







Relay and Timer Specifications

Bulletin 700

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General Purpose Relays

Product Overview

				
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 connect terminals Clear cover for visual inspection 	<ul style="list-style-type: none"> Square-base Plug-in quick connect solder terminals Optional push-to-test Optional LED
Contact Ratings				
Contact Form	DPDT, 3PDT	DPDT, 3PDT	DPDT, 3PDT	DPDT, 4 PDT
Contact Type	Single	Single	Single	Single
Contact Material	AgNi, AgNi + Gold	AgCdO	AgCdO	AgCdO
Operating Current, Under Resistive Load, Max	700-HA: 10 A 700-HAX: 6 A	15 A	15 A	10 A
Permissible Load, min	700-HA: 10V, 5 mA 700-HAX: 6V 1 mA	10V, 10 mA	10V, 10 mA	5V, 100 mA
Coil Ratings				
Coil Voltage	AC: 6, 12, 24, 48, 110, 120, 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: 6, 12, 24, 120, 208, 240V DC: 6, 12, 24, 48, 110V	AC: 6, 12, 24, 120, 240V DC: 6, 12, 24, 48, 110V
Permissible Coil Voltage Variation	80...110% of nom voltage at 50 Hz 80...110% of nom voltage at 60 Hz 80...110% of nom voltage at DC			85...110% of nom voltage at 50 Hz 85...110% of nom voltage at 60 Hz 80...110% of nom 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 Contact-to-coil: 1500V Contact-to-frame: 1500V
Electrical Service Life (Cycles)	100,000 min	100,000 min	100,000 min	200,000 min 500,000 min (DPDT)
Reference				
Certifications	CE, cULus, cURus, CSA, Lloyds	CE, cULus, cURus, CSA, Lloyds	CE, UR, CSA, Lloyds	CE, UR, CSA
Socket Catalog Numbers	700-HN100, 700-HN101, 700-HN125, 700-HN126, 700-HN204, 700-HN205	700-HN153, 700-HN154	—	700-HN262, 700-HN264
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700-HA General-purpose 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, or bifurcated silver nickel with gold plating



Tube Base Relay with PIN Terminals (Single Contact) — Mechanical ON/OFF Indicator Included⁽¹⁾

Description	Contact Rating	Wiring Diagrams		Coil Voltage	Cat. No. ⁽¹⁾
		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				
Sockets		700-HN125	700-HN100 700-HN204	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
				Sockets	
				220V DC	700-HA33Z2

(1) LED Option: Add suffix (-4) to the selected 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 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 700-HA relay. LED not available for 220V DC and 277V AC coils.

(1) For Time Modules and Surge Suppressor Modules, see Accessories.

Tube Base Relay with PIN Terminals (Bifurcated Contacts with Gold Overlay) — Mechanical ON/OFF Indicator Included

Description	Contact Rating	Wiring Diagrams		Coil Voltage	Cat. No				
		U.S./Canada	International						
DPDT 2-Pole 2 Form C Bifurcated AgNi Contacts with Gold Plating	6 A			6V AC	700-HAX2A06				
				12V AC	700-HAX2A12				
				24V AC	700-HAX2A24				
				120V AC	700-HAX2A1				
				240V AC	700-HAX2A2				
				277V AC	700-HAX2A27Δ				
				6V DC	700-HAX2Z06				
				12V DC	700-HAX2Z12				
				24V DC	700-HAX2Z24				
				36V DC	700-HAX2Z36				
				48V DC	700-HAX2Z48				
				110V DC	700-HAX2Z1				
Sockets		700-HN125	700-HN100 700-HN204	125V DC	700-HAX2Z01				
				140V DC	700-HAX2Z3				
3PDT 3-Pole 3 Form C Bifurcated AgNi Contacts with Gold Plating	6 A			6V AC	700-HAX3A06				
				12V AC	700-HAX3A12				
				24V AC	700-HAX3A24				
				120V AC	700-HAX3A1				
				240V AC	700-HAX3A2				
				6V DC	700-HAX3Z06				
				12V DC	700-HAX3Z12				
				24V DC	700-HAX3Z24				
				48V DC	700-HAX3Z48				
				110V DC	700-HAX3Z1				
				Sockets		700-HN126	700-HN101 700-HN205	125V DC	700-HAX3Z01
								140V DC	700-HAX3Z3

