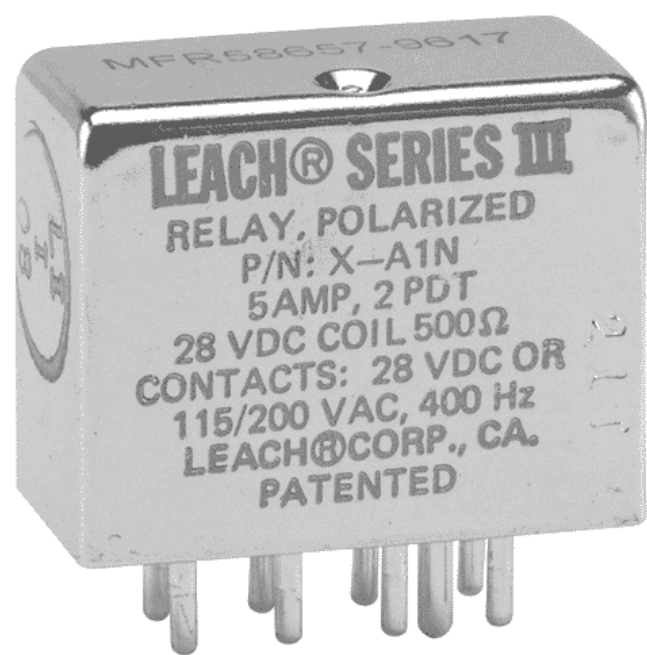


ENGINEERING DATA SHEET

SERIES X
RELAY - NONLATCH
2 PDT, LOW LEVEL TO 5 AMP



APPLICATION NOTES:

[101](#)
[102](#)
[103A](#)
[007](#)
[023](#)

APPLICABLE SOCKETS:

[SO-1064-001](#)
[SM-1000-003](#)

Contact arrangement **2 PDT**
Qualified to **MIL-PRF-6106**

PRINCIPLE TECHNICAL CHARACTERISTICS

Contacts rated at **Low level, 28 Vdc and 115/200 Vac, 400Hz 3Ø, case grounded**
Weight **0.034lb max**
Dimensions **.41in x .81in x .64in**
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]	-	-	-



Featuring **LEACH®** power and control solutions
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AMERICAS 6900 Orangethorpe Ave. P.O. Box 5032 Buena Park, CA 90622 Tel: (01) 714-736-7599 Fax: (01) 714-670-1145	EUROPE 2 Rue Goethe 57430 Sarralbe France Tel: (33) 3 87 97 31 01 Fax: (33) 3 87 97 96 86	ASIA Units 602-603 6/F Lakeside 1 No.8 Science Park West Avenue Phase Two, Hong Kong Science Park Pak Shek Kok, Tai Po, N.T. Hong Kong Tel: (852) 2 191 3830 Fax: (852) 2 389 5803
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Data sheets are for initial product selection and comparison. Contact Esterline Power Systems prior to choosing a component.

COIL CHARACTERISTICS (Vdc)**SERIES X**

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	7	2.5
Coil resistance in Ω $\pm 10\%$ at +25° C, except types "C" and "V" +20%, -10% $\pm 20\%$	500	125	20	1600	500	125	20

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, D and J mounting)	0.12DA / 10 to 70 Hz 30G / 70 to 3000 Hz
Sinusoidal vibration (E mounting in track)	0.06DA / 10 to 57 Hz 10G / 57 to 500 Hz 20G / 500 to 3000 Hz
Sinusoidal vibration (G mounting)	0.12DA / 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 - E 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 mounting)	100G / 6 ms
Maximum contact opening time under vibration and shock	10 μ s
Operate time at nominal voltage@25°C	4 ms max
Release time at nominal voltage@25°C	4 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	0.034lb

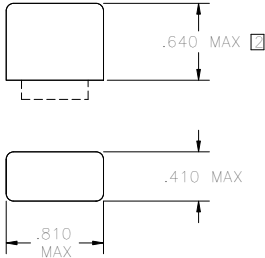
Unless otherwise noted, the specified temperature range applies to all relay characteristics.

