

Interposing/Isolation Relays

Product Overview/Catalog Number Explanation



Bulletin 700-HL 2-Pole "Terminal Block Relay"

- Relay and socket assembled interface modules for high density interposing or isolation applications
- Screw terminal and spring-clamp bases
- 10 A relay, choice of silver or gold contacts
- DPDT (relay)
- Built-in retainer clip and snap-in marker lever
- Standard LED, reverse polarity protection, and surge protection
- Externally replaceable relay modules

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Standards Compliance and Certifications

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Catalog Number Explanation

700	-	HL	T	1	2	Z24	X*
Bulletin Number		Series Type	Relay Type	Terminal Type	Output	Supply Voltage	Gold-Plated Contact Option
700	-	HL	T	1	2	Z24	X*
Bulletin Number		a	b	c	d	e	f

a

Series Type	
Code	Description
HL	Terminal Block relay

c

Terminal Type	
Code	Description
1	Screw Terminal
2	Spring Clamp Terminal

e

Supply Voltage	
Code	Description
Z12	12V DC
Z24	24V DC
Z48	48V DC
U24	24V AC/DC
U1	110...125V AC/DC
U2	220...240V AC/DC

f*

Gold-Plated Contact Option	
Code	Description
Blank	None
X	Gold Plate

b

Relay Type	
Code	Description
T	EM Relay

d

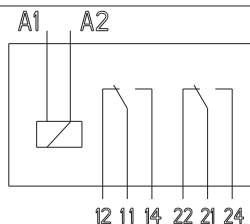
Output	
Code	Description
2	DPDT (2 C/O), 14 mm

* For Gold-plated contacts: Add the letter "X" at the end of the catalog number. Example: Cat. No. 700-HLT12Z24 with gold plated contacts is catalog number 700-HLT12Z24X. The following relays are available with the gold-plated contact option: 700-HLT_Z24, 700-HLT_U24, 700-HLT_U1, and 700-HLT_U2.

- Standard built-in Features:
- LED
 - Reverse Polarity Protection for DC Inputs
 - Coil Surge Protection



Specifications



Output Type	DPDT (2 C/O); $I_{th} = 10$ A
Recommended Tightening Torque	0.6 N•m max. (5.3 lb•in.)
Wire Range	Screw Terminal: 0.2...2.5 mm ² (#24...14 AWG), Spring Terminal: 0.2...2.5 mm ² (#24...14 AWG)
Approvals	cULus, cURus, CE

Assembled Devices	Pkg. Quantity	Cat. No. (Screw Terminals)	Cat. No. (Spring Clamp Terminals)
Input Voltage			
12V DC	10	700-HLT12Z12	700-HLT22Z12
24V DC	10	700-HLT12Z24*	700-HLT22Z24*
48V DC	10	700-HLT12Z48	700-HLT22Z48
24V AC/DC	10	700-HLT12U24*	700-HLT22U24*
110/125V AC/DC	10	700-HLT12U1*	700-HLT22U1*
220...240V AC/DC	10	700-HLT12U2*	700-HLT22U2*

* For Gold-plated contacts: Add the letter "X" at the end of the catalog number. Example: **Cat. No. 700-HLT12Z24** with gold plated contacts is **Cat. No. 700-HLT12Z24X**. The following relays are available with the gold-plated contact option: 700-HLT_2Z24, 700-HLT_2U24, 700-HLT_2U1, and 700-HLT_2U2.

