

## Description

The P28 Series controls provide dependable lube oil protection for pressure-lubricated refrigeration compressors by sensing low lube oil pressure. A built-in time delay switch, accurately compensated for ambient temperature, provides a time delay for pressure to rise on start and avoids nuisance shutdowns on pressure drops of short duration during the running cycle.

Refer to the *P28 and P128 Series Lube Oil Controls with Built-in Time Delay Relay Product Bulletin (LIT-125420, Part No. 24-7664-605)* for important product application information.

**Figure 1: P28AA Lube Oil Pressure Cutout Control**



## Features

- Direct-reading scale indication
- Adjustable setpoint
- Trip-free manual reset
- Replacement timing relays available
- Dust-protected switch

## Applications

- Semi-hermetic compressors
- The P28 Control measures the pressure available to circulate oil through the lubrication system. Net oil pressure is the difference between the oil gauge and the crankcase pressure.

## Accessories

- All models listed include a universal mounting bracket.
- For replacement timing relays, refer to the *Replacement Timing Relays for P28 and P29 Lube Oil Controls Catalog Page (LIT-1927395)*.

## Repair information

If the P28 Series Lube Oil Pressure Cutout Control with Time Delay fails to operate within its specifications, replace the unit. For a replacement control, contact the nearest Johnson Controls® representative.

## Selection chart

### ① Note:

- The switch differential is approximately 5 psig (34 kPa). The time delay relay energizes at 9 psig (61 kPa) pressure difference, and de-energizes at 14 psig (97 kPa) difference.
- P28AA-1C replaces Ranco® P30-3701.
- P28AA-17C replaces Ranco P30-3801.
- Non-corrosive refrigerants include R- 12, R- 22, R- 134A, R- 500, and R- 502 (R).

**Table 1: Selection chart**

Product code	Time delay	Time delay heater circuit	Type of reset	Range	Refrigerant (R)	Pressure connection
P28AA-1C	90 s	120 VAC/240 VAC	Manual	8 psi to 70 psi (55 kPa to 483 kPa)	Non-corrosive	36 in. capillary with 1/4 in. flare nut
P28AA-17C	120 s					
P28AA-18C	45 s					
P28AN-1C	90 s				Ammonia	1/4 in. SAE female flare
P28DN-4C	30 s					

## Technical specifications

The maximum bellows pressure is 180 psig (2,241 kPa).

**Table 2: Electrical ratings: Pilot duty**

Time delay heater circuit	Pilot circuit	Alarm circuit Must be same voltage as pilot circuit	P28DA-1 contact rating 2 to 1: 2 to 3 Must be same voltage as time delay circuit	
			Crankcase heater: Term 2 to 1	Runlight: Term 2 to 3
120/240 VAC	750 VA, 120/240 VAC	125 VA, 120/240 VAC	10 A 120 VAC, 5 A 240 VAC	10 W
24 VAC or VDC	125 VA, 24 VAC 57.5 VA, 24 VDC	125 VA, 24 VAC 57.5 VA, 24 VDC	—	

**Table 3: Conformity declaration information**

Specification	Description
Purpose of control	Pressure operating controls
Method of mounting control	Flat surface or with a universal mounting bracket (Part No. 271-51)
Method of earthing of control	Wiring binding screw terminal
Type 1 or Type 2 action	Type 1.C (micro-interruption)
External pollution situation	Pollution degree 3
Rated impulse voltage	4,000 VAC

## Product warranty

This product is covered by a limited warranty, details of which can be found at [www.johnsoncontrols.com/buildingswarranty](http://www.johnsoncontrols.com/buildingswarranty).

## Single point of contact

APAC	EU	UK	NA/SA
JOHNSON CONTROLS C/O CONTROLS PRODUCT MANAGEMENT NO. 32 CHANGJIANG RD NEW DISTRICT WUXI JIANGSU PROVINCE 214028 CHINA	JOHNSON CONTROLS VOLTAWEG 20 6101 XK ECHT THE NETHERLANDS	JOHNSON CONTROLS TYCO PARK GRIMSHAW LANE MANCHESTER M40 2WL UNITED KINGDOM	JOHNSON CONTROLS 5757 N GREEN BAY AVE. GLENDALE, WI 53209 USA

## Contact information

Contact your local branch office: [www.johnsoncontrols.com/locations](http://www.johnsoncontrols.com/locations)

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