Bulletin 700-HL
Interposing/Isolation Relays
Product Selection/Accessories

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

Specifications

<table>
<thead>
<tr>
<th>Description</th>
<th>Pkg. Quantity</th>
<th>Cat. No. (Screw Terminals)</th>
<th>Cat. No. (Spring Clamp Terminals)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cat. No. 700-TBR224</td>
<td>20</td>
<td>700-HLT22Z24*</td>
<td></td>
</tr>
<tr>
<td>8-Way Jumper</td>
<td>1</td>
<td>700-HLT12U24</td>
<td>700-HLT22Z24*</td>
</tr>
<tr>
<td>Cat. No. 700-HN177</td>
<td>10</td>
<td>700-HLT12Z48</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>700-HLT12U24</td>
<td>700-HLT22Z48</td>
</tr>
<tr>
<td></td>
<td></td>
<td>700-HLT12Z24</td>
<td>700-HLT22Z24</td>
</tr>
<tr>
<td></td>
<td></td>
<td>700-HLT12U24</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>700-HLT12U1</td>
<td>700-HLT22U1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>700-HLT12U2</td>
<td>700-HLT22U2</td>
</tr>
</tbody>
</table>

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.

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 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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**Catalog Number Explanation**

<table>
<thead>
<tr>
<th>Bulletin Number</th>
<th>Series Type</th>
<th>Relay Type</th>
<th>Terminal Type</th>
<th>Output</th>
<th>Supply Voltage</th>
<th>Gold-Plated Contact Option</th>
</tr>
</thead>
<tbody>
<tr>
<td>700 – HL T 1 2 Z24 X</td>
<td>a</td>
<td>HL</td>
<td>T 1</td>
<td>2</td>
<td>Z24</td>
<td>X*</td>
</tr>
</tbody>
</table>

- **a** Bulletin Number
- **b** Relay Type
- **c** Terminal Type
- **d** Output
- **e** Supply Voltage
- **f** Gold-Plated Contact Option

- **HH** Terminal Block relay
- **EM** EM Relay
- **1** Screw Terminal
- **2** Spring Clamp Terminal
- **2** DPDT (2 C/O), 14 mm

- **Z12** 12V DC
- **Z24** 24V DC
- **Z48** 48V DC
- **U1** 110...125V AC/DC
- **U2** 220...240V AC/DC

- **Blank** None
- **X** Gold Plate

*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_2Z24, 700-HLT_2U24, 700-HLT_2U1, and 700-HLT_2U2.*
## Cat. No. 700-HLT...2-Pole (Relay Output)

### Electrical Ratings

<table>
<thead>
<tr>
<th>Inductive V AC UL</th>
<th>120V AC</th>
<th>AC-15, 3.0A B 300, 3.0 A</th>
<th>1/4 HP (186 W), 1-phase</th>
</tr>
</thead>
<tbody>
<tr>
<td>240V AC</td>
<td>AC-15, 3.0A B 300, 1.5 A</td>
<td>1/2 HP (373 W), 1-phase</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Inductive V DC</th>
<th>24V DC</th>
<th>DC-13, 2.0 A</th>
</tr>
</thead>
<tbody>
<tr>
<td>125V DC</td>
<td>DC-13, 0.3 A</td>
<td></td>
</tr>
<tr>
<td>250V DC</td>
<td>DC-13, 0.2 A</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Resistive Make, Break and Continuous</th>
<th>250V AC</th>
<th>10 A</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>24V DC</td>
<td>10 A</td>
</tr>
<tr>
<td></td>
<td>250V DC</td>
<td>0.28 A</td>
</tr>
</tbody>
</table>

### 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

<table>
<thead>
<tr>
<th>5% of Nominal Voltage at DC</th>
</tr>
</thead>
</table>

### Design Specification/Test Requirements

#### Dielectric Withstand Voltage

<table>
<thead>
<tr>
<th>Pole to Pole (VRMS)</th>
<th>1000V</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contact to Coil (VRMS)</td>
<td>5000V</td>
</tr>
<tr>
<td>Adjacent Contacts (VRMS)</td>
<td>2500V</td>
</tr>
</tbody>
</table>

#### Input Voltage

- 12V AC/DC
- 24V AC/DC
- 48V DC
- 120V AC/DC
- 240V AC/DC

#### Impedance (Ohms)

- AC N/A 0.5V A
- N/A 0.4V A
- 0.8V A

#### Power Consumption

- AC 0.4 W 0.5 W 0.8 W
- DC 0.5 W 0.7 W

### Mechanical

- Degree of Protection: IP20
- Electrical Life Operations
  - 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)

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

<table>
<thead>
<tr>
<th>Cat. No.</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>Approx. Shipping Wt.</th>
</tr>
</thead>
<tbody>
<tr>
<td>199-DR1</td>
<td>35</td>
<td>27</td>
<td>7.5</td>
<td>1.02</td>
<td>1.85 kg (4.07 lb)</td>
</tr>
<tr>
<td></td>
<td>(1-3/8)</td>
<td>(1-1/16)</td>
<td>(19/64)</td>
<td>(1/64)</td>
<td>(10/pkg)</td>
</tr>
<tr>
<td>199-DR4</td>
<td>35</td>
<td>27</td>
<td>15</td>
<td>2.3</td>
<td>3.68 kg (8 lb)</td>
</tr>
</tbody>
</table>