- [1] Standard Intermediate current test applicable.
- [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-R-83536 for details.
- [5] "N" "R" & "V" coils have back EMF suppression to 42 volts maximum.
- [6] 500 Vrms with silicone rubber gasket compressed, 250 Vrms all other conditions.
- [7] Applicable to Type "N", "R" & "V" coils only.
8. Reference M83536/1,2,3,4.
9. Relay will not operate, but will not be damaged by application of reverse polarity on coil.

NUMBERING SYSTEM

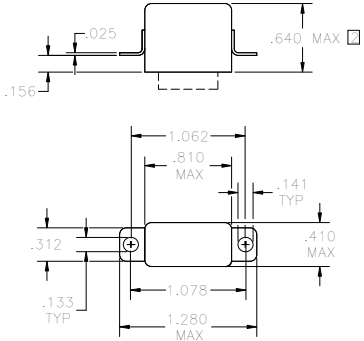
		X	A	1	A
Basic series designation					
1-Mounting Style (A,D,E,G,J)					
2-Terminal Types (1,2,4,7)					
3-Coil Voltage see coil characteristics (A,B,C,M,N,R & V)					

MOUNTING STYLES



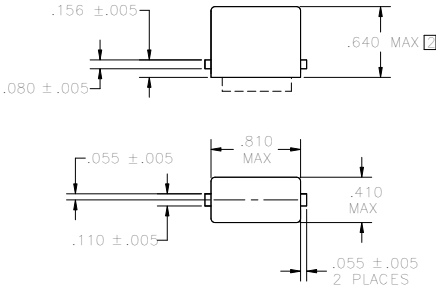
RELAY HEIGHT MAY BE INCREASED .100 INCH FOR "N" SUPPRESSED COILS

MOUNTING STYLE A



RELAY HEIGHT MAY BE INCREASED .100 INCH FOR "N" SUPPRESSED COILS

MOUNTING STYLE D



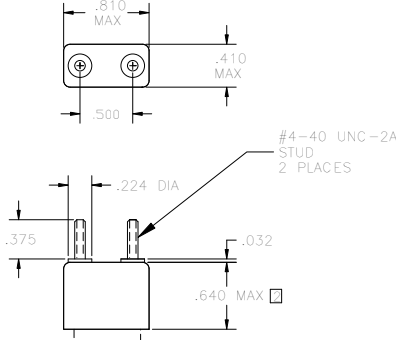
RELAY HEIGHT MAY BE INCREASED .100 INCH FOR "N" SUPPRESSED COILS

MOUNTING STYLE E

NOTES:

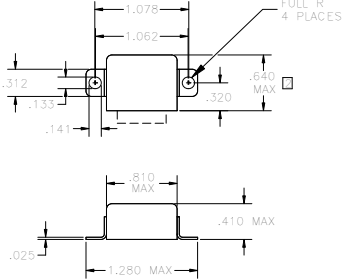
FOR USE WITH TRACK MOUNT SYSTEM, MT-3000-003 AND SM-1000-003

SILICONE GASKET NOT PROVIDED ON THIS MOUNTING STYLE.



