

# Product Details and Certifications

Cross Reference RA Part Number: 700-HC24A1 D



Product: **700-HC24A1**

Description: 700-HC General Purpose Square w/ Blade Terminal Relay, 4PDT, 7A, Contact, Low Energy Rating: (10V, 10mA), 120V 50/60 Hz



Representative Photo Only (actual product may vary based on configuration sections)

## CONTROL RELAY DATA

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Bulletin Number	700-HC General Purpose Miniature Relay
Contact Rating	Silver Contact
Contact Configuration	4PDT Contact Arrangement
Coil Voltage	120V 50/60 Hz
Relay Option	No Additional Options

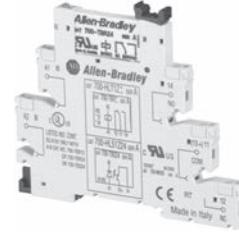
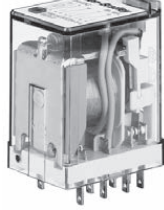
## CERTIFICATIONS AND APPROVALS

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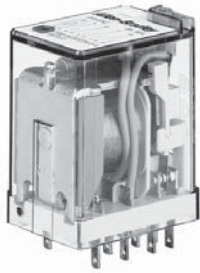
UL  
CE  
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CSA

For UL Certifications Directory:

<http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm>



Bulletin No.	700-HC	700-HK	700-HL	700-HP
<b>Type</b>	Interposing/Isolation Relay	Interposing/Isolation Relay	Interposing/Isolation Relay	Interposing/Isolation Relay
<b>Features</b>	<ul style="list-style-type: none"> <li>Blade-style terminals</li> <li>Standard ON/OFF flag indicator</li> <li>Electrical schematic on face</li> <li>Clear cover for visual inspection</li> <li>Optional push-to-test and manual override</li> <li>Optional LED</li> </ul>	<ul style="list-style-type: none"> <li>Optional pilot light</li> <li>Retainer clip (comes with socket)</li> <li>Low switching capacity</li> <li>Push-to-test &amp; manual override</li> </ul>	<ul style="list-style-type: none"> <li>Ideal for PLC Interfaces</li> <li>Built-in Coil Surge Protection</li> <li>Fully Assembled Relay/Sockets</li> <li>Standard LED</li> <li>Relay or Solid-state Output</li> <li>Optional: Leakage Current Suppression Solution</li> </ul>	<ul style="list-style-type: none"> <li>PCB "Pin Style" mounting</li> <li>5 mm pin spacing</li> </ul>
<b>Contact Ratings</b>				
<b>Contact Form</b>	DPDT, 4PDT	SPDT, DPDT	SPDT 1 N.O. (SSR)	DPDT
<b>Contact Type</b>	Single	Single	Single	Single
<b>Contact Material</b>	AgNi, AgNi + Gold	AgNi, AgNi + Gold	AgSnO	AgNi, AgNi + Gold
<b>Max. operating current under resistive load</b>	10 A (DPDT) 7 A (4PDT)	8 A (DPDT), 16 A (SPDT)	6 A (SPDT), 2 A (SSR DC output), 1 A (SSR AC output)	8 A
<b>Min. permissible load</b>	10V, 10 mA (Gold), 5V, 10 mA or 25V, 2 mA (Silver)	5V 60 mA (Silver), 5V 10 mA (Gold)	12V 6 mA (72 mW) Silver 8V, 2.5 mA (20 mW) Gold	5V 5 mA (50 mW) Gold, 5V 5 mA (300 mW) Silver
<b>Coil Ratings</b>				
<b>Coil Voltage</b>	<b>AC:</b> 6, 12, 24, 120, 240V <b>DC:</b> 6, 12, 24, 48, 110V	<b>AC:</b> 6, 12, 24, 120, 240V <b>DC:</b> 6, 12, 24, 48, 110V	<b>AC:</b> 12, 24, 48, 110, 120, 230, 240V <b>DC:</b> 12, 24, 48, 125, 230, 240V	<b>AC:</b> 6, 12, 24, 120, 240V <b>DC:</b> 6, 12, 24, 48, 110V
<b>Permissible Coil Voltage Variation</b>	80...110% of Nominal Voltage at 50 Hz 80...110% of Nominal Voltage at 60 Hz 80...110% of Nominal Voltage at DC	80...110% of Nominal Voltage at 50 Hz 80...110% of Nominal Voltage at 60 Hz 73...110% of Nominal Voltage at DC	85...110% of Nominal Voltage at 50 Hz 85...110% of Nominal Voltage at 60 Hz 80...110% of Nominal Voltage at DC	80...110% of Nominal Voltage at 50 Hz 80...110% of Nominal Voltage at 60 Hz 73...150% of Nominal Voltage at DC
<b>Electrical Ratings</b>				
<b>Dielectric Withstand Voltage</b>	Pole-to-pole: 1000V Contact-to-coil: 2000V Contact-to-frame: 2000V	Pole-to-pole: 1500V AC Contact-to-coil: 1500V AC Contact-to-frame: 1500V AC	Pole-to-pole: 1000V AC Contact-to-coil: 4000V Contact-to-frame: 1500V	Pole-to-pole: 2000V Contact-to-coil: 5000V
<b>Electric Service Life (cycles)</b>	100 000 minimum	100 000 minimum	100 000 minimum	100 000 minimum
<b>Reference</b>				
<b>Certifications</b>	CE, cULus, cURus, CSA, Lloyds	CE, UL, UR, CSA	CE, cURus, cULus, ABS	CE, cULus, cURus, CSA, Lloyds
<b>Socket Type</b>	700-HN103, 700-HN128, 700- HN104	700-HN121, -HN221 700-HN122, -HN222 700-HN223, -HN224	—	700-HN123, -HN230
<b>Page Number</b>	page 9-34	page 9-39	page 9-45	page 9-58



