P470 Electronic Pressure Control with Display Catalog Page

LIT-1900109

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Description

The P470 Electronic Pressure Control with Display is a single-stage, on and off, electronic pressure control with a single-pole, double-throw (SPDT) output relay. You can field-set the P470 control to operate in one of the following three pressure ranges, as either an open-high or open-low control: 0 psi to 100 psi, 0 psi to 500 psi, or 50 psi to 750 psi.

The P470 control has a large LCD that displays the sensed pressure, other system-status indicators, and adjustable setpoints in the programming mode. The P470 control has a lockable, three-button touchpad for adjusting setpoints, and a front-panel LED that indicates the output relay status.

The P470 control uses a P499 or P599 Series Electronic Pressure Transducer and a WHA-PDK3 wiring harness to sense system pressure. This arrangement eliminates almost all refrigerant leaks because there are no capillaries or bellows to break or fail.

Refer to the *P470 Electronic Pressure Control with Display Product/Technical Bulletin (LIT-125528)* for important product application information.

Features

- Easy-to-read LCD
- Three field-selectable pressure ranges between 0 psi and 750 psi
- 24 VAC, and 120 VAC or 208/240 VAC models
- Lockable, three-button, front-panel touchpad
- Built-in, adjustable, anti-short cycle time-delay

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- Uses an economical and versatile transducer and wiring harness

Repair information

The P470 Electronic Pressure Controls and P499 or P599 Series Electronic Pressure Transducers are not field repairable. If you have a problem with the control or transducer, contact a Johnson Controls® and PENN® sales representative for a replacement.

Selection chart

ⓘ **Note:** P470 Controls do not include a transducer or wiring harness. A P499 and P599 transducer and a wiring harness must be purchased separately. Match the transducer to the selected pressure range.

Table 1: Selection chart

Item	Product code number	Description
P470 (Low-voltage) Electronic Pressure Control with Display	P470FB-1C	Low voltage (less than 30 VAC) Electronic Pressure Control with Display Supply voltage: 24 VAC Class 2 transformer (See Technical specifications for complete relay electrical ratings.)
P470 (Line-voltage) Electronic Pressure Control with Display	P470EB-1C	Line voltage Electronic Pressure Control with Display Supply voltage: 120 VAC or 208/240 VAC See Technical specifications for complete relay electrical ratings.
P499 and P599 transducers[1]	P499RAP-101C P499RAP-101K P599RAPS101C P599RAPS101K	0 psi to 100 psi pressure transducer with 1/8 in. NPT male fitting
	P499RCP-101C P499RCP-101K P599RCPS101C P599RCPS101K	0 psi to 100 psi pressure transducer with 1/4 in. SAE (Schrader®) female fitting with integral valve depressor
	P499RAP-105C P499RAP-105K P599RAPS105C P599RAPS105K	0 psi to 500 psi pressure transducer with 1/8 in. NPT male fitting
	P499RCP-105C P499RCP-105K P599RCPS105C P599RCPS105K	0 psi to 500 psi pressure transducer with 1/4 in. SAE (Schrader) female fitting with integral valve depressor
	P499RAP-107C P499RAP-107K P599RAPS107C P599RAPS107K	0 psi to 750 psi pressure transducer with 1/8 in. NPT male fitting
	P499RCP-107C P499RCP-107K P599RCPS107C P599RCPS107K	0 psi to 750 psi pressure transducer with 1/4 in. SAE (Schrader) female fitting with integral valve depressor

Table 1: Selection chart

Item	Product code number	Description
Wiring harnesses for P499 or P599 transducers	WHA-PKD3-200C	6 ft 6 1/2 in. (2 m) 3-wire cable with plug-in connector for P499 or P599 transducer
	WHA-PKD3-400C	13 ft 3 in. (4 m) 3-wire cable with plug-in connector for P499 or P599 transducer
	WHA-PKD3-600C	19 ft 8 in. (6 m) 3-wire cable with plug-in connector for P499 or P599 transducer

1 The standard P499 and P599 transducers listed in this table are for sale as single-piece items. P499 and P599 transducer product code numbers that end in -xxxC are transducers only. Product code numbers that end in -xxxK are kits, and include a transducer and a 2 m (6.6 ft) wire harness.

Refer to the *P499 Series Electronic Pressure Transducers Product/Technical Bulletin* (LIT-12011190) or the *P599 Electronic Pressure Transducer Product/Technical Bulletin* (LIT-12012446) for more information.

Technical specifications

Table 2: Output relay contacts electrical ratings

	P470EB-1			P470FB-1
	120 VAC	208 VAC	240 VAC	24 VAC
Horsepower N.O. (N.C.)	1 (1/4)	1 (1/3)	1 (1/2)	100 VA, 30 VAC maximum, Class 2
Full load ampere N.O. (N.C.)	16 (5.8)	9.2 (4.0)	8.0 (4.9)	
Locked rotor ampere N.O. (N.C.)	96 (34.8)	55.2 (24)	498 (29.4)	
Non-inductive ampere N.O. (N.C.)	15 (10)	10 (10)	10 (10)	
Pilot duty	125 VA (N.O.) at 24 VAC to 240 VAC 125 VA (N.C.) at 120 VAC to 240 VAC 50 VA (N.C.) at 24 VAC			

Table 3: P470 Electronic Pressure Control with Display

Specification	Description		
Operating pressure ranges	0 psi–100 psi	0 psi–500 psi	50 psi–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	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		
Transducer type	P499 or P599 Series Electronic Pressure Transducer		
Ambient temperature at control	Operating: -30°F to 140°F (-34°C to 60°C) Shipping: -40°F to 185°F (-40°C to 85°C)		
Ambient humidity at operating control	0% to 95% RH noncondensing; 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		

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Product warranty

This product is covered by a limited warranty, details of which can be found at www.johnsoncontrols.com/buildingswarranty.

Software terms

Use of the software that is in (or constitutes) this product, or access to the cloud, or hosted services applicable to this product, if any, is subject to applicable terms set forth at www.johnsoncontrols.com/techterms. Your use of this product constitutes an agreement to such terms.

Single point of contact

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