

XCL SERIES RELAY – LATCHING 1PDT, LOW LEVEL TO 10 AMP



All weld construction

Contact arrangement 1 PDT

• Designed to the performance standards of MIL-PRF-6106

Applicable Socket: Contact factory

Application Notes:

001 002 103B

007 023

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	Load current in Amps			
and load type [1]	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	Α	В	С	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 Ω ±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 µs
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	0.034 lbs.

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



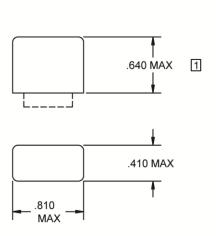
XCL SERIES

RELAY – LATCHING 1PDT, LOW LEVEL TO 10 AMP

Dimensions in inches

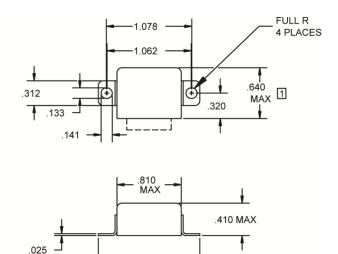
Tolerances, unless otherwise specified, XX \pm 0.03 in., XXX \pm 0.010

MOUNTING STYLES



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

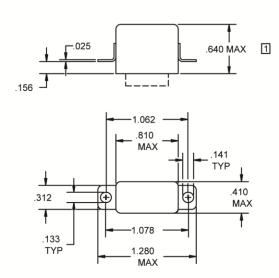
MOUNTING STYLE A



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

-1.280 MAX

MOUNTING STYLE J



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

MOUNTING STYLE D



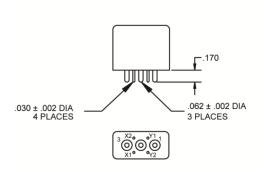
XCL SERIES

RELAY – LATCHING 1PDT, LOW LEVEL TO 10 AMP

Dimensions in inches

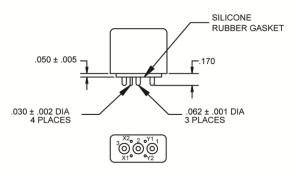
Tolerances, unless otherwise specified, XX ± 0.03 in., XXX ± 0.010

TERMINAL TYPES



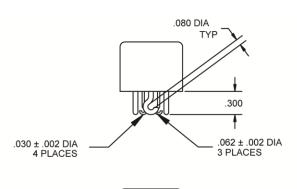
TERMINAL TYPE 1

FINISH: BODY-LEACH BLUE TERMINALS-TIN/LEAD



TERMINAL TYPE 4

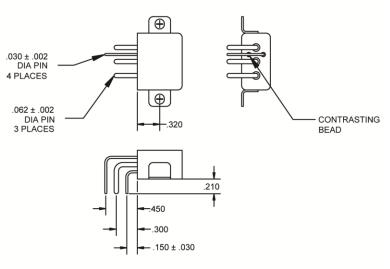
FINISH: BODY-LEACH BLUE TERMINALS-GOLD PLATED POLARIZING PIN-TIN/LEAD





TERMINAL TYPE 2

FINISH: BODY-LEACH BLUE TERMINALS-TIN/LEAD



TERMINAL TYPE 7

FINISH: BODY - LEACH BLUE TERMINALS - TIN/LEAD



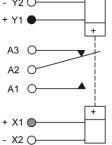
XCL SERIES **RELAY - LATCHING** 1PDT, LOW LEVEL TO 10 AMP

Dimensions in inches

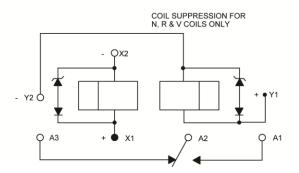
Tolerances, unless otherwise specified, XX ± 0.03 in., XXX ± 0.010

DIAGRAMS

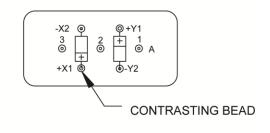
SCHEMATIC DIAGRAM - Y2 O-A3 O



WIRING DIAGRAM



STANDARD TERMINAL LAYOUT



TOL: .XX ±.03; .XXX ±.010

NUMBERING SYSTEM

		XCL -	Α	1	Α	- XXX
Bas	sic 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					

NOTES

- 1. Standard Intermediate current test applicable.
- Inductive load life, 20,000 cycles. AC; 10,000 cycles DC. 2.
- Low level enducrance test: contact load of 10 to 50 millivolt, 10 to 50 microamp, 100 Ohm max. contact resistance. 3.
- 4. Refer to MIL-R-6106 for details.
- "N" "R" & "V" coils have back EMF suppression to 42 volts maximum. 5.
- 500 Vrms with silicone rubber gasket compressed, 250 Vrms all other conditions. 6.
- 7. Applicable to Type "N", "R" & "V" coils only.
- Relay will not operate, but will not be damaged by application of reverse polarity on coil 8.

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