



Application Notes:
101
102
007

Balanced-Force Design

Hermetically sealed

Designed to the performance standards of MIL-PRF-6106

PRINCIPLE TECHNICAL CHARACTERISTICS

Contacts rated at	28 Vdc and 115 Vac, and 115/200 Vac, 400Hz, 3 Ø
Weight	See Mounting
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	28 Vdc [3]	28 Vdc [7]	DELTA 115/200 Vac 60 Hz
Resistive	50	180	120	120	200	60
Inductive [2]	30	180	120	80	-	60
Motor	30	80	80	80	-	60
Load transfer, resistive [6]	-	-	120	-	-	-

COIL CHARACTERISTICS (Vdc)

CODE	A	B	C	F Vac 400 Hz	N [5]	Y [8]	YN [5]
Nominal operating voltage	28	12	6	115	28	28	28
Maximum operating voltage	29	14.5	7.3	124	29	29	29
Maximum pick-up voltage							
- Nominal	18	9	4.5	90	18	18	18
- High temp test	20	10	5	95	20	20	20
- Continuous current test	22.5	11	5.7	100	22.5	22.5	22.5
Drop-out voltage, maximum	7	4.5	2.5	30	7	7	7
Coil resistance in Ohms \pm 20% at +25 °C	113	28	7	-	113	-	-
Coil current Amp max. @ Nom. Volt. and +25 °C	0.31	0.60	1.2	0.12	0.31	-	-

