

P67 Series Low Range Pressure Control

Application

These pressure controls are used whenever it is necessary to close (or open) an electrical circuit on the basis of a predetermined air pressure signal. Typical applications include the control of air compressors, fans, pilot lights, resistance heating element, etc.

All Series P67 controls 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) or systems (alarm, supervisory systems) that protect against, or warn of, control failure.

Specifications

Type Number	P67AA	DPST, Opens On Pressure Drop
	P67CA	DPST, Opens on Pressure Rise
	P67EA	Main and Auxiliary. Main Contacts Close On Pressure Rise, Simultaneously Auxiliary Contacts Open
	P67FA	Main and Auxiliary. Main Contacts Open on Pressure Rise, Simultaneously Auxiliary Contacts Close
Adjusting		Screwdriver Slot
Ambient Temperature Limits	Minimum	32°F (0°C)
	Maximum	140°F (60°)
Conduit Opening		7/8" (22 mm) Dia. Hole for 1/2" Conduit
Contact Action		DPST or Main and Auxiliary
Contact Unit		Snap Acting High Contact Force Right Up To Contact Break Point, No Bounce, Beryllium Copper Conductor Leaves With Silver Cadmium Oxide Contacts
Diaphragm Material		"BUNA-N" Rubber on Nylon Fabric
Scale Range*		3 to 30 PSIG (20 to 200 kPa)
Differential (Adjustable)		1.5 to 20 PSI (10 to 138 kPa)
Maximum Overrun Pressure		50 PSIG (345 kPa)
Finish		Gray Baked Enamel
Material	Case	.062" (1.6 mm) Cold Rolled Steel
	Cover	.028" (0.7 mm) Cold Rolled Steel
Mounting		Holes In Back of Case or With Part No. 271-350 Mounting Bracket Normally Supplied With Control
Pressure Connector	P67AA-1, P67CA-1	Angle Barbed Fitting for 1/4" O.D. Poly tubing
	Other Models	1/8" Male NPT is Standard
	Individual Pack	2 lb (.9 kg)
Shipping Weights	Overpack of 20 Units	42 lb (19 kg)
	Bulk Pack of 25 Units	54 lb (24 kg)

* Range is minimum cutout to maximum cut-in on "Open Low" controls. It is minimum cut-in to maximum cutout on "Open High" controls.



Fig. 1 -- P67 Pressure Control with barbed fitting.

Features

- long life contact structure -- high contact force
- Heavy contact mechanism has been thoroughly field proven.
- Easy to adjust settings -- single "sight-set" scales show both cut-in and cutout settings.

General Description

The operating point of the control, as well as the differential, are readily adjusted by means of the externally located adjustment screws on the top of the control enclosure. The control set points (both cut-in and cutout) are easily read on the large graduated scale on the front of the case.

The pressure controls incorporate a non-metallic diaphragm member which is positioned by air pressure changes. The diaphragm in turn actuates a heavy duty electrical contact block through a lever mechanism.

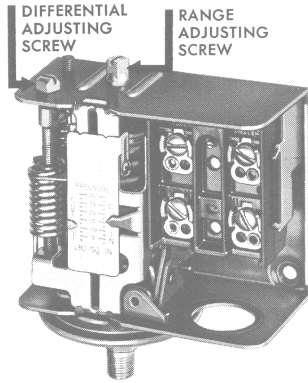


Fig. 2 -- Interior view of pressure control showing range and differential adjusting screws.

Electrical Ratings

P67AA, P67CA

Motor Ratings in Amp	1 Phase				2 - 3 Phase		
	120 V	208 V	240 V	277 V	208 V	240 V	277 V
AC Full Load	12.0	12.0	12.0	—	12.0	12.0	—
AC Locked Rotor	72.0	72.0	72.0	—	72.0	72.0	—
AC Non-Inductive	12.0	12.0	12.0	12.0	—	—	—
DC Non-Inductive	3.0	0.5	0.5	—	—	—	—
Pilot Duty	125 VA, 120 to 600 VAC 57.5 VA, 120 to 300 VDC						

P67EA, P67FA

Pole Number Motor Rating	LINE-M2 (Main)				LINE-M1 (Auxiliary)			
	120 V	208 V	240 V	277 V	120 V	208 V	240 V	277 V
AC Full Load Amp	16.0	9.2	8.0	—	6.0	3.3	3.0	—
AC Locked Rotor Amp	96.0	55.2	48.0	—	36.0	19.8	18.0	—
AC Non-Inductive Amp	16.0	9.2	8.0	7.2	6.0	6.0	6.0	6.0
Pilot Duty	125 VA, 120 to 600 VAC 57.5 VA, 120 to 300 VDC							

Ordering Information

When ordering, specify:

1. Type Number (see Specifications table).
2. Control description.

Installation

Mounting

The pressure controls may be mounted in any position. They are for use in areas protected from the weather. For support, the enclosure may be secured to an adjoining surface either directly, or by use of the mounting bracket provided.

