

P47 Series Steam Pressure Controls

Application

P47 steam pressure controls are for high limit or operating control applications. A typical use is a limit control on steam heating systems. Models that close on a pressure increase are used on

steam unit heaters to avoid blower operation when steam pressure is below the point required for adequate heating. The P47 can be used with steam, water, air, or non-combustible gases which do not harm iron or copper.

Specifications

Product	P47	Steam Pressure Control
Contact Action		Open On Increase, Close On Increase, As Required
Contact Unit		Snap Acting High Contact Force Right Up To Contact Break Point, Large Copper Backed Silver Contacts Are Riveted To Beryllium Copper Conductor Leaves
Adjustment		Screwdriver Slot
Material	Case	0.062" (1.6 mm) Cold Rolled Steel
	Cover	0.028" (0.6 mm) Cold Rolled Steel
Finish		Gray Baked Enamel
Mounting		Holes In Back Of Case Or With Part No. 271-51 Universal Mounting Bracket. Controls Supplied To OEM Come Without Bracket Unless Specified
Maximum Permissible Enclosure Temperature		124° F (51° C)
Pressure Connectors		1/4" Male NPTF (0 to 15 PSIG Only), 1/4" Female NPTF (All Other Ranges)
Siphon		Part No. TBG16A-600 Supplied With All Ranges Except 0 to 15 PSIG
Shipping Weights	Individual Pack	2.1 Lb (0.95 kg) Less Siphon 2.3 Lb (1.04 kg) With Siphon
	Overpack of 20 Units	43 Lb (19.5 kg) Less Siphon 47 Lb (21.3 kg) With Siphon

Type Number Chart

P47	A	One Pole, Open High, 1/2" Conduit Opening
	B	One Pole, Close High, 1/2" Conduit Opening
	C	Two Pole, Open High, 3/4" Conduit Opening
	D	Two Pole, Close High, 3/4" Conduit Opening
	E	SPDT, 1/2" Conduit Opening
	G	4-Wire, 2-Circuit, Main Contacts (LINE-M2) Open High, And Simultaneously Auxiliary Contacts (LINE-M1) Close, 1/2" Conduit Opening
	A	Auto Reset, NEMA 1 Enclosure
	B	Manual Reset, NEMA 1 Enclosure



Fig. 1 -- P47 Steam Pressure Control.

Features

- Long life contact structure with high contact force.
- Manual reset is "trip-free."
- Easy to adjust single "sight-set" scales show both cut-in and cutout settings.

General Description

Models are available with single-pole and two-pole contact action. They may be supplied to **open** a circuit on pressure increase or **close** a circuit on pressure increase, as required. Models are also available with single-pole, double-throw switch action, and 4-wire, two circuit switch constructions.

Controls with the lockout feature require manual reset to reclose the circuits after cutout. The reset is "trip-free" and will not permit restart until the reset lever is released.

Optional Constructions

Manual Reset

Manual reset is "trip-free." The reset lever must be pressed and released before operation will resume. The reset lever cannot be blocked or tied down.

Metric Pressure Scale Plate

Models are available with metric pressure scale plates.

Mounting Brackets

Controls are supplied without mounting brackets unless specified. Controls may be supplied with mounting brackets at additional cost. Standard mounting bracket (Part No. 271-51) is available separately (bulk packaged).

Repairs and Replacement

Field repairs must not be made except for replacement of the cover or siphon. For a replacement control, cover, or siphon, contact the nearest Johnson Controls wholesaler.

Ordering Information

To order, specify:

1. Quantity.
2. Complete Product Number, if available.
3. If Product Number is not available, specify Type Number and the following specifications.
4. Pressure range.
5. Setting switch contacts to close at _____ and open at _____.
6. Optional constructions, if required.

Range and Differential Specifications

Range PSIG (kPa)	Nominal Differential PSI (kPa)			Maximum Allowable Pressure PSIG (kPa)
	P47AA,AB,BA,CA CB,DA,GA		P47EA* (Fixed (Diff.))	
	Minimum	Maximum		
0 to 15 (0 to 100)	2 (14)	8 (55)	1.0 (6.9)	50 (345)
20" Vac. to 50 (-70 to 345)	5 (34)	35 (241)	1.0 (6.9)	180 (1241)
0 to 150 (0 to 1000)	12 (83)	50 (345)	6.5 (45)	325 (2241)
50 to 240 (345 to 1500)	20 (138)	70 (483)	8.0 (55)	300 (2069)

*Differentials shown for the P47EA are approximate. Contact Customer Service with actual application requirements.