Accessories - 700-HA Relays







Photo	Description	Pkg. Qty.	Cat. No.
	Screw Terminal Tube Base Socket — Panel or DIN Rail Mounting; Guarded Terminal Construction. 8-Pin for use with DPDT 700-HA Relays, -HX Timing Relays, -HT (On-Delay), and -HRM, -HRC and -HV (Repeat Cycle) Timing Relays.	10	700-HN100
	Screw Terminal Tube Base Socket — Panel or DIN Rail Mounting; Open Style Construction. 8-Pin for use with DPDT 700-HA Relays, -HT (On-Delay) and -HRM, -HRC, and -HV (Repeat Cycle) Timing Relays. No retainer clip required.	10	700-HN125
	Screw Terminal Tube Base Sockets — Panel or DIN Rail Mounting; Guarded Terminal Construction. 11-pin for use with 3PDT 700-HA relays.	10	700-HN101
	Screw Terminal Tube Base Sockets — Panel or DIN Rail Mounting; Open Style Terminal Construction. 11-pin for use with 3PDT 700-HA relays. No retainer clip required.	10	700-HN126
	8-Pin Socket — Can Be Used With or Without Timing Attachment or Surge Suppressor Screw Terminal Tube Base Sockets — panel or DIN Rail mounting. Guarded terminal construction. Used with DPDT 700-HA Relays.	10	700-HN204
	11-Pin Socket — Can Be Used With or Without Timing Module or Surge Suppressor. Screw Terminal Tube Base Sockets — panel or DIN Rail mounting. Guarded terminal construction. Used with 3PDT 700-HA relays.	10	700-HN205
	DIN (#3) symmetrical hat rail 35 x 7.5 x 1 m	10	199-DR1


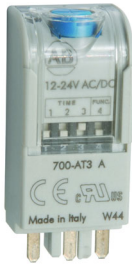
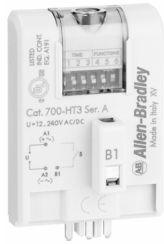







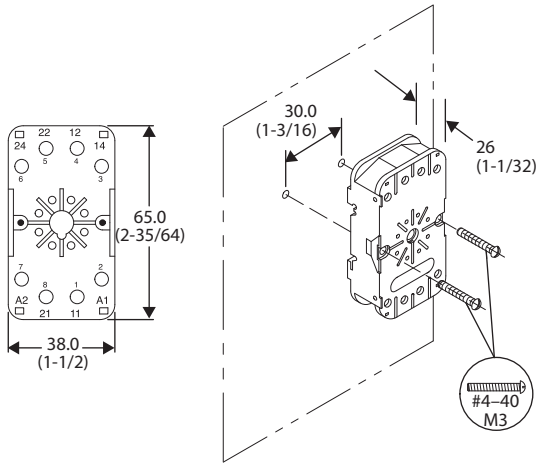
Photo	Description	Pkg. Qty.	Cat. No.
	Diode Surge Suppressor Voltage Range: 6...220V DC used with 700-HN204 and 700-HN205 socket	10	700-ADR
	Diode with LED Surge Suppressor Voltage Range: 6...24V DC used with 700-HN204 and 700-HN205 socket	10	700-ADL1R
	Diode with LED Surge Suppressor Voltage Range: 28...60V DC used with 700-HN204 and 700-HN205 socket	10	700-ADL2R
	Diode with LED Surge Suppressor Voltage Range: 110...220V DC used with 700-HN204 and 700-HN205 socket	10	700-ADL3R
	Varistor with LED Surge Suppressor Voltage Range: 6...24V AC used with 700-HN204 and 700-HN205 socket	10	700-AV1R
	Varistor with LED Surge Suppressor Voltage Range: 110...240V AC used with 700-HN204 and 700-HN205 socket	10	700-AV3R
	RC Surge Suppressor Voltage Range: 6...24V AC/DC used with 700-HN204 and 700-HN205 socket	10	700-AR1
	RC Surge Suppressor Voltage Range: 110...240V AC/DC used with 700-HN204 and 700-HN205 socket	10	700-AR2

Photo	Description	Pkg. Qty.	Cat. No.
	Timing Module On-Delay or One-Shot selectable voltage range: 12...24V AC/DC used with sockets that accept plug-in accessory modules.	1	700-AT3
	Timing Module On-Delay or One-Shot selectable voltage range: 110...125V AC used with sockets that accept plug-in accessory modules.	1	700-AT3A1
	Timing Module On-Delay or One-Shot selectable voltage range: 230...240V AC used with sockets that accept plug-in accessory modules.	1	700-AT3A2
	Multi-Function Multi-Range Time Module Voltage range 12...240V AC 50/60 Hz and 12...240V DC, with a voltage variation of 85...110%. Repeat accuracy of +/- 1%. Reset time <50 ms. For use with 700-HA relays using 700-HN204 and 700-HN205 sockets. Refer to Specifications - 700-HT3 Time Module on page 17 .		
	1. 1 s	0.05...1 s	
	2. 10 s	0.5...10 s	
	3. 100 s	5...100 s	
	4. 10 min	0.5...10 min	
	5. 100 min	5...100 min	
	6. 10 hours	0.5...10 h	
	7. 100 hours	5...100 h	
	8. LED Indicator		
		1	700-HT3

