

Bulletin 700-HL

- Relay and Socket Assembled Interface
- SPDT – 6 A Output
- 1 N.O. SSR Output
- Externally Replaceable Relay
- Built-in Retainer Clip
- Standard LED
- Ideal for PLC and Drives Applications

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Description

The Bulletin 700-HL General Purpose Interface Relays feature a fully assembled relay (electro-mechanical or solid-state) and socket. The SPDT version is capable of 6 A per pole. The 1 N.O. solid-state relay has a 2 A rating. The SPDT relay feature AgSnO contacts. All 700-HL assembled devices are UL listed. Coils are available in a variety of AC and DC voltages.

Conformity to Standards:

EN60947-4-1
EN60947-5-1
IEC 947
CSA 22.2
UL 508
NEMA IEE MAC Compliant
ICS-2 Compliant

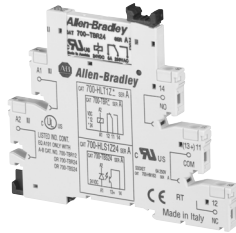
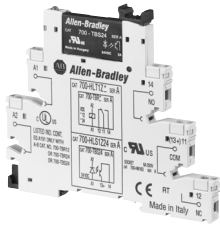
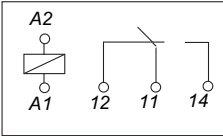
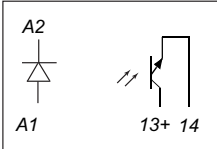
Approvals:

cURus Recognized, File E3125
Guide NLDX 2
cULus Listed, with Allen-Bradley socket
CE Marked (per EU Low Voltage
Directive 73/23 EEC 93/68 EEC)
ABS (American Bureau of Shipping)

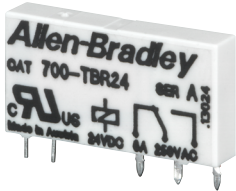
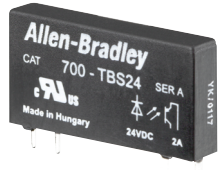


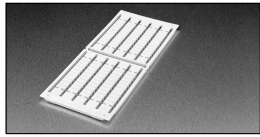
Your order must include:

- Cat. No. of the assembled relay.
- If required, Cat. No. of any accessories.

Bulletin 700-HL
Interposing/Isolation Relays
Product Selection

<p>Standard built-in Features:</p> <ul style="list-style-type: none"> • LED • Reverse Polarity Protection for DC Inputs • Surge Protection 	 Cat. No. 700-HLT1Z24			 Cat. No. 700-HLS1Z24		
Specifications						
Output Type	SPDT (1 C/O); $I_{th} = 6A$			1 N.O. solid-state; $I_{th} = 2A$		
Recommended Tightening Torque	0.5 Nm max. (4.4 lb.-in.)			0.5 Nm max (4.4 lb.-in.)		
Wire Range	0.14 mm ² ...2.5 mm ² (#26...#14 AWG)			0.14 mm ² ...2.5 mm ² (#26...#14 AWG)		
Approvals	cULus, cURus, ABS, CE			cULus, cURus, ABS, CE		
Assembled Devices	Cat. No.	Pkg Qty.	Factory-stocked Item	Cat. No.	Pkg Qty.	Factory-stocked Item
Input Voltages:						
12V DC	700-HLT1Z12 ②	10	✓	—	—	
24V DC	700-HLT1Z24 ②	10	✓	700-HLS1Z24 ②	10	✓
48V DC	700-HLT1Z48 ②	10		700-HLS1Z48 ②	10	
12V AC/DC	700-HLT1U12	10		—	—	
24V AC/DC	700-HLT1U24	10	✓	—	10	
48V AC/DC	700-HLT1U48	10		—	10	
110/125V AC/DC	700-HLT1U1	10	✓	700-HLS1U1 ②	10	✓
220-240V AC/DC	700-HLT1U2	10	✓	700-HLS1U2 ②	10	
Built-in LCSC (leakage current suppression circuit) 120V AC and 125V DC	700-HLT1L1 ② (Available in November 2001)	10		700-HLS1L1 ② (Available in November 2001)	10	
Built-in LCSC (leakage current suppression circuit) 240V AC	700-HLT1L2 ② (Available in November 2001)	10		700-HLS1L2 ② (Available in November 2001)	10	

- ① Reverse polarity on the output terminals of the solid-state relay will result in the output being "ON" regardless of the state of the input voltage.
 ② Electromechanical relay to solid-state relay interchangeability possible.

