

P470

Electronic Pressure Control with Display

Description

The P470 Electronic Pressure Control with Display is a single-stage, On/Off, electronic pressure control with an SPDT (Single-Pole Double-Throw) output relay. The control may be field set to operate in one of three pressure ranges (0 to 100 psi, 0 to 500 psi, or 50 to 750 psi), as either an open-high or open-low control.

The P470 control features a large LCD that displays the sensed pressure and other system-status indicators, as well as the adjustable setpoints in the programming mode. The P470 control has a lockable, 3-button touchpad for adjusting setpoints, and a front-panel LED (Light-Emitting Diode) that indicates the output relay status.

The P470 control uses a P399 Electronic Pressure Transducer to generate a pressure signal and WHA-P399 Wiring Harness, which eliminates many of the constraints of capillary-tube control applications.

Features

- easy-to-read liquid crystal display (LCD) clearly displays the sensed pressure (and other control information), and in many situations pressure may be monitored without applying gauges to the controlled equipment
- three field-selectable pressure ranges between 0-750 psi provide the flexibility to cover most HVAC/R pressure applications
- 24 VAC, and 120 or 208/240 VAC models increase application options, with two controls that cover most common voltages
- lockable, 3-button, front-panel touchpad deters tampering and over adjustment of control settings by unauthorized personnel
- built-in, adjustable, anti-short cycle time-delay reduces compressor short cycling and nuisance lockouts, which can extend compressor life
- economical, versatile transducer and wiring harness eliminate many of the constraints of capillary control applications and allow up to a 100 ft (30.5m) cable between control and transducer



P470 Pressure Control with a P399 Transducer and WHA-P399 Wiring Harness (Control, transducer, and harness must be purchased separately.)

- up to four P470 controls may be used with one P399 transducer

Selection Chart

Code Number	Description
P470FB-1C	Low Voltage (<30 VAC) Electronic Pressure Control with Display Supply Voltage: 24 VAC Class 2 Transformer
P470EB-1C	Line Voltage Electronic Pressure Control with Display Supply Voltage: 120 or 208/240 VAC

Note: P470 controls do not include a transducer or wiring harness. Transducer and wiring harness must be purchased separately. P399 transducer must be matched to the selected pressure range.

Accessories

Code Number	Description
P399AAA-1C	0 to 100 psi Pressure Transducer with 1/8 in. NPT Male Fitting
P399AAC-1C	0 to 100 psi Pressure Transducer with 1/4 in. SAE (Schrader) Female Fitting with integral valve depressor
P399BAA-1C	0 to 500 psi Pressure Transducer with 1/8 in. NPT Male Fitting
P399BAC-1C	0 to 500 psi Pressure Transducer with 1/4 in. SAE (Schrader) Female Fitting with integral valve depressor
P399CAA-1C	0 to 750 psi Pressure Transducer with 1/8 in. NPT Male Fitting
P399CAC-1C	0 to 750 psi Pressure Transducer with 1/4 in. SAE (Schrader) Female Fitting with integral valve depressor
WHA-P399-200C	6 ft 6-1/2 in. (2m) 3-Wire Cable with Plug-in Connector for P399 Transducer
WHA-P399-400C	13 ft 3 in. (4m) 3-Wire Cable with Plug-in Connector for P399 Transducer

Note: To order a transducer and 2-meter cable packaged together, order P399***-1-200C.

