Y SERIES
RELAY – NONLATCH
4PDT, LOW LEVEL TO 5 AMP

- All welded construction
- Contact arrangement 4 PDT
- Qualified to MIL-PRF-83536 /5 & /6

PRINCIPLE TECHNICAL CHARACTERISTICS

- Contacts rated at Low level, 28 Vdc and 115/200 Vac, 400Hz, 3Ø, case grounded
- Weight 0.058 lbs. max
- Dimensions 0.81 in x 0.81 in x 0.64 in
- Special models available upon request
- Hermetically sealed, corrosion resistant metal can

CONTACT ELECTRICAL CHARACTERISTICS

<table>
<thead>
<tr>
<th>Contact rating per pole and load type [1]</th>
<th>28 Vdc</th>
<th>Load current in Amps</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>115 Vac, 400 Hz, 1Ø</td>
<td>115/200 Vac, 400 Hz, 3Ø</td>
</tr>
<tr>
<td>Resistive</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Inductive [2]</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>Motor</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Lamp</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Overload</td>
<td>20</td>
<td>30</td>
</tr>
<tr>
<td>Rupture</td>
<td>25</td>
<td>40</td>
</tr>
<tr>
<td>Low level [3]</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Time current characteristics [4]</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Application Notes:
001
002
103A
007
023

Applicable sockets:
SO-1066-001
SM-1002-003

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COIL CHARACTERISTICS (Vdc)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominal operating voltage</td>
<td>28</td>
<td>12</td>
<td>6</td>
<td>48</td>
<td>28</td>
<td>12</td>
<td>6</td>
</tr>
<tr>
<td>Maximum operating voltage</td>
<td>29</td>
<td>14.5</td>
<td>7.3</td>
<td>50</td>
<td>29</td>
<td>14.5</td>
<td>7.3</td>
</tr>
<tr>
<td>Maximum pickup voltage</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Cold coil at +125°C</td>
<td>18</td>
<td>9</td>
<td>4.5</td>
<td>36</td>
<td>18</td>
<td>9</td>
<td>4.5</td>
</tr>
<tr>
<td>- During high temp test at +125°C</td>
<td>19.8</td>
<td>9.9</td>
<td>5</td>
<td>38</td>
<td>19.8</td>
<td>9.9</td>
<td>5</td>
</tr>
<tr>
<td>- During continuous current test at +125°C</td>
<td>22.5</td>
<td>11.25</td>
<td>5.7</td>
<td>42</td>
<td>22.5</td>
<td>11.25</td>
<td>5.7</td>
</tr>
<tr>
<td>Maximum drop-out voltage</td>
<td>7</td>
<td>4.5</td>
<td>2.5</td>
<td>14</td>
<td>7</td>
<td>4.5</td>
<td>2.5</td>
</tr>
<tr>
<td>Coil resistance in Ω ±10% at +25°C except types “C” and “V” +20%, - 10% ± 20%</td>
<td>400</td>
<td>100</td>
<td>25</td>
<td>1275</td>
<td>400</td>
<td>100</td>
<td>25</td>
</tr>
</tbody>
</table>

