

# PNEUMATICS & FITTINGS

## SIEMENS/POWERS 243 SWITCHING RELAY 243-0001 SERIES



SIEMENS

POWERS™

NEW!



243-0001 Series

### DESCRIPTION

The **Siemens/Powers 243-0001 Series Switching Relay** is a two-position, pilot-operated auxiliary device used for switching a common part from one pneumatic circuit to another. A mounting bracket is provided for mounting on a vertical or horizontal surface.

### FEATURES

- **Two-position switching relay**
- **Pilot-operated used for switching one circuit to another**
- **Mounting bracket either vertical or horizontal**

### APPLICATION

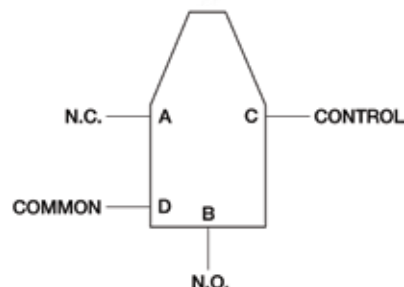
There are applications that require a low differential switching relay that can be triggered by a gradual input signal. The following describes ways of connecting the 243-0001 switching relay to achieve this.

The low differential is achieved by connecting the relay so its differential is the opening and closing of only one valve of the two-valve relay mechanism. A restrictor must be used in the output ("D" port) of the relay to make sure the relay valve can bleed the output signal down to approximately zero. Since a restrictor is used in the output of the relay, the switching relay becomes a low capacity device. Its air capacity is limited by the size of the restrictor.

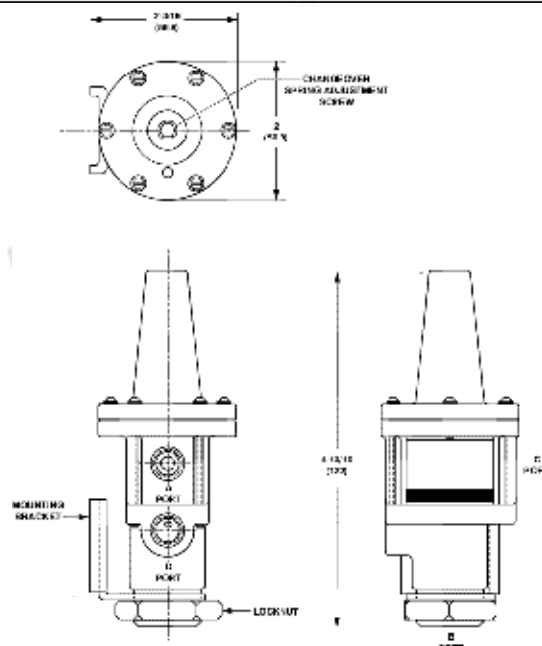
If a high capacity switching device is required, two switching relays can be used, one piloting the other.

For a single switching relay configuration, the switching differential is 0.5 to 1.0 psi (3.4 to 6.9 kPa). For a double switching relay configuration, the switching differential is approximately 0.5 psi (3.4 kPa).

### WIRING



### DIMENSIONS



### SPECIFICATIONS

<b>Maximum Instrument Air Supply</b>	30 psi (207 kPa)
<b>Changeover Range</b>	3 to 25 psi (21 to 172 kPa)
<b>Standard Changeover Setting</b>	9 psi (62 kPa)
<b>Changeover Differential (Nominal)</b>	1.5 psi (10.3 kPa)
<b>Maximum Ambient Temperature</b>	160°F (71.1°C)
<b>Minimum Ambient Temperature</b>	-20°F (-28.8°C)
<b>Air Connection</b>	1/8" NPT
<b>Dimensions</b>	3 11/32"H x 2 5/32"W x 1 19/32"D (8.5 x 5.5 x 4.0 cm)
<b>Weight</b>	2 lb (.9 Kg)
<b>Nominal Capacity</b>	@ 2 psi Δ P
<b>A Port</b>	800 scim
<b>B Port</b>	1100 scim
<b>Warranty</b>	1 year



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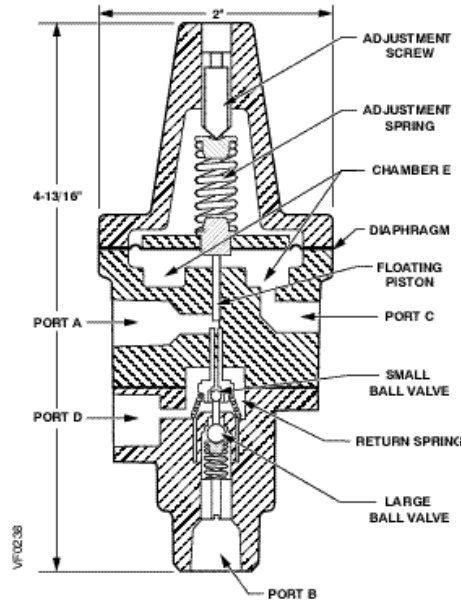
### OPERATION

With an increase in air pressure at Port C, the diaphragm in Chamber E is forced upward to overcome the adjustment spring setting. As the diaphragm moves upward, the return spring moves the floating piston upward to unseat the small ball valve and seat the large ball valve. Ports A and D are now connected and Port B is closed.

With a decrease in air pressure at Port C, the adjustment spring pushes the floating piston downward to seat the small ball valve and unseat the large ball valve. Ports B and D are now connected and Port A is closed.

To increase the air pressure set point for changeover, turn the adjustment screw clockwise. This compresses the adjustment spring to require a higher air pressure for changeover.

To decrease the changeover set point, turn the adjustment screw counterclockwise. This decreases the compression on the adjustment spring so less air pressure is needed to cause changeover.



**NOTE:** The switching relay is factory-set to 9 psi changeover. The changeover point is adjustable from 3 to 25 psi. To increase changeover point, turn adjustment screw clockwise with Allen wrench. To decrease changeover point, turn adjustment screw counterclockwise.

### ORDERING INFORMATION

**MODEL**  
243-0001

**DESCRIPTION**  
Pneumatic switching relay SP/DT, 3-25psi span

NEW!

836

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OVER 1.8 MILLION PARTS IN STOCK

September 2016