GENERAL CHARACTERISTICS

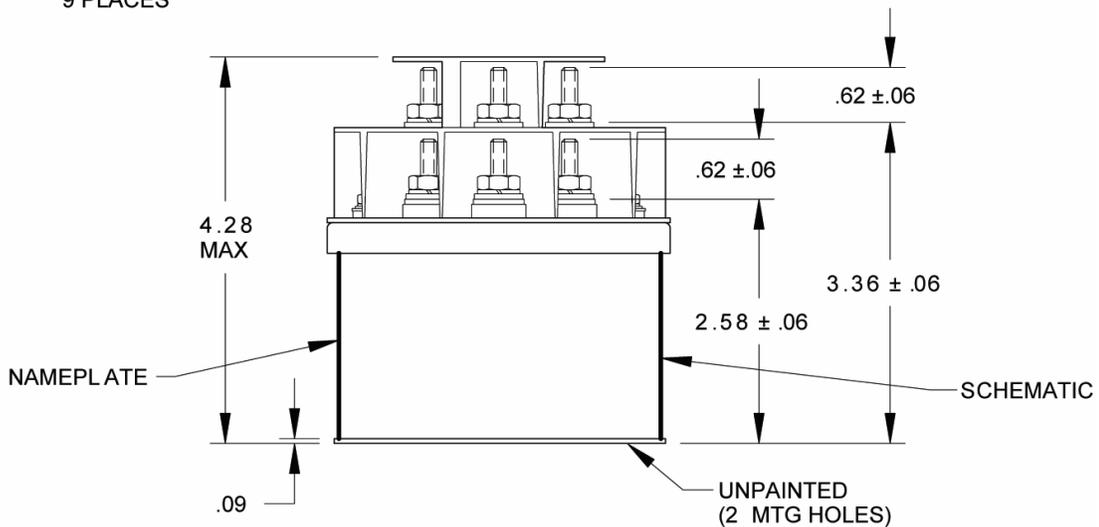
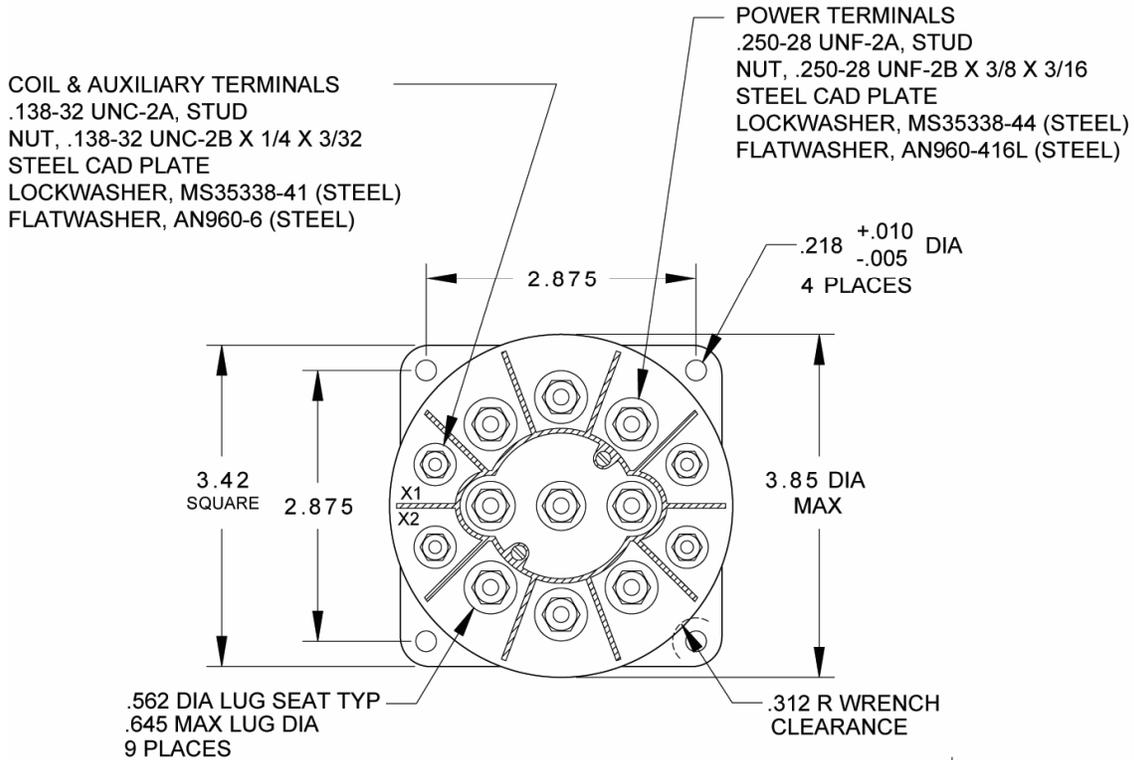
Temperature range	-55°C to +71°C
Minimum operating cycles (life) at rated load	50,000
Minimum operating cycles (life) at 25% rated load	100,000
Dielectric strength at sea level	
- All circuits to ground and circuit to circuit	1,500 Vrms
- Coil to ground and Aux.contacts	1,250 Vrms
Dielectric strength at altitude	700 Vrms (Main contacts) 500 Vrms (Coil and auxiliary contacts)
Insulation resistance	
- Initial (500 Vdc)	100 M Ω min
- After environmental tests (500 Vdc)	50 M Ω min
Sinusoidal vibration (55 to 1000 Hz)	10 G
Shock (10-12 ms duration)	15 G
Maximum contact opening time under vibration and shock	10 μ s
Operate time at nominal voltage (Including bounce)	60 ms max 25 ms max (Economizer coil)
Release time at nominal voltage (Including bounce)	
DC	40 ms max
AC	125 ms mas
Release time at nominal voltage (Including bounce) : Economizer	
DC	35 ms max
AC	100 ms max
Contact bounce at nominal Voltage	4 ms max
Overload	1,000 Amps @ 115/200 Vac, 400 Hz
Rupture	1,500 Amps @ 115/200 Vac, 400 Hz
Altitude	50,000 Feet

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

CONFIGURATION STYLES

MOUNTING STYLE A

WEIGHT: 2.5 LB MAXIMUM
WEIGHT IS DEPENDENT UPON CONFIGURATION REQUIRED.
PLEASE CONSULT FACTORY.