Models with barbed fitting are for use with 1/4 in. O.D. polytubing.

Wiring

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

Large, coded, screw-type terminals are provided for simplified installation.

CAUTION: Use terminal screws furnished in switch (8-32 x 1/4 in.). Longer terminal screws can interfere with switch mechanism and damage the switch.

Make all wiring connections using copper conductors only, and in accordance with the National Electrical Code or local regulations. Electrical loads exceeding the rating of the control should be controlled by means of an intermediate relay or starter.

Adjustments

The settings of the range adjusting screw (see Fig. 2) establishes the control operating point on a pressure increase and is indicated by the pointer on the right side of the graduated scale. Next, the differential adjusting screw should be turned until the desired switch operating point on a pressure decrease is established (as indicated by the scale pointer on the left).

Settings must be confirmed by an accurate pressure gage. For example, to properly set a P67CA to open its contacts at 15 psig (103 kPa) and close them at 12 psig (83 kPa), proceed as follows:

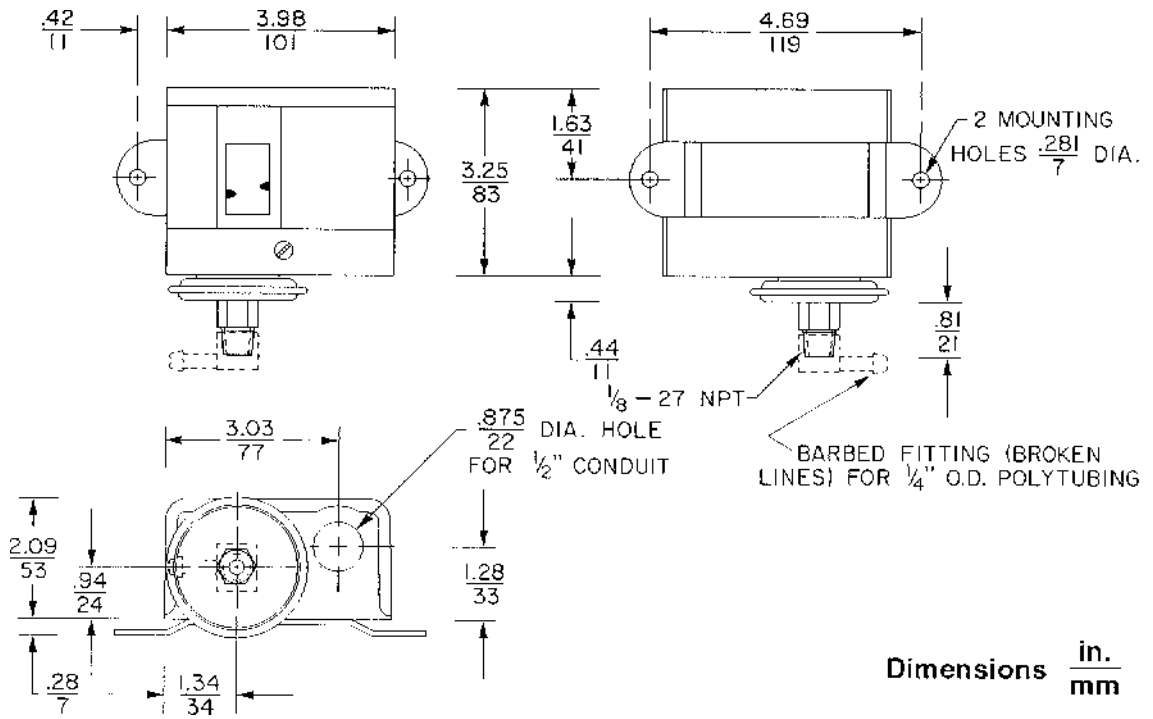
1. Turn range adjusting screw until the pointer on the right is at 15 psig (103 kPa) on the graduated scale.
2. Turn differential adjusting screw until the scale pointer on the left is at 12 psig (83 kPa).
3. Raise and lower the air pressure to check the accuracy of the settings.

Checkout Procedure

Before leaving the installation, observe at least three complete operating cycles to be sure components are functioning correctly.

Repairs and Replacement

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



Performance specifications appearing herein are nominal and are subject to accepted manufacturing tolerances and application variables.

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Notes



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