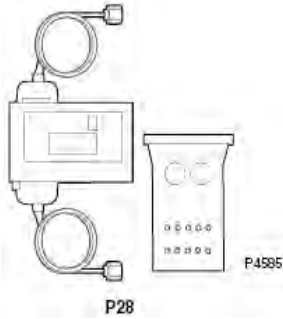


JOHNSON CONTROLS - P28 SERIES LUBE OIL PRESSURE CUTOUT CONTROL (With Time Delay) SELECTION CHART



DESCRIPTION

The P28 series provides dependable shutdown on pressure of lubricated refrigeration compr by sensing low lube oil pressure. A built-in time Delay switch, accurately compensated for air temperature, allows for pressure pick up on start and avoids nuisance shutdowns on pressur of short duration during the running cycle.

APPLICATIONS

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

SPECIFICATIONS

- Maximum bellows pressure is 180 psig (2241 kPa)

SELECTION CHART

PART NO	TIME DELAY	TIME DELAY HEATERCIRCUIT VAC	TYPE OF RESET	REFRIGERANT ®	PRESSURE CONNECTION
P28AA-1C†	90 sec	120/240	Manual	Non-Corrosive**	36 in. Cap. With 1/4 in.Flare Nut
P28AA-2C††	60 sec	120/240	Manual	Non-Corrosive**	36 in. Cap. With 1/4 in.Flare Nut
P28AA-17C***	120 sec	120/240	Manual	Non-Corrosive**	36 in. Cap. With 1/4 in.Flare Nut
P28AA-18C	45 sec	120/240	Manual	Non-Corrosive**	36 in. Cap. With 1/4 in.Flare Nut
P28NA-1C	90 sec	120/240	Manual	Ammonia	1/4 in. Female NPT
P28DA-1C	90 sec with Runlight and Alarm Terminals	120/240	Manual	Non-Corrosive**	36 in. Cap. With 1/4 in.Flare Nut
P28GA-2C	90 sec	120/240	Automatic	Non-Corrosive**	36 in. Cap. With 1/4 in.Flare Nut
P28NA-5C	120 sec	24 VAC or VDC	Manual	Non-Corrosive**	36 in. Cap. With 1/4 in.Flare Nut

*Switch differential approximately 5 psi (34 kPa). Time Delay relay energizes @ 9 psi (61 kPa) pressure difference, de-energized @ 14psi (97 kPa) difference.

†Replaces Ranco P30-3701.

** Non-corrosive refrigerants include R-12, R-22, R-134a, R-500, R-502(R).

††Replaces Ranco P30-3601.

*** Replaces Ranco P30-3801.

- Universal Replacement.

JOHNSON CONTROLS - P45 SERIES LUBE OIL PRESSURE CUTOUT CONTROL (With Time Delay)

Copeland compressors



P45NCA

DESCRIPTION

The P45 control provides dependable, low lube oil pressure protection for refrigeration compressors. The factory set pressure setting provides operation to the compressor manufacturer's specification. A built in time delay relay, compensated for ambient temperature, allows for pressure pick-up on short duration pressure losses during the running cycle.

SPECIFICATIONS

- For all non-corrosive refrigerants.

FEATURES

- Universal mounting.
- Trip-free manual reset
- Ambient compensated time delay

ACCESSORIES

These controls are supplied without mounting brackets but are required, order kit number BKT38A600R, which contains (5) 271-51 angle mounting brackets with screws.

APPLICATIONS

- Semi-hermetic compressors.
- The P45 control measures pressure available to circulate oil through the lubrication system. (net oil pressure is the difference between oil pump pressure and the crank case pressure).

SELECTION CHART

PART NO	FACTORY SET OPENING POINT psig (kpa)	TIME DELAY(a)	TYPE OF RESET	PRESSURE CONNECTION	HEATER CIRCUIT VAC	MAXIMUM ALLOWABLE PRESSURE, psig (kPa)
P45NCA-12C(b)	9(62)(c)	120 sec	Manual	36 in. Cap. With 1/4 in. Flare Nut	120/240	425(2360)
P145NCA-12C(d)	9(62)(c)	120 sec	Manual	style 5	120/240	425(2360)
P145NCB-12C(e)	9(62)(c)	120 sec	Manual	style 5	120/240	425(2360)