**Bulletin 700-HC — Miniature Ice Cube Relay**

- 7 or 10 A contact ratings
- 2PDT or 4PDT
- Standard ON/OFF flag indicator
- Blade-style terminals
- Choice of standard silver nickel contacts, or silver nickel with gold-plated contacts for low-energy applications
- Options: LED, push-to-test with manual override option
- Tungsten UL Approvals  
 4-Pole: 5A @ 24V DC  
 2-Pole: 10A @ 24V DC

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**Product Selection**  
**Bulletin 700-HC Miniature Square Base with Blade Terminals**

	Description	Contact Rating	Wiring Diagrams		Coil Voltage	Cat. No. * ⚡
			U.S./Canada	International		
	2PDT 2-Pole 2 Form C Contacts: 10 A = AgNi Contacts	10 A C300 R300 Low energy rating; (10V, 10 mA) 100 mW			12V DC	700-HC22Z12
					24V DC	<b>700-HC22Z24</b>
					24V AC	<b>700-HC22A24</b>
					120V AC	<b>700-HC22A1</b>
					240V AC	<b>700-HC22A2</b>
	4PDT 4-Pole 4 Form C Contacts: 7A = AgNiAu Gold Plated Contacts	7 A Low energy rating; (5V, 10 mA or 25V, 2 mA) 50 mW			6V AC	700-HC14A06
					12V AC	700-HC14A12
					24V AC	<b>700-HC14A24</b>
					120V AC	<b>700-HC14A1</b>
					240V AC	<b>700-HC14A2</b>
					6V DC	700-HC14Z06
					12V DC	<b>700-HC14Z12</b>
					24V DC	<b>700-HC14Z24</b>
					48V DC	700-HC14Z48
					110V DC	700-HC14Z1
					6V AC	700-HC24A06
					12V AC	<b>700-HC24A12</b>
					24V AC	<b>700-HC24A24</b>
					120V AC	<b>700-HC24A1</b>
	240V AC	<b>700-HC24A2</b>				
	6V DC	700-HC24Z06				
	12V DC	<b>700-HC24Z12</b>				
	24V DC	<b>700-HC24Z24</b>				
	48V DC	700-HC24Z48				
	110V DC	<b>700-HC24Z1</b>				