	Description	Pkg. Qty.	Socket Input Voltage	Cat. No.	Factory-stocked Item
 <p>Cat. No. 700-TBR24</p>	Replacement Relays Order must be for 20 relays or multiples of 20.	20	12V	700-TBR12	✓
			24V	700-TBR24	✓
			48V	700-TBR48	✓
			110/125V	700-TBR60	✓
			220...240V	700-TBR60	✓
			120V...125V	700-TBR60	✓
			240V	700-TBR60	✓
 <p>Cat. No. 700-TBS24</p>	Replacement SSR 4-blade miniature relay for use with 1 N.O. SSR output. Order must be for 18 relays or multiples of 18.	18	24V	700-TBS24	✓
			48V	700-TBS60	✓
			110/125V	700-TBS60	✓
			220...240V	700-TBS60	✓
			120V...125V	700-TBS60	✓
			240V	700-TBS60	✓
			120/125V	700-TBS60	✓
 <p>Cat. No. 700-TBJ20B</p>	20-Way Jumper Can be cut to required length. $I_{th} = 36$ A max per 20-way jumper.	1	Color		
			Red	700-TBJ20R	✓
			Gray	700-TBJ20G	✓
			Blue	700-TBJ20B	✓
 <p>Cat. No. 700-HN177</p>	End Barrier Used for visual inspection of groups, safe separation of neighboring 700-HL modules that end with jumpers. Order must be for 10 or multiples of 10.	10	Black	700-HN177	✓
	Snap-in Marker These snap-in markers have a 6 x 10 mm surface and snap into the ejection lever for the relay.	100	Blank	1492-SMN81	
		100	Text	See publication A113, 1492 page 12-139.	

Cat. No. 700-HLT... (Relay Output)			
Electrical Ratings			
Rated Thermal Current (I_{th})	1-Pole — 6 A		
Rated Insulation Voltage (U_i)	250V IEC, 300V UL/CSA		
Contacts	Inductive	1-Pole	
	24V AC, 1-phase	30 A ► ◄	5 A ◄ ►
	120V AC, 1-phase	30 A	3 A
	240V AC, 1-phase	15 A	1.5 A
	Make, Break, & Continuous V DC	24V DC 120V DC 240V DC	1.0 A 0.2 A 0.1 A
Min. Permissible Contact Ratings	12V, 6 mA (72 mW)		
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		
Power Consumption ±10%	AC	0.3 VA	
	DC	0.2 W	
Design Specification/Test Requirements			
Dielectric Withstand Voltage	Pole to Pole (VRMS)	1500 VA	
	Contact to Coil (VRMS)	4000 VA	
Mechanical			
Degree of Protection	IP20		
Mechanical Life Operations	1 x 10 ⁷		
Switching Frequency Operations (no-load)	10 cycles/sec		
Coil Voltages	See Product Selection		
Operating Time at Nominal Voltage at 20°C (ms)	Pickup	7 ms	
	Dropout	3 ms	
Maximum Operating Rate (full load = 6 A)	6 cycles/min.		
Environmental			
Temperature	Operating	-40...+55°C	
	Storage	-40...100°C	
Altitude	2000 m (6560 ft)		
Construction			
Insulating Material	Molded High Dielectric Material		
Enclosure	Relay IP67		
Contact Material	Silver Cad. Ox., AgSnO		
Terminal Markings on Socket	In accordance with EN50 0005		
Certifications	cULus, cURus, ABS, CE		

❶ Performance Data – See page Important-2, publication A113.