	Description	Pkg. Quantity	Socket Input Voltage	Cat. No.
 Cat. No. 700-TBR224	Replacement Relays Order must be for 20 relays or multiples of 20.	20	12V DC	700-TBR212
			24V AC/DC	700-TBR224*
			48V DC	700-TBR248
			110/125V AC/DC 220...240V AC/DC	700-TBR2110*
 Cat. No. 700-TBJ08B	8-Way Jumper Can be cut to required length. $I_{th} = 10$ A max per 8-way jumper.	1	Color	
			Red	700-TBJ08R
			Grey	700-TBJ08G
Blue	700-TBJ08B			
 Cat. No. 700-HN177	End Barrier Used for visual inspection of groups, safe separation of neighboring 700-HL modules that end with jumpers.	10	Black	700-HN177
 Cat. No. 700-HN177	Snap-in Marker These snap-in markers have a 6 x 12 mm surface and snap into the ejection lever for the relay.	100	Blank	1492-MS6X12
			Standard 1492-MS6X12	www.ab.com/catalogs for information
			Custom	⊛

* For gold-plated contacts: Add the letter "X" at the end of the catalog number. For example: if Cat. No. 700-TBR224 is required with gold plating, the new cat. no. is 700-TBR224X.

⊛ Go to <http://www.ab.com/software/>, click on "Terminal Marking System and WinABMS" to download software. Create custom text, save file, and e-mail to your local Rockwell Automation sales office or Allen-Bradley distributor.

Note: Terminal Block Relay bases are not sold separately.

Bulletin 700-HL
Interposing/Isolation Relays
Specifications

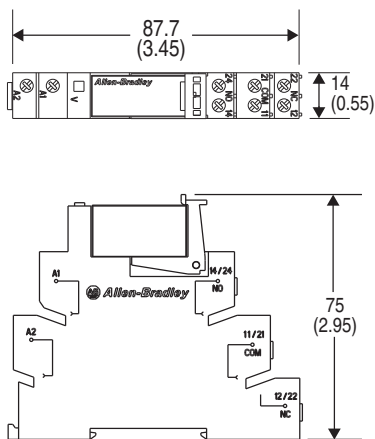
Cat. No. 700-HLT...2-Pole (Relay Output)							
Electrical Ratings							
Rated Thermal Current (I_{th})		2-Pole — 10 A					
Rated Insulation Voltage (U_i)		250V IEC, 300V UL/CSA					
Contacts	Inductive V AC UL	120V AC	AC-15, 3.0A B 300, 3.0 A		1/4 HP (186 W), 1-phase		
		240V AC	AC-15, 3.0 A B 300, 1.5 A		1/2 HP (373 W), 1-phase		
	Inductive V DC	24V DC	DC-13, 2.0 A				
		125V DC	DC-13, 0.3 A				
		250V DC	DC-13, 0.2 A				
	Resistive Make, Break and Continuous	250V AC	10 A				
		24V DC	10 A				
250V DC		0.28 A					
Min. Permissible Contact Ratings		12V, 10 mA (120 mW) for Silver Contacts, 5V, 1 mA (50 mW) for Gold Contacts					
Permissible Coil Voltage Variation		Pickup: 85...110% of Nominal Voltage at 50 Hz 85...110% of Nominal Voltage at 60 Hz 80...110% of Nominal Voltage at DC				Must Dropout Voltage: 10% of Nominal Voltage at AC 5% of Nominal Voltage at DC	
Design Specification/Test Requirements							
Dielectric Withstand Voltage		Pole to Pole (VRMS)	1000V				
		Contact to Coil (VRMS)	5000V				
		Adjacent Contacts (VRMS)	2500V				
Input Voltage		12V AC/DC	24V AC/DC	48V DC	120V AC/DC	240V AC/DC	
Impedance (Ohms)		1 K	2 K	3 K	34 K	72 K	
Power Consumption		AC	N/A	0.5V A	N/A	0.4V A	0.8V A
±10%		DC	0.4 W	0.5 W	0.8 W	0.5 W	0.7 W
Mechanical							
Degree of Protection		IP20					
Mechanical Life Operations		3 x 10 ⁷					
Electrical Life Operations		250V AC/24V DC, 8 A Resistive: 100 000 min. 24V DC, 10 A Resistive: 6000 min. 250V DC, 0.28 A Resistive: 6000 min. 250V AC, 10 A Resistive: 30 000 min.					
Switching Frequency Operations (no-load)		1200 cycles/sec					
Coil Voltages		See Overview/Product Selection					
Operating Time at Nominal Voltage at 20 °C (ms)		Pickup	typical 10 ms				
		Dropout	typical 10 ms				
Maximum Operating Rate (full load = 6 A)		6 cycles/min.					
Environmental							
Temperature		Operating	-40...+60 °C				
		Storage	-40...+100 °C				
Altitude		2000 m (6560 ft)					
Construction							
Insulating Material		Molded High-Dielectric Material					
Enclosure		Relay RT II — flux-proof, pollution degree 2 installation environment					
Contact Material		AgNi 90/10 or AgNi 90/10 + Au					
Terminal Markings on Socket		In accordance with EN50 0005					
Certifications		cULus Listed (File No. E3125, Guide NRNT/NRNT7), CE Marked					
Standards		UL 508, CSA C22.2 No. 14, EN/IEC 60947-1, -5-1					

