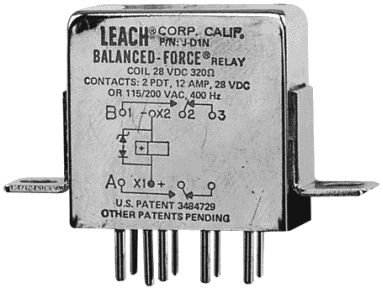
LEACH®

SERIES J
RELAY – NONLATCH
2 PDT, 12 AMP



- **All weld construction**
- **Contact arrangement** — **2 PDT**
- **Qualified at 10 Amps to** — **MIL-PRF-83536 /9 & /10**

Applicable sockets:
SO-1049-8309/8987

Application Notes:
023

PRINCIPLE TECHNICAL CHARACTERISTICS

- **Contacts rated at** — 28 Vdc; 115 Vac, 400 Hz, 1 phase and 115/200 Vac, 400 Hz, 3 phases
- **Weight** — 0.10 lbs. max
- **Dimensions** — 1.01 in x .51 in x 1.00 in
- **Special models available upon request**
- **Hermetically sealed, corrosion resistant metal can**
- **Contact factory for information on MIL-qualified part numbers**

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 [2]
Resistive	12	12	12	2.5
Inductive [3]	8	8	8	2.5
Motor	4	4	4	2
Lamp	2	2	2	-
Overload	40	60	60	N/A
Rupture	50	80	80	N/A

COIL CHARACTERISTICS (Vdc)

CODE	A	B	C	M	N [4]	R [4]	V [4]	W [4]
Nominal operating voltage	28	12	6	48	28	12	6	48
Maximum operating voltage	29	14.5	7.3	50	29	14.5	7.3	7.3
Maximum pickup voltage								
- Cold coil at +125° C	18	9	4.5	36	18	9	4.5	9
- During high temp test at +125° C	19.8	9.9	5	38	19.8	9.9	5	9.9
- During continuous current test at +125° C	22.5	11.25	5.7	42	22.5	11.25	5.7	11.25
Maximum drop-out voltage	7	4.5	2.5	14	7	4.5	2.5	4.5
Coil resistance Ω ±10% at +25° C except types "C" and "V" +20%, -10%	320	80	20	1000	320	80	20	1000

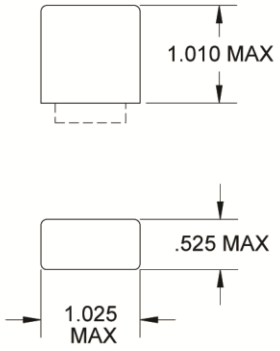
GENERAL CHARACTERISTICS

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	1250 Vrms
- Coil to ground	1000 Vrms
Dielectric strength at altitude 80,000 ft	500 Vrms [5]
Insulation resistance - Initial (500 Vdc)	100 M Ω min
Insulation resistance - After environmental tests (500 Vdc)	50 M Ω min
Sinusoidal vibration (A, D and J mounting)	0.12 d.a. / 10 to 70 Hz 30G / 70 to 3000 Hz
Sinusoidal vibration (G 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, D and J mounting	1G ($0.4G^2$/Hz, 50 to 2000 Hz)
- Test condition - 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 ± 1 ms
Shock (G mounting)	100G / 6 ± 1 ms
Maximum contact opening time under vibration and shock	10 µs
Operate time at nominal voltage @ 25°C	10 ms max
Release time at nominal voltage @ 25°C	10 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 [6]

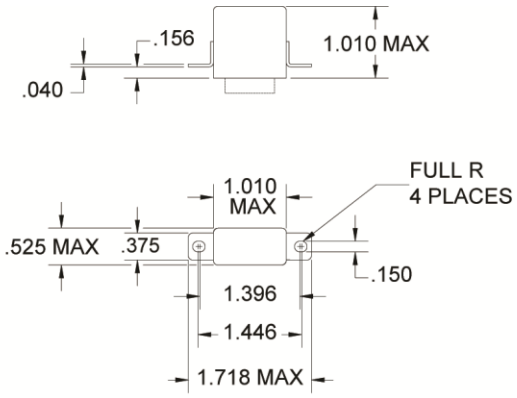
Unless otherwise noted, the specified temperature range applies to all relay characteristics.

