

# PNEUMATICS & FITTINGS



## SIEMENS/POWERS HIGHEST AND LOWEST PRESSURE SIGNAL SELECTOR 243-0019 SERIES

### DESCRIPTION

The **Siemens/Powers 243-0019 Series Highest and Lowest Pressure Signal Selector** is designed to compare, select and transmit the highest and/or lowest of up to six pneumatic input signals.

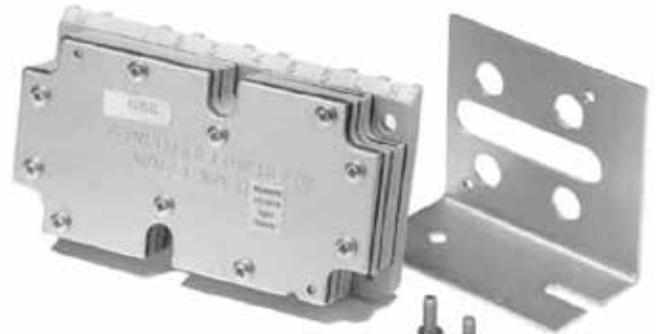
The six input ports are dead-ended. The signal selector is designed for pilot duty; for most applications and amplifying relay is required.

### FEATURES

- **Compact design**
- **Can be mounted in any position**
- **Bracket provided for fixed mounting**

NEW!

**SIEMENS  
POWERS™**

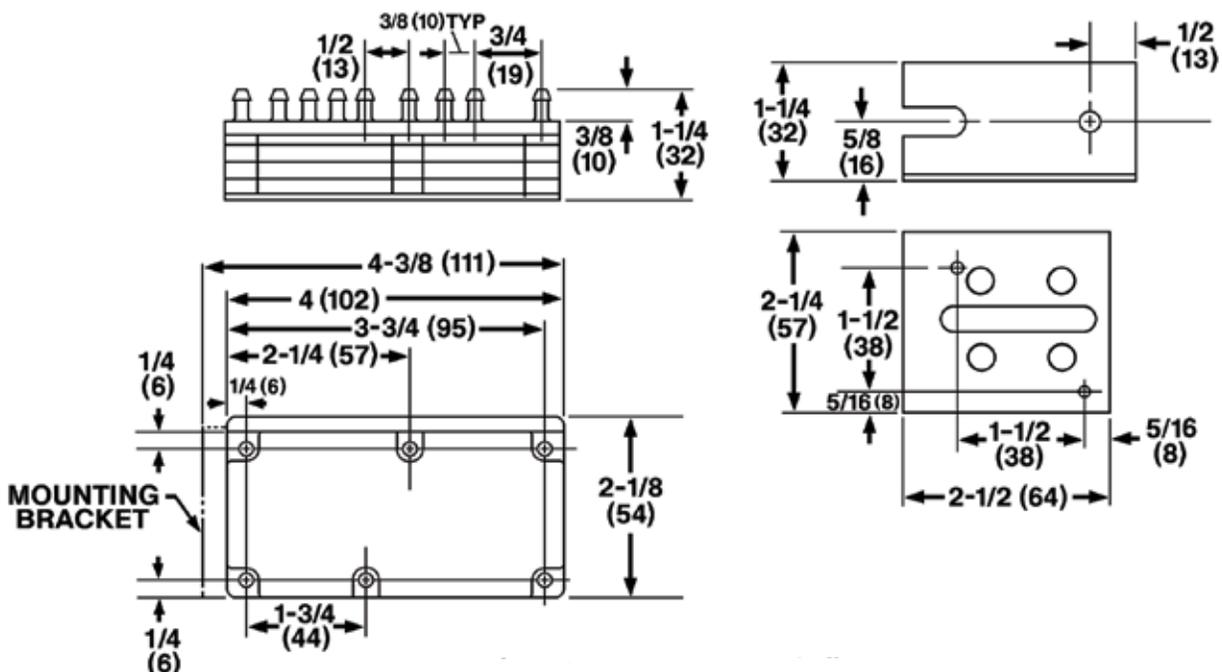


243-0019 Series

### SPECIFICATIONS

<b>Maximum Air Pressure</b>	30 psig (210 kPa)	<b>Low Port</b>	14 scim
<b>Ambient Temperature Range</b>	140°F (60°C)	<b>Air Consumption</b>	43 scim
<b>Air Connections</b>	Barbed nipple for 1/4" OD polyethylene tubing	<b>Housing</b>	4 Glass-filled nylon plates and 1 steel plate
<b>Mounting</b>	Bracket	<b>Diaphragm</b>	Rubber with fabric
<b>Air Capacity</b>		<b>Warranty</b>	1 year
<b>High Port</b>	29 scim		