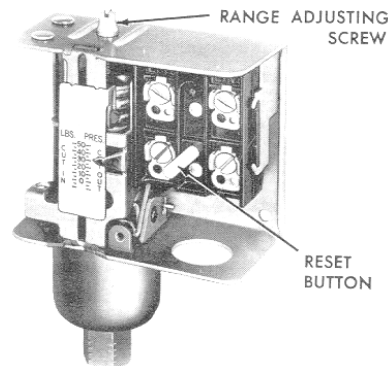


Fig. 2 – P47CB control showing manual reset lever.

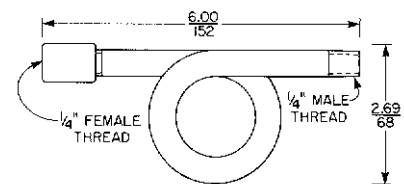


Fig. 3—Steam siphon
Part No. TBG16A-600.

Electrical Ratings

P47AA, P47AB, P47BA

Motor Ratings – Single Phase	120 V	208 V	240 V	277V
AC Full Load Amps.	16.0	9.2	8.0	—
AC Locked Rotor Amps.	96.0	55.2	48.0	—
AC Non-Ind. Amps.	16.0	16.0	16.0	16.0
Pilot Duty – 125 VA, 120 to 600 VAC 57.5 VA, 120 to 300 VDC				

P47GA

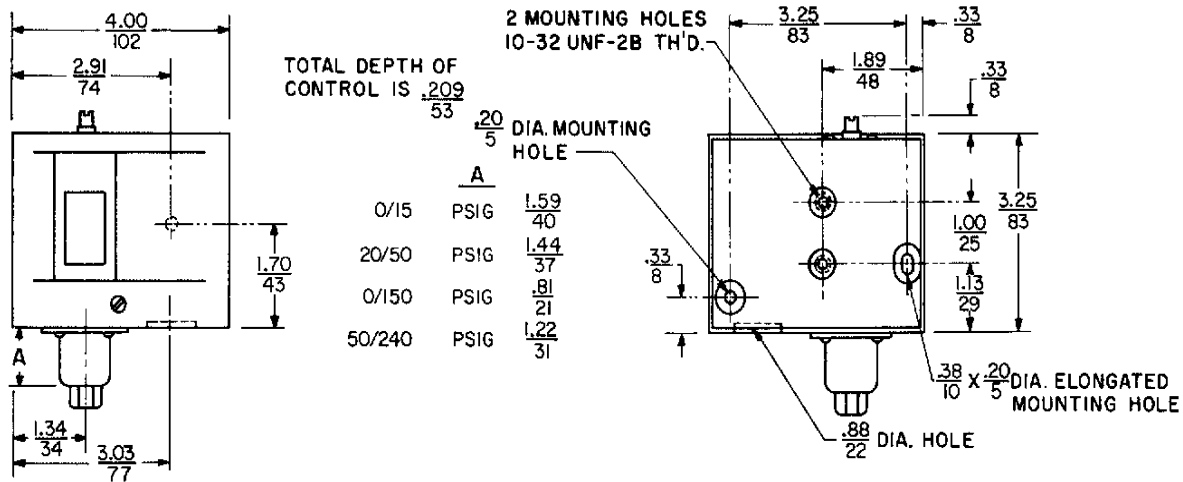
Pole Number	LINE-M2 (Main)				LINE-M1 (Auxiliary)			
	120 V	208 V	240 V	277 V	120 V	208 V	240 V	277 V
AC Full Load Amps.	16.0	9.2	8.0	—	6.0	3.3	3.0	—
AC Locked Rotor Amps.	96.0	55.2	48.0	—	36.0	19.8	18.0	—
AC Non-Ind. Amps.	16.0	9.2	8.0	7.2	6.0	6.0	6.0	6.0
Pilot Duty – Both Poles					125 VA, 24 to 600 VAC 57.5 VA, 120 to 300 VDC			

P47CA, P47CB, P47DA

Motor Ratings	120 V	208 V	240 V	277 V
AC Full Load Amps.	16.0	9.2	8.0	—
AC Locked Rotor Amps.	96.0	55.2	48.0	—
AC Non-Ind. Amps.	22.0	22.0	22.0	22.0
Pilot Duty – 125 VA, 120 to 600 VAC 57.5 VA, 120 to 300 VDC				

P47EA

Motor Ratings	120 V	208 V	240 V	277 V
AC Full Load Amps.	16.0	9.2	8.0	—
AC Locked Rotor Amps.	96.0	55.2	48.0	—
AC Non-Ind. Amps.	16.0	10.0	10.0	10.0
Pilot Duty – 125 VA, 120 to 277 VAC				



P47 Dimensions $\frac{\text{in}}{\text{mm}}$

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

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CONTROLS**

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