

Applicable Socket:
SO-1064-10534



Application Notes:

001
002
103B
007
023

• All weld construction

• Contact arrangement **1 PDT**

• Designed to the performance standards of **MIL-PRF-83536**

PRINCIPLE TECHNICAL CHARACTERISTICS

• **Contacts rated at** Low level, 28 Vdc and 115/200 Vac, 400Hz, 3Ø, case grounded

• **Weight** 0.034 lbs. max

• **Dimensions** 0.41in x 0.81in x 0.64in

• **Special models available upon request**

• **Hermetically sealed, corrosion resistant can**

CONTACT ELECTRICAL CHARACTERISTICS

Contact rating per pole and load type [1]	Load current in Amps	
	28 Vdc	115 Vac, 400 Hz, 1Ø
Resistive	10	10
Inductive [2]	6	8
Motor	4	4
Lamp	2	2
Overload	30	60
Rupture	32	80
Low level [3]	-	-
Time current characteristics [4]	-	-

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COIL CHARACTERISTICS (Vdc)

CODE	A	B	C	N [5]	R [5]	V [5]
Nominal operating voltage	28	12	6	28	12	6
Maximum operating voltage	29	14.5	7.3	29	14.5	7.3
Maximum pickup voltage						
- Cold coil at +125° C	18	9	4.5	18	9	4.5
- During high temp test at +125° C	19.8	9.9	5	19.8	9.9	5
- During continuous current test at +125° C	22.5	11.25	5.7	22.5	11.25	5.7
Maximum drop-out voltage	7	4.5	2.5	7	4.5	2.5
Coil resistance in $\Omega \pm 10\%$ at +25° C except types "C" & "V" +20%, -10%	730	182	43	730	182	43

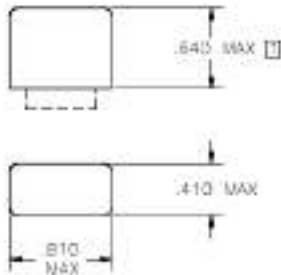
GENERAL CHARACTERISTICS

Temperature range	-70°C to +125°C
Minimum operating cycles (life) at rated load	50,000
Minimum operating cycles (life) at 25% rated load	200,000
Dielectric strength at sea level - All circuits to ground and circuit to circuit	1000 Vrms
Dielectric strength at sea level - Coil to ground	1000 Vrms
Dielectric strength at altitude 80,000 ft.	500 Vrms [6]
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 - 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 (G 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	1 ms max
Contact release break bounce at nominal voltage@25°C	0.5 ms max [7]
Weight maximum	0.034lb

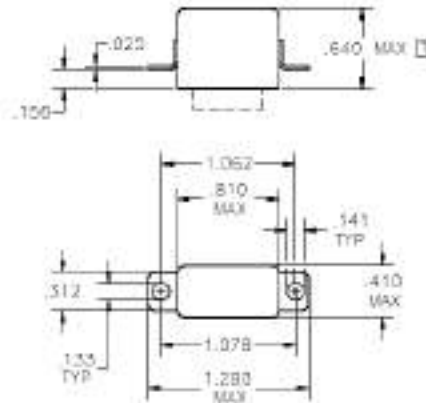
Unless otherwise noted, the specified temperature range applies to all relay characteristics.

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

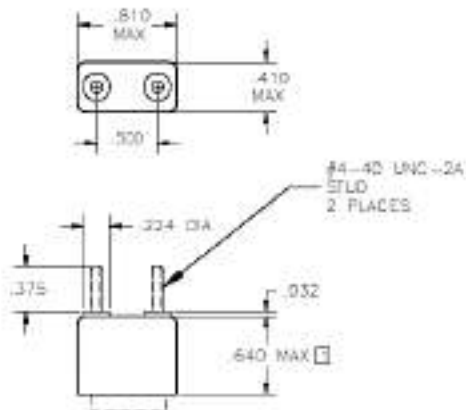
MOUNTING STYLES



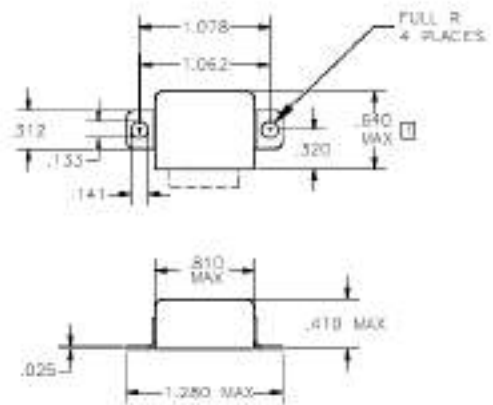
RELAY HEIGHT MAY BE INCREASED .100 INCH FOR "N" SUPPRESSED COILS
MOUNTING STYLE A



