

# Product Details and Certifications

Cross Reference RA Part Number: 700-HF34A1 B

 Product: **700-HF34A1**

Description: 700-HF General Purpose Miniature Square Base Relay,  
4 PDT, 120V 50/60Hz



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

## **CONTROL RELAY DATA**

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Bulletin Number	700-HF Miniature Square Base Relay
Contact Rating	12A Standard Contact
Contact Configuration	4PDT Contact Arrangement
Coil Voltage	120V 50/60Hz
Relay Options	No Additional Options

## **CERTIFICATIONS AND APPROVALS**

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UL

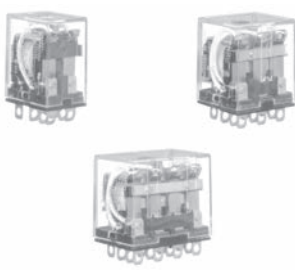
CSA

CE


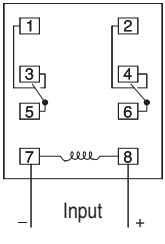
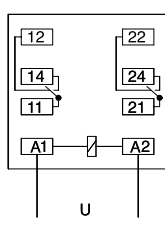
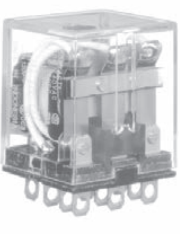
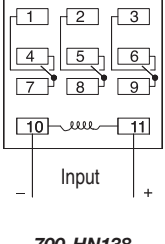
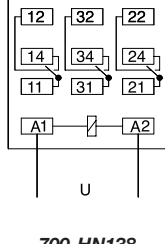
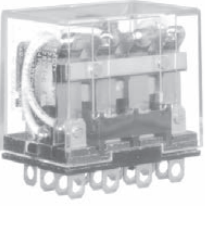
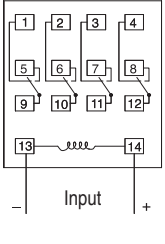
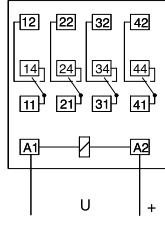
For UL Certifications Directory:

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

Bulletin No.	700-HA	700-HB	700-HD	700-HF
<b>Type</b>	General-Purpose Relay	General-Purpose Relay	General-Purpose Relay	General-Purpose Relay
<b>Features</b>	<ul style="list-style-type: none"> <li>Pin-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>Blade-style quick connect 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>Flange-mounted</li> <li>Blade-style quick connection terminals</li> <li>Clear cover for visual inspection</li> </ul>	<ul style="list-style-type: none"> <li>Square-base</li> <li>Plug-in quick connect solder terminals</li> <li>Optional push-to-test and LED</li> </ul>
<b>Contact Ratings</b>				
<b>Contact Form</b>	DPDT, 3PDT	DPDT, 3PDT	DPDT, 3PDT	DPDT, 3PDT, 4PDT
<b>Contact Type</b>	Single	Single	Single	Single
<b>Contact Material</b>	AgNi, AgNi + Gold	AgCdO	AgCdO	AgCdO
<b>Max. operating current under resistive load</b>	700-HA: 10 A -HAX: 6 A	15 A	15 A	10 A
<b>Min. permissible load</b>	700-HA 10V 5 mA 700-HAB 5V 5 mA 700-HAX 6V 1mA	10V 10 mA	10V 10 mA	5V 100 mA
<b>Coil Ratings</b>				
<b>Coil Voltage</b>	<b>AC:</b> 6, 12, 24, 48, 110, 120, 208, 230, 240, 277V <b>DC:</b> 6, 12, 24, 36, 48, 60, 80, 110, 125, 140, 220V	<b>AC:</b> 6, 12, 24, 120, 240V <b>DC:</b> 6, 12, 24, 48, 110V	<b>AC:</b> 6V, 12V, 24V, 120V, 208V, 240V <b>DC:</b> 6V, 12V, 24V, 48V, 110V	<b>AC:</b> 6V, 12V, 24V, 120V, 240V <b>DC:</b> 6V, 12V, 24V, 48V, 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 80...110% of Nominal Voltage at DC	80...110% of Nominal Voltage at 50 Hz 80...110% of Nominal Voltage at 60 Hz 80...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
<b>Electrical Ratings</b>				
<b>Dielectric Withstand Voltage</b>	Pole-to-pole: 2000V Contact-to-coil: 2000V Contact-to-frame: 2000V	Pole-to-pole: 2500V Contact-to-coil: 4000V Contact-to-frame: 2500V	Pole-to-pole: 2500V Contact-to-coil: 4000V Contact-to-frame: 2500V	Pole-to-pole: 1500V AC Contact-to-coil: 1500V AC Contact-to-frame: 1500V AC
<b>Electric Service Life (cycles)</b>	100 000 minimum	100 000 minimum	100 000 minimum	200 000 minimum, 500 000 minimum (DPDT)
<b>Reference</b>				
<b>Certifications</b>	CE, cULus, cURus, CSA, Lloyds	CE, cULus, cURus, CSA, Lloyds	CE, UR, CSA, Lloyds	CE, UR, CSA
<b>Socket Cat. No(s).</b>	700-HN100, 700-HN101, 700-HN125, 700-HN126, 700-HN204, 700-HN205	700-HN153, 700-HN154	—	700-HN116, 700-HN138, 700-HN139
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	<p><b>Bulletin 700-HF — Square Base Relay</b></p> <ul style="list-style-type: none"> <li>• 10 A contact rating</li> <li>• DPDT, 3PDT, 4PDT</li> <li>• Plug-in quick connect solder terminals</li> <li>• Options: LED, push-to-test operator</li> </ul>	<p><b>Table of Contents</b></p> <p>Product Selection ..... this page</p> <p>Accessories..... 9-30</p> <p>Specifications . . . . . 9-31</p> <p>Approximate Dimensions..... 9-32</p> <p><b>Standards Compliance and Certifications</b></p> <p>See Specification table in this section, page 9-31 .</p>
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**Product Selection**  
**Square Base with Quick Connect/Solder Style Terminations**

