

Applicable sockets:
SO-1066-001



SM-1002-003



Application Notes:
001
002
103A
007
023

• 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

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

AMERICAS.

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<http://www.esterline.com/powersystems>

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COIL CHARACTERISTICS (Vdc)

| CODE | A | B | C | M | N [5] | R [5] | V [5] |
|--|------|-------|-----|------|-------|-------|-------|
| Nominal operating voltage | 28 | 12 | 6 | 48 | 28 | 12 | 6 |
| Maximum operating voltage | 29 | 14.5 | 7.3 | 50 | 29 | 14.5 | 7.3 |
| Maximum pickup voltage | | | | | | | |
| - Cold coil at +125° C | 18 | 9 | 4.5 | 36 | 18 | 9 | 4.5 |
| - During high temp test at +125° C | 19.8 | 9.9 | 5 | 38 | 19.8 | 9.9 | 5 |
| - During continuous current test at +125° C | 22.5 | 11.25 | 5.7 | 42 | 22.5 | 11.25 | 5.7 |
| Maximum drop-out voltage | 7 | 4.5 | 2.5 | 14 | 7 | 4.5 | 2.5 |
| Coil resistance in Ω $\pm 10\%$ at +25° C except types "C" and "V" +20%, - 10% $\pm 20\%$ | 400 | 100 | 25 | 1275 | 400 | 100 | 25 |

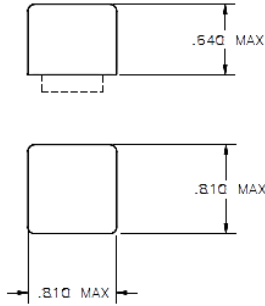
GENERAL CHARACTERISTICS

| | |
|--|---|
| 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 (0.4G ² /Hz, 50 to 2000 Hz) |
| - Test condition – E, J, and G mounting (E in track) | 1E (0.2G ² /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 μ s |
| 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. |

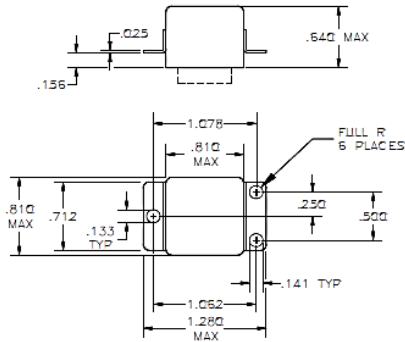
Unless otherwise noted, the specified temperature range applies to all relay characteristics.

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

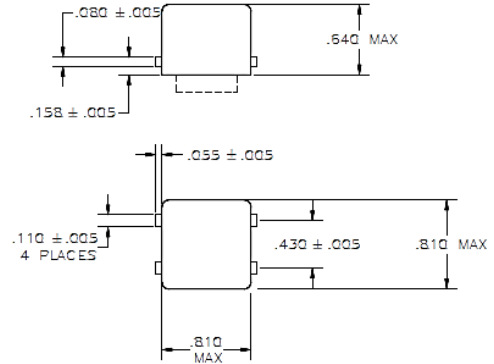
MOUNTING STYLES



MOUNTING STYLE A

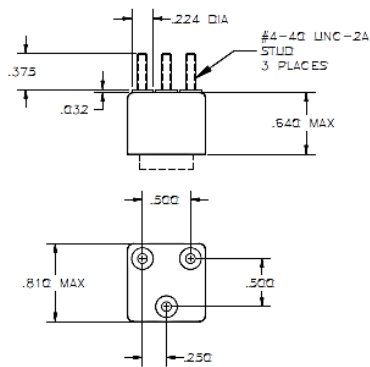


MOUNTING STYLE D

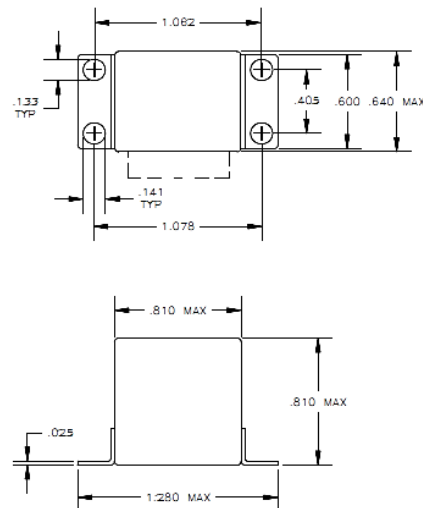


MOUNTING STYLE E

NOTE:
 FOR USE WITH TRACK MOUNT
 SYSTEM, MT-3000-.003 &
 SM-1002-.003.
 SILICONE RUBBER GASKET NOT
 PROVIDED ON THIS MOUNTING
 STYLE.