Dimensions in inches
Tolerances, unless otherwise specified, ± 0.010 in.

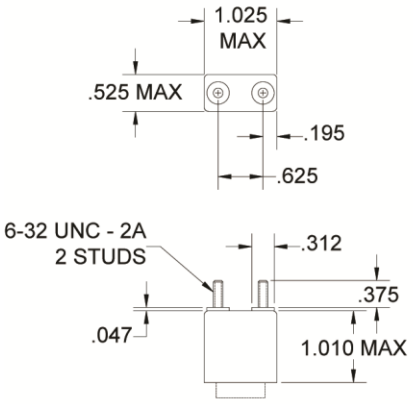
MOUNTING STYLES



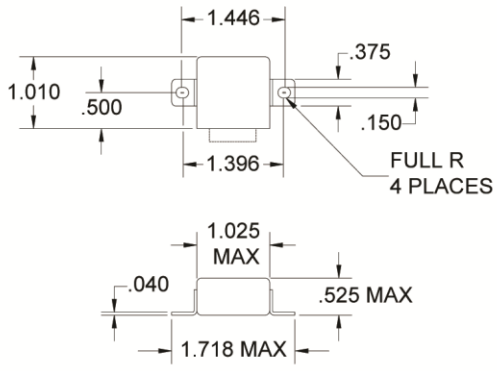
MOUNTING STYLE A



MOUNTING STYLE D

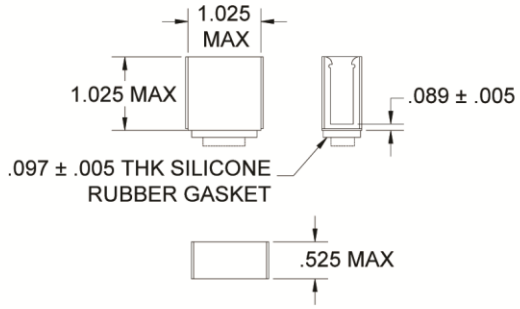


MOUNTING STYLE G



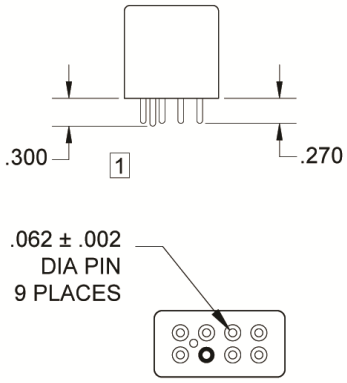
MOUNTING STYLE J

FOR USE WITH TRACK MOUNT
SYSTEM NOTE: TRACK SYSTEM
NOT AVAILABLE FROM LEACH



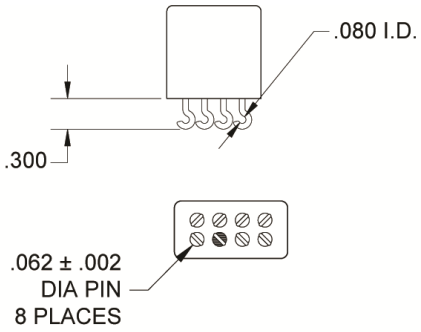
MOUNTING STYLE W

TERMINAL TYPES



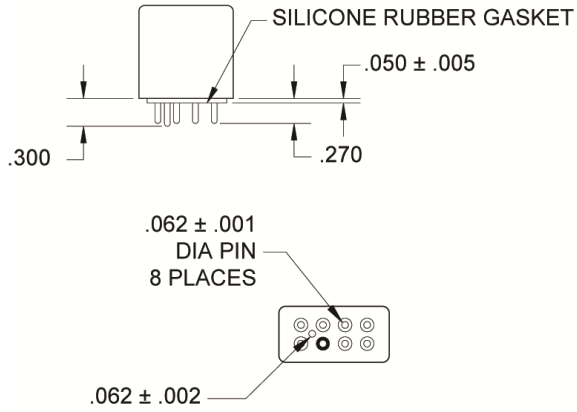
TERMINAL TYPE 1

FINISH: TIN/LEAD PLATE



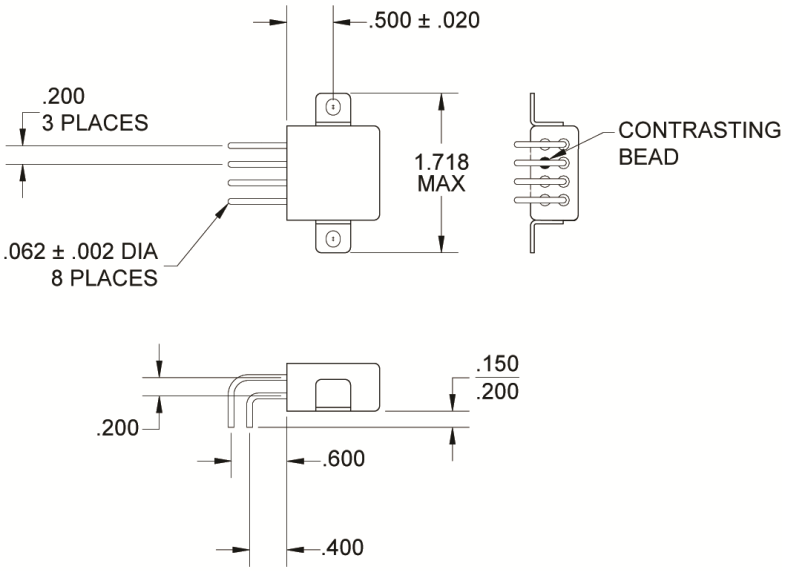
TERMINAL TYPE 2

FINISH: TIN/LEAD PLATE



TERMINAL TYPE 4

FINISH:
CASE - TIN/LEAD PLATE
TERMINAL - GOLD PLATE
POLARIZING PIN - TIN/LEAD PLATED



TERMINAL TYPE 7

FINISH: TIN/LEAD PLATE

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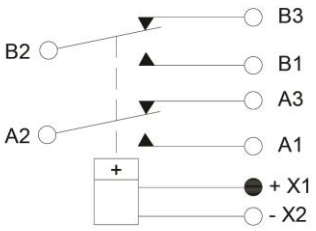
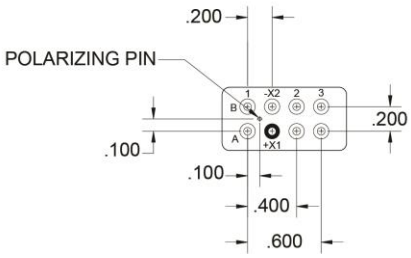
DIAGRAMS

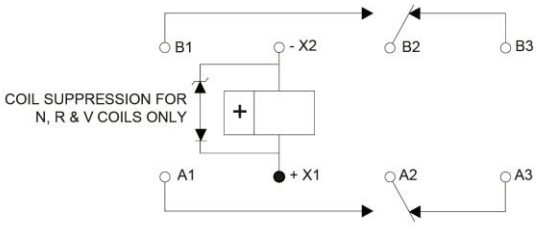
SCHEMATIC DIAGRAM



STANDARD TERMINAL LAYOUT



WIRING DIAGRAM



STANDARD TOLERANCE: = ±.010
[1] COIL POLARITY NOT APPLICABLE TO AC VERSIONS.

NUMBERING SYSTEM

J - A 1 A - XXX

Basic series designation

1. **Mounting styles** (A, D, 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 : J-A1A-XXX

J-A1A (Commercial)
J-A1W-300 L,M (MIL)
J-A1A-123 (Customer Part)

NOTES

1. **Standard Intermediate current test applicable.**
2. **60 Hz load life, 10,000 cycles.**
3. **Inductive load life, 20,000 cycles.**
4. **N, R, V & W coils have back EMF suppression to 42 volts maximum.**
5. **500 Vrms with silicone gasket compressed, 350 Vrms all other conditions.**
6. **Applicable to suppressed coils only.**
7. **Applicable military specification: MIL-PRF-83536.**
8. **Special models available: Dry circuit, established reliability testing, etc.**
9. **Time current relay characteristics per MIL-PRF-83536.**
10. **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