	Description	Contact Rating	Wiring Diagrams		Coil Voltage	Cat. No. *❖
			U.S./Canada	International		
	DPDT 2-pole 2 Form C AgCdO Contacts  Socket	10 A	 700-HN116	 700-HN116	6V AC	700-HF32A06
			12V AC	<b>700-HF32A12</b>		
			24V AC	<b>700-HF32A24</b>		
			120V AC	<b>700-HF32A1</b>		
			240V AC	<b>700-HF32A2</b>		
			6V DC	700-HF32Z06		
			12V DC	<b>700-HF32Z12</b>		
			24V DC	<b>700-HF32Z24</b>		
			48V DC	<b>700-HF32Z48</b>		
			110V DC	<b>700-HF32Z1</b>		
	3PDT 3-pole 3 Form C AgCdO Contacts  Socket	10 A	 700-HN138	 700-HN138	6V AC	700-HF33A06
			12V AC	700-HF33A12		
			24V AC	<b>700-HF33A24</b>		
			120V AC	<b>700-HF33A1</b>		
			240V AC	<b>700-HF33A2</b>		
			6V DC	700-HF33Z06		
			12V DC	700-HF33Z12		
			24V DC	<b>700-HF33Z24</b>		
			48V DC	700-HF33Z48		
			110V DC	700-HF33Z1		
	4PDT 4-pole 4 Form C AgCdO Contact  Socket	10 A	 700-HN139	 700-HN139	6V AC	700-HF34A06
			12V AC	700-HF34A12		
			24V AC	<b>700-HF34A24</b>		
			120V AC	<b>700-HF34A1</b>		
			240V AC	<b>700-HF34A2</b>		
			6V DC	700-HF34Z06		
			12V DC	<b>700-HF34Z12</b>		
			24V DC	<b>700-HF34Z24</b>		
			48V DC	700-HF34Z48		
			110V DC	700-HF34Z1		

\* Pilot Light Option: Add suffix (-4) to the selected Bulletin 700-HF Relay Cat. No. except for the 240V AC units, add (-4L).

❖ Manual Operator and LED Option: Add suffix (-1-4) to the selected Bulletin 700-HF Relay Cat. No., except for the 240V AC units, add (-1-4L).

**Specifications\***

Cat. No. 700-HF...				
Electrical Ratings				
Pilot Duty Rating		C300		
Rated Thermal Current ( $I_{th}$ )		10 A		
Rated Insulation Voltage (U)		250V IEC, 300 UL/CSA		
Contacts	Inductive	<b>Make</b>	<b>Break</b>	<b>Hp</b>
		►][◄	◄][►	
	120V AC	29 A	2.9 A	1/2
	240V AC	14 A	1.4 A	1/3
	General Purpose	10 A, 240V AC		
Resistive		10 A, 30V DC		
Min. Low Energy Permissible Load		5V, 100 mA		
Permissible Coil Voltage Variation		85...110% of Nominal Voltage at 50 Hz 85...110% of Nominal Voltage at 60 Hz 80...110% of Nominal Voltage at DC		
Coil Consumption ±10%	AC Coils		<b>50 Hz</b>	<b>60 Hz</b>
		Inrush	2.4 VA	2.1 VA
		Sealed	1.6 VA	1.4 VA
	DC Coils	0.9 W (Bul. No. 700-HF32) 1.4 W (Bul. No. 700-HF33) 1.5 W (Bul. No. 700-HF34)		
Max. Allowable Leakage		25% of VA		
		10% of W		
Design Specification/Test Requirements				
Dielectric Withstand Voltage	Pole-to-Pole		1500V AC	
	Contact to Pole		1500V AC	
	Contact to Frame		1500V AC	
Mechanical				
Degree of Protection		Open Type (Sockets)		
Mechanical Life Operations		30 x 10 <sup>6</sup>		
Switching Frequency Operations		3600/hr		
Coil Voltages		See Product Selection		
Operating Time at Nominal Voltage at 20 °C	Pickup	15 ms		
	Dropout	15 ms		
Maximum Operating Rate		4 Ops/s		
Shock (Mechanical Durability)		100 G		
Shock (Malfunction Durability)		20 G		
Environmental				
Temperature	Operating	-30...+55 °C (-22...+131 °F)		
	Storage	-55...+85 °C (-67...+185 °F)		
Altitude		2000 m (6560 ft)		
Construction				
Insulating Material		Molded High-Dielectric Material		
Enclosure		Transparent Dust Cover		
Contact Material		Silver Cad. Ox.		
Terminal Markings on Socket		In accordance with EN50 0005		
Sockets		8-Blade Socket (DPDT) Cat. No. 700-HN116 11-Blade Socket (3PDT) Cat. No. 700-HN138 14-Blade Socket (4PDT) Cat. No. 700-HN139		
Certifications		CSA Certified (File No. 75088), UL Recognized (File No. E3125, Guide NLDX 2), CE Marked		
Standards		UL 508, CSA 22.2 No. 14, EN/IEC 60255-1		

\* Performance Data – See this catalog, Important- 3.