### DIMENSIONS





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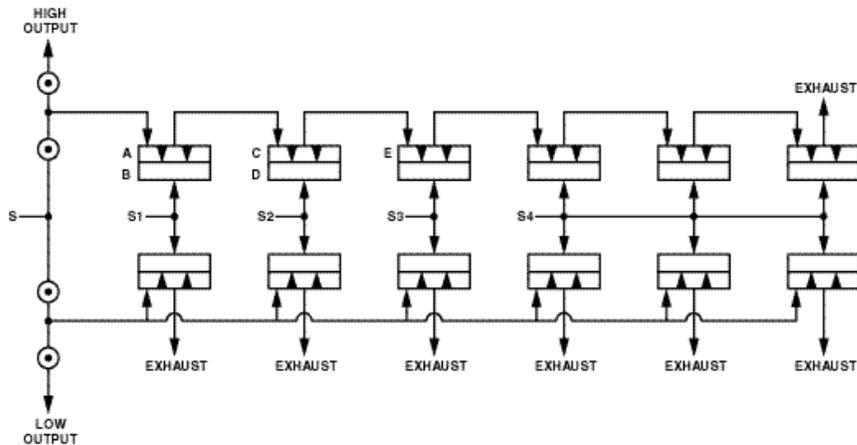
## SIEMENS/POWERS HIGHEST AND LOWEST PRESSURE SIGNAL SELECTOR 243-0019 SERIES

### OPERATION

The port identification and use is as follows. The air supply is connected to the "M" port. The input signals are connected to ports 1 through 6. The "H" port output is the highest of the input signals. The "L" port output is the lowest of the input signals.

**HIGH SIGNAL PRESSURE SELECTION:** Restricted main air pressurizes chamber "A" until its value equals (slightly exceeds) the "S1" signal pressure in chamber "B" and moves the diaphragm to open the passage to chamber "C". If the "S2" signal pressure in chamber "D" is lower than the "S1" signal pressure now in chamber "C", the "S1" pressure in chamber "C" blocks the passage to chamber "E" until the pressure in chambers "C" and "A" increases to the "S2" value, at which time the diaphragm will open to pass the "S2" pressure to chamber "E". In this manner, a series of six high-pressure selections occur and the resultant highest signal pressure will appear at the "H" output port.

**LOW SIGNAL PRESSURE SELECTION:** Restricted main air pressurizes the common output side of six signal comparison diaphragms, where it is exhausted to balance the applied input pressure. The lowest signal pressure will be established in all output chambers and will appear at the "L" output port.



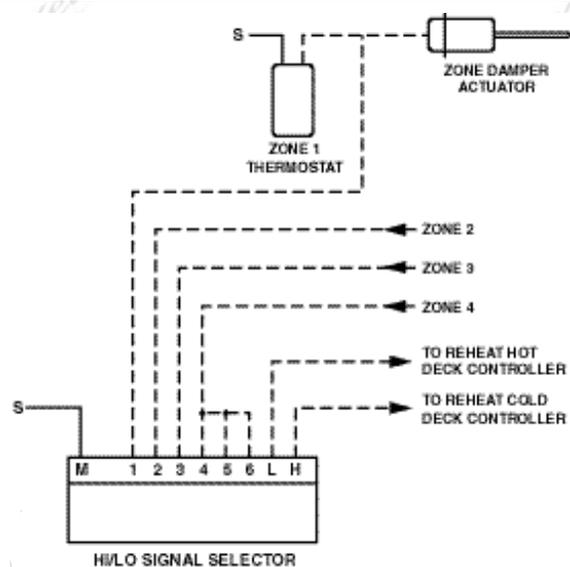
### APPLICATION

The highest and lowest pressure signal selector is used in applications where it is necessary to sense the output signal of a number of controllers and select the highest and lowest signal for reset purposes.

A typical example is show below. Four zone space thermostats modulate their respective zone dampers. The zone requiring the most heating, the lowest pressure as determined by the signal selector, resets the hot deck controller. The zone requiring the most cooling, highest pressure as determined by the signal selector, resets the cold deck controller.

Even though only four inputs are used, Ports 5 and 6 are piped to zone 4. If Ports 5 and 6 were left open, the lowest pressure output would always be 0 psi. If highest pressure is all that is required, unused ports may be left open.

The six input ports are dead-ended. That is, only supply air passes through the signal selector to the output ports. It can be used with one-pipe (bleed type) or two-pipe (relay type) thermostats. The signal selector is designed for pilot duty. For most applications, an amplifying relay will be required for both output signals.



### ORDERING INFORMATION

MODEL	DESCRIPTION
243-0019	Pneumatic high/low signal selector

NEW!