



Applicable sockets:
SO-1057-8912

Application Notes:
101
102
103E
007

- All welded construction

- Contact arrangement 3 PDT configuration in one inch cube

- Qualified to MIL-PRF-83536

PRINCIPLE TECHNICAL CHARACTERISTICS

- **Contacts rated at** 28 Vdc; 115 Vac, 400 Hz, 1Ø
and 115/200 Vac, 400 Hz 3Ø

- **Weight** 0.188 lb max

- **Dimensions** 1.01in x 1.01in x 1.00in

- **Hermetically sealed, corrosion resistant metal can. Detail specifications and ordering data appear on the following pages.**

CONTACT ELECTRICAL CHARACTERISTICS

| Contact rating per pole and load type [1] | Load current in Amps | | | |
|---|----------------------|-----------------|--------------------------|-----------------------------|
| | @28 Vdc | @115 Vac 400 Hz | @115/200 Vac, 400 Hz, 3Ø | @115/200 Vac, 60 Hz, 3Ø [9] |
| Resistive [2] | 25 | 25 | 25 | 2.5 |
| Inductive [3] | 12 | 15 | 15 | 2.5 |
| Motor | 10 | 10 | 10 | 2 |
| Lamp | 5 | 5 | 5 | 1 |
| Overload | 40 | 80 | 80 | N/A |
| Rupture | 60 | 100 | 100 | N/A |
| Circuit Breaker | - | - | - | |
| Compatible [10] | | | | |

COIL CHARACTERISTICS (Vdc)

| CODE | A | B | C | M | N [7] | R [7] | V [7] |
|---|------|-------|-----|-----|-------|-------|-------|
| 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 $\Omega \pm 10\%$ at +25° C except types "C" and "V" +20%, -10% | 290 | 70 | 18 | 890 | 290 | 70 | 18 |

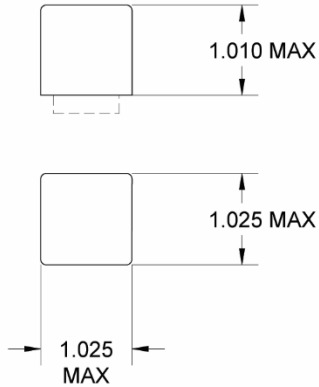
GENERAL CHARACTERISTICS

| | |
|--|--|
| Temperature range | -70°C to +125°C |
| Minimum operating cycles (life) at rated load | 50,000 [3] |
| Minimum operating cycles (life) at 25% rated load | 200,000 |
| Dielectric strength at sea level | |
| - All circuits to ground and circuit to circuit | 1250 Vrms |
| - Coil to ground | 1000 Vrms |
| Dielectric strength at altitude 80,000 ft | 500 Vrms [4] |
| 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 (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 – G and J mounting | 1E (0.2G ² /Hz, 50 to 2000 Hz) |
| - Duration | 15 minutes each plane |
| Shock (A, D and W mounting) | 200G / 6 \pm 1 ms |
| Shock (J mounting) | 100G / 6 \pm 1 ms |
| Maximum contact opening time under vibration and shock | 10 μ s |
| Operate time at nominal voltage @25°C | 15 ms max |
| Release time at nominal voltage @25°C | 15 ms max |
| Contact make bounce at nominal voltage @25°C | 1 ms max |
| Contact release break bounce at nominal voltage @25°C | 0.1 ms max [8] |

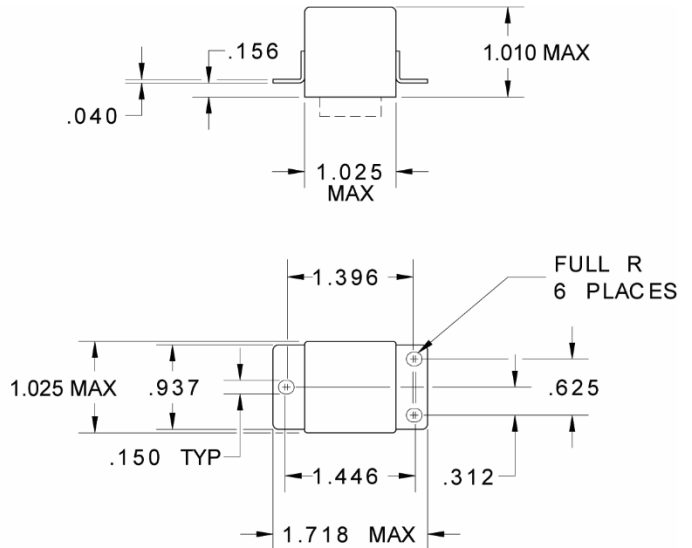
Unless otherwise noted, the specified temperature range applies to all relay characteristics.

