Expansion Panels - Heating, Ventilating, and Air Conditioning (HVAC) Catalog Page

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Description

Expansion panels provide a platform for field-built custom or standard panel solutions. The control panel is pre-assembled and contains a power supply, wire management hardware, DIN rails, a perforated sub-panel, and a 24 VAC distribution terminal block that compresses the field assembly time. Digital controllers and other required components are obtained and installed separately.

The design of the Johnson Controls® panel enclosures provide a solid protection package for the intelligent devices in the building automation system. The National Electrical Manufacturers' Association (NEMA) rated control panel enclosures increase flexibility and efficiency with installations. The control panel enclosures are compliant with UL and Canadian safety standards.

The NEMA/UL Type 1 rated enclosures include a silk-screened Johnson Controls logo and a lift-off door with a slotted latch.

The NEMA/UL Type 3R rated enclosures include a silk-screened Johnson Controls logo and a door on lift-off hinges with a draw pull latch. The draw pull latch enables the use of a padlock. The door is seam-free at the sides, front, and back and also has a drip-shield and gasket on top. The enclosures feature a removable cover for easy mounting and access, and protect components in applications subject to rain, sleet, snow, or dripping water.

The NEMA/UL Type 3R/4/4X/12/13 rated enclosures include a silk-screened Johnson Controls logo and a continuous hinged door with a fast-operating clamp assembly. The door has an oil-resistant gasket, continuously welded and smooth seams, and a rolled lip around three sides of the door and the enclosure opening. You can detach the door by removing the continuous hinge pin. The hasp and staple attached enables the use of a padlock.

The expansion panel includes a steel or aluminum enclosure with perforated subpanel, a pre-mounted DIN rail, wire ducts, 24 VAC distribution terminal block, and a 96 VA power supply with convenience outlets. One model contains a single 40 VA power supply, other models have an additional 96 VA transformer.

For additional NEMA ratings, enclosure materials, and customizations, contact the Custom Panel Group at BE-CustomPanelGroup@jci.com.

Features

- Flexibility to customize the expansion panel assembly to a wide variety of solutions that use basic panel components
- Additional items, such as digital controllers, input/output modules, relays, and contractors, are sourced locally and field mounted on the panel
- Five available sizes, all in a consistent layout
- Distribution terminal block, which provides additional connections for 24 VAC supply
- Available in NEMA/UL Type 1, NEMA/UL Type 3R, and NEMA/UL Type 3R/4/4X/12/13 rated enclosure models
- Silk-screened Johnson Controls logo on the enclosure door
- 16-gauge steel construction with industry-standard ANSI 61 gray powder-coat finish for the NEMA/UL Type 1 and 3R enclosures

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- Type 5052-H32 aluminum for the NEMA/UL Type 3R/4/4X/12/13 enclosures along with stainless steel door clamp assemblies
- UL 50 enclosure, cUL - CAN/CSA C22.2 No. 14-05 meet local and national code requirements for the United States and Canada (cULus listed)

Repair information

If the expansion panel fails to operate within its specifications, replace the unit. For a replacement expansion panel, contact the nearest Johnson Controls® representative.

Selection charts

Table 1: NEMA/UL Type 1 Expansion panels (dimensions in W x H x D)

