

Application Notes:

101
102
104
007

- Balanced-Force Design

- Hermetically sealed

- Meets the standards and requirements of MIL-PRF-6106

PRINCIPLE TECHNICAL CHARACTERISTICS

- Contacts rated at 28 Vdc and 115 Vac, 400 Hz, 1Ø and 115/200 Vac, 400Hz, 3Ø

- Weight 14.0 oz.

- Special units available upon request, including models with auxiliary contacts.

CONTACT ELECTRICAL CHARACTERISTICS

Contact rating per pole and load type	Load current in Amps			
	28 Vdc	115 Vac 400 Hz	115/200 Vac 400 Hz, 3Ø	115 Vac 60 Hz DELTA
Resistive	50	60	60	30
Inductive [1]	20	60	60	30
Motor	20	40	40	30
Lamp	10	15	15	-
Transfer load resistive [7]	-	12.5/60	12.5/60	-

COIL CHARACTERISTICS (Vdc)

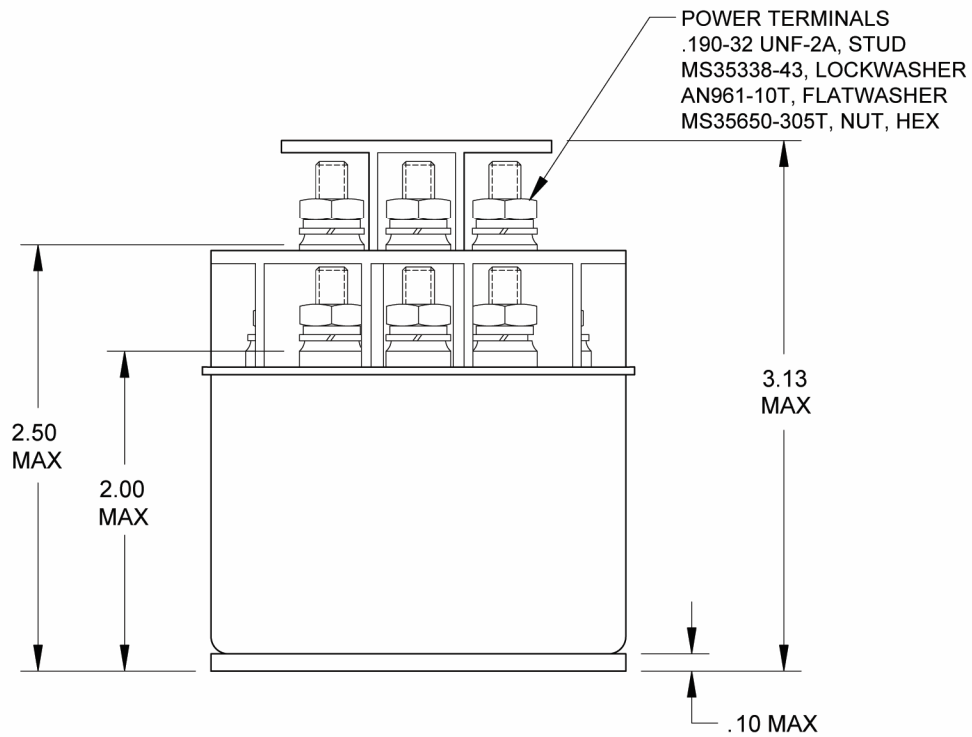
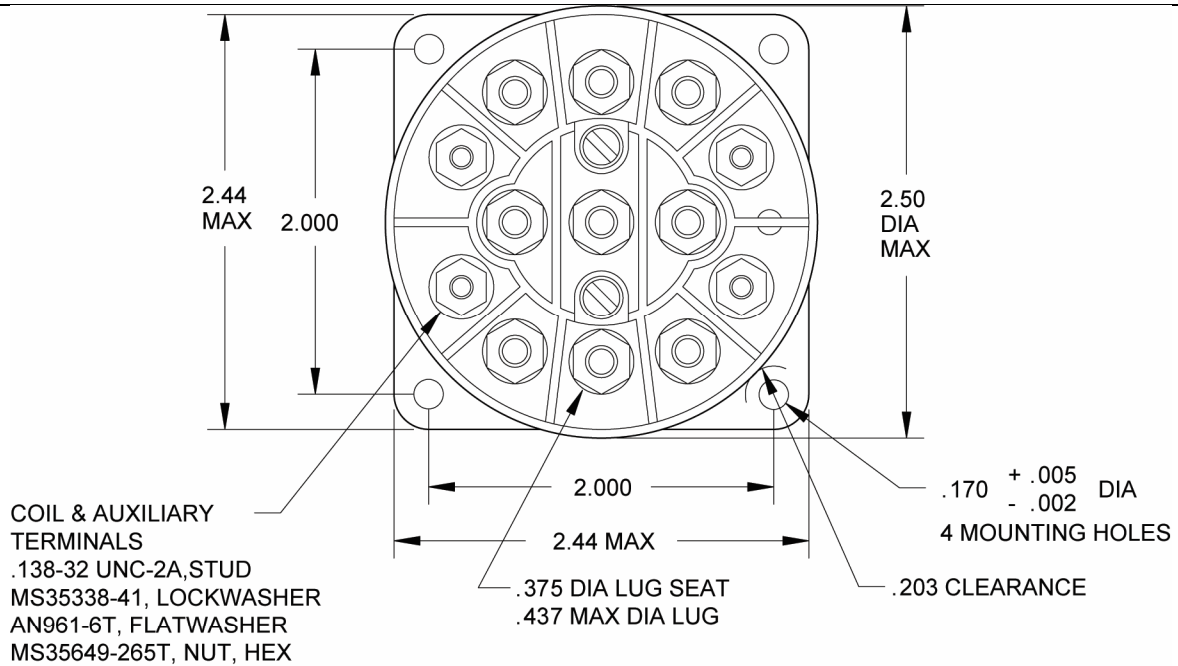
CODE	A Vdc	B Vdc	C Vdc	F Vac 400 Hz	N [4] Vdc
Nominal operating voltage	28	12	6	115	28
Maximum operating voltage (Reset voltage)	29	14.5	7.3	124	29
Pick-up voltage, maximum at +125° C	18	9	4.5	90	18
Drop-out voltage, maximum	N/A	N/A	N/A	N/A	N/A
Coil resistance in Ohms ±10% at +25° C	200	50	12	-	200
Coil current max. mA at +25° C	-	-	-	90	-

