

# Powers™ Controls

## Static Pressure Switch



<b>Description</b>	The 269 Static Pressure Switch senses static pressure and performs a three-way switching function when the specified static pressure level is reached.
<b>Features</b>	Accurate and repeatable switching thresholds 1/8-inch (3 mm) OD brass barb port fittings
<b>Product Number</b>	269-1200
<b>Application</b>	In a typical application, it can be used to close outside air dampers when the fan is off (Figure 1).

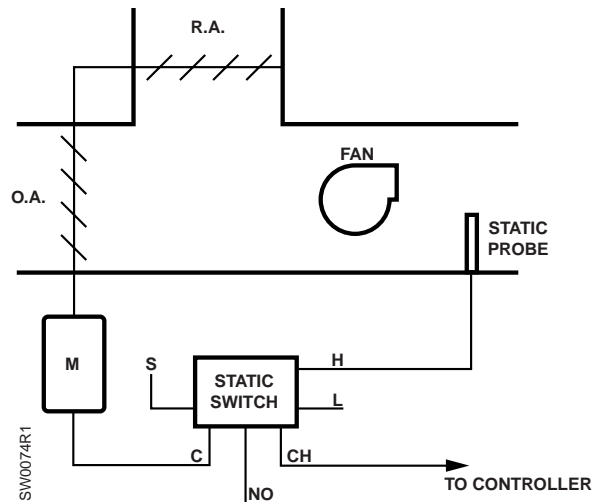


Figure 1. Typical Application.

<b>Specifications</b>	Switching threshold (Differential H To L)	
	Increasing static to 0.25-inch WG (62.25 Pa) switches C to N.C.	
	Decreasing static to 0.10-inch WG (62.25 Pa) switches C to N.O.	
	Standard Sensitivity	0.25-inch WG
	Air Capacity	
	At 1 psi pressure drop	300 SCIM (82 cm <sup>3</sup> /s)
	Air Supply	18-28 psi (124-193 kPa)
	Maximum Ratings	
	Pressure	
	Ports S, C, NC or NO	30 psi (206 kPa) max.
	Ports H & L	10-inch WG (2.49 kPa) max. differential
	Temperature	
	Operating	35 to 120°F (2 to 48°C)
	Storage	-10 to 140°F (-23 to 60°C)
Air Consumption	30 SCIM (8.19 cm <sup>3</sup> /s)	
Weight (Net Product Weight)	1 lb 12 oz (0.794 kg)	
Dimensions	See Figure 3	
	5.20-inch (132 mm) H.	
	3.25-inch (82.6 mm) W.	
	3.32-inch (84.3 mm) D.	
	2.50-inch (63.5 mm) mounting hole centers	

<b>Accessories</b>	Static Pressure Probe Kit	189-142
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<b>Service Parts</b>	These parts make up the restrictor assembly which is the only recommended replacement:	
	Restriction Cover	182-261
	Upper Restriction Gasket	180-251
	Restriction Plate	182-276
	Lower Restriction Gasket	180-253
	Screws (For Restrictor Assembly)	034-014K (Two required)

**Operation**

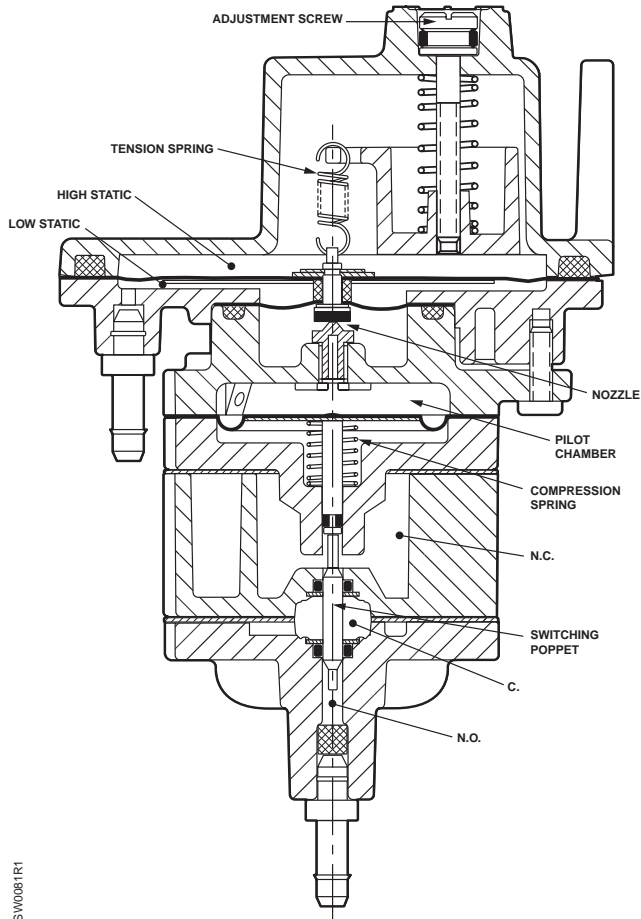
The Static Pressure Switch is a device that compares two static pressure inputs. When the high static input is 0.25-inch WG higher than the low static input, the switch will connect the common port to the normally closed port. As the high pressure decreases to within 0.1-inch WG of the low pressure, the switch will again change over and connect the common port to the normally open port.

