

## P100 Series Encapsulated Pressure Controls

### Application

The P100 series are encapsulated, nonadjustable, single-pole single-throw, direct mount pressure controls typically used for low or high pressure cutouts. The control may be used in Computer Room Air Conditioning, Commercial Refrigeration Fixtures, Refrigeration/Air Conditioning Condensers, Ice Machines and Food Service Equipment applications.

P100 series automatic reset models are available with OPEN HIGH and OPEN LOW configurations. The manual reset models are available in an OPEN HIGH configuration for high limit applications.

Certain P100 models are supplied as pressure limiting devices for use in refrigeration and air conditioning applications. Contact the Control Products Division, Johnson Controls, Inc. for specific models.

P100 models other than those specified as pressure limiting devices are designed for use **only** as operating controls. Where an operating control failure would result in personal injury and/or loss of property, it is the responsibility of the installer to add devices (safety, limit controls) that protect against, or systems (alarm, supervisory systems) that warn of controls failure. All installations should conform to local building codes.

### Operation

#### Auto Reset Models

When pressurized to the selected actuation pressure setting, the internal snap-acting disc reverses its shape and drives a set of electrical contacts either open or closed. When the

pressure drops below the deactuation pressure setting, the disc snaps back to its preset position thus resetting the electrical contacts.

#### Manual Reset Models

The snap-acting disc in the manual reset model opens the electrical contacts when actuated by the pressure sensor. Once the disc snaps, the contacts are held open until an external force on the push button closes them. Because of the disc's link with the pressure sensor, the contacts cannot be reset until the pressure drops to a predetermined level.

The latching mechanism inside the manual reset model is trip free. The electrical contacts will cutout even if the reset button is held fully depressed. The control can only be reset when the pressure returns to a predetermined level.

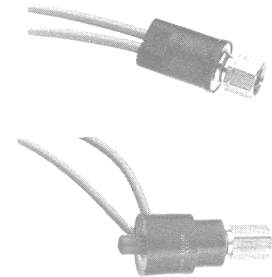
#### Mounting

The P100's small size, light weight and environmental seal allow the control to be mounted by its pressure port without the use of a mounting bracket. The direct mounting also eliminates the need for capillary tubing.

**Note:** It is recommended that the P100 be mounted in a position such that refrigeration oils and foreign matter cannot collect in the pressure sensor.

#### General Instructions

1. Purge all tubing and lines before connecting the pressure control.
2. Make sure control is not installed on equipment to handle a load in excess of the P100's electrical rating.



**Fig. 1 -- P100 pressure controls, automatic reset (top), manual reset (bottom).**

### Wiring

**CAUTION:** Disconnect power supply before wiring connections are made to avoid possible electrical shock or damage to equipment.

All wiring should conform to the National Electrical Code and local regulations. Use copper conductors only.

### Checkout Procedure

Before leaving the installation, observe at least three complete operating cycles to see that all components are functioning correctly.

**CAUTION:** for your safety, before reconnecting power, be sure nothing is touching live electrical parts.

### Repairs and Replacement

Field repairs must not be made. For replacement controls, contact the nearest Johnson Controls wholesaler.

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# Notes



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