GENERAL CHARACTERISTICS

Temperature range	-55°C to +71°C
Minimum operating cycles (life) at rated resistive load	50,000
Minimum operating cycles (life) at 25% rated resistive load	200,000
Dielectric strength at sea level	
All circuits to ground and circuit to circuit	1,500 Vrms
Coil to ground and aux. contacts	1,000 Vrms
Dielectric strength at altitude: 50,000 feet	
Main contacts	700 Vrms
Coil and aux. contacts	500 Vrms
Insulation resistance	
Initial	100 M Ω min
After environmental tests	50 M Ω min
Sinusoidal vibration	10 G / 70 to 2000 Hz
Shock (6 ms duration)	50 G
Maximum contact opening time under vibration and shock	10 μs
Operate time at nominal voltage (Including bounce)	35 ms max
Contact bounce at nominal voltage	3 ms max
Weight	14.0 Oz max
Power requirements:	
at nominal D.C. voltage	4.35 watt max.
Overload @ 115/200 Vac, 400Hz. @ 28 Vdc	400 Amp 125 Amp
Rupture @ 115/200 Vac, 400Hz. @ 28 Vdc	500 Amp 150 Amp

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

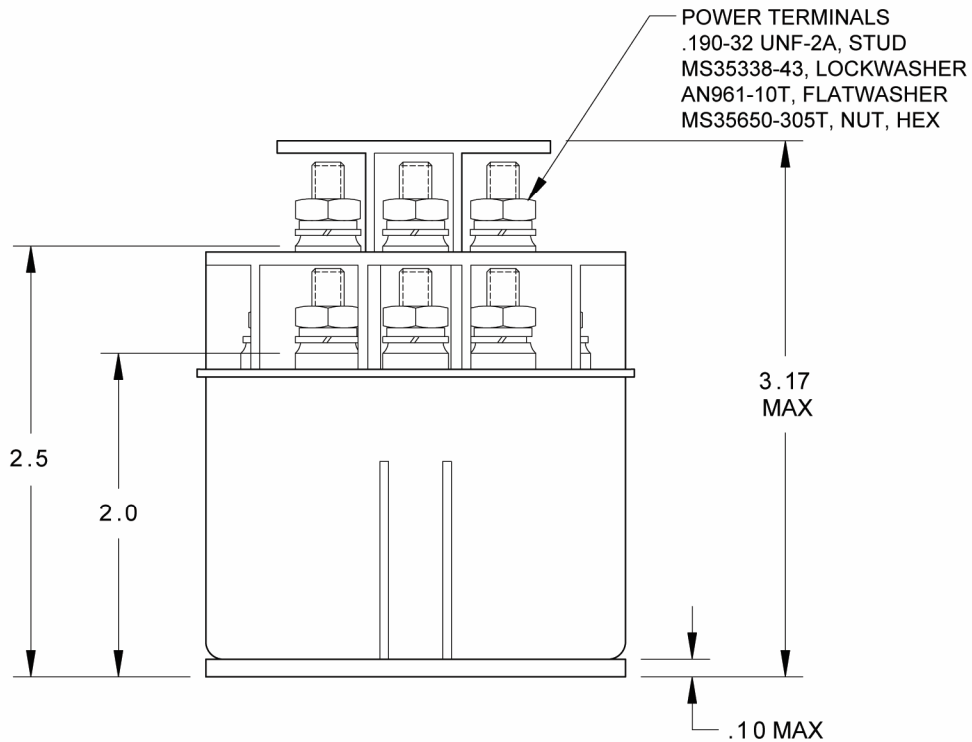
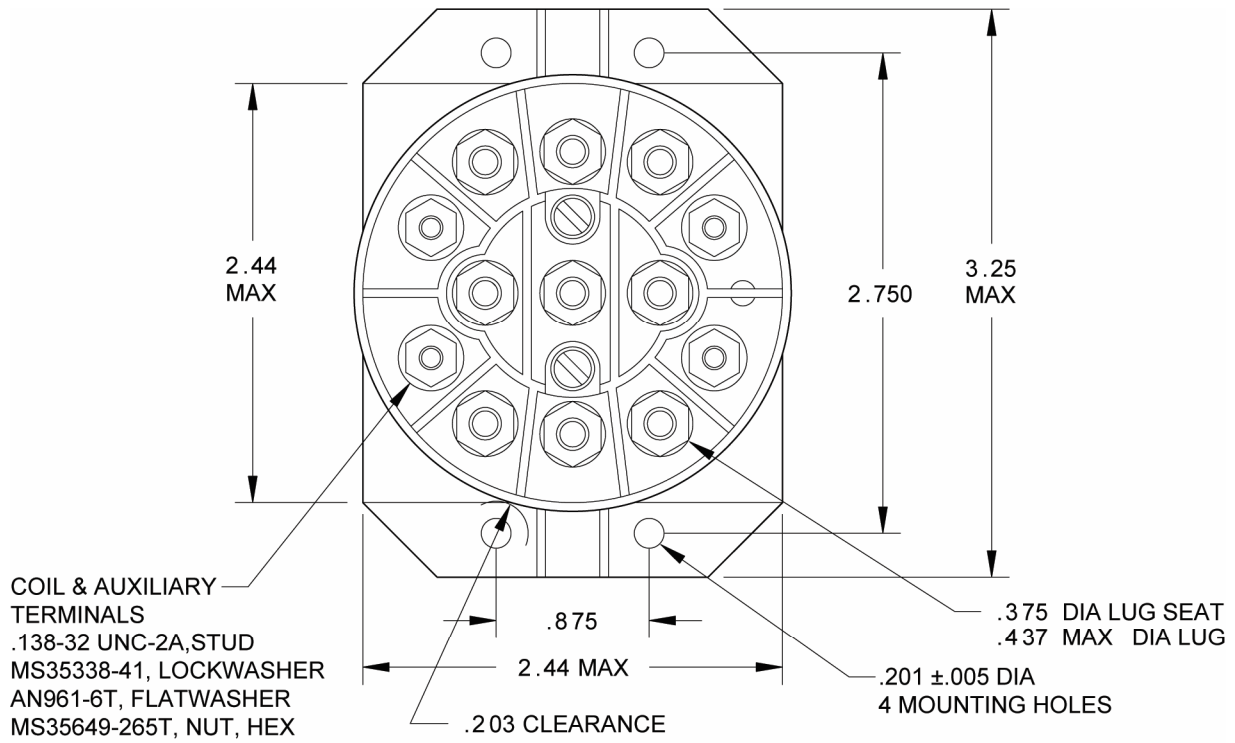
CONFIGURATION STYLES



