

## P-7100 Pneumatic Electric Switch

The P-7100 Pneumatic Electric Switch is designed for use where a pneumatic controller is used to actuate an electric device. The P-7100 can be used for electric heat applications, to provide variations of the G-7185 Step Controller, or it can be used for any other application where an electric device is actuated by a pneumatic signal.

### Operation

As the control pressure applied to the diaphragm increases, the switch plunger is depressed. When the pressure reaches the set point, the 20 amp SPDT switch controls transfer. When the pressure decreases approximately 2 PSI (14 kPa) below the set point value, the switch contacts return to their original position. The set point is fully adjustable from 3 to 18 PSIG (21 to 126 kPa) and can be changed by turning the dial to the desired setting.

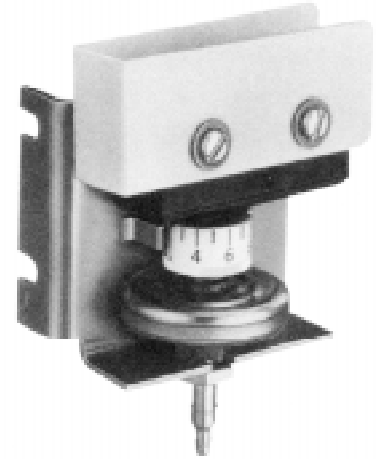
### Installation

The P-7100 can be mounted in any position inside an approved electrical enclosure (as required). Two mounting slots are provided in the bracket for attachment; refer to Fig. 2 for space requirements and additional mounting details.

### Calibration

The P-7100 is factory calibrated at 10 PSIG (70 kPa). If the unit needs to be recalibrated, proceed as follows:

1. Make sure that the nut holding the diaphragm assembly to the bracket is tight, then apply 10 PSIG (70 kPa) to the diaphragm.
2. Rotate the dial assembly until the switch contacts transfer (C to N.O. closes). Monitor the switch using an ohmmeter.
3. Loosen the holding nut, rotate the entire diaphragm and dial assembly until the "10" on the dial is aligned with the indicator, and retighten the holding nut.
4. Recheck for proper operation at the desired setting.



**Fig. 1: P-7100  
Pneumatic Electric Switch**

### Repair Information

Field repairs must not be made. For a replacement P-7100, contact the nearest Johnson Controls branch office.

### Specifications

|                                |  |   |
|--------------------------------|--|---|
| <b>Product</b>                 | P-7100-1 Pneumatic Electric Switch   |   |
| <b>Pneumatic Range</b>         | 3 to 20 PSIG (21 to 140 kPa)   |   |
| <b>Differential</b>            | 2 PSI (14 kPa)   |   |
| <b>Set Point</b>               | Adjustable from 3 to 18 PSIG (21 to 126 kPa)   |   |
| <b>Switch Action</b>           | SPDT (Single Pole Double Throw)  |   |
| <b>Electrical Ratings</b>      | 20 Amps, 480 VAC (Noninductive);<br>1 hp, 125 VAC; 2 hp, 250 VAC;<br>Pilot Duty 750 VA, 125 or 250 VAC |   |
| <b>Connections</b>             | <b>Pressure</b>  | Barbed Fitting for 5/32 or 1/4 in. O.D. Poly tubing |
|                                | <b>Electric</b>  | #8 Screw Terminals                                  |
| <b>Ambient Temp Limits</b>     | -25 to 140°F (-32 to 60°C)   |   |
| <b>Ambient Humidity Limits</b> | 10 to 90% RH Non-Condensing,<br>85°F (29°C) Maximum Dew Point  |   |
| <b>Ambient Humidity Effect</b> | ± .025 PSI/1% RH   |   |
| <b>Mounting</b>                | Enclosure Mounted Using Integral Bracket   |   |
| <b>Accuracy</b>                | ± 1 PSI (7 kPa) of Dial Marking at Calibration Conditions  |   |
| <b>Agency Listings</b>         | UL Component Recognized and CSA Approved   |   |
| <b>Shipping Weight</b>         | 1.5 lb (.68 kg)  |   |

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.

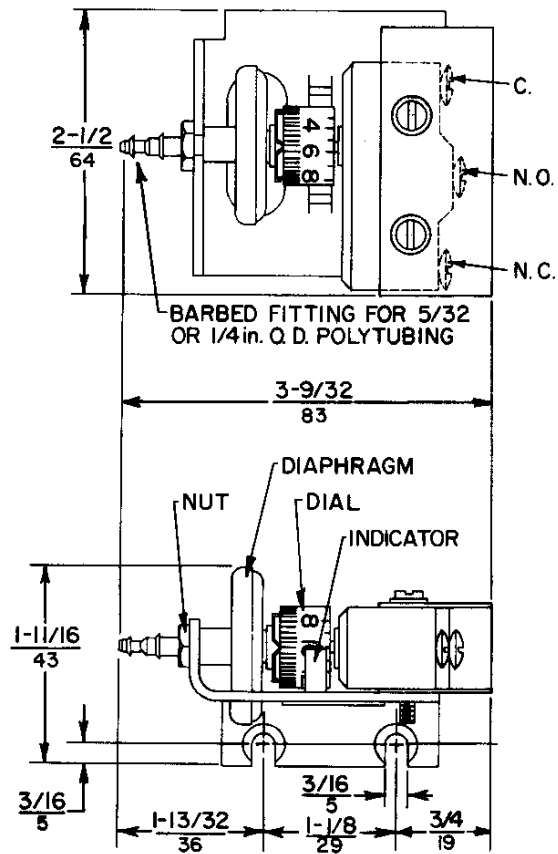


Fig. 2: P-7100 Dimensions  $\frac{\text{in.}}{\text{mm}}$

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