

Product Details and Certifications

Cross Reference RA Part Number: 700-HA33A1 D

 Product: **700-HA33A1**

Description: 700-HA General Purpose Tube Base Relay, 10 Amp Contact, 3PDT, 120V 50/60 Hz



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

CONTROL RELAY DATA

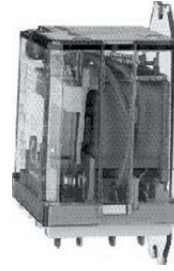
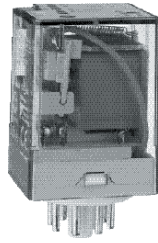
Bulletin Number	700-HA General Purpose Tube Base Relay
Contact Rating	10A Standard Contact
Contact Configuration	3PDT Contact Arrangement
Coil Voltage	120V 50/60 Hz
Relay Option	No Additional Options

CERTIFICATIONS AND APPROVALS

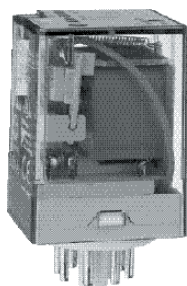
UL
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For UL Certifications Directory:

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



Bulletin No.	700-HA	700-HB	700-HD	700-HF
Type	General-Purpose Relay	General-Purpose Relay	General-Purpose Relay	General-Purpose Relay
Features	<ul style="list-style-type: none"> Pin-style terminals Standard ON/OFF flag indicator Electrical schematic on face Clear cover for visual inspection Optional Push-to-test and manual override Optional LED 	<ul style="list-style-type: none"> Blade-style quick connect terminals Standard ON/OFF flag indicator Electrical schematic on face Clear cover for visual inspection Optional push-to-test and manual override Optional LED 	<ul style="list-style-type: none"> Flange-mounted Blade-style quick connection terminals Clear cover for visual inspection 	<ul style="list-style-type: none"> Square-base Plug-in quick connect solder terminals Optional push-to-test and LED
Contact Ratings				
Contact Form	DPDT, 3PDT	DPDT, 3PDT	DPDT, 3PDT	DPDT, 3PDT, 4PDT
Contact Type	Single	Single	Single	Single
Contact Material	AgNi, AgNi + Gold	AgCdO	AgCdO	AgCdO
Max. operating current under resistive load	700-HA: 10 A -HAX: 6 A	15 A	15 A	10 A
Min. permissible load	700-HA 10V 5 mA 700-HAB 5V 5 mA 700-HAX 6V 1mA	10V 10 mA	10V 10 mA	5V 100 mA
Coil Ratings				
Coil Voltage	AC: 6, 12, 24, 48, 110, 120, 208, 230, 240, 277V DC: 6, 12, 24, 36, 48, 60, 80, 110, 125, 140, 220V	AC: 6, 12, 24, 120, 240V DC: 6, 12, 24, 48, 110V	AC: 6V, 12V, 24V, 120V, 208V, 240V DC: 6V, 12V, 24V, 48V, 110V	AC: 6V, 12V, 24V, 120V, 240V DC: 6V, 12V, 24V, 48V, 110V
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	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
Electrical Ratings				
Dielectric Withstand Voltage	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
Electric Service Life (cycles)	100 000 minimum	100 000 minimum	100 000 minimum	200 000 minimum, 500 000 minimum (DPDT)
Reference				
Certifications	CE, cULus, cURus, CSA, Lloyds	CE, cULus, cURus, CSA, Lloyds	CE, UR, CSA, Lloyds	CE, UR, CSA
Socket Cat. No(s).	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-HA — Tube Base Relay

- 10 A contact rating
- DPDT, 3PDT
- Pin-style terminals
- Standard ON/OFF flag indicator
- Options: LED, push-to-test and manual override, socket-mounted surge suppressor module, or multi-function timer
- Contact choices: standard silver nickel, bifurcated silver nickel, or bifurcated with gold plating