* Performance Data – See this catalog, Important 3

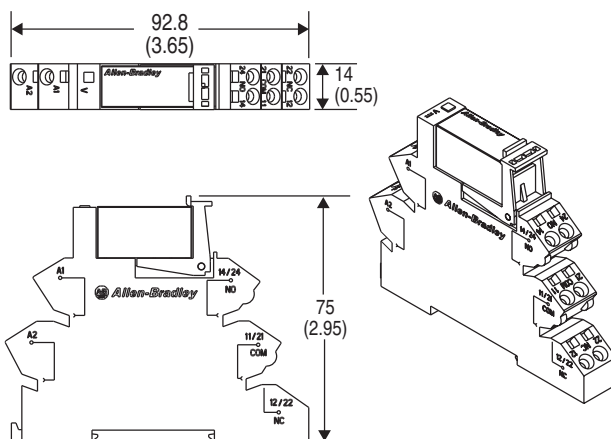


Approximate Dimensions

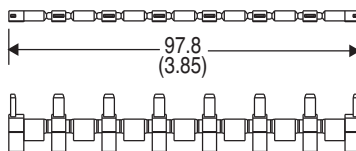
Approximate dimensions are shown in millimeters (inches). Approximate dimensions are not intended to be used for manufacturing purposes.



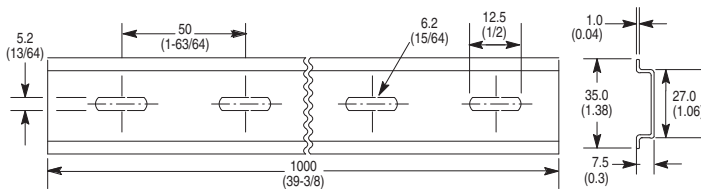
Bulletin 700-HL Screw Terminal Design
 Single Wire: 0.14 mm²...2.5 mm² (#26 AWG...14 AWG)
 Double Wire: 2 x 0.14 mm²...2 x 1.5 mm² (2 x #26 AWG...2 x 16 AWG)
 Wire Type: Solid or stranded, copper only
 Strip Length: 9 mm (11/32 in). Torque: 0.5 N•m (4.4 lb•in)



Bulletin 700-HL Spring Terminal Design
 Single Wire: 0.2 mm²...2.5 mm² (#24 AWG...#14 AWG)
 Wire Type: Solid or stranded, copper only
 Strip Length: 9 mm (11/32 in)



Bulletin 700-TBJ08_ 8-Way Jumper



Cat. No. 199-DR1 DIN Mounting Rail Series B
Cat. No. 199-DR4 DIN Mounting Rail Series B Has No Mounting Holes

Cat. No.	A	B	C	D	Approx. Shipping Wt.
199-DR1	35 (1-3/8)	27 (1-1/16)	7.5 (19/64)	1.02 (1/64)	1.85 kg (4.07 lb) (10/pkg)
199-DR4	35 (1-3/8)	27 (1-1/16)	15 (19/32)	2.3 (3/32)	3.68 kg (8 lb) (5/pkg)