KD SERIES
RELAY – NONLATCH
3PST/NO+AUX, 25 AMP

- **All welded construction**
- **Contact arrangement** — **3 PST configuration with 1 PDT, 2 Amp auxiliary contacts in one inch cube**
- **Qualified to** — **MIL-PRF-6106**

Applicable sockets:
SO-1059-8914

Application Notes:
101
102
103E
007

PRINCIPLE TECHNICAL CHARACTERISTICS

- **Contacts rated at** — 28 Vdc 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 [10]
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	50	80	80	N/A
Rupture	60	100	100	N/A
Contact rating of auxiliary contacts at 28 Vdc or 115 Vac, 400 Hz		**Resistive 2 Amp**	**Inductive 1 Amp**	**Lamp 0.5 Amp**

COIL CHARACTERISTICS (Vdc)

CODE	A	B	C	M	N [8]	R [8]	V [8]
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 Ω ±10% at +25° except types "C" & "V" +20%, -10%	290	70	18	890	290	70	18

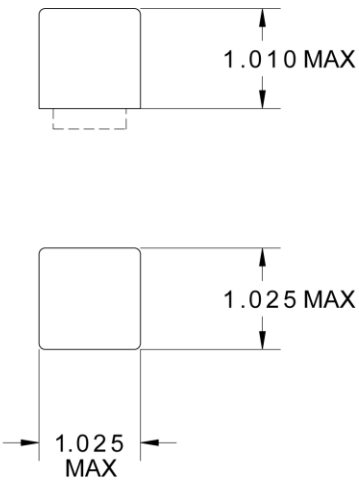
GENERAL CHARACTERISTICS

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 [4]
Dielectric strength at altitude 80,000 ft	500 Vrms [5]
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 – J mounting	1E ($0.2G^2$/Hz, 50 to 2000 Hz)
- Duration	15 minutes each plane
Shock (A, D and W mounting)	200G / 6 ms
Shock (J mounting)	100G / 6 ms
Maximum contact opening time under vibration and shock	10 µs
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	
- Power contacts@25°C	1 ms max
- Auxiliary contacts@25°C	4 ms max
Contact release break bounce at nominal voltage @25°C – Power contacts	0.1 ms max [9]

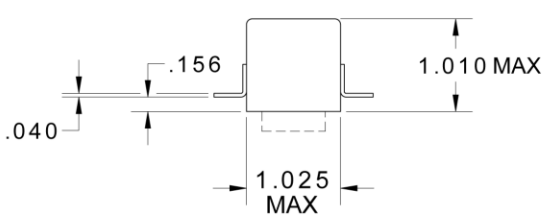
Unless otherwise noted, the specified temperature range applies to all relay characteristics.

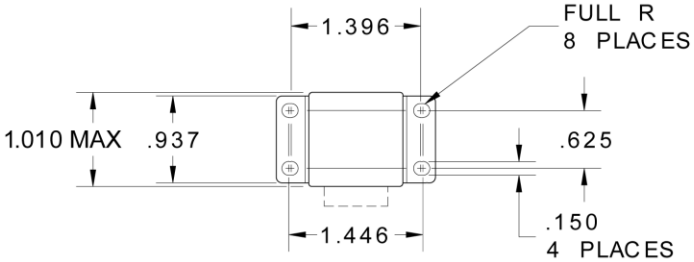
Dimensions in inches
Tolerances, unless otherwise specified
XXX ± 0.010 in
XX ± 0.03 in

