P74

Differential Pressure Controls, without time delay

Product Bulletin

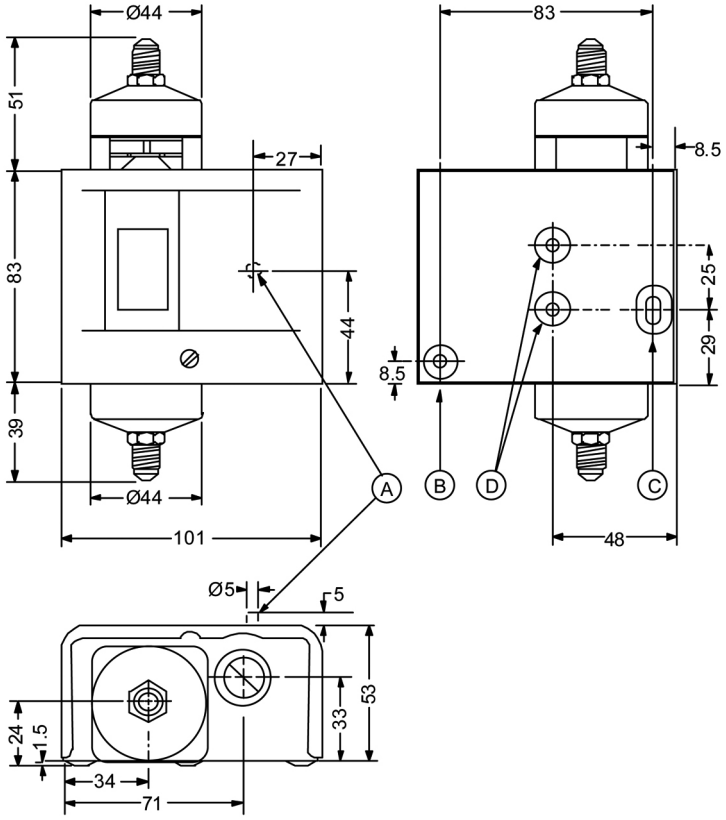
These controls are designed to sense pressure differences between two points and may be used as operating or limit controls.

Typical applications are to detect flow across a chiller or water cooled condenser, to detect flow in a heating system and sensing lube oil pressure differential on refrigeration compressors.

Features

- **Heavy duty pressure elements**
  Withstand high overrun pressure
- **These controls may be used in combination with series P28 lube oil protection control on two compressor, single motor units.**
  Reduces the lube oil system cost.

Dimensions *(in mm)*



A	Reset button
B	Mounting hole, 5 mm dia.
C	Mounting slot
D	10-32 UNF2B

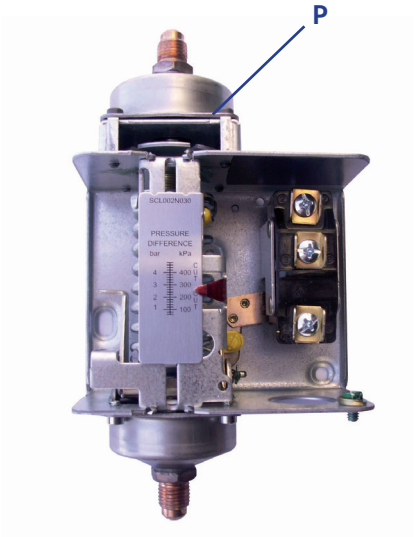
Description

The P74 series of differential pressure switches incorporate two opposing pressure elements and an adjustable range setpoint spring with a calibrated scale. The control switches at the indicated setpoint on an increase in differential pressure and switches back to the normal position when the different pressure decreases to the setpoint less the mechanical switching differential.

> These controls are designed for use only as operating controls. Where an operating control failure would result in personal injury or loss of property it is the responsibility of the installer to add devices or systems that protect against, or warn of, control failure.

Adjustment

The setpoint can be adjusted by the notched cam A located on the top of the control.
The switching differential can be adjusted by turning a hexagonal nut on the differential adjusting screw located inside the control cover (adjustable differential models only).



P74, Cover removed
(P) Setpoint adjusting cam

Contact Function

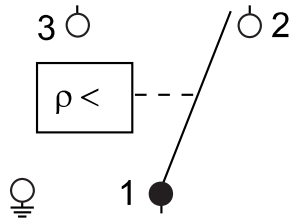


Fig. 1a.
Type P74EA and P74FA
1-2 closes on increase of differential pressure
1-3 opens simultaneously

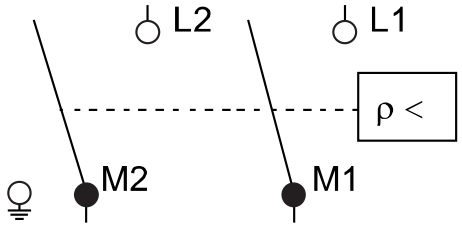


Fig. 1b.
Type P74DA
Contacts close on increase of differential pressure

Repair and Replacement

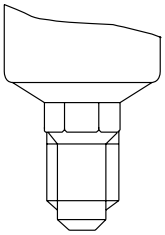
Power elements may be replaced in the field. Other repairs are not possible.
In case of an improperly functioning control, please check with your nearest supplier.