MOUNTING STYLES

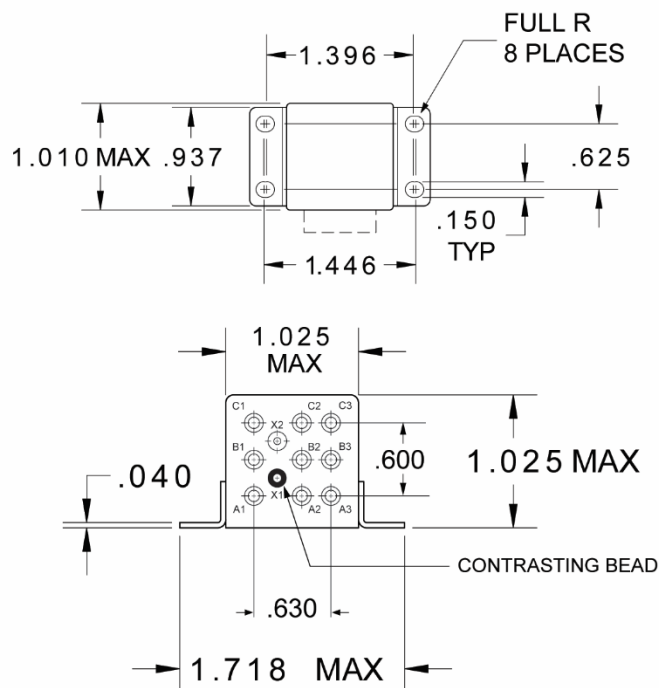
Dimensions in inches
Tolerances, unless otherwise specified, ± 0.03 in



MOUNTING STYLE A

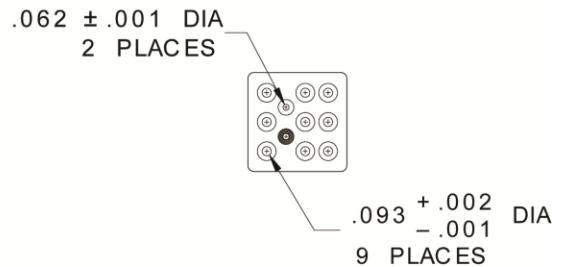
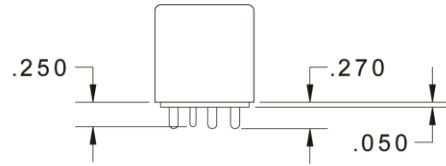
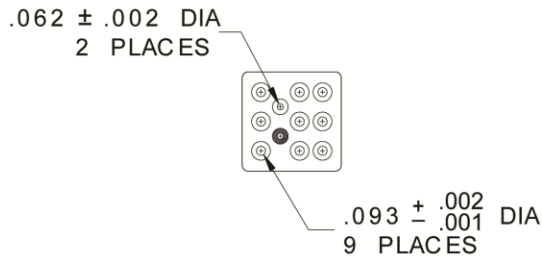
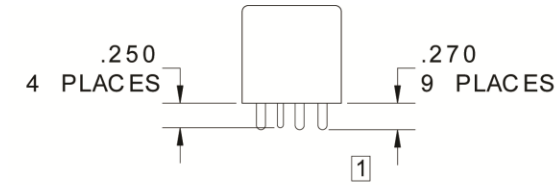


MOUNTING STYLE D



MOUNTING STYLE J

TERMINAL TYPES



TERMINAL TYPE 1

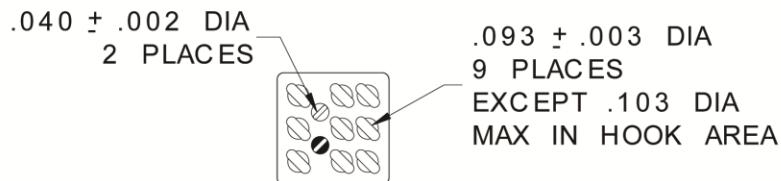
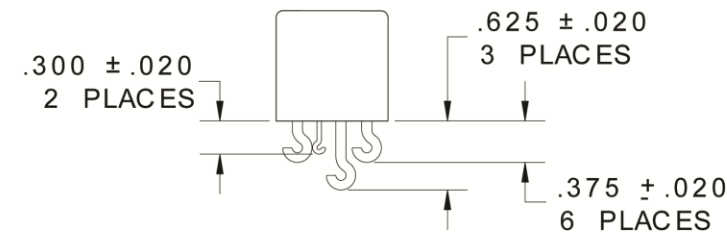
FINISH:
CASE: TIN/LEAD (All M83536 qualified relays)
BLUE PAINT UPON REQUEST

