P74 Series Differential Pressure Control

2026-06-23

LIT-1927260

Description

Series P74 measures the pressure difference between two sources: supply lines and return lines. A change in differential pressure will reposition the switching mechanism to cause corrective action of the supplementary control equipment.

Refer to the *P47 Series Steam Pressure Controls Product Bulletin (LIT-125450)* for important product application information.

Figure 1: P74EA-8 Differential Pressure Control



Features

- Field-proven Penn switch, with a completely enclosed contact mechanism.
- Easy-to-change pressure differential setting, with no need to remove the cover.
- Heavy duty, low profile elements that withstand high shipping or machine room overrun pressures.
- Lockout models available, with a trip-free manual reset.
- Long life contact structure, with high contact force and no contact bounce.
- Single unit mounting and wiring, to save installation time and material.

Applications

- differential pressure sensing on chillers or water-cooled condensers
- lube oil failure cutout for refrigeration compressors (same as the P28, but does not incorporate time delay)
- positioning M100 Series motor-actuated valves (P74JA-2)
- to prove pump operation

Accessories

All models include a universal mounting bracket.

Repair information

If the P74 Series Differential Pressure Control fails to operate within its specifications, replace the unit. For a replacement control, contact the nearest Johnson Controls® representative.

P74AA, P74BA, P74EA, P74FA, P74JA

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Selection chart

Table 1: P74 Series Differential Pressure Control selection chart

Product code number	Switch action	Range pressure differential psig (kPa)[1]	Switch differential	Pressure connections	Bellows material
For all non-corrosive liquids					
P74AA-1C	Single-pole, single-throw (SPST) closes on decreases in pressure difference	8 to 70 adjustable (55 to 483)	8 to 30 adjustable	36 in. capillary with 1/4 in. flare nut	Stainless steel
P74BA-1C	SPST opens on decrease in pressure difference				
P74EA-8C	Single-pole, double-throw (SPDT) (snap-acting)	2 to 26 adjustable (14 to 207)	3.5 fixed	36 in. capillary with 1/4 in. flare nut	Brass
P74EA-10C				1/4 in. external flare	
P74FA-1C		8 to 60 adjustable (55 to 414)	1.5 fixed		
P74FA-5C				1/4 in. FNPT	
P74FA-10C		2 to 26 adjustable (14 to 207)		36 in. capillary with 1/4 in. flare nut	
P74JA-2C	SPDT (floating)	8 to 60 adjustable (55 to 414)	2.5 fixed	1/4 in. external flare	

1 Maximum continuous pressure to low pressure bellows - 180 psig (1,241 kPa)

Ordering P74 controls

To order P74 controls, specify the following information:

- The quantity that you require.
- The complete product number.
- Non-corrosive or ammonia refrigerant.
- Style of pressure connector.
- Optional constructions.
- Contact open and close settings.

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Technical specifications

Table 2: Electrical ratings

Motor ratings	120 V	208 V	240 V	277 V
P74AA, P74BA - 1 Phase				
AC Full Load A	20.0	18.7	17.0	—
AC Locked Rotor A	120.0	112.2	102.0	—
AC Non-Inductive A	22.0	22.0	22.0	—
Pilot Duty	125 VA, 120 to 600 VAC; 57.5 VA, 120 to 300 VDC			
P74EA				
AC Full Load A	16.0	9.2	8.0	—
AC Locked Rotor A	96.0	55.2	48.0	—
AC Non-Inductive A	16.0	16.0	16.0	16.0
Pilot Duty	125 VA, 120 to 600 VAC			
P74FA				
AC Full Load A	6.0	3.4	3.0	—
AC Locked Rotor A	36.0	20.4	18.0	—
AC Non-Inductive A	10.0	10.0	10.0	10.0
Pilot Duty	125 VA, 120 to 277 VAC			
P74JA				
1 A; 24 VAC Class 2; 50/60 Hz				

Product warranty

This product is covered by a limited warranty, details of which can be found at www.johnsoncontrols.com/buildingswarranty.

Software terms

Use of the software that is in (or constitutes) this product, or access to the cloud, or hosted services applicable to this product, if any, is subject to applicable end-user license, open-source software information, and other terms set forth at www.johnsoncontrols.com/techterms. Your use of this product constitutes an agreement to such terms.

Single point of contact

APAC	EU	UK	NA/SA
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Contact information

Contact your local Johnson Controls representative: www.johnsoncontrols.com/locations

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