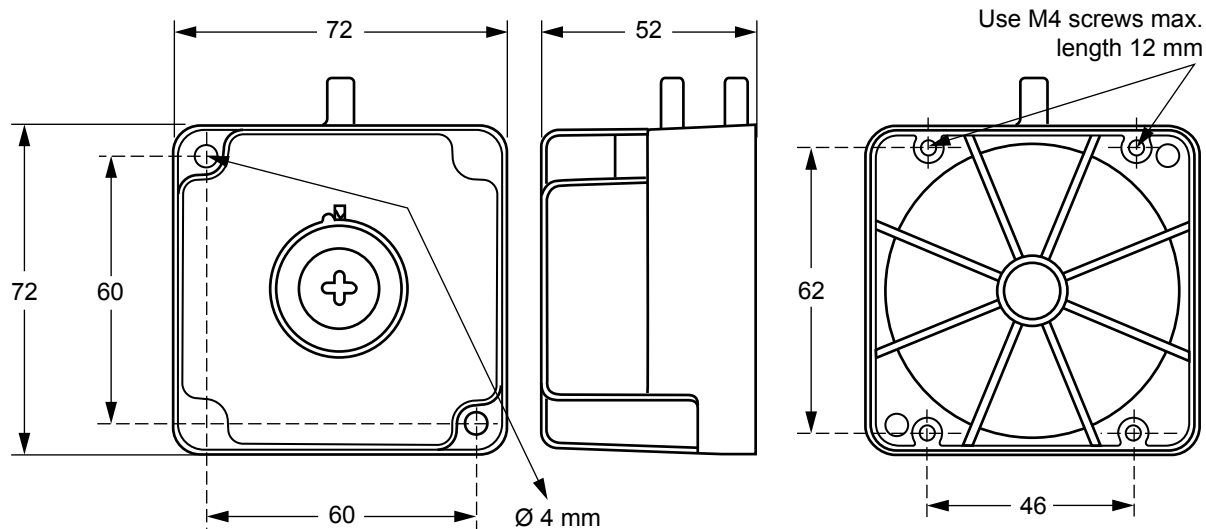
FTG015N603R

Duct mounting kit (bent)

Including:

- 2 mounting screws
- O-ring

Dimensions (in mm)



Technical Specification

Setpoint Range	0,2 to 1,6 in. WC
Differential (fixed)	≤ 0,1 in. WC
Sample Media	Air, non-inflammable gases, non-aggressive gases
Max. Continuous Overpressure	120 in. WC
Calibration Position	With diaphragm vertical. <i>(For horizontal position make corrections as mentioned in Figure 2)</i>
Temperature	
Calibration Temp.	20°C
Operating Temp. Limits	-15 to +60 °C
Storage Temp.	-35 to 60°C
Operating / Storage Humidity	10 to 95%RH, non condensing
Material	
Cover:	Polycarbonate
Case:	Glass reinforced polycarbonate
Bottom:	
Diaphragm:	Nitrile butadiene rubber
Switch:	Brass, Phosphorbronze, Silvernickel
Weight	115 g 330 g (for models including grommet and bracket)
Contact Rating (SPDT contact)	I _{max} at 30 Vac: 5A at cosφ=1; 2A at cosφ=0,6
Life Cycle	At I _{max} : 200.000 operations (@ 60°C) 50.000 operations (@ -15°C)
Electrical Connections	Screw terminals, wire diameter 2,5 mm ² (Connector according DIN 43650 optional)
Protection Class	IP54
Approvals	UL E 29374, 01 NK 2212

Note: 1in.H₂O = 2,49 mbar

The performance specifications are nominal and conform to acceptable industry standards. For application at conditions beyond these specifications, consult the local Johnson Controls office. Johnson Controls, Inc. shall not be liable for damages resulting from misapplication or misuse of its products.