When contacting the supplier for a replacement you should state the type/model number of the control.
This number can be found on the data plate or cover label.

Type Number Selection Table

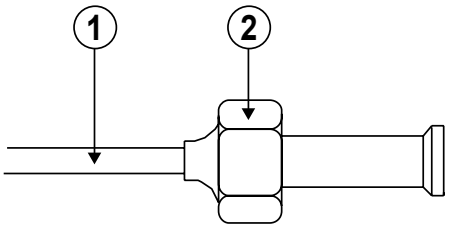
Order Number	P74DA-9300	P74DA-9600	P74EA-9300	P74EA-9600	P74EA-9700	P74FA-9700	P74FA-9701
Range Δ (bar)	0.6/4.8	0.6/4.8	0.6/4.8	0.6/4.8	0.6/4.8	0/1	2.0/8.0
Switching differential (bar)	0.7/2 adj.	0.7/2 adj.	0.3 fix.	0.3 fix.	0.3 fix.	0.1 fix.	0.7 fix.
Medium	Non-corrosive Refrigerant	Non-corrosive Refrigerant	Non-corrosive Refrigerant	Non-corrosive Refrigerant	Ammonia or Non-corrosive Refrigerant	Water	Ammonia or Non-corrosive Refrigerant
Pressure connector (style)	5	13	5	13	15	15	15
Electrical rating	15(10) A 230 V AC	15(10) A 230 V AC	15(8) A 230 V AC	15(8) A 230 V AC	15(8) A 230 V AC	15(3) A 230 V AC	15(3) A 230 V AC
Contact function	fig. 1b	fig. 1b	fig. 1a	fig. 1a	fig. 1a	fig. 1a	fig. 1a
Maximum bellows pressure absolute (bar)	23	23	23	23	23	10	23
Maximum allowable diff. in pressure between the bellows (bar)	14	14	14	14	14	7	14
Pressure element material	Stainless Steel/ Copper	Stainless Steel/ Copper	Stainless Steel/ Copper	Stainless Steel/ Copper	Stainless Steel	Tombac/ Brass	Stainless Steel

Pressure Connections



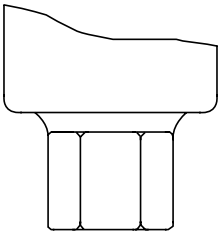
Style 5 Male connection

7/16"-20 UNF for 1/4" /6 mm flare nut



Style 13

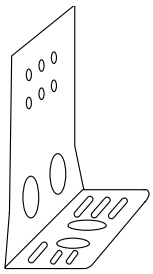
1. 90 cm capillary
2. 7/16"-20 UNF nut for 1/4" SAE flare tube



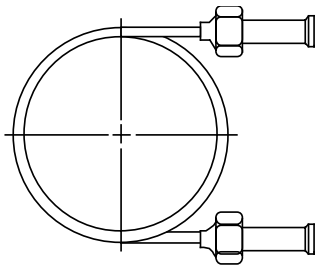
Style 15

1/4"-18 NPT (female)

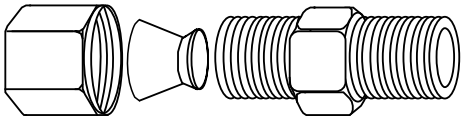
Accessories



Mounting Bracket



90 cm Capillary with (2) flare nuts



Compression Coupling

Accessories Ordering Codes

Code number	Description	Application
CNR003N001R	Compression coupling fits into Style 15 pressure connection	For 6 mm copper or steel tubing
CNR003N002R		For 8 mm copper or steel tubing
271-51L	Mounting Bracket	
SEC002N600	90 cm capillary with two flare nuts	

Technical Specifications

Types, Ranges Differentials	*See "Type Number Selection Table"*
Media	Ammonia (for special models), non-corrosive refrigerant or water
Pressure Connections	*See "Type Number Selection Table"*
Maximum Overrun Pressure	*See "Type Number Selection Table"*
Ambient Temperature Limits	-30 to 55°C
Material	
Case	Cold-rolled steel, zinc plated
Cover	Cold-rolled steel, grey enamel finish
Pressure Element	*See "Type Number Selection Table"*
Protection	IP30
Electrical Ratings	*See "Type Number Selection Table"*
Shipping Weight	
Ind. pack	1.2 Kg
Overpack	12 Kg (10 pcs)
CE **Compliance**	Johnson Controls declares that these products are in compliance with the essential requirements and other relevant provisions of the EMC Directive and Low Voltage Directive

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 shall not be liable for damages resulting from misapplication or misuse of its products.