MOUNTING STYLE A

Dimensions in inches
Tolerances, unless otherwise specified, XX ±.03; XXX ±.010

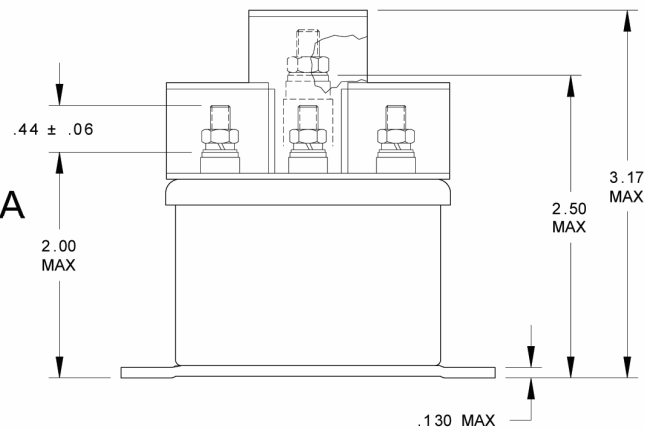
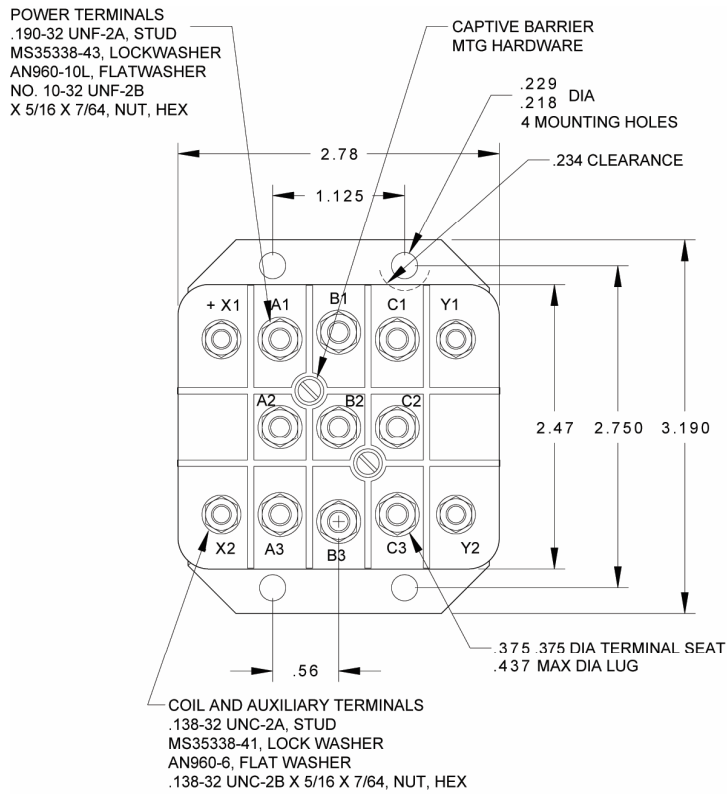
CONFIGURATION STYLES



MOUNTING STYLE B

CONFIGURATION STYLES

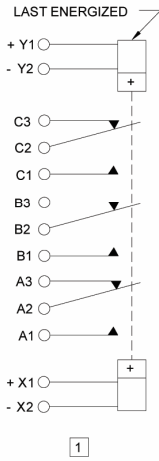
Dimensions in inches
Tolerances, unless otherwise specified, XX ±.03; .XXX ±.010