Referring to Figure 2, the tension spring will maintain a force as set by the adjustment screw in opposition to the high static pressure. When the high static pressure (in reference to the low static pressure) is high enough to overcome the force of the tension spring, the nozzle will be sealed off allowing the pressure in the pilot chamber to build up to supply pressure (the pilot chamber is supplied with a restricted supply). When the pressure in the pilot chamber is high enough to overcome the compression spring, the switching poppet valve will be driven downward connecting the common port to the normally closed port.

When the high static pressure decreases, the nozzle will vent the pilot chamber, and the compression spring will force the poppet valve assembly upward once again connecting the common port to the normally open port.

**Operation,  
Continued**

In this sense, the static pressure switch provides a three-way pneumatic switching function. That is, the normally closed or normally open, when not connected to the common port, are essentially sealed chambers.



SIW061R1

**Figure 2.**

## Dimensions

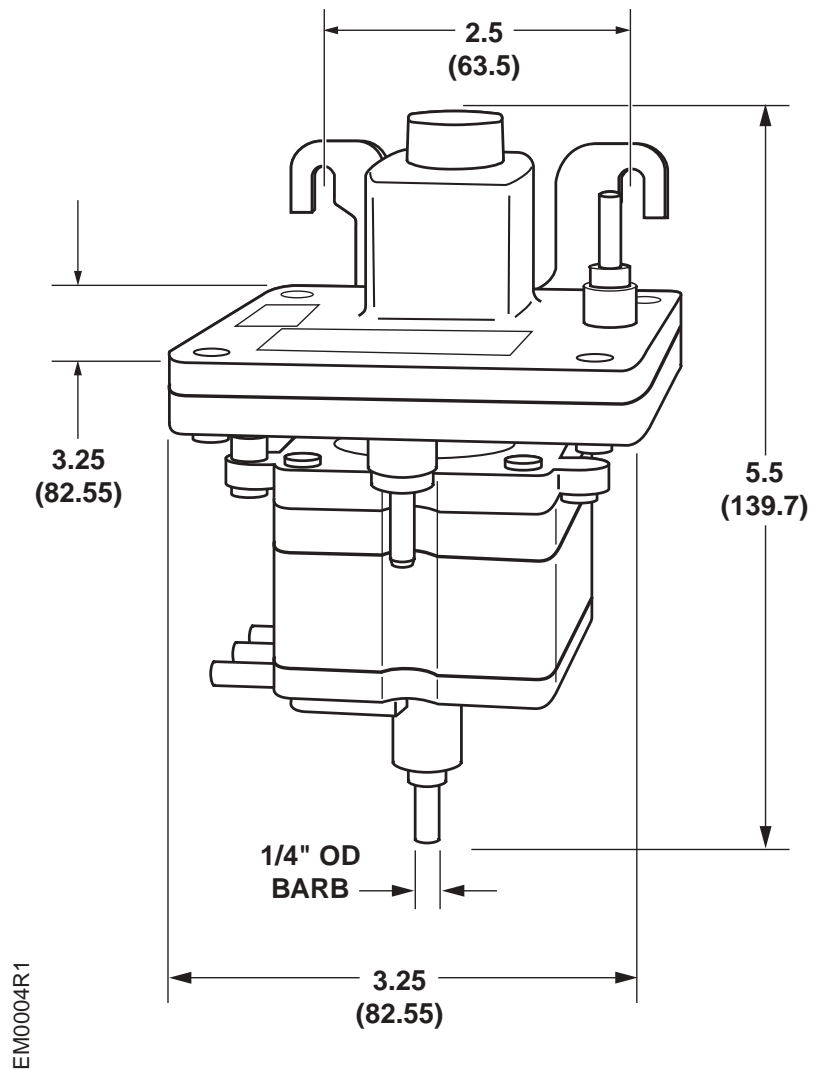


Figure 3. Dimensions in Inches.

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