

Heavy-Duty Industrial Safety Relays

Overview/Product Selection



Bulletin 700S-P/700S-PK — Heavy-Duty Safety Control Relays

Features

- Mechanically linked contacts meet IEC 947-5-1-L
- 2...12 poles – all mechanically linked
- Red cover for easy identification of safety circuits
- Tamper resistant cover helps prevent changes which could jeopardize safety
- IEC mechanically linked contacts symbol displayed on front
- Visual indication of contact state
- Ideal for use in safety circuits

Table of Contents

Specifications..... 9-129
Approximate
Dimensions..... 9-130

Certifications

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

Standards Compliance

UL 508
CSA C22.2 No. 14

Product Selection

Bulletin 700S-P (10 A) Safety Control Relays — AC and DC Coil Voltages

Contacts		AC Coils	24V DC Coils	
		Open Type Panel Mount Relay Rail Mount	Open Type Panel Mount Relay Rail Mount	Open Type DIN Rail Mount
N.O.	N.C.	Cat. No.*	Cat. No.*	Cat. No.*
3	1	700S-P310	700S-DCP310Z24	700S-DCP310DZ24
2	2	700S-P220	700S-DCP220Z24	700S-DCP220DZ24
7	1	700S-P710	700S-DCP710Z24	700S-DCP710DZ24
6	2	700S-P620	700S-DCP620Z24	700S-DCP620DZ24
5	3	700S-P530	700S-DCP530Z24	700S-DCP530DZ24
4	4	700S-P440	700S-DCP440Z24	700S-DCP440DZ24
3	5	700S-P350	700S-DCP350Z24	700S-DCP350DZ24
10	2	700S-P1020	700S-DCP1020Z24	700S-DCP1020DZ24

⊗AC Coil Voltage Code

The Cat. No. as listed is incomplete. Select a coil voltage code from the table below to complete the Cat. No.

Example: **Cat. No. 700S-P310** becomes **Cat. No. 700S-P310A1** for a 120V AC coil.

[V]	24	115-120	230-240	460-480
60 Hz	A24	A1	A2	A4

* For other coil voltages, consult your local Rockwell Automation sales office or Allen-Bradley distributor.

IEC 947-5-1 Annex L has 2 requirements for a relay to meet for mechanically linked contacts:

1.) If a N.O. contact welds, all the N.C. contacts will remain open and meet a 2500V impulse test.

2.) If a N.C. contact welds, all the N.O. contacts will remain open and meet a 2500V impulse test.

Bul. Nos. 700S-P and 700S-DCP relays meet these requirements including the 2500V impulse test.

The relays shown on this page are shipped from the factory with the Bul. 700-CPS safety cartridge installed and cannot be converted to N.O. or N.C. in the Field.

Bulletin 700S-PK (20 A) Safety Control Relays

Contacts		Coil Voltage	Cat. No.
N.O.	N.C.		
7	1	110V AC	700S-PK710A1
6	2	110V AC	700S-PK620A1
5	3	110V AC	700S-PK530A1
4	4	110V AC	700S-PK440A1
3	5	110V AC	700S-PK350A1
10	2	110V AC	700S-PK1020A1
3	1	110V AC	700S-PK310A1
7	1	24V DC	700S-DCPK710Z24
6	2	24V DC	700S-DCPK620Z24
5	3	24V DC	700S-DCPK530Z24
4	4	24V DC	700S-DCPK440Z24
3	5	24V DC	700S-DCPK350Z24
10	2	24V DC	700S-DCPK1020Z24
3	1	24V DC	700S-DCPK310Z24

Type		700S-P						
Electrical								
Contact Rating Continuous		10 A @ 600V AC 5 A @ 600V DC						
Ratings Make/Break	AC	NEMA A600						
	DC	NEMA P600						
Minimum Contact Switching Ratings		10V, 50 mA						
DC Switching	Contacts in Series	Volts DC						
		24V	64V	125V	250V	500V	600V	
	1	5 A	2.2 A	1.1 A	0.55 A	0.24 A	0.2 A	
	2	10 A	10 A	5 A	2 A	0.7 A	0.5 A	
	3	—	—	7 A	3 A	1.5 A	1.0 A	
	4	—	—	10 A	5 A	2.5 A	1.5 A	
Contact Electrical Life—Resistive Loads		1.5 million operations at 10A break at 120V AC 14 million operations at 1A break at 120V AC 6 million operations at 1A break at 24V DC						
Coil Voltage Range*	AC	85...110%						
	DC	80...110%						
	Battery Charging	85...115%						
Coil Consumption		50 Hz			60 Hz			
AC	Inrush	132 VA			138 VA			
	Sealed	19.3 VA			19 VA			
DC	Inrush	12.7 W						
	Sealed	12.7 W						
Mechanical								
Mechanically Linked Contacts		All contacts are mechanically linked per IEC 947-5-1 annex L for 2 to 12 poles						
Operating Time	Pickup	AC – 10...20 ms DC – 30...50 ms						
	Dropout	AC – 10...20 ms DC – 20...33 ms						
Mechanical Life		10 million operations						
Construction								
Contact Arrangement		2 to 12 Poles, Double Break Contacts N.O. or N.C. (8 N.C. Maximum)						
Contact Material/Design		Silver Nickel/Bifurcated						
Mounting		Panel mount or mount on 700-MP Relay or DIN Rail Horizontal Mounting Recommended						
Environmental								
Operating Temperature†		-20...+65 °C (-4...+149 °F)						
Storage Temperature		-40...+65 °C (-40...+149 °F)						
Wire Terminations								
Wire size per UL/CSA		#18 AWG...(2) #12 AWG						
Tightening Torque		8...12 lb•in (0.9...1.4 N•m)						

* Coil voltage required for proper operation (percent of rated coil voltage).