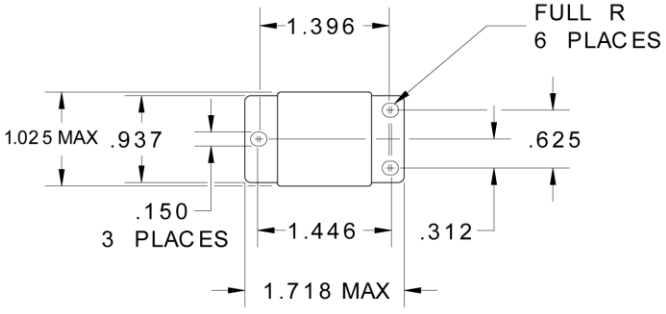
MOUNTING STYLES



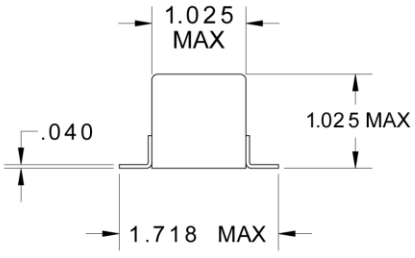
MOUNTING STYLE A





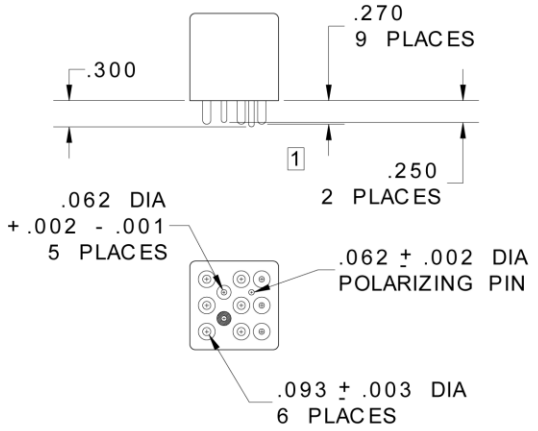


MOUNTING STYLE D



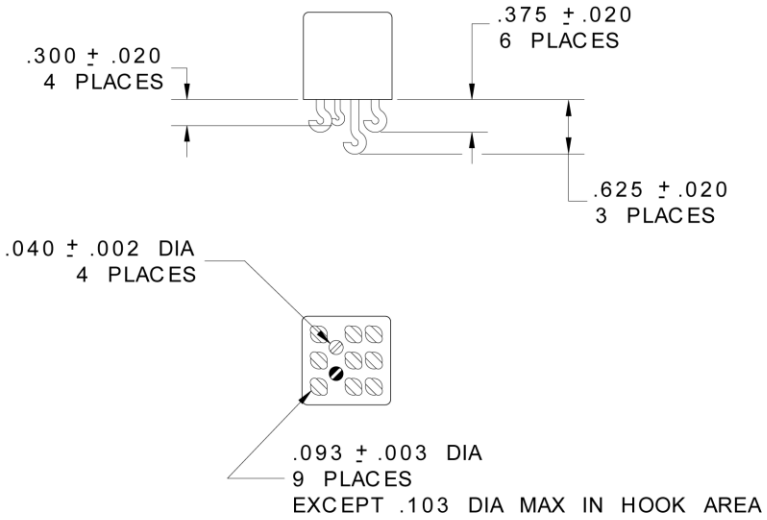
MOUNTING STYLE J

TERMINAL TYPES

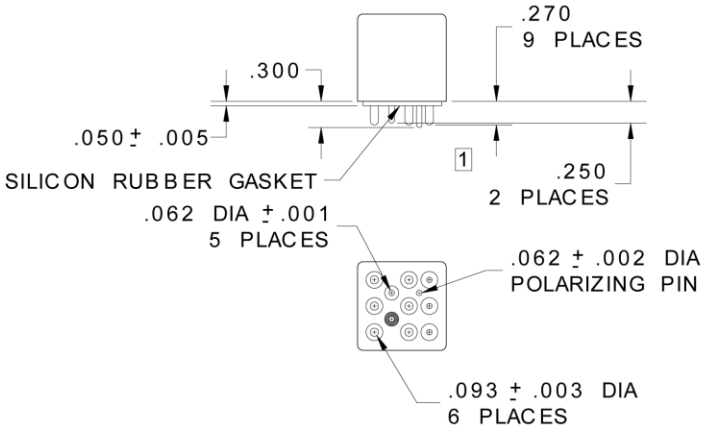


TERMINAL TYPE 1

FINISH:
BODY- LEACH BLUE
TERMINALS- TIN/ LEAD



TERMINAL TYPE 2

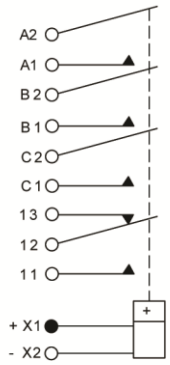


TERMINAL TYPE 4

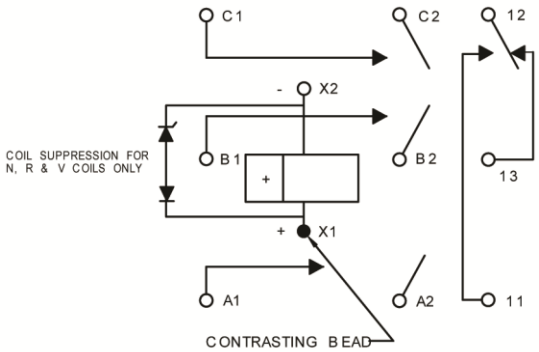
FINISH:
BODY- LEACH BLUE
TERMINALS- GOLD PLATED
POLARIZING PIN- TIN/ LEAD

DIAGRAMS

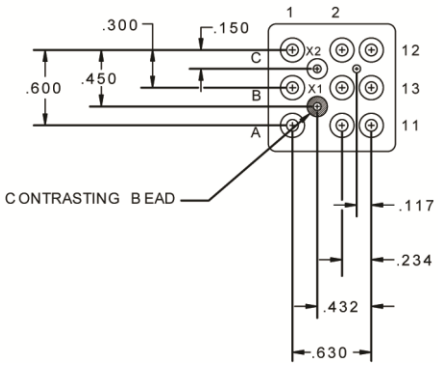
SCHEMATIC DIAGRAM



WIRING DIAGRAM



STANDARD TERMINAL LAYOUT



TOL: .XX ±.03; .XXX ±.010

NUMBERING SYSTEM

KD - A 4 A

Basic series designation

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

NOTES

1. **Standard Intermediate current test applicable**
2. **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.
3. **DC inductive load 10,000 cycles, AC inductive load 20,000 cycles.**
4. **Dielectric of auxiliary contact gap after life tests: 750 Vrms, 60 Hz.**
5. **500 Vrms with silicone gasket compressed, 350 Vrms all other conditions.**
6. **Applicable military specification: MIL-PRF-6106 and M6106/13.**
7. **Special models available: Dry circuit, high reliability testing, etc.**
8. **"N, R & V" coils have back EMF suppression to - 42 volts maximum.**
9. **Applies to "N, R & V" coils and main contacts only.**
10. **60 Hz load life, 10,000 cycles.**
11. **Time current relay characteristics per MIL-PRF-6106.**
12. **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