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Product Selection

Bulletin 700-HA Tube Base Relay with PIN Terminals (Single Contact) — 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 AgNi Contact	10 A B300			6V AC	700-HA32A06
					12V AC	700-HA32A12
					24V AC	700-HA32A24
					120V AC	700-HA32A1
					240V AC	700-HA32A2
					277V AC	700-HA32A27 ➤
					6V DC	700-HA32Z06
					12V DC	700-HA32Z12
					24V DC	700-HA32Z24
					36V DC	700-HA32Z36
					48V DC	700-HA32Z48
					60V DC	700-HA32Z60
					80V DC	700-HA32Z80
					110V DC	700-HA32Z1
					125V DC	700-HA32Z01
140V DC	700-HA32Z3					
220V DC	700-HA32Z2 ➤					
	3PDT 3-pole 3 Form C Single AgNi Contact	10 A B300			6V AC	700-HA33A06
					12V AC	700-HA33A12
					24V AC	700-HA33A24
					120V AC	700-HA33A1
					240V AC	700-HA33A2
					6V DC	700-HA33Z06
					12V DC	700-HA33Z12
					24V DC	700-HA33Z24
					48V DC	700-HA33Z48
					60V DC	700-HA33Z60
					80V DC	700-HA33Z80
					110V DC	700-HA33Z1
					125V DC	700-HA33Z01
					140V DC	700-HA33Z3
					220V DC	700-HA33Z2 ➤

* For Time Module and Surge Suppressor Module, see page 9-12.

‡ LED Option: Add suffix (-4) to the selected Bulletin 700-HA 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-HA 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-HA relay.

➤ LED not available for 220V DC and 277V AC coils.

Bulletin 700-HA
General Purpose Relays

Specifications



Cat. No. 700-HA...			
Electrical Ratings			
Pilot Duty Rating*	NEMA B300		
Rated Thermal Current (I_{th})	HA = 10 A – 120V, 240V HAX = 6 A – 120V, 240V		
Rated Insulation Voltage (U _i)	250V IEC – 300V UL/CSA		
Contacts	Inductive	Make	Break
		▶][◀	◀][▶
	120V AC	30 A	3 A
	240V AC	15 A	1.5 A
	General Purpose	10 A, 240V AC	
	Resistive	10 A, 30V DC	
Min. Low Energy Permissible Load	HA = 10V, 5 mA HAX = 5V, 2 mA		
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		
Coil Consumption ±10%	AC Coils	50 Hz	60 Hz
	Inrush	3.3 VA	2.85 VA
	Sealed	2.2 VA	1.9 VA
	DC Coils	1.3 W	
Must Dropout Voltage	20% of nominal V AC 10% of nominal V DC		
Max. Contact Resistance	50 MΩ (700-HA and 700-HAB) 30 MΩ (700-HAX)		
Design Specification/Test Requirements			
Electrical			
Pole-to-Pole	1000V		
Contact to Coil	3600V		
Contact to Frame	4000V		
Electrical Life (Operating)	100 000 min.		
Mechanical			
Degree of Protection (Open Type) IEC 529	IP 40		
Mechanical Life Cycles (AC/DC)	> 20 x 10 ⁶ / 50 x 10 ⁶		
Switching Frequency Operations	3600/HR		
Coil Voltages	See Product Selection		
Operating Time	Max. Pickup	10 ms	
	Max. Dropout	10 ms	
Maximum Operating Rate	4 Ops/s		
Vibration	Endurance	5 G	
	Operational	2.5 G	
Shock	Endurance	50 G	
	Operational	9 G	
Environmental			
Temperature	Operating	AC/DC	-40...+70 °C
	Storage	AC/DC	-40...+100 °C
Altitude	2000 m (6560 ft)		
Construction			
Insulating Material	Molded High-Dielectric Material		
Enclosure	Transparent Dust Cover		
Contact Material	700-HA:	10 A– AgNi	
	700-HAX:	6 A–Bifurcated/Gold Plating AgNi	
Terminal Markings on Socket	In accordance with EN50 0005		
Sockets	8-Pin Socket — 700-HN100, -HN125, -HN204 11-Pin Socket — 700-HN101, -HN126, -HN205		
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 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*