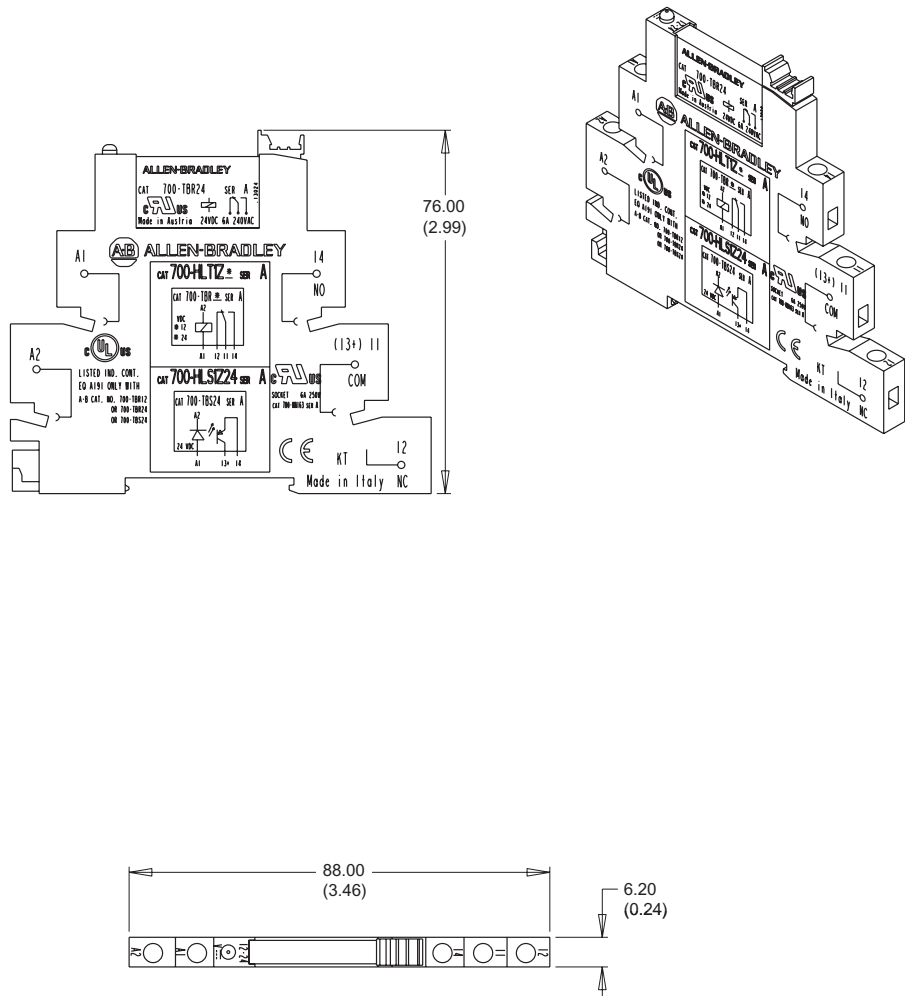
Cat. No. 700-HLS... (Solid State Output)		
Electrical		
Rated Thermal Current (I_{th})	2 A	
Rated Insulation Voltage (U_i)	250V IEC, 300V UL/CSA	
Control Circuit	Min. Control Voltage	80% nominal voltage
	Maximum Control Voltage	110% nominal voltage
	Control Current	9 mA \pm 10% (24V) 4 mA \pm 10% (120/240V)
	Release Voltage	0.4 x nominal voltage (24V), 0.35 x nominal voltage (120/240V)
	Min. Control Circuit Resistance	3200 ohms (24V), 16k ohms (120V), 32k ohms (240V)
Outputs	Load Voltage Range	0...24V DC
	Max. Repetitive Blocking Voltage	33V
	Max. Switching Current	2 A DC
	On State Voltage Drop @ Max. Switching Current	< 120 mV DC
	LeakageCurrent	max. 100 μ A (@U = 24V)
Power Consumption \pm 10%	AC	0.3 VA
	DC	0.2 W
Design Specification/Test Requirements		
Dielectric Withstand Voltage	Pole to Pole (VRMS)	2500 VA
	Contact to Coil (VRMS)	2500 VA
Mechanical		
Degree of Protection	IP20	
Coil Voltages	See Product Selection	
Operating Time at Nominal Voltage at 20°C (ms)	Turn on Time	30 μ s (DC only input voltage), 7 ms (AC/DC input voltage)
	Drop Off Time	350 μ s (DC only input voltage), 10 ms (AC/DC input voltage)
Maximum Operating Rate	300 Hz	
Environmental		
Temperature	Operating	-20...+55°C
	Storage	-40...70°C
Altitude	2000 m (6560 ft)	
Construction		
Insulating Material	Molded High Dielectric Material	
Enclosure	Relay IP67	
Terminal Markings on Socket	In accordance with EN50 0005	
Certifications	cULus, cURus, ABS, CE	

Bulletin 700-HL

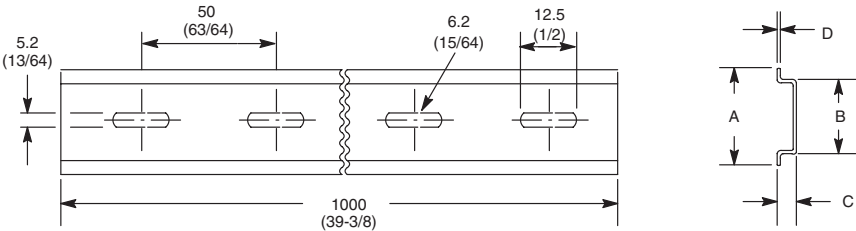
Interposing/Isolation Relays

Approximate Dimensions

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



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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 lbs.) (10/pkg)
199-DR4	35 (1-3/8)	27 (1-1/16)	15 (19/32)	2.3 (3/32)	3.68 kg (8 lbs.) (5/pkg)