FORWARD RELAYS

**Features**
- Coil latching
- IEC68-2-27 Test Ea
- IEC68-2-6 Test Fc
- Index mark
- 10~55Hz Double amplitude Functional: 3mm
- 0.45
- 202.5
- Coil latching
- 144.6
- 3.38
- 5
- 9

**Ordering Information**
- Part number P
- 2 Operating function, NIL: Single Side Stable, L: Coil Latching, K: 2 Coil Latching
- 3 Coil rated voltage (VDC): 3, 4.5, 5.6, 9, 12, 24
- 4 Contact material, NIL: AgPd, W: AgNi

**Contact Arrangement**
- 2C: (DSPU-B-M1) (Bifurcated Crossbar)
- Contact material: AgPd (Stationary contact: Gold clad) / AgNi (Gold clad)
- Contact rating (resistive): 1A, 2A/30V DC; 0.5A/125V AC
- Contact material: AgPd (Stationary contact: Gold clad) / AgNi (Gold clad)

**Contact Data**
- Operation life
- Electrical: 1A/30VDC, 2 x 10^7, 1 x 10^7
- Mechanical: 10
- Contact resistance or Voltage drop < 50mV
- Item 4.12 of IEC 61810-1

**CAUTION:**
- Relays previously tested or used above 10mA resistive at 6V maximum DC or peak AC open circuit are not recommended for subsequent use in low level applications.

**Coil Parameter**

<table>
<thead>
<tr>
<th>Dash numbers</th>
<th>Coil voltage VDC</th>
<th>Coil resistance</th>
<th>Pick up voltage VDC (max)</th>
<th>Release voltage VDC (max)</th>
<th>Operate Time ms</th>
<th>Release Time ms</th>
</tr>
</thead>
<tbody>
<tr>
<td>P-003</td>
<td>3</td>
<td>7.9</td>
<td>84.3</td>
<td>2.35</td>
<td>0.3</td>
<td>0.14</td>
</tr>
<tr>
<td>P-004</td>
<td>4.5</td>
<td>11.25</td>
<td>144.6</td>
<td>3.38</td>
<td>0.45</td>
<td>0.14</td>
</tr>
<tr>
<td>P-005</td>
<td>5</td>
<td>12.5</td>
<td>178</td>
<td>3.75</td>
<td>0.5</td>
<td>0.14</td>
</tr>
<tr>
<td>P-006</td>
<td>6</td>
<td>15.0</td>
<td>257</td>
<td>4.50</td>
<td>0.6</td>
<td>0.14</td>
</tr>
<tr>
<td>P-009</td>
<td>9</td>
<td>22.5</td>
<td>579</td>
<td>6.75</td>
<td>0.9</td>
<td>0.14</td>
</tr>
<tr>
<td>P-012</td>
<td>12</td>
<td>30.0</td>
<td>1028</td>
<td>9.00</td>
<td>1.2</td>
<td>0.14</td>
</tr>
<tr>
<td>P-015</td>
<td>15</td>
<td>45.0</td>
<td>2880</td>
<td>18.0</td>
<td>2.4</td>
<td>0.20</td>
</tr>
</tbody>
</table>

1. Coil Latching
   - Reset
   - Reset (Max)

- PL-003        | 3                | 8.7            | 90                         | 2.25                     | -2.25          | 0.10           |
- PL-004        | 4.5              | 13.0           | 202.9                      | 3.38                     | -3.38          | 0.10           |
- PL-005        | 5                | 14.5           | 250                        | 3.75                     | -3.75          | 0.10           |
- PL-006        | 6                | 17.4           | 380                        | 4.50                     | -4.50          | 0.10           |
- PL-009        | 9                | 26.1           | 810                        | 6.75                     | -6.75          | 0.10           |
- PL-012        | 12               | 34.8           | 1440                       | 9.00                     | -9.00          | 0.10           |
- PL-015        | 15               | 45.0           | 2880                       | 18.0                     | -18.0          | 0.15           |

2. Coil Latching
   - Set Coil
   - Reset Coil
   - Reset (Max)

- PK-003        | 3                | 6              | 49                         | 2.25                     | 2.25           | 0.20           |
- PK-004        | 4.5              | 9              | 101                        | 3.38                     | 3.38           | 0.20           |
- PK-005        | 5                | 10             | 125                        | 3.75                     | 3.75           | 0.20           |
- PK-006        | 6                | 12             | 180                        | 4.50                     | 4.50           | 0.20           |
- PK-009        | 9                | 18             | 405                        | 6.75                     | 6.75           | 0.20           |
- PK-012        | 12               | 24             | 1020                       | 9.00                     | 9.00           | 0.20           |
- PK-015        | 15               | 24             | 1200                       | 18.0                     | 18.0           | 0.20           |

**CAUTION:**
1. The use of coil voltage less than the rated coil voltage will compromise the operation of the relay.
2. Pickup and release/reset voltage are for test purposes only and are not to be used as design criteria.
3. When latching relays are installed in equipment, the latch and reset coil should not be pulsed simultaneously. Coil should not be pulsed with less than the nominal coil voltage and pulse width should be a minimum of three times the specified operate time of the relay. If these conditions are not followed, it is possible for the relay to be in the magnetically neutral position.

**Safety approvals**
- Safety approval: UL&CUR, TUV
- Load: 1A, 2A/30VDC, 0.5A/125VAC
- 1A/30VDC, 0.5A/125VAC

**Dimensions**

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>mm/inch</th>
</tr>
</thead>
<tbody>
<tr>
<td>Index mark</td>
<td>1.0</td>
</tr>
<tr>
<td>Dimensions</td>
<td>1.0</td>
</tr>
</tbody>
</table>

| NOTES | 1. Dimensions are in millimeters. 2. Inch equivalents are given for general information only.
SOLDERING and MOUNTING RECOMMENDATIONS

1. Conditions for Terminal Soldering by reflow soldering method
   a. In case of Infrared Soldering
   b. In case of Vapor Phase Soldering

2. Usage of Stand-Off A & B in Base Area

The Stand-Offs shown in the Fig. 3 are designed to Anchor Relays temporarily to PC Board with glue before Terminal Soldering.