GENERAL CHARACTERISTICS

- Temperature range -70°C to +125°C
- Minimum operating cycles (life) at rated load 100,000
- Minimum operating cycles (life) at 25% rated load 400,000
- Dielectric strength at sea level
  - All circuits to ground and circuit to circuit 1000 Vrms
  - Coil to ground 1000 Vrms
- Dielectric strength at altitude 80,000 ft 500 Vrms [6]
- Insulation resistance
  - Initial (500 Vdc) 100 M Ω min
  - After environmental tests (500 Vdc) 50 M Ω min
- Sinusoidal vibration (A, and D mounting) 0.12 d.a. / 10 to 70 Hz 30G / 70 to 3000 Hz
- Sinusoidal vibration (E mounting in track) 0.06 d.a / 10 to 57 Hz 10G /57 to 500 Hz 20G / 500 to 3000 Hz
- Sinusoidal vibration (G and J mounting) 0.12 d.a / 10 to 57 Hz 20G /57 to 3000 Hz
- Random vibration
  - Applicable specification MIL-STD-202
  - Method 214
  - Test condition – A, and D mounting 1G (0.4G²/Hz, 50 to 2000 Hz)
  - Test condition – E, J, and G mounting (E in track) 1E (0.2G²/Hz, 50 to 2000 Hz)
  - Duration 15 minutes each plane
- Shock (A, D, and J mounting) 200G / 6 ms
- Shock (E mounting in track) 50G / 11 ms
- Shock (G and J mounting) 100G / 6 ms
- Maximum contact opening time under vibration and shock 10 μs
- Operate time at nominal voltage @ 25°C 6 ms max
- Release time at nominal voltage @ 25°C 6 ms max
- Contact make bounce at nominal voltage @ 25°C 0.5 ms max
- Contact release break bounce at nominal voltage @ 25°C 0.1 ms max [7]
- Weight, maximum 0.058 lbs.

Unless otherwise noted, the specified temperature range applies to all relay characteristics.
Y SERIES
RELAY – NONLATCH
4PDT, LOW LEVEL TO 5 AMP

MOUNTING STYLES

Dimensions in inches
Tolerances, unless otherwise specified, ±0.03 in

MOUNTING STYLE A

MOUNTING STYLE D

MOUNTING STYLE E

NOTE:
FOR USE WITH TRACK MOUNT SYSTEM, MT-3000-C03 & SM-1002-C03.
GLASS FIBER GASKET NOT PROVIDED ON THIS MOUNTING STYLE.

MOUNTING STYLE C

MOUNTING STYLE J
TERMINAL TYPES

TERMINAL TYPE 1
FINISH:
BODY—TIN/LEAD
TERMINALS—TIN/LEAD

TERMINAL TYPE 2
FINISH:
BODY—TIN/LEAD
TERMINALS—TIN/LEAD

TERMINAL TYPE 4
FINISH:
BODY—TIN/LEAD
TERMINALS—GOLD PLATED

Dimensions in inches
Tolerances, unless otherwise specified, ± 0.03 in

INSULATOR P/N: RC—RP800050—1 AVAILABLE FROM ROBISON ELECTRONICS, SAN LUIS OBISPO, CA.
Y SERIES
RELAY – NONLATCH
4PDT, LOW LEVEL TO 5 AMP

DIAGRAMS

SCHEMATIC DIAGRAM  Wiring Diagram  STANDARD TERMINAL LAYOUT

TOL: XX ±.03; XXX ±.010

NUMBERING SYSTEM

Basic series designation

1. Mounting styles (A, D, E, G, J)
2. Terminal types (1, 2, 4)
3. Coil voltage, see coil characteristics (A, B, C, M, N, R, V)
4. XXX Designators

Example: Y-A1A-XXX
Y-A1A (Commercial)
Y-A1A-300 L,M (MIL)
Y-A1A-123 (Customer Part)

NOTES

1. Standard Intermediate Current test applicable; relay can also switch low level load while switching any of the other rated loads on adjacent contacts.
2. Inductive load life: 20,000 cycles.
3. Low level endurance test: contact load of 10 to 50 millivolt, 10 to 50 microamp, 100 Ohm max. contact resistance.
4. Refer to MIL-PRF-83536 for details.
5. "N" "R" & "V" coils have back EMF suppression to 42 volts maximum.
6. 500 Vrms with silicone gasket compressed, 250 Vrms all other conditions.
7. Applicable to Type "N", "R" & "V" coils only.
8. Relay will not operate, but will not be damaged by application of reverse polarity on coil.
9. Reference MIL-PRF-83536/5 & 6

For any inquiries, please contact your local Esterline Power Systems representative