Technical Specifications

P470 Electronic Pressure Control with Display																															
Operating Pressure Ranges	0 to 100 psi	0 to 500 psi	50 to 750 psi																												
Minimum Differential Pressure	5 psi	20 psi	20 psi																												
Displayed Resolution	1 psi	3 psi	5 psi																												
Control Accuracy	± 1.5 % of selected Operating Pressure Range plus transducer accuracy																														
Supply Voltage	<table border="0"> <tr> <td>P470FB-1</td> <td colspan="3">24 VAC, 50/60 Hz, Class 2</td> </tr> <tr> <td>P470EB-1</td> <td colspan="3">120 or 208/240 VAC, 50/60 Hz</td> </tr> </table>			P470FB-1	24 VAC, 50/60 Hz, Class 2			P470EB-1	120 or 208/240 VAC, 50/60 Hz																						
P470FB-1	24 VAC, 50/60 Hz, Class 2																														
P470EB-1	120 or 208/240 VAC, 50/60 Hz																														
Power Consumption	1.8 VA Maximum																														
Output Relay Contacts Electrical Ratings	<table border="0"> <tr> <td>P470FB-1 (24 volt model)</td> <td colspan="3">100 VA, 30 VAC maximum, Class 2</td> </tr> <tr> <td rowspan="5">P470EB-1 (120 or 208/240 volt model)</td> <td>120V</td> <td>208V</td> <td>240V</td> </tr> <tr> <td>Horsepower N.O. (N.C.)</td> <td>1 (1/4) hp</td> <td>1 (1/3) hp</td> <td>1 (1/2) hp</td> </tr> <tr> <td>Full Load Amperes N.O. (N.C.)</td> <td>16 (5.8)A</td> <td>9.2 (4.0)A</td> <td>8.0 (4.9)A</td> </tr> <tr> <td>Locked Rotor Amperes N.O. (N.C.)</td> <td>96 (34.8)A</td> <td>55.2 (24)A</td> <td>48 (29.4)A</td> </tr> <tr> <td>Non-inductive Amperes N.O. (N.C.)</td> <td>15 (10)A</td> <td>10 (10)A</td> <td>10 (10)A</td> </tr> <tr> <td>Pilot Duty</td> <td colspan="3"> 125 VA (N.O.) @ 24 to 240 VAC 125 VA (N.C.) @ 120 to 240 VAC 50 VA (N.C.) @ 24 VAC </td> </tr> </table>			P470FB-1 (24 volt model)	100 VA, 30 VAC maximum, Class 2			P470EB-1 (120 or 208/240 volt model)	120V	208V	240V	Horsepower N.O. (N.C.)	1 (1/4) hp	1 (1/3) hp	1 (1/2) hp	Full Load Amperes N.O. (N.C.)	16 (5.8)A	9.2 (4.0)A	8.0 (4.9)A	Locked Rotor Amperes N.O. (N.C.)	96 (34.8)A	55.2 (24)A	48 (29.4)A	Non-inductive Amperes N.O. (N.C.)	15 (10)A	10 (10)A	10 (10)A	Pilot Duty	125 VA (N.O.) @ 24 to 240 VAC 125 VA (N.C.) @ 120 to 240 VAC 50 VA (N.C.) @ 24 VAC		
P470FB-1 (24 volt model)	100 VA, 30 VAC maximum, Class 2																														
P470EB-1 (120 or 208/240 volt model)	120V	208V	240V																												
	Horsepower N.O. (N.C.)	1 (1/4) hp	1 (1/3) hp	1 (1/2) hp																											
	Full Load Amperes N.O. (N.C.)	16 (5.8)A	9.2 (4.0)A	8.0 (4.9)A																											
	Locked Rotor Amperes N.O. (N.C.)	96 (34.8)A	55.2 (24)A	48 (29.4)A																											
	Non-inductive Amperes N.O. (N.C.)	15 (10)A	10 (10)A	10 (10)A																											
Pilot Duty	125 VA (N.O.) @ 24 to 240 VAC 125 VA (N.C.) @ 120 to 240 VAC 50 VA (N.C.) @ 24 VAC																														
Transducer Type	P399 Electronic Pressure Transducer																														
Ambient Temperature at Control	Operating: -30 to 140°F (-34 to 60°C) Shipping: -40 to 185°F (-40 to 85°C)																														
Ambient Humidity at Operating Control	0 to 95% RH non-condensing; Maximum Dew Point: 85°F (29°C)																														
Enclosure, Case and Cover	NEMA 1 High-impact Thermoplastic																														
Agency Information	UL: File SA516; CCN SDFY Canadian UL: File SA516; CCN SDFY7 FCC/DOC Part 15, Class A																														

The performance specifications are nominal and conform to acceptable industry standards. For applications at conditions beyond these specifications, consult the local Johnson Controls office. Johnson Controls, Inc. shall not be liable for damages resulting from misapplication or misuse of its products. © 2006 Johnson Controls, Inc. www.johnsoncontrols.com