

JOHNSON CONTROLS

P545 SERIES ELECTRONIC LUBE OIL CONTROL



P545 Control with P400 Switch

DESCRIPTION

The P545 series electronic lube oil control is designed for refrigeration compressors equipped with an oil pump that accepts a single point differential pressure switch. The P400 switch continuously monitors net lube oil pressure and the P545 control locks out the compressor if lube oil pressure falls below the manufacturer's recommended net pressure for longer than the recommended lube oil time delay. Front-mount Light-Emitting diodes (LEDs) indicate the status of lubrication system, and can be set to minimize compressor short cycling. A Johnson Controls/PENN(R) R310AD current sensing switch, sold separately, may be used to disable the P545 control lockout circuit during abnormal compressor shutdowns.

FEATURES

- Single-pole double-throw (SPDT) relay contacts for liquid line solenoid and alarm application – allows liquid line solenoid to be closed if the P545 control shuts off the compressor due to low oil pressure; provides alarm indication, including circuits that use neon lights.
- Relay contact output for compressor - provides reliable, long-lasting operation.
- Build in test circuit - verifies proper control operation quickly, without additional tools or equipment.
- Improved noise immunity - exceeds immunity requirements of UL 991 for radiated Radio Frequency (RF) and (IEC) 6100-4-6 for RF-induced conducted disturbances.
- Selection of anti-short cycle time delay - allows choice of anti-short cycle strategy for a wide range of equipment. Requirements; possible elimination of external short-cycle timer.
- User-friendly display panel-display the status of the compressor lubrication system continuously.
- Backwards compatibility - allows easy replacement of existing electronic lube oil control.

SELECTION CHART

Product PART NO	Fit Compressors Manufactured by	Lube oil delay (second)	P400switch	Wiring Harness
P545NCB-22C1	copeland(R)	120	P400AD-2	WHA-P400-100
P545NCB-25C1	Bitzer	90	P400BD-1	WHA-P400-125
P545NCB-82C1	Carlyle(R)	120	P400AD-1	WHA-P400-100

1. Switch and wiring harness included

Control and Sensor/switch Compatibility

Test	P345 or P445 control with P300 sensor	P345 or P445 control with P300 sensor	P545 control and P300 sensor	P545 control and P400 sensor
Wiring Harness ¹	WHA-300-XXX only	WHA-300-XXX only or WHA-400-XXX	WHA-300-XXX only	WHA-300-XXX only or WHA-400-XXX
Test switch	6-8 second delay	Does not function ²	Immediate	Immediate

1. WHA-P300-XXX is the 3-wire harness supplied with the P345 or P445 control and the P300 sensor. WHA-P400-XXX is the line 2-wire harness supplied with the P545 control and the P400 switch.
2. When the P445 control is wired to a P400 switch, the test button may operate when powered up; however, after a couple minutes of operation, the test switch function no longer works. All other control functions operate normally.

Accessories

PART NO	Open point(differential pressure)	Close point(Differential above open point)	Threads	Wiring Harness
P400AD-1C	7.0 ± 1.0 Psid	less than or equal to 2.0 Psid	3/4-16UNF	WHA-P400-100
P400AD-2C	12.75 ± 0.75 Psid	less than or equal to 1.5 Psid	3/4-16UNF	WHA-P400-100
P400BD-1C	10.0 ± 1.5 Psid	less than or equal to 3.0 Psid	M20x1.5	WHA-P400-125

1. Wiring harness included.

P545 SERIES ELECTRONIC LUBE OIL CONTROL(continued)

wiring harness and other accessories

Product PART NO	DESCRIPTION
KITP545-82C*	CST29A-600C sensor block; P545NCB-82 control;P400AD-1C switch WHA-P400-100C wiring harness
WHA-P400-100C	3-1/3 ft(1m)length wiring harness
WHA-P400-125C	4 ft(1-1/4m)length wiring harness
WHA-P400-250C	8 ft(2-1/2m)length wiring harness
WHA-P400-430C	14 ft(4-1/3m)length wiring harness