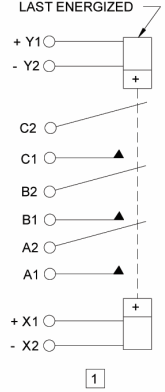
MOUNTING STYLE C

TERMINAL CONFIGURATION AND CIRCUIT DIAGRAMS

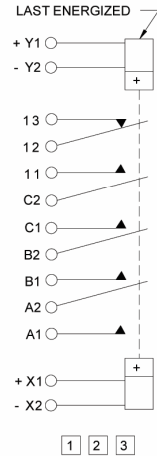
TERMINAL TYPE 1



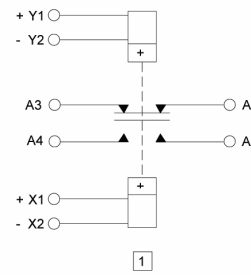
TERMINAL TYPE 2



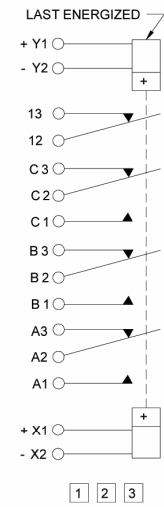
TERMINAL TYPE 3



TERMINAL TYPE 4

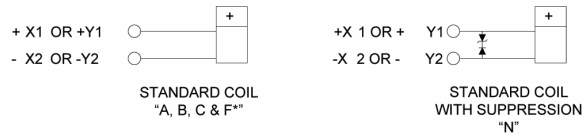


TERMINAL TYPE 5

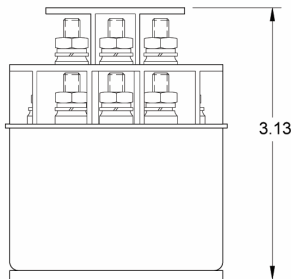


TERMINAL TYPE 9
IS A GENERAL CATEGORY USED FOR ALL
TERMINAL TYPES NOT ILLUSTRATED
FOR OTHER VARIATIONS OF TERMINAL
CONFIGURATIONS
PLEASE CONTACT FACTORY.

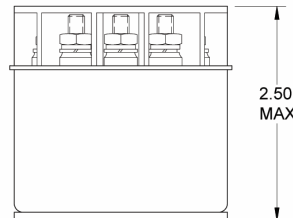
COIL CONFIGURATIONS 4



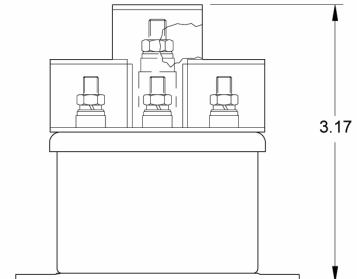
*A.C. COILS ARE NOT POLARIZED



TERMINAL TYPE 1, 3



TERMINAL TYPE 2, 4



TERMINAL TYPE 5

1 POLARITY INDICATION APPLIES TO D.C. COILS ONLY

2 AUXILIARY CONTACT RATING: 28 VDC OR 115 VAC

RESISTIVE: 5 AMP
INDUCTIVE: 3 AMP
LAMP: 1 AMP
CONTACT BOUNCE AT NOMINAL VOLTAGE: .004 SEC MAX

NOTE: OTHER AUXILIARY CONTACT FORMS ARE
AVAILABLE. PLEASE CONTACT FACTORY.

3 AVAILABLE IN MOUNTING STYLE "C" ONLY

4 COIL TERMINALS MAY BE IDENTIFIED AS X1-X2 OR Y1-Y2

NOTE: Although all configuration and/or terminal type
options are available, some combinations may require a
setup charge and be subject to minimum order size

NUMBERING SYSTEM

	HL	X	0	X
	[5] HLD	X	0	X
	[6] HLP	X	0	X
	HLT	X	0	X
Relay family _____				
1. Mounting styles _____				
2. Terminal & Circuit _____				
3. Coil Voltage _____				

NOTES

1. Inductive load life, 20,000 cycles
2. Applicable military specification: MS27749-1, MS27749-2.
3. Alternate contact configurations and other special models available upon request. Please contact factory.
4. Suppressed "N" coil has back EMF suppression to 42 volts max.
5. Non-hermetic, gasket sealed version.
6. Non-hermetic, non-metallic cover gasket sealed version. (Not available with mounting style C).
7. Suitable for transfer between unsynchronized A.C. power sources at the rating shown. Contact transfer: MS27749-1 12.5 AMP, MS27749-2 60 AMP. ("HL" SERIES=12.5 AMP., "HLT" SERIES=60.0 AMP).

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