Product code number	Description
PA0000004GC0	Expansion panel, 12 in. x 16 in. x 6.62 in. (305 mm x 406 mm x 168 mm) enclosure, 40 VA power supply, wire duct, and a 5-point 24 VAC distribution terminal block
PA0000001FH0	Expansion panel, 20 in. x 16 in. x 6.62 in. (508 mm x 406 mm x 168 mm) enclosure, 96 VA power supply, wire duct, and a 5-point 24 VAC distribution terminal block
PA0000001AH0	Expansion panel, 24 in. x 20 in. x 6.62 in. (610 mm x 508 mm x 168 mm) enclosure, 96 VA power supply, wire duct, and a 5-point 24 VAC distribution terminal block
PA0000002AH0	Expansion panel, 24 in. x 20 in. x 6.62 in. (610 mm x 508 mm x 168 mm) enclosure, 96 VA power supply, wire duct, 10-point 24 VAC distribution terminal block, and additional 96 VA transformer
PA0000001EH0	Expansion panel, 24 in. x 24 in. x 6.62 in. (610 mm x 610 mm x 168 mm) enclosure, 96 VA power supply, wire duct, and a 5-point 24 VAC distribution terminal block
PA0000002EH0	Expansion panel, 24 in. x 24 in. x 6.62 in. (610 mm x 610 mm x 168 mm) enclosure, 96 VA power supply, wire duct, 10-point 24 VAC distribution terminal block and additional 96 VA transformer
PA0000001BH0	Expansion panel, 36 in. x 24 in. x 6.62 in. (914 mm x 610 mm 168 mm) enclosure, 96 VA power supply, and a 5-point 24 VAC distribution terminal block
PA0000002BH0	Expansion panel, 36 in. x 24 in. x 6.62 in. (914 mm x 610 mm x 168 mm) enclosure, 96 VA power supply, 10-point 24 VAC distribution terminal block, and additional 96 VA transformer
P2BBN-00001N00	Expansion panel, 24 in. x 20 in. x 9.25 in. (610 cm x 508 mm x 235 mm) enclosure, 96 VA power supply, wire duct, 5-point distribution block, suitable for use with ring manager IP network system
P2DBN-00002N00	Expansion panel, 36 in. x 24 in. x 9.25 in. (914 mm x 610 mm x 235 mm) enclosure, 96 VA power supply, wire duct, 10-point distribution block, additional 96 VA transformer, suitable for use with ring manager IP network system
P2DBN-00001N00	Expansion panel, 36 in. x 24 in. x 9.25 in. (914 mm x 610 mm x 235 mm) enclosure, 96 VA power supply, wire duct, 5-point distribution block, suitable for use with ring manager IP network system

Table 2: NEMA/UL Type 3R Expansion panels (dimensions in W x H x D)

Product code number	Description
PA0000001FA0	Expansion panel, 20 in. x 16 in. x 6 in. (508 mm x 406 mm x 152 mm) enclosure, 96 VA power supply, wire duct, and a 5-point 24 VAC distribution terminal block
PA0000001AA0	Expansion panel, 24 in. x 20 in. x 8 in. (610 mm x 508 mm x 203 mm) enclosure, 96 VA power supply, wire duct, and a 5-point 24 VAC distribution terminal block
PA0000002AA0	Expansion panel, 24 in. x 20 in. x 8 in. (610 mm x 508 mm x 203 mm) enclosure, 96 VA power supply, wire duct, 10-point 24 VAC distribution terminal block and additional 96 VA transformer
PA0000001EA0	Expansion panel, 24 in. x 24 in. x 8 in. (610 mm x 610 mm x 203 mm) enclosure, 96 VA power supply, wire duct, and a 5-point 24 VAC distribution terminal block
PA0000002EA0	Expansion panel, 24 in. x 24 in. x 8 in. (610 mm x 610 mm x 203 mm) enclosure, 96 VA power supply, wire duct, 10-point 24 VAC distribution terminal block and additional 96 VA transformer
P2DCN-00001N01	Expansion panel, 24 in. x 36 in. x 8 in. (610 mm x 914 mm x 203 mm) enclosure, 96 VA power supply, and a 5-point 24 VAC distribution terminal block
P2DCN-00002N01	Expansion panel, 24 in. x 36 in. x 8 in. (610 mm x 914 mm x 203 mm) enclosure, 96 VA power supply, 10-point 24 VAC distribution terminal block and additional 96 VA transformer

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Table 2: NEMA/UL Type 3R Expansion panels (dimensions in W x H x D)

Product code number	Description
P2ECN-00001N01	Expansion panel, 30 in. x 42 in. x 8 in. (762 mm x 1067 mm x 203 mm) enclosure, 96 VA power supply, and a 5-point 24 VAC distribution terminal block
P2ECN-00002N01	Expansion panel, 30 in. x 42 in. x 8 in. (762 mm x 1067 mm x 203 mm) enclosure, 96 VA power supply, 10-point 24 VAC distribution terminal block and additional 96 VA transformer