† Temperature inside the panel.

Type		700S-PK						
Electrical								
Contact Rating Continuous		20 A @ 600V AC 10 A @ 600V DC						
Ratings Make/Break	AC	NEMA A600						
	DC	NEMA P600						
Additional Contact Ratings for AC Single-Phase Loss		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						
DC Current Ratings Make/Break		Cartridge Cat. No. 700-CMS						
DC Switching	Contacts in Series	Volts DC						
		24V	64V	125V	250V	500V	600V	
	1	10 A	5 A	2.2 A	0.55 A	0.24 A	0.2 A	
	2	20 A	10 A	5 A	2 A	0.7 A	0.5 A	
	3	—	15 A	7 A	3 A	1.5 A	1.0 A	
	4	—	20 A	10 A	5 A	2.5 A	1.5 A	
Coil Voltage Range★	AC	85...110%						
	DC	80...110%						
	Battery Charging	85...115%						
Coil Consumption		50 Hz			60 Hz			
AC	Inrush	132 VA			138 VA			
	Sealed	19.3 VA			19 VA			
DC	Inrush	12.7 W						
	Sealed	12.7 W						
Mechanical								
Mechanically Linked Contacts		All contacts are mechanically linked per IEC 947-5-1 annex L for 2 to 12 poles						
Operating Time	Pickup	AC – 10...20 ms DC – 30...50 ms						
	Dropout	AC – 10...20 ms DC – 20...33 ms						
Construction								
Contact Arrangement		2 to 12 Poles, Convertible to N.O. or N.C. (8 N.C. Maximum)						
Contact Material/Design		Silver Cadmium Oxide						
Mechanical (Mechanically-Linked Contacts)		All contacts, are mechanically linked per IEC 947-5-1 Annex L for 2 to 12 poles						
Mounting		Panel mount or strip mount recommended						
Environmental								
Operating† Temperature		-20...+65 °C (-4...+149 °F)						
		-40...+65 °C (-40...+149 °F)						
		CSA certified, CSA file #LR1234, UL listed, UL file #E14840, Guide NKCR, CE certified IEC 947-5-1, IEC 336-1 CENELEC, BS 4794, VDE 0660, Listed: U.S. Coast Guard and American Bureau of Shipping, UL 508, CSA22.2						
Wire Terminations								
Wire size per UL/CSA		#18 AWG...(2) #12 AWG						
Tightening Torque		8...12 lb•in (0.9...1.4 N•m)						

* Coil voltage required for proper operation (percent of rated coil voltage).

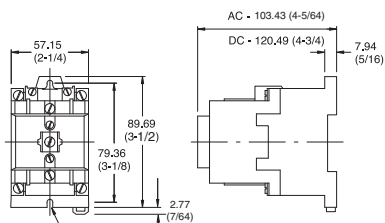
† Temperature inside the panel.

Bulletin 700S-P

Heavy-Duty Industrial Safety Relays

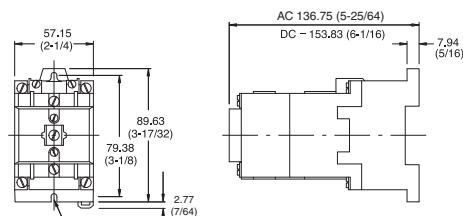
Approximate Dimensions

Dimensions are shown in millimeters (inches). Dimensions are not intended for manufacturing purposes.



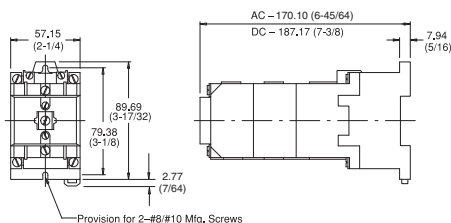
2- and 4-pole Bulletin 700S-P Relay

Approximate Shipping Weight: AC – 0.68 kg (1.5 lb), DC – 1.34 kg (2.95 lb)



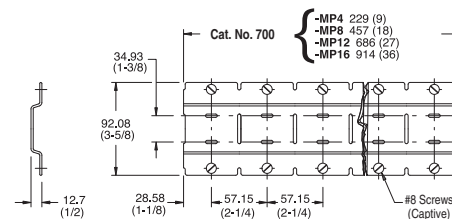
6- and 8-pole Bulletin 700S-P Relay

Approximate Shipping Weight: AC – 0.79 kg (1.75 lb), DC – 1.45 kg (3.20 lb)

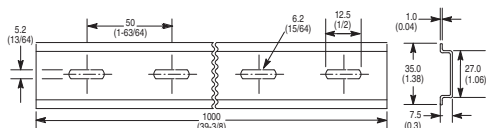


10- and 12-pole Bulletin 700S-P

Approximate Shipping Weight: AC – 1.02 kg (2.25 lb), DC – 1.68 kg (3.7 lb)



Relay Rail



DIN Rail