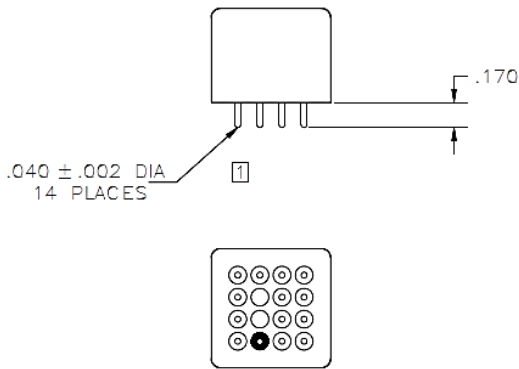
MOUNTING STYLE G



MOUNTING STYLE J

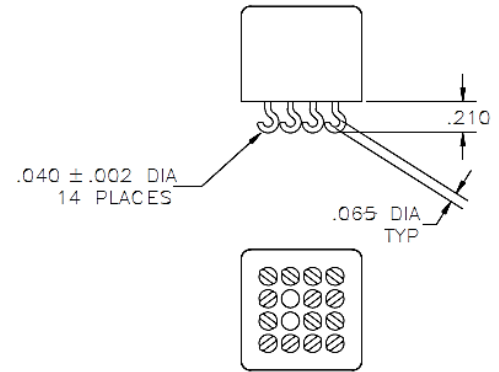
Dimensions in inches
Tolerances, unless otherwise specified, ± 0.03 in

TERMINAL TYPES



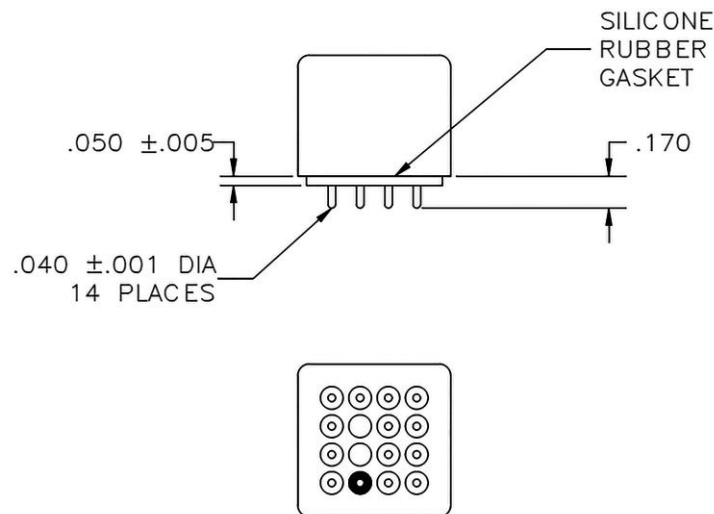
1 INSULATOR P/N RC-RP8000050-1 AVAILABLE FROM ROBISON ELECTRONICS, SAN LUIS OBISPO, CA.

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



TERMINAL TYPE 2

FINISH:
BODY-TIN/LEAD
TERMINALS-TIN/LEAD



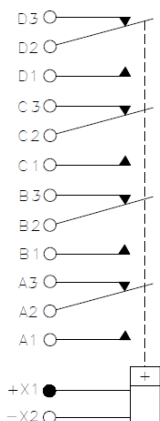
TERMINAL TYPE 4

FINISH:
BODY-TIN/LEAD
TERMINALS-GOLD PLATED

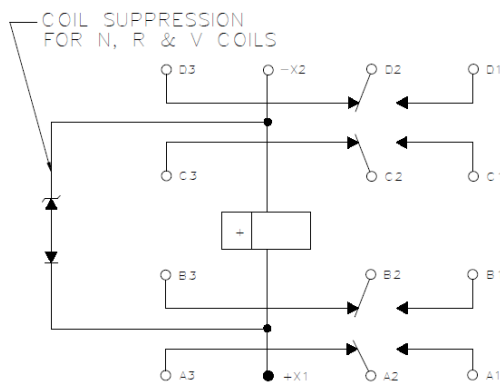
Dimensions in inches
Tolerances, unless otherwise specified, ± 0.03 in

DIAGRAMS

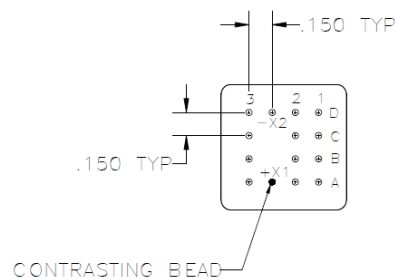
SCHEMATIC DIAGRAM



WIRING DIAGRAM

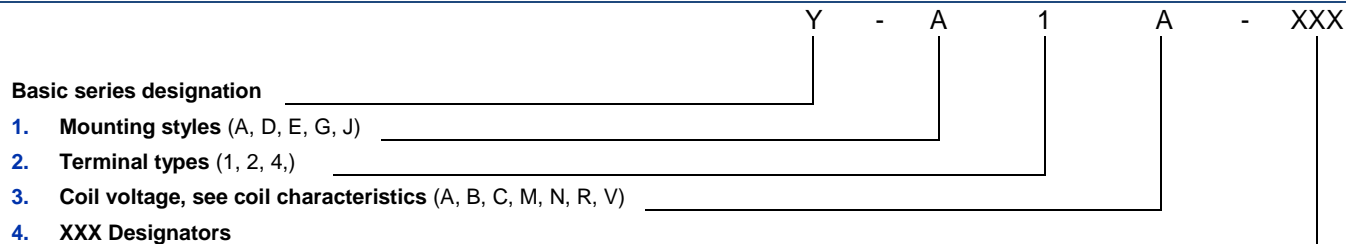


STANDARD TERMINAL LAYOUT



TOL: .XX ±.03; .XXX ±.010

NUMBERING SYSTEM



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
<http://www.esterline.com/powersystems/Contact/TheAmericas.aspx>