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\* LED Option: Add suffix (-4) to the selected Bulletin 700-HC Relay Cat. No. except for the 240V AC units, add (-4L).  
 ⚡ Push-to-Test and LED Option: Add suffix (-3-4) to the selected Bulletin 700-HC Relay Cat. No., except for the 240V AC units, add (-3-4L).

Specifications



Cat. No. 700-HC...

Electrical Ratings							
Pilot Duty Rating *		NEMA C300, R300					
Rated Thermal Current ( $I_{th}$ )		7 A and 10 A					
Rated Insulation Voltage (U <sub>i</sub> )		250V IEC – 300V UL/CSA					
Contacts	Inductive	700-HC_4		Hp	700-HC22		Hp
		►][◀	◀][►		►][◀	◀][►	
	120V AC	15 A	1.5 A	1/8	15 A	1.5 A	1/3
	240V AC	7.5 A	0.75 A	1/3	7.5 A	0.75 A	3/4
	General Purpose	7 A, 277V AC			10 A, 277V AC		
	Resistive	7 A, 30V DC			10 A, 24V DC		
Min. Low Energy Permissible Load		100 mW (10V, 10 mA) - Silver Contacts 50 mW (5V, 10 mA or 25V, 2 mA) - Gold Contacts					
Permissible Coil Voltage Variation		Pickup: 80...110% of Nominal Voltage at 50 Hz 80...110% of Nominal Voltage at 60 Hz 80...110% of Nominal Voltage at DC		Must Dropout Voltage: 20% of Nominal Voltage at AC 10% of Nominal Voltage at DC			
Coil Consumption ±10%	AC Coils	Inrush	50 Hz			60 Hz	
		Sealed	2.2 VA			1.6 VA	
	DC Coils	1.3 VA			1.1 VA		
		1.0 W					
Max. Allowable Leakage		20% of VA (AC)			10% of W (DC)		
Design Specification/Test Requirements							
Electrical							
Dielectric Withstand Voltage	Pole-to-Pole	1000V					
	Contact to Coil	3600V					
	Contact to Frame	3600V					
Electrical Life (Cycles)		100 000 minimum					
Mechanical							
Degree of Protection (Open Type) IEC 529		IP 20 (Guarded Terminal Sockets)					
Mechanical Life Cycles		20 x 10 <sup>6</sup> (AC) 50 x 10 <sup>6</sup> (DC)					
Switching Frequency Operations		1800/HR					
Coil Voltages		See Product Selection					
Operating Time (ms)	Max. Pickup	10					
	Max. Dropout	3					
Maximum Operating Rate		8 cycles/s					
Environmental							
Temperature	Operating	-30...+55 °C (-22...+131 °F)					
		Storage	-55...+85 °C (-67...+185 °F)				
Altitude			2000 m (6560 ft)				
Insulating Material		Molded High Dielectric Material					
Enclosure		Transparent Dust Cover					
Contact Material		AgNi (700-HC2) AgNi + 5 µm AlI (700-HC1)					
Terminal Markings on Socket		In accordance with EN50 0005					
Sockets		700-HN103, -HN128, -HN104					
Certifications		cURus Recognized (File No. E14843, Guide NRNT2/NRNT8), cULus Listed when used with Bulletin 700-HN103, -HN104, and -HN128 sockets (File No. E14843, Guide NRNT/NRNT7), CE Marked, LR Certified					
Standards		UL 508, CSA 22.2 No. 14, EN/IEC 60947-4-1, EN/IEC 60947-5-1					

\* Performance Data – See this catalog, Important 3.  
\* NEMA Rating Chart is in publication 700-SG003\_-EN-P.