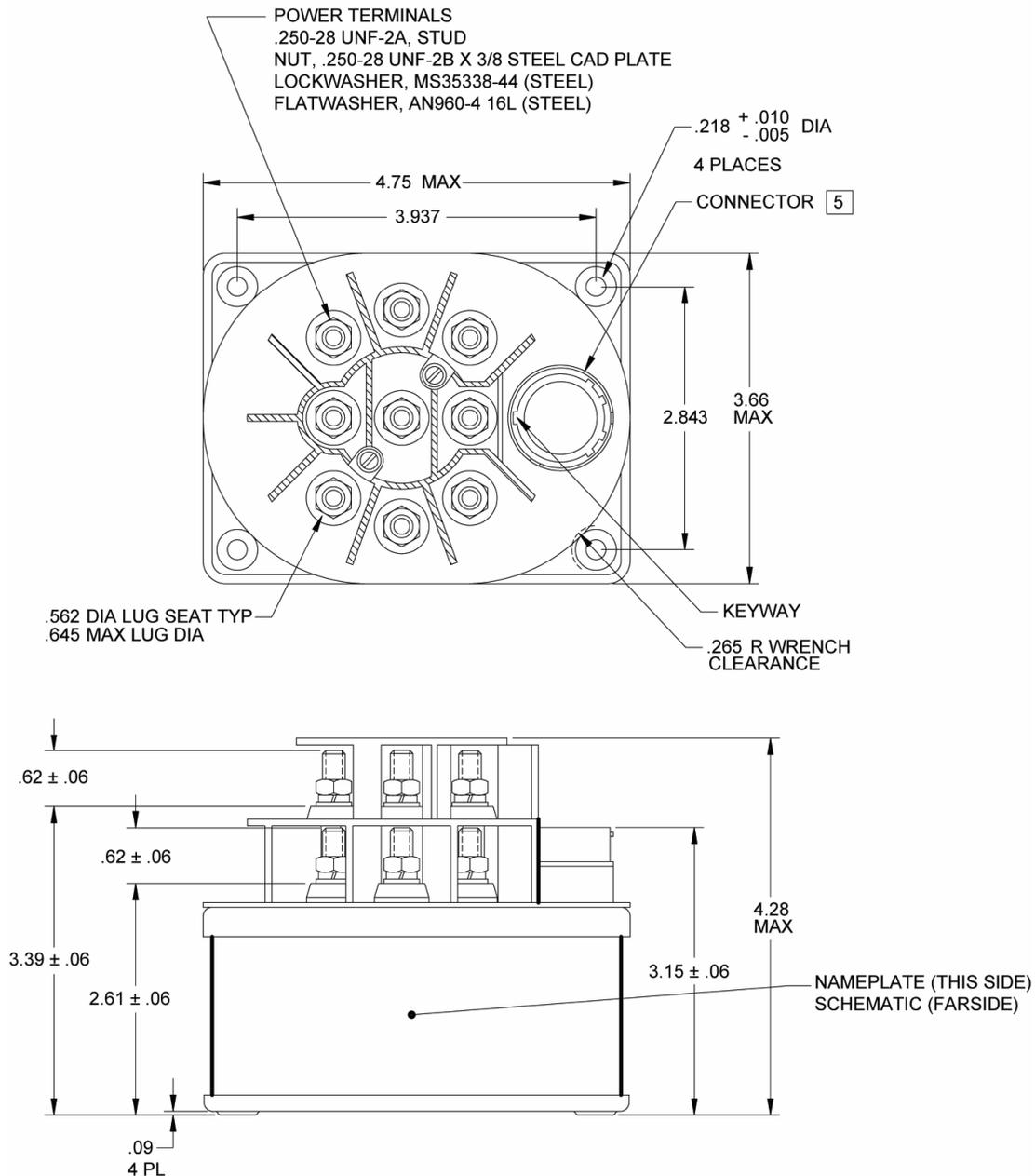


Dimensions in inches
Tolerances, unless otherwise specified,
XX ±.03
XXX ±.010

CONFIGURATION STYLES

MOUNTING STYLE B

WEIGHT: 2 LB 12 OZ MAXIMUM
WEIGHT IS DEPENDENT UPON CONFIGURATION REQUIRED.
PLEASE CONSULT FACTORY.

