

# Product Details and Certifications

Cross Reference RA Part Number: 700-HB33A1-3 E

 Product: **700-HB33A1-3**

Description: 700-HB General Purpose Blade Base Relay, 15 Amps Contact, 3PDT,  
120V 50/60 Hz, Push-To-Test and Manual Override Option



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

## **CONTROL RELAY DATA**

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Bulletin Number	700-HB General Purpose Square Base Relay
Contact Rating	15A Standard Contact
Contact Configuration	3PDT Contact Arrangement
Coil Voltage	120V 50/60 Hz
Relay Option	Push-To-Test and Manual Override Option

## **CERTIFICATIONS AND APPROVALS**

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UL  
CE  
cULus  
cURus  
IMQ  
ABS  
CSA

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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**Bulletin 700-HB — Square Base Relay**

- 15 A contact rating
- DPDT, 3PDT
- Blade-style quick connect terminals
- Standard ON/OFF flag indicator
- Options: LED, push-to-rest, and manual override
- Faston 187 (4.8 x 0.5 mm)

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**Product Selection**

**Bulletin 700-HB Square Base Relay with Blade Style Quick Connect/Solder Terminations — Mechanical ON/OFF Indicator Included**

	Description	Contact Rating	Wiring Diagrams		Coil Voltage	Cat. No.*§
			U.S./Canada	International		
	DPDT 2-Pole 2 Form C Single AgCdO Contact	15 A B300			6V AC	700-HB32A06
					12V AC	700-HB32A12
					24V AC	<b>700-HB32A24</b>
					120V AC	<b>700-HB32A1</b>
					240V AC	<b>700-HB32A2</b>
					6V DC	700-HB32Z06
					12V DC	<b>700-HB32Z12</b>
					24V DC	<b>700-HB32Z24</b>
					48V DC	700-HB32Z48
					110V DC	700-HB32Z1
Sockets	3PDT 3-Pole 3 Form C Single AgCdO Contact	15 A B300			6V AC	700-HB33A06
					12V AC	700-HB33A12
					24V AC	<b>700-HB33A24</b>
					120V AC	<b>700-HB33A1</b>
					240V AC	<b>700-HB33A2</b>
					6V DC	700-HB33Z06
					12V DC	<b>700-HB33Z12</b>
					24V DC	<b>700-HB33Z24</b>
					48V DC	700-HB33Z48
					110V DC	<b>700-HB33Z1</b>

\* LED Option: Add suffix (-4) to the selected Bulletin 700-HB Relay Cat. No., except for the 240V AC Units, add (-4L).  
 † Push-to-test, Manual Override, and LED Option: Add suffix (-3-4) to the selected Bulletin 700-HB Relay Cat. No., except for the 240V AC units, add (-3-4L).  
 § Push-to-test and Manual Override option: Add suffix (-3) to the selected Bulletin 700-HB relay.



**Specifications**



**Cat. No. 700-HB...**

**Electrical Ratings**

Pilot Duty Rating*	NEMA B300					
Rated Thermal Current ( $I_{th}$ )	15 A – 120V, 240V					
Rated Insulation Voltage (U)	250V IEC-300V UL/CSA					
Contacts	Inductive	<b>Make</b>		<b>Break</b>		<b>Hp</b>
		▶ ◀		◀ ▶		
		2 -Pole	3 -Pole	2 -Pole	3 -Pole	
	120V AC	60 A	30 A	6 A	3 A	3/4
	240V AC	30 A	15 A	3 A	1.5 A	2
	General Purpose	15 A, 240V AC				
	Resistive	15 A, 30V DC				
Min. Low Energy Permissible Load	1000 mW (10V, 10 mA)					
Permissible Coil Voltage Variation	80...110% of Nominal Voltage at 50 Hz					
	80...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	3.3 VA		2.85 VA		
	Sealed	2.2 VA		1.9 VA		
	DC Coils	1.3 W				
Max. Allowable Leakage	25% of VA					
	10% of W					
Max. Contact Resistance	50 mΩ					
<b>Design Specification/Test Requirements</b>						
<b>Electrical</b>						
Dielectric Withstand Voltage						
Pole-to-Pole	1500V					
Contact to Coil	6000V					
Contact to Frame	4000V					
<b>Mechanical</b>						
Degree of Protection (Open Type) IEC 529	IP 40					
Mechanical Life Cycles (AC/DC)	> 10 x 10 <sup>6</sup> /30 x 10 <sup>6</sup>					
Switching Frequency Operations	3600/HR					
Coil Voltages	See Overview/Product Selection					
Operating Time (ms)	Pickup	20 ms				
	Dropout	4 ms				
Maximum Operating Rate	4 Ops/s					
Vibration	Endurance	5 G				
	Operational	1.5 G				
Shock	Endurance	50 G				
	Operational	15 G				
<b>Environmental</b>						
Temperature	Operating	AC/DC	-40...+70 °C			
	Storage	AC/DC	-40...+100 °C			
Altitude	2000 m (6560 ft)					
<b>Construction</b>						
Insulating Material	Molded High Dielectric Material					
Enclosure	Transparent Dust Cover					
Contact Material	AgCdO					
Terminal Markings on Socket	In accordance with EN50 0005					
Sockets	700-HN153, -HN154					
Certifications	cURus Recognized (File No. E3125, Guide NLDX2/NLDX8), cULus Listed when used with Bulletin 700-HN sockets noted above (File No. E3125, Guide NLDX/NLDX7), CE Marked, CSA Certified, UR Certified (File No. 229473)					
Standards	UL508, CSA C22.2 No. 14, EN 61810-1, EN 60255-23					

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

\* NEMA Rating Chart is in publication 700-SG003\*