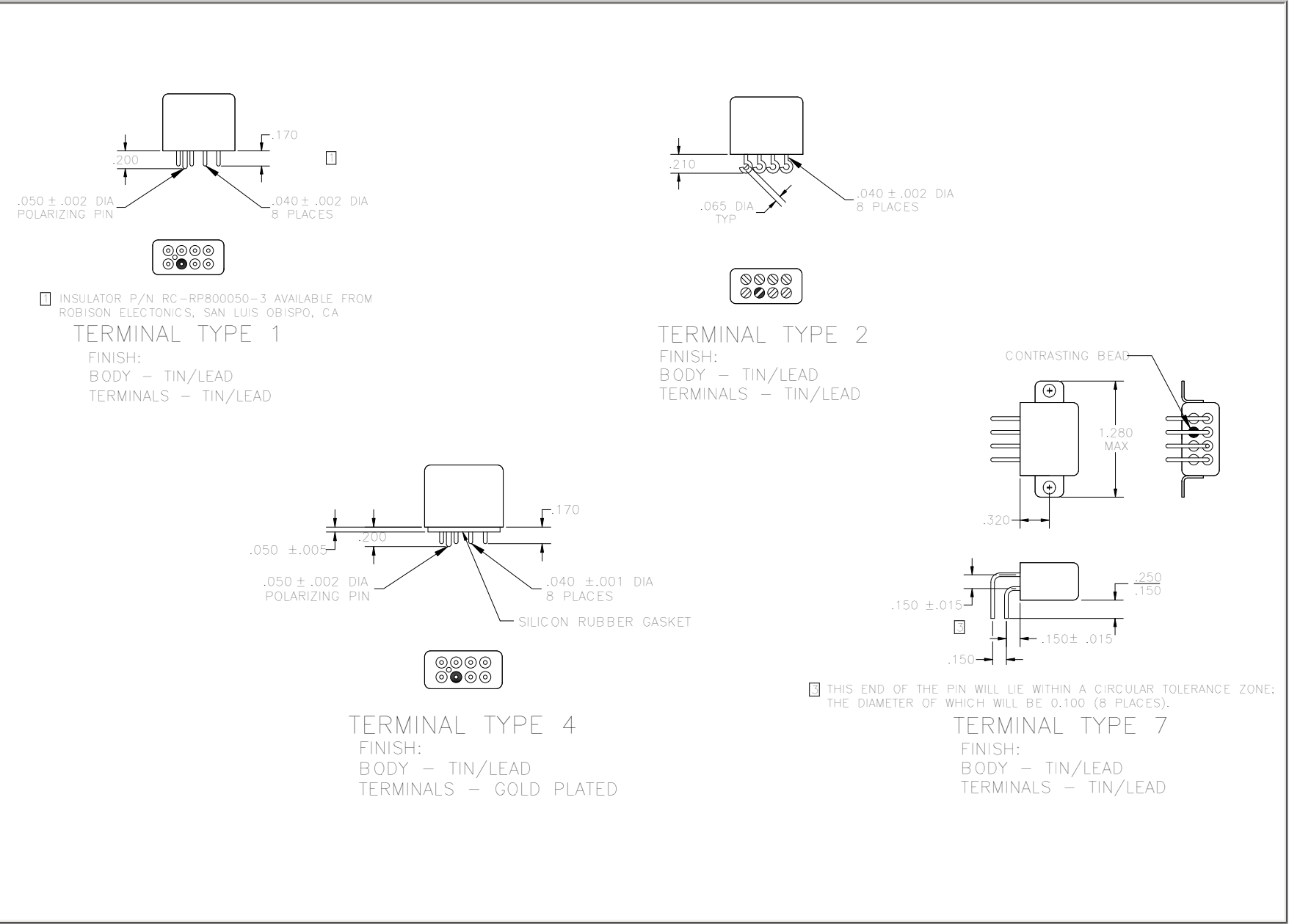
RELAY HEIGHT MAY BE INCREASED .100 INCH FOR "N" SUPPRESSED COILS

MOUNTING STYLE G

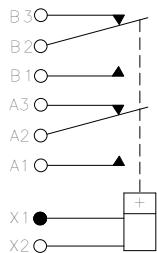


RELAY HEIGHT MAY BE INCREASED .100 INCH FOR "N" SUPPRESSED COILS

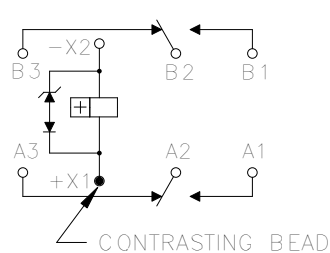
MOUNTING STYLE J



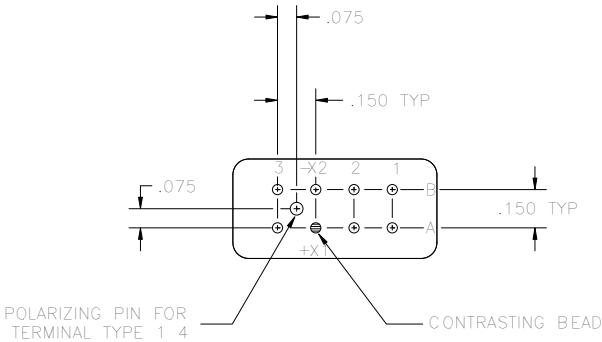
SCHEMATIC DIAGRAM



WIRING DIAGRAM



STANDARD TERMINAL LAYOUT



TOL: .XX ±.03; .XXX ±.010