

## 700-R Sealed Switch Relays

- Sealed contacts
- Extremely long mechanical and electrical life
- Hazardous locations Class I, Div 2 Groups A, B, C, D
- Harsh environments
- Suitable for applications with shock and vibration
- High reliability circuit integrity



No. of Poles	Electrically Held		Contact Arrangement and Markings‡	AC-Operated Relay Only	
	Contacts			Open Type	DC-Operated Relay Only
	N.O.	N.C.		Cat. No.	Cat. No.
0	0	0	Relay without Contact	700-R000⊗	700DC-R000⊗
2	2	0		700-R200⊗	700DC-R200⊗
	1	1		700-R110⊗	700DC-R110⊗
	0	2		700-R020⊗	700DC-R020⊗
4	4	0		700-R400⊗	700DC-R400⊗
	3	1		700-R310⊗	700DC-R310⊗
	2	2		700-R220⊗	700DC-R220⊗
	1	3		700-R130⊗	700DC-R130⊗
	0	4		700-R040⊗	700DC-R040⊗
6	6	0		700-R600⊗	700DC-R600⊗
	5	1		700-R510⊗	700DC-R510⊗
	4	2		700-R420⊗	700DC-R420⊗
	3	3		700-R330⊗	700DC-R330⊗
	2	4	700-R240⊗	700DC-R240⊗	
	1	5	700-R150⊗	700DC-R150⊗	
	0	6	700-R060⊗	700DC-R060⊗	
8	8	0	700-R800⊗	700DC-R800⊗	
	7	1	700-R710⊗	700DC-R710⊗	
	6	2	700-R620⊗	700DC-R620⊗	
	5	3	700-R530⊗	700DC-R530⊗	
	4	4	700-R440⊗	700DC-R440⊗	
	3	5	700-R350⊗	700DC-R350⊗	
	2	6	700-R260⊗	700DC-R260⊗	
	1	7	700-R170⊗	700DC-R170⊗	
	0	8	700-R080⊗	700DC-R080⊗	


‡ Arrangement displays all N.O. contacts.  
 ◆ Location of contacts in 6-pole relays.  
 ▲ Polarity must be observed for DC voltage (700 DC) relays.  
 ◆ Location of contacts in 2-pole relays.

### ⊗ Coil Voltage Code

The Cat. No. as listed is incomplete. Select a voltage code from the table below to complete the Cat. No. Example: Cat. No. 700-R000⊗ becomes Cat. No. 700-R000A24.

Type of Relay	[V]	Coil Volts							
		24	48	110	115-125	120	220	230-250	240
AC	25, 50, 60 Hz	—	—	A1	—	—	A2	—	—
		A24	—	—	—	A1	—	—	A2
DC	—	Z24	Z48	—	Z1	—	—	Z2	—

## Accessories - 700-R Relays

Photo			Description	Pkg. Qty.	Cat. No.	
			<b>Relay Rail</b> Simplifies panel layout. These indexed strips are easily cut to the required length and bolted, riveted, or spot-welded in place. Relays are installed adjacent to one another on the mounting strip with the captive mounting screws provided. Rows of relays on Relay Rail form their own wiring trough. Can be used with the following relays: 700P, 700DC-P, 700S-P, 700N, 700-R, 700-RTC	4 Relays per Strip	700-MP4	
				8 Relays per Strip	700-MP8	
				12 Relays per Strip	700-MP12	
				16 Relays per Strip	700-MP16	
			<b>DIN (#3) symmetrical hat rail</b> 35 x 7.5 x 1 m	10	199-DR1	
			<b>DIN Rail Adapter</b> Can be used with the following relays: 700-P, 700DC-P, 700S-P, 700-N, 700-R, 700-RTC	1	700-DRA	
			<b>Front Deck</b> A front deck can be attached to 700 2-, 3-, or 4-pole AC and DC Type R relays.	Front Deck with one N.O. Contact Cartridge (700-R Relay)	700-RA10	
				Front Deck with one N.C. Contact Cartridge (700-R Relay)	700-RA01	
				Front Deck with one N.O. Contact Cartridge (700-RM Relay)	700-RB10	
				Front Deck with one N.C. Contact Cartridge (700-RM Relay)	700-RB01	
			<b>Contact Cartridges</b> These cartridges are used to increase the number of poles of a relay. A dummy cartridge is also available to fill empty space not occupied by a contact cartridge.	N.O. Contact Cartridge - Green (700-R Relay)	700-CR5	
				N.C. Contact Cartridge - Yellow (700-R Relay)	700-CR6	
				 N.O. N.C.	"DUMMY" Cartridge - Black (700-R Relay)	700-CR9
Cat. No. 700-CR5	Cat. No. 700-CR6	Cat. No. 700-CR9				
			<b>Surge Suppressor</b> When the circuit to a DC operating coil is opened, the inductive energy stored in the coil can generate very high transient voltages. With the addition of the appropriate surge suppressor, the stored energy is absorbed and dissipated limiting the voltage spikes. A surge suppressor is not required with AC 700-R relays because the AC operating coil transients are suppressed by a full wave rectifier connected to the coil.	12V DC (700-R Relay)	199-FSMA9	
				24V DC (700-R Relay)		1
				48V DC (700-R Relay)		1
				115...125V DC (700-R Relay)	1	199-FSMA10
				230...250V DC (700-R Relay)	1	199-FSMA11

## Specifications - 700-R

**Application Data** – Because of the inherent characteristics of this device, the normally open contacts may close before the normally closed contacts open on energization and the normally closed contacts may close before the normally open contacts open on de-energization.