Socket and Retainer Clip Reference

Relay Type	Socket	Retainer Clip
700-HA32 700-HAX2	700-HN100 700-HN125 700-HN204	700-HN157 Not Required 700-HN157
700-HA33 700-HAX3	700-HN101 700-HN126 700-HN205	700-HN157 Not Required 700-HN157

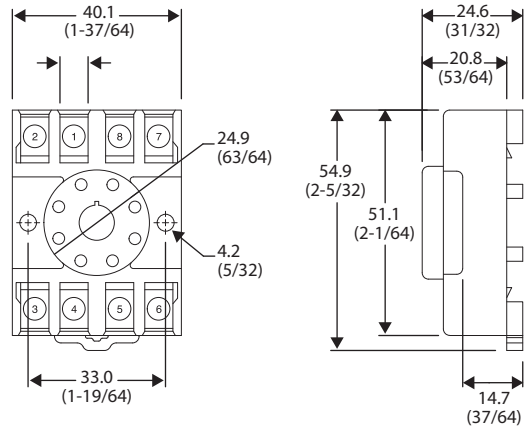
Approximate dimensions are shown in millimeters (inches). Dimensions are not intended for manufacturing purposes.



Cat. No. 700-HN100

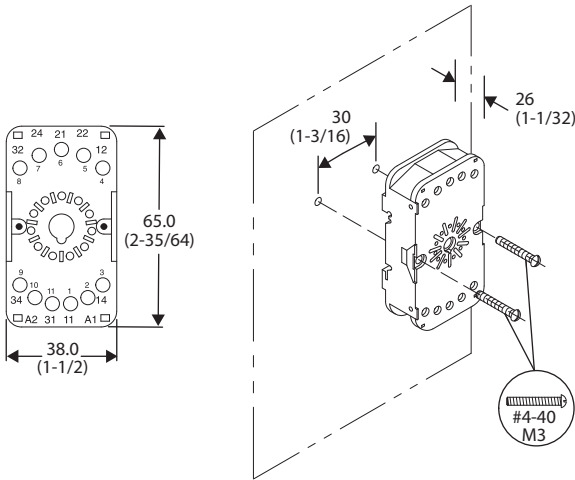
Panel Mounting

Wire Size: $2 \times 2.5 \text{ mm}^2$
 Single Wire – Up to #12 AWG
 Double Wire – $2 \times 2.5 \text{ mm}^2$ (#2–14 AWG... #2–20 AWG)
 (Either Solid or Stranded)
 Strip Length: 9 mm (3/8 in.) – Torque: 0.8 N·m (7 lb·in)



Cat. No. 700-HN125

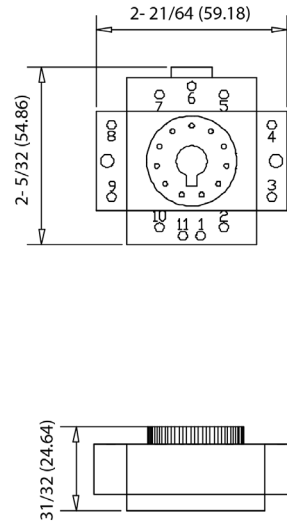
Wire Size: $2 \times 2.5 \text{ mm}^2$
 Single Wire – Up to #12 AWG
 Double Wire – $2 \times 2.5 \text{ mm}^2$ (#2–14 AWG... #2–20 AWG)
 (Either Solid or Stranded)
 Strip Length: 9 mm (3/8 in.) – Torque: 0.8 N·m (7 lb·in)



Cat. No. 700-HN101

Panel Mounting

Wire Size: $2 \times 2.5 \text{ mm}^2$
 Single Wire – Up to #12 AWG
 Double Wire – $2 \times 2.5 \text{ mm}^2$ (#2–14 AWG... #2–20 AWG)
 (Either Solid or Stranded)
 Strip Length: 9 mm (3/8 in.) – Torque: 0.8 N·m (7 lb·in)



Cat. No. 700-HN126

Wire Size: $2 \times 2.5 \text{ mm}^2$
 Single Wire – Up to #12 AWG
 Double Wire – $2 \times 2.5 \text{ mm}^2$ (#2–14 AWG... #2–20 AWG)
 (Either Solid or Stranded)
 Strip Length: 9 mm (3/8 in.) – Torque: 0.8 N·m (7 lb·in)