TERMINALS: TIN/LEAD PLATE

TERMINAL TYPE 4

FINISH:
CASE: TIN/LEAD (All M83536 qualified relays)
BLUE PAINT UPON REQUEST

TERMINALS: GOLD PLATE



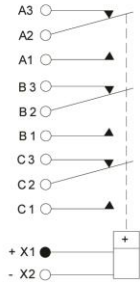
TERMINAL TYPE 2

FINISH:
CASE: TIN/LEAD (All M83536 qualified relays)
BLUE PAINT UPON REQUEST

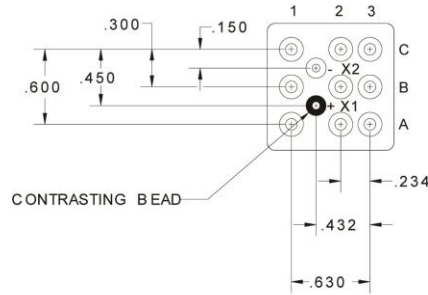
TERMINALS: TIN/LEAD PLATE

DIAGRAMS

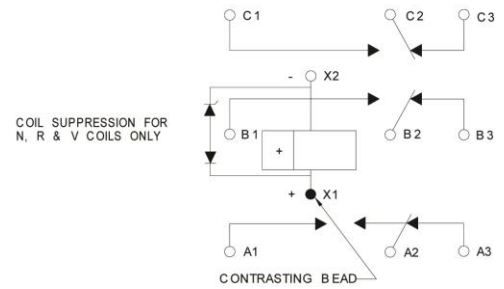
SCHEMATIC DIAGRAM



STANDARD TERMINAL LAYOUT



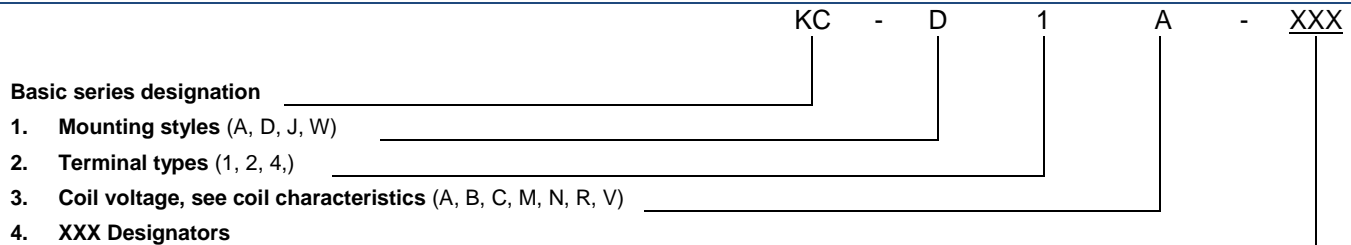
WIRING DIAGRAM



With EMF Suppression [7]

TOL: .XX ±.03; .XXX ±.010

NUMBERING SYSTEM



NOTES

- Standard Intermediate current test applicable
- For full rated load, max. temp. and altitude use no. 12 wire or larger.
Solder hook relays to be mounted to limit mounting bracket temp. to 160° C.
- DC inductive load 10,000 cycles, AC inductive load 20,000 cycles.
- 500 Vrms with silicone gasket compressed, 350 Vrms all other conditions.
- Applicable military specification: MIL-PRF-83536.
- Special models available: Dry circuit, high reliability testing, etc.
- "N, R & V" coils have back EMF suppression to - 42 volts maximum.
- Applies to "N, R & V" coils only
- 60 Hz load life, 10,000 cycles.
- Time current relay characteristics per MIL-PRF-83536
- Relay will not operate, but will not be damaged by application of reverse polarity to coil.

For any inquiries, please contact your local sales representative: leachcorp.com