## Ratings

AC Voltage					DC Voltage			
NEMA Rating Designation	Voltage	Make	Break	Continuous Carrying Current [A]	NEMA Rating Designation	Volts DC	Make/Break	Continuous Carrying Current [A]
B300	Up to 300V AC	120V	30	3	5	46...300	138 VA	5
		240V	15	1.5				
C600	Above 300V AC	480V	3.75	0.375	2.5	5...46	3 A	5
		600V	3.0	0.30				


## Maximum Allowable Off-State Leakage Current

Voltage	Maximum Off-State Leakage Current [mA]
	Type R
24V DC	23
24V AC	23
120V AC	5

## Relay Data

Type	700-R	
Contact Arrangement	Up to 8 poles, available in any combination of N.O. or N.C. contacts	
Contact Material	W (tungsten in a controlled gas atmosphere)	
Coil Voltage Range	24...250V AC 24...250V DC	
Coil Power	Sealed Voltage Range: -15... +10%	5.5 VA, 50/60 Hz 5.5 W DC
	Inrush	5.5 VA, 50/60 Hz 5.5 W DC
Pickup Time	30 ms	
Dropout Time	30 ms	
Operating Temperature	-40...+60 °C (-40...+140 °F)	
Mounting	Panel mount	
Haz. Loc. Ratings	Class I, Division 2, Groups A, B, C, and D	
Standards Compliance	ISA 12.12, CSA C22.2, No. 213, EN/IEC 60947-1, -5-1	
Certifications	cULus Listed (File No. E10314, Guide NOIV/NOIV7), CE Marked	

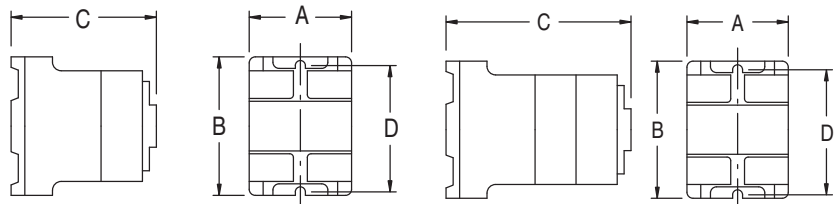
### 700-R Operating Coils

	Coil Volts	700-R 2-...8-Pole AC		700-R 2-...8-Pole DC
		60 Hz	50 Hz	
			24	
	48	77AB134	77AB134	77D166
	110	77AB86	77AB86	—
	115...125	—	—	77D155
	120	77AB86	77AB86	—
	208	—	—	—
	220	77AB83	77AB83	—
	240	77AB83	77AB83	—
	230...250	—	—	77D156

### Dimensions - 700-R

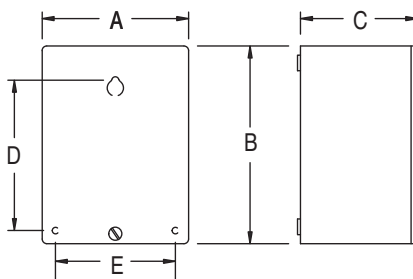
Approximate dimensions are shown in millimeters (inches). Dimensions are not intended for manufacturing purposes.

700-R Relays														
Type of Relay		No. of Poles	Open Type Without Enclosures				Approx. Ship Wt. [kg (lb)]	Type 1 General Purpose Enclosure					Approx. Ship Wt. [kg (lb)]	
			Drawing Number	A Wide	B High	C Deep		D	A Wide	B High	C Deep	D		E
R	700 and 700DC	2...4	1	55.56 (2-3/ 16)	88.90 (3-1/2)	92.25 (3-3/8)	79.38 (3-1/8)	0.91 (2)	104.78 (4-1/8)	185.74 (7-5/ 16)	103.19 (4-1/ 16)	146.05 (5-3/4)	85.73 (3-3/8)	1.81 (4)
		5...8	2	55.56 (2-3/ 16)	88.90 (3-1/2)	111.13 (4-3/8)	79.38 (3-1/8)	1.02 (2-1/4)	112.71 (4-7/ 16)	228.60 (9)	120.65 (4-3/4)	206.38 (8-1/8)	92.08 (3-5/8)	2.49 (5)

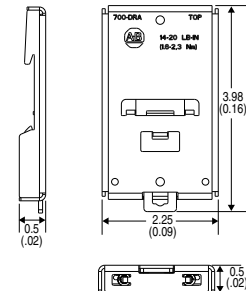


700-R400...

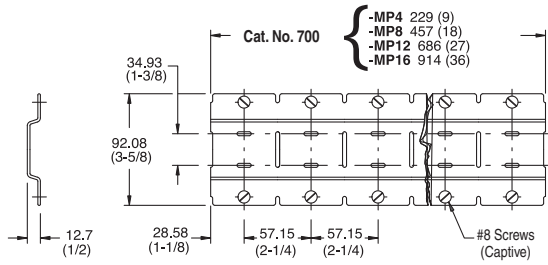
700-R800...



Type 1 Enclosure

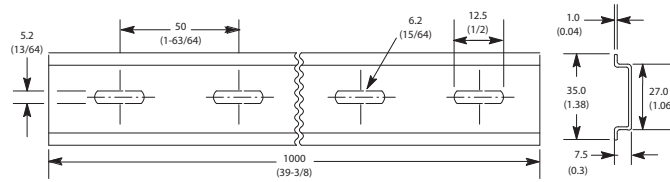


DIN Rail Adapter



Secure the mounting strip with 2 screws at each end relay position. Use a minimum of one screw at the 3rd, 5th, 7th, etc., relay positions. Alternate between upper and lower horizontal slots.

Relay Rail



Cat. No. 199-DR1 DIN Mounting Rail Series B