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



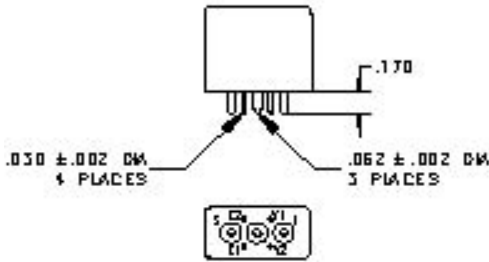
RELAY HEIGHT MAY BE INCREASED .100 INCH FOR "N" SUPPRESSED COILS
MOUNTING STYLE G



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

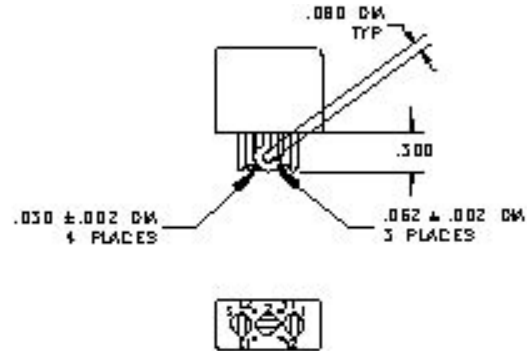
Dimensions in inches
 Tolerances, unless otherwise specified, ± 0.03 in

TERMINAL TYPES



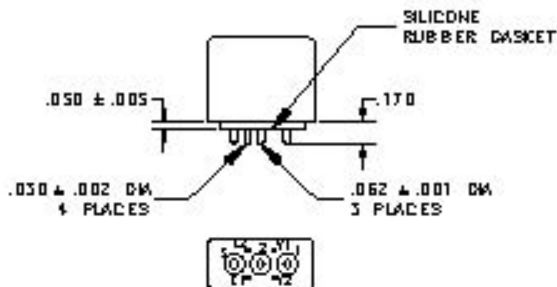
TERMINAL TYPE 1

FINISH:
 BODY-LEACH BLUE
 TERMINALS-TIN/LEAD



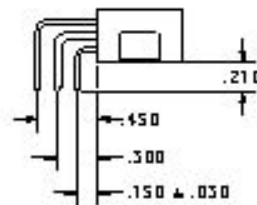
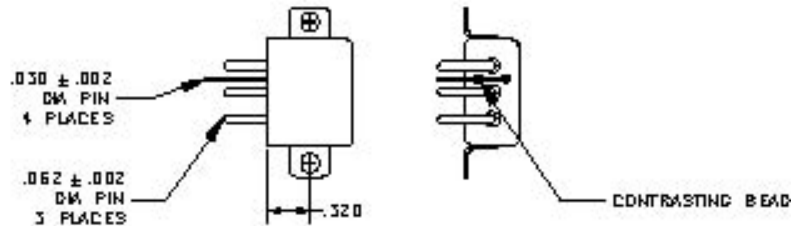
TERMINAL TYPE 2

FINISH:
 BODY-LEACH BLUE
 TERMINALS-TIN/LEAD



TERMINAL TYPE 4

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



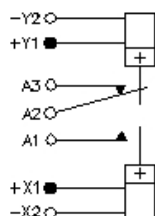
TERMINAL TYPE 7

FINISH:
 BODY - LEACH BLUE
 TERMINALS - TIN/LEAD

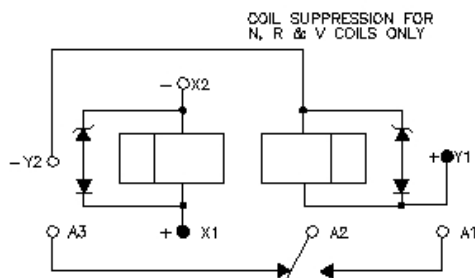
Dimensions in inches
Tolerances, unless otherwise specified, ± 0.03 in

DIAGRAMS

SCHEMATIC DIAGRAM

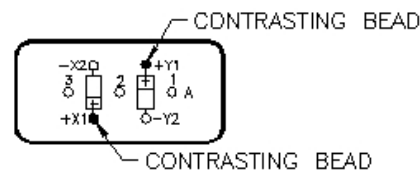


WIRING DIAGRAM



TOL: .XX ±.03; .XXX ±.010

STANDARD TERMINAL LAYOUT



NUMBERING SYSTEM

XCL - A 1 A - XXX

Basic series designation

1. Mounting styles (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)
4. XXX Designators

Example : XCL-A1A-XXX

XCL-A1A (Commercial)

XCL-A1A-300 L,M (MIL)

XCL-A1A-123 (Customer Part)

NOTES

1. Standard Intermediate current test applicable.
2. Inductive load life, 20,000 cycles. AC; 10,000 cycles DC.
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. Relay will not operate, but will not be damaged by application of reverse polarity on coil

For any inquiries, please contact your local Esterline Power Systems representative

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