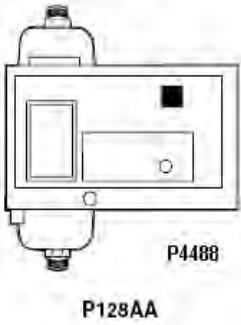
Carlyle compressors

PART NO	FACTORY SET OPENING POINT	TIME DELAY(a)	TYPE OF RESET	PRESSURE CONNECTION	HEATER CIRCUIT VAC (g)	MAXIMUM ALLOWABLE PRESSURE, psig (kPa)
P45NCA-82C(f)	6.5(45)(g)	45	Manual	36 in. Cap. With 1/4 in. Flare Nut	120/240	425(2360)
P145NCA-82C(h)	6.5(45)(g)	45	Manual	style 5	120/240	425(2360)
P145NCB-82C(i)	6.5(45)(g)	45	Manual	style 5	120/240	425(2360)

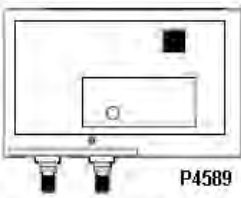
- Relay is not field replaceable
- Replaces Ranco P30-5826
- Switch differential is approximately 5 psi (34kpa). Time relay energizes at: 9 psi (61 kpa) pressure difference, de-energizes at 14 psi (97kpa) difference
- Replaces Ranco P30-5827
- Replaces Ranco P30-5827 (includes alarm wire)
- Replaces Carlyle/Carrier part no. HKA-600, 6342060
- Switch differential is approximately 4.5 psi (34kpa). Time delay relay energizes at: 6.5 psi (45kpa) pressure difference de-energizes at: 11 psi (76kpa) difference
- Replaces Carlyle/Carrier part no. HKA-600.6342060 36" SEC99A UltraCap
- Replaces Carlyle/Carrier part no. HKA-600.6342060 36" SEC99A UltraCap (includes alarm wire)

JOHNSON CONTROLS - P128 AND P145 SERIES LUBE OIL PRESSURE CONTROLS

SELECTION CHART



P128AA



P145NCA

DESCRIPTION

The P128 and P145 Series controls provide dependable low pressure lube oil cut-out for pressure lubricated refrigeration compressors. The P128 Series offer adjustable range settings. The P128 and P145 controls feature a 1/4-in. male flare pressure connection which may be used with a refrigerant hose or cap tube such as SEC99 Ultra Cap.

FEATURES

- Ambient compensated time delay relay
- Trip-free manual reset
- Industry standard
- P128 is fully adjustable throughout its range
- P145 is factory set to compressor manufacturer's specifications

APPLICATIONS

Lube oil cutout on hermetic and semi-hermetic compressors used in commercial air conditioning and commercial and industrial refrigeration systems.

SELECTION CHART

PART NO	Range PSI (ICPA)		TIME DELAY	TYPE OF RESET	REFRIGERANT	PRESSURE CONNECTION	HEATER CIRCUIT VAC
	Adjustable	Non-Adjustable					
P128AA-1C(a)	8 to 70 (55 to 483)	--	90 sec	Manual	Non-Corrosive	1/4 in. Male Flared Conn.	120/240
P128AA-2C(b)	8 to 70 (55 to 483)	--	60 sec	Manual	Non-Corrosive	1/4 in. Male Flared Conn.	120/240
P128AA-17C(c)	8 to 70 (55 to 483)	--	120 sec	Manual	Non-Corrosive	1/4 in. Male Flared Conn.	120/240
P145NCA-12C(d)	Factory Set 9 (62)	Factory Set 9 (62)	120 sec	Manual	Non-Corrosive	1/4 in. Male Flared Conn.	120/240
P145NCA-82C(e)	--	Factory Set 6.5 (45)	45 sec	Manual	Non-Corrosive	1/4 in. Male Flared Conn.	120/240
P145NCB-12C(f)	--	Factory Set 9 (62)	120 sec	Manual	Non-Corrosive	1/4 in. Male Flared Conn.	120/240
P145NCB-82C(g)	--	Factory Set 6.5 (45)	45 sec	Manual	Non-Corrosive	1/4 in. Male Flared Conn.	120/240

- (a) Replacement for P28AA-1-. Replaces Ranco P30-3701.
 (b) Replacement for P28AA-2-. Replaces Ranco P30-3601.
 (c) Replacement for P28AA-17-. Replaces Ranco P30-3801.
 (d) Replacement for P45NCA-12-. (Copeland Model). Replaces Ranco P30-5826.
 (e) Replacement for P45NCA-82-.
 (f) Copeland model with alarm circuit.
 (g) Carlyle model alarm circuit.

NOTE: SEC99 UltraCap hose must be ordered separately.