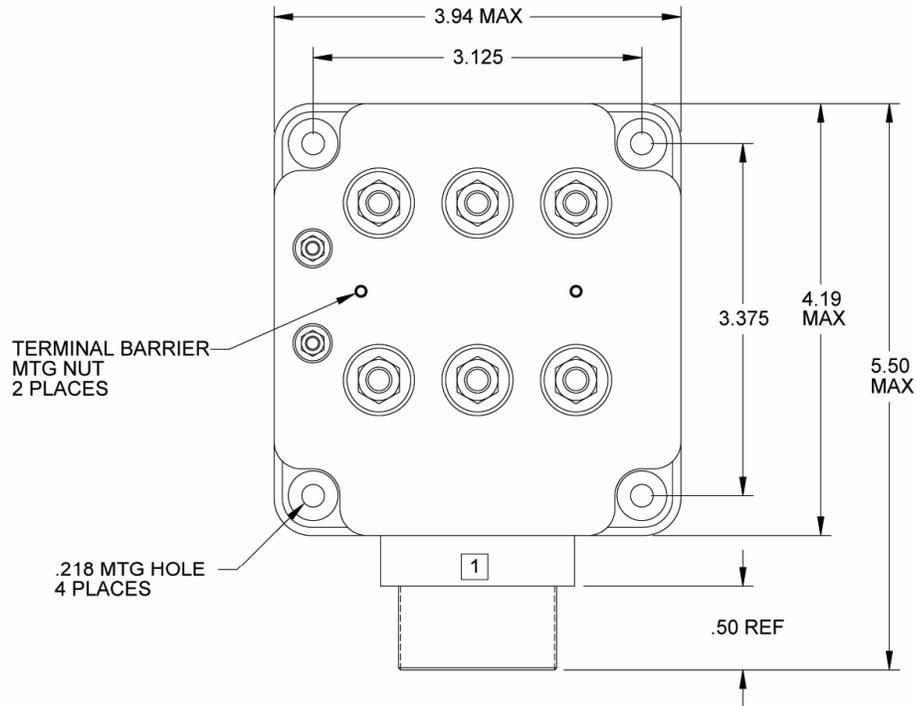


Dimensions in inches
Tolerances, unless otherwise specified,
XX ±.03
XXX ±.010

CONFIGURATION STYLES

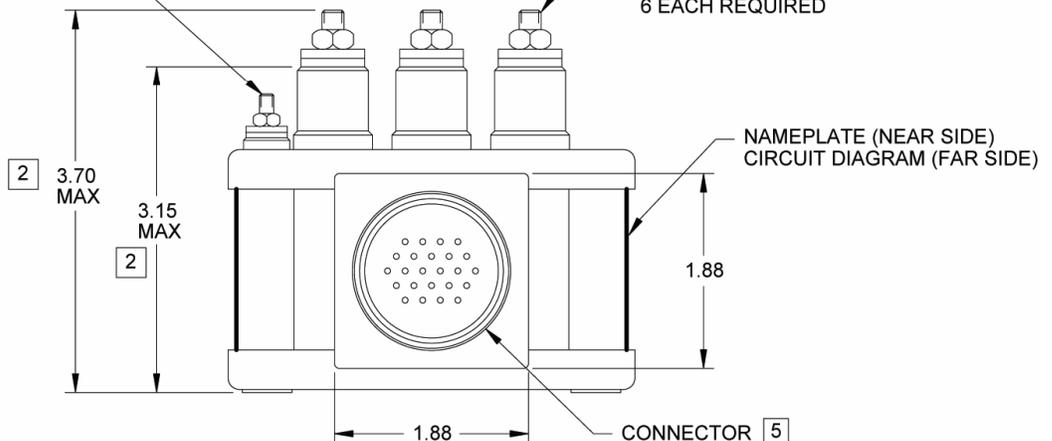
MOUNTING STYLE H

WEIGHT: 2 LB 8 OZ MAXIMUM



STUD, .138-32 UNC-2A
NUT, .138-32 UNC-2B X 1/4 X 3/32
STEEL CAD PLATE
LOCKWASHER, MS35338-41 (STEEL)
FLATWASHER, AN960-6 (STEEL)
2 EACH REQUIRED

STUD, .250 X 28 UNF-2A X 3/8 X 3/16
STEEL CAD PLATE
LOCKWASHER, MS35338-44 (STEEL)
FLATWASHER, AN960-416L (STEEL)
6 EACH REQUIRED

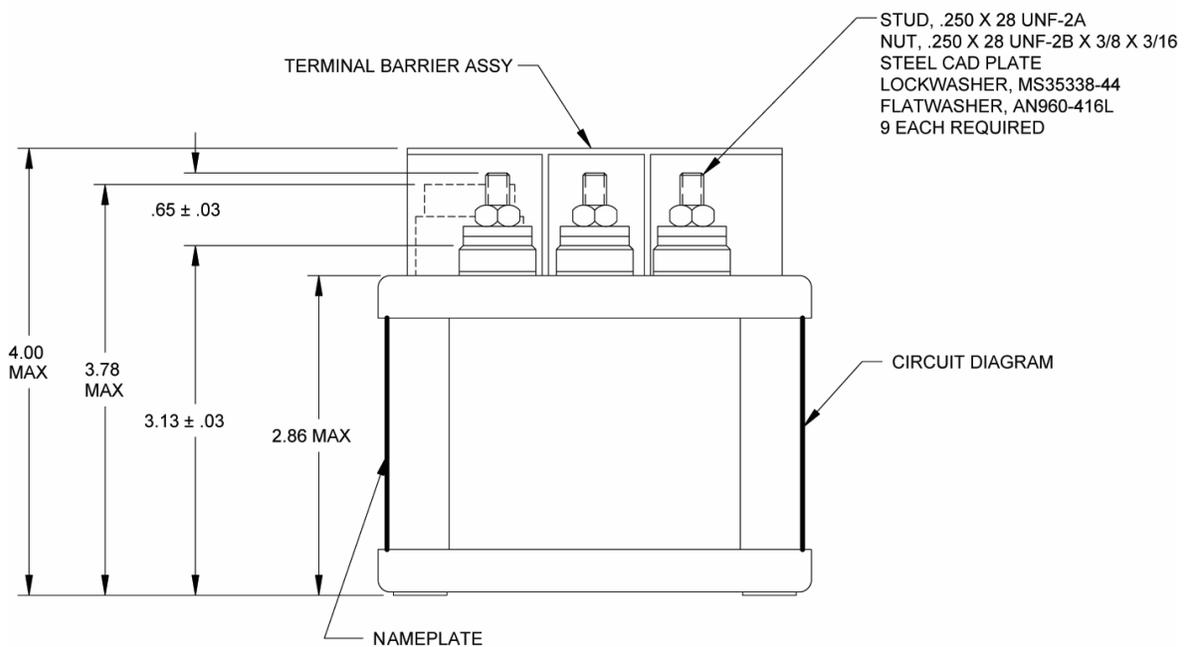
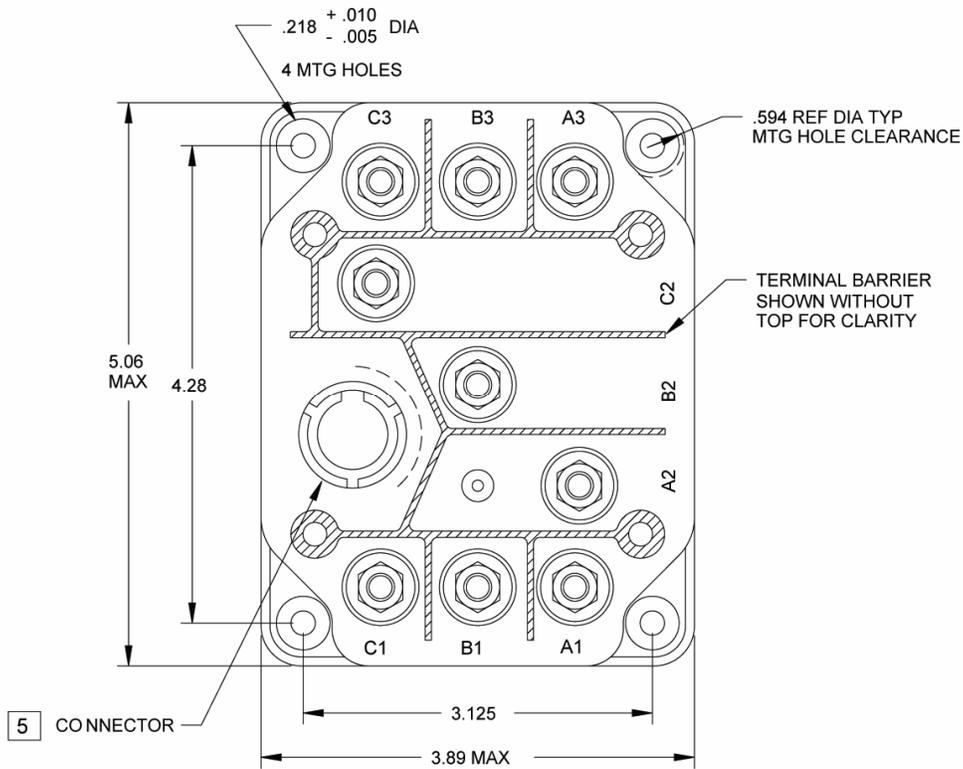


Dimensions in inches
Tolerances, unless otherwise specified,
XX ±.03
XXX ±.010

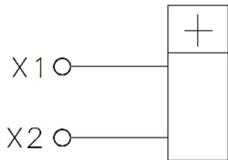
CONFIGURATION STYLES

MOUNTING STYLE K

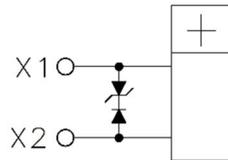
WEIGHT: 2 LB 13 OZ MAXIMUM



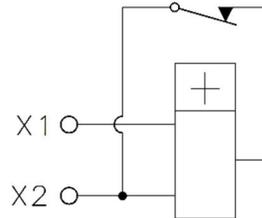
COIL CIRCUIT CONFIGURATION [3] [4]



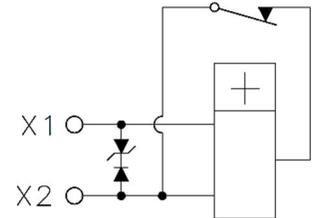
STANDARD
"A, B, C & F" COIL



STANDARD
WITH
COIL SUPPRESSION
"N" COIL



ECONOMIZER COIL
"Y" COIL



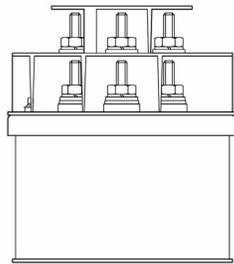
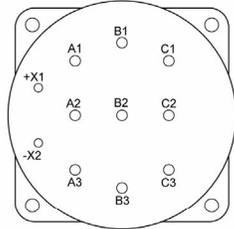
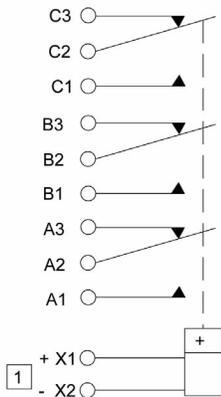
ECONOMIZER COIL
WITH
COIL SUPPRESSION
"YN" COIL

NOTES:

- 1 CAN BE DELETED.
- 2 MAXIMUM DIMENSIONS CAN BE REDUCED BY .500 INCH.
- 3 POLARITY INDICATION APPLIES TO D.C. COILS ONLY.
- 4 COIL TERMINALS MAY BE IDENTIFIED AS A-B OR X1-X2.
- 5 CIRCULAR CONNECTOR MS-STYLE OR EQUIVALENT

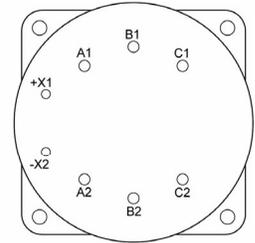
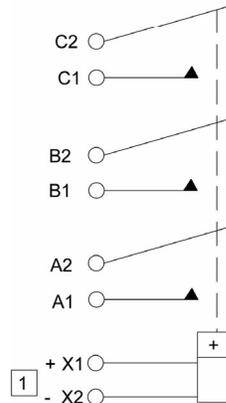
TERMINAL CONFIGURATION AND CIRCUIT DIAGRAMS

TERMINAL TYPE 1 3 PDT



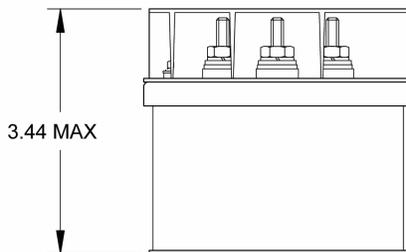
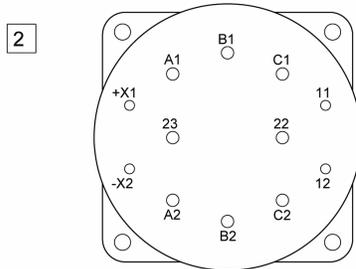
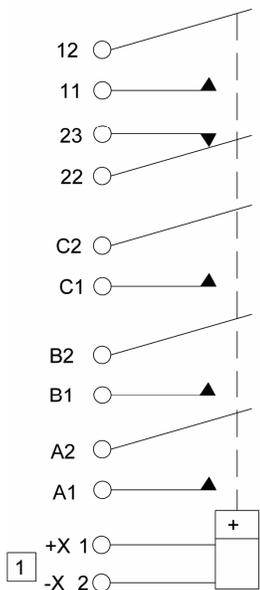
AVAILABLE MOUNTING STYLES: A (SHOWN), B AND K

TERMINAL TYPE 2 3 PST-N.O.