Table 3: NEMA/UL Type 3R/4/4X/12/13 Expansion panels (dimensions in W x H x D)

Product code number	Description
PA0000001FB0	Expansion panel, 20 in. x 16 in. x 6 in. (508 mm x 40.6 cm x 15.2 cm) enclosure, 96 VA power supply, wire duct, and a 5-point 24 VAC distribution terminal block
PA0000001AB0	Expansion panel, 24 in. x 20 in. x 6 in. (610 mm x 406 mm x 203 mm) enclosure, 96 VA power supply, wire duct, and a 5-point 24 VAC distribution terminal block
PA0000001BB0	Expansion panel, 36 in. x 24 in. x 8 in. (914 mm x 610 mm x 203 mm) enclosure, 96 VA power supply, wire duct, and a 5-point 24 VAC distribution terminal block
PA0000001EB0	Expansion panel, 24 in. x 24 in. x 8 in. (610 mm x 610 mm x 203 mm) enclosure, 96 VA power supply, wire duct, and a 5-point 24 VAC distribution terminal block
PA0000002AB0	Expansion panel, 24 in. x 20 in. x 6 in. (610 mm x 508 mm x 203 mm) enclosure, 96 VA power supply, wire duct, 10-point 24 VAC distribution terminal block, and additional 96 VA transformer
PA0000002EB0	Expansion panel, 24 in. x 24 in. x 8 in. (610 mm x 610 mm x 203 mm) enclosure, 96 VA power supply, wire duct, 10-point 24 VAC distribution terminal block, and additional 96 VA transformer
PA0000002BB0	Expansion panel, 36 in. x 24 in. x 8 in. (914 mm x 610 mm x 203 mm) enclosure, 96 VA power supply, wire duct, 10-point 24 VAC distribution terminal block, and additional 96 VA transformer

Technical specifications

Table 4: Technical specifications

Expansion panels		
Wire size	Ground wire: 14 AWG Controller wires: 16 AWG	
Ambient operating condition	32°F to 122°F (0°C to 50°C) 10% to 90% RH	
Ambient storage condition	-40°F to 176°F (-40°C to 80°C) 5% RH to 95% RH	
Agency compliance	Enclosure UL 50 Rated, cUL-CAN/CSA C22.2 No. 14-05	
Weights	**Code number**	**Weight**
	PA0000004GC0	21 lbs (9.5 kg)
	PA0000001Fx0	32 lbs (14.5 kg)
	PA0000001Ax0	42 lbs (19 kg)
	PA0000002Ax0	47 lbs (21.3 kg)
	PA0000001Ex0	48 lbs (21.8 kg)
	PA0000002Ex0	53 lbs (24 kg)
	PA0000001Bx0	75 lbs (34 kg)
	PA0000002Bx0	80 lbs (36.3 kg)
	P2BBN-00001N00	46 lbs (20.9 kg)
	P2DBN-00001N00	77 lbs (35 kg)
	P2DBN-00002N00	82 lbs (37.2 kg)
Material type	NEMA/UL Type 1: Steel NEMA/UL Type 3R: Steel NEMA/UL Type 3R/4/4X/12/13: Type 5052-H32 aluminum	

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Table 4: Technical specifications

Expansion panels	
Enclosure finish	NEMA/UL Type 1: ANSI 61 gray polyester powder coating, inside and outside, over phosphatized surfaces NEMA/UL Type 3R: ANSI 61 gray polyester powder coating, inside and outside, over phosphatized surfaces NEMA/UL Type 3R/4/4X/12/13: Brushed aluminum
Door type	NEMA/UL Type 1: Lift off NEMA/UL Type 3R: Lift off NEMA/UL Type 3R/4/4X/12/13: Stainless steel hinge
Latch type	NEMA/UL Type 1: Slotted latch NEMA/UL Type 3R: Draw pull latches NEMA/UL Type 3R/4/4X/12/13: Stainless steel door clamps plus a hasp and staple for padlocking
Miscellaneous	NEMA/UL Type 3R/4/4X/12/13: Oil-resistant gasket and a door-mounted data pocket

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 end-user license, open-source software information, and other 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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