

NEMA Heavy-Duty Industrial Controls

Overview/Product Selection



700-P

Bulletin 700-P and 700-PK — Direct Drive™ Convertible Contact Cartridge Relays

- NEMA and IEC ratings
- 600V maximum AC/DC
- Accessories for field installation: Adder Decks, time delay, latching, surge suppressors, mounting strip
- Contact Ratings: (10 A) 700-CP1, (20 A) 700-CPM, (35 A) 700-CPH, (Low Power) 700-CPR
- For machine tool and other heavy-duty applications
- Can accommodate ring tongue terminals
- Integral DIN Rail adapter on AC relays
- Finger-safe protection standard

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Standards

- UL 508
- CSA C22.2, No. 14
- EN/IEC 60947-1, -5-1

Certifications

- cULus Listed (File No. E14840, Guide NKCR/NKCR7)
- ABS Certified

Description

The Bulletin 700-P family of relays has four types of contact cartridges to meet your specific switching requirements. Different cartridges can be combined into one relay to yield a custom-tailored application solution. Time delay, latching attachments, overlapping, and logic reed contacts are available.

Bulletin 700-P relays use standard (10 A) contact cartridges with a double-break and bifurcated design. Bifurcation provides excellent contact reliability and low-contact bounce, while the double-break contact design reduces the possibility of contacts welding and enhances the relay's ability to break DC circuits. These relays are supplied with a max. of 12 contacts (max. 8 N.C.).

Bulletin 700-PK master control relays contain (20 A) master contact cartridges with large single-contact pads on each side of the spanner for twice the current rating to control heavy loads and for master control of a system. The Bulletin 700-PK relay also has the same doublebreak design as the 700-P relay. These relays are supplied with a max. of 12 contacts (max. 8 N.C.). Time delay and latching attachments are available.

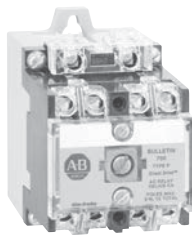
Bulletin 700-P and **-PK** relays combine the advantages of convertible contacts with **Direct Drive**, a construction designed to maintain non-overlap operation between N.O. and N.C. contacts (within published ratings).

Bulletin 700-PH relays contain (35 A) tandem contact cartridges. A jumper kit (Cat No. 700-CPH) allows two (20 A) master contact cartridges to be connected in parallel. A maximum of six poles are supplied, up to four of which can be normally closed. Time delay and latch attachments are available.

Electrically Held Relays

Bulletin 700-P Standard Contact Cartridge*❄

AC-Operated Relays

	Contacts		Contact Arrangement and Markings	Open Type Relay Rail Mount
	N.O.	N.C.		Cat. No.
	2	—	4-Pole Relay K1 A1X ‡ A2X A3X A4X ‡ K2 A1Y A2Y A3Y A4Y	700-P200❄
	4	—		700-P400❄
	6	—	8-Pole Relay B1X § B2X B3X B4X § B1Y B2Y B3Y B4Y	700-P600❄
	8	—		700-P800❄
	10	—	12-Pole Relay C1X * C2X C3X C4X * C1Y C2Y C3Y C4Y	700-P1000❄
	12	—		700-P1200❄

❄AC Coil Voltage Code

The Cat. No. as listed is incomplete. Select a voltage suffix code from the table below to complete the Cat. No. Example: **Cat. No. 700-P200❄** becomes **Cat. No. 700-P200A48**. For other coil voltages, consult your local Rockwell Automation sales office or Allen-Bradley distributor.

Hz	24	48	110	110-115	115-120	120	127	200-208	220-230	230-240	277	347	380	415	440-480	460-480	500	575-600
50	B24	B48	A1❄	B11 †	—	—	B27	—	B22	B2	—	—	B3	B41	B44	—	B50	—
60	A24	A48	—	—	A1❄	B11 †	—	A20	A22	A2	A27	A35	—	—	—	A4	—	A6

❄ Optimized for 115...120V, 60 Hz. Operates satisfactorily at 110V, 50 Hz. † Optimized for 110...115V, 50 Hz. Operates satisfactorily at 120V, 60 Hz.

‡ Location of contacts in 2-pole relays. § Location of contacts in 6-pole relays: 4-pole relay plus the two contacts indicated.

* Location of contacts in 10-pole relays: 8-pole relays plus the two contacts indicated.

* **Normally closed contacts:** The normally open contacts can easily be changed to normally closed in the field. Relays can be supplied with N.C. contacts.

❄ **Overlap contacts:** To order a relay containing one pair: Use **Cat. No. 700-PZ110**. To order a relay containing two pairs: Use **Cat. No. 700-PZ220**. N.O. contact closes before N.C. contact opens. AC Ratings: NEMA A600, DC Ratings: P161.

➤ See Accessories on page 9-123 for NEMA Type 1, Type 4/4X, and Type 7/9 enclosures available for field installation.





Type		700-P, PL, PT						700-PK, PKL, PKT						700-PH							
Electrical																					
Contact Rating Continuous		10 A @ 600V AC 5 A @ 600V DC						20 A @ 600V AC 10 A @ 600V DC						35 A @ 600V AC 20 A @ 600V DC							
Ratings Make/Break	AC	NEMA A600						2 x NEMA A600						2 x NEMA A600							
	DC	NEMA P600						2 x NEMA P600						2 x NEMA P600							
Additional Contact Ratings for AC single-phase loads		—						3 Hp @ 240V AC - N.O. 2 Hp @ 240V AC - N.O./N.C. 1 Hp @ 120V AC - N.O./N.C. 20 A Resistive Heating to 600V AC 20 A Tungsten Lighting Load to 480V AC						5 Hp @ 240V AC - N.O. 3 Hp @ 240V AC - N.O./N.C. 2 Hp @ 120V AC - N.O./N.C. 35 A General Use At 0.75 PF to 600V AC 35 A Tungsten Lighting Load to 480V AC							
DC Current Ratings Make/Break		Cartridge Cat. No. 700-CP1						Cartridge Cat. No. 700-CPM						Cartridge Cat. No. 700-CPH							
DC Switching		Volts DC																			
		Contacts in Series	24	64	125	250	500	600	24	64	125	250	500	600	24	64	125	250	500	600	
			5 A	2.2 A	1.1 A	.55 A	.24 A	.2 A	10 A	5 A	2.2 A	.55 A	.24 A	.2 A	10 A	5 A	2.2 A	.55 A	.24 A	.2 A	
		1	5 A	2.2 A	1.1 A	.55 A	.24 A	.2 A	10 A	5 A	2.2 A	.55 A	.24 A	.2 A	10 A	5 A	2.2 A	.55 A	.24 A	.2 A	
		2	10 A	10 A	5 A	2 A	.7 A	.5 A	20 A	10 A	5 A	2 A	.7 A	.5 A	20 A	10 A	5 A	2 A	.7 A	.5 A	
		3	—	—	7 A	3 A	1.5 A	1.0 A	—	15 A	7 A	3 A	1.5 A	1.0 A	—	15 A	7 A	3 A	1.5 A	1.0 A	
		4	—	—	10 A	5 A	2.5 A	1.5 A	—	20 A	10 A	5 A	2.5 A	1.5 A	—	20 A	10 A	5 A	2.5 A	1.5 A	
Coil Voltage Range		AC	85...110%						85...110%						85...110%						
		DC	80...110%						80...110%						80...110%						
		Battery Charging	85...115%						85...115%						85...115%						
Coil Consumption P-PH-PK		A	50 Hz			60 Hz			50 Hz			60 Hz			50 Hz			60 Hz			
			Inrush	132VA*			138VA*			132VA*			138VA*			132VA*			138VA*		
		C	Sealed	19.3VA*			19VA*			19.3 VA*			19VA*			19.3VA*			19VA*		
			D	12.7VA*						12.7VA*						12.7VA*					
PLL - PKLL AC Latch Unit		Inrush	15VA*			15.6VA*			5VA*			15.6VA*			15VA*			15.6VA*			
		Sealed	5.4VA*			5.5VA*			5.4VA*			5.5VA*			5.4VA*			5.5VA*			
PLL - PKLL DC Latch Unit		Unlatch	35VA*						35VA*						—						
		Intermittent	35 W*						35 W*						—						
Reset Time	PT - PKT	75 ms						75 ms						—							
Minimum Pulse	PLL-PKLL	75 ms						75 ms						—							
Mechanical																					
Operating Time		Pickup	AC - 10...20 ms DC - 30...50 ms						AC - 10...20 ms DC - 30...50 ms						AC - 10...20 ms DC - 30...50 ms						
		Dropout	AC - 10...20 ms DC - 20...33 ms						AC - 10...20 ms DC - 20...33 ms						AC - 10...20 ms DC - 20...33 ms						
Mechanical Life		10 million operations																			
Construction																					
Contact Arrangement		Up to 12 Poles, Convertible to N.O. or N.C. (8 N.C. Maximum)						Up to 12 Poles, Convertible to N.O. or N.C. (8 N.C. Maximum)						Up to 6 Poles, Convertible to N.O. or N.C. (4 N.C. Maximum)							
Contact Material		Nickel Silver						Silver Cadmium Oxide						Silver Cadmium Oxide							
Mounting		Panel or Strip Mount Horizontal Mounting Recommended						Panel or Strip Mount Horizontal Mounting Recommended						Panel or Strip Mount Horizontal Mounting Recommended							
Environmental																					
Temperature		Operating*	-20...+65 °C (-4...149 °F)						-20...+65 °C (-4...149 °F)						-20...+65 °C (-4...149 °F)						
		Storage	-40...+65 °C (-40...149 °F)						-40...+65 °C (-40...149 °F)						-40...+65 °C (-40...149 °F)						
Certifications		CSA Certified, CSA File #LR1234, UL Listed, UL File #E14840, Guide NKCR, CE Certified, ABS																			
Standards		UL 508, CSA C22.2 No. 14, EN/IEC 60947-1, -5-1																			
Wire Terminations																					
Wire size per UL/CSA		#18 AWG...(2) #12 AWG																			
Tightening Torque		8...12 lb•in (0.9...1.4 N•m)																			

* Temperature inside the panel.

* Average value for all coils within range. For values on a specific coil voltage, contact your local Rockwell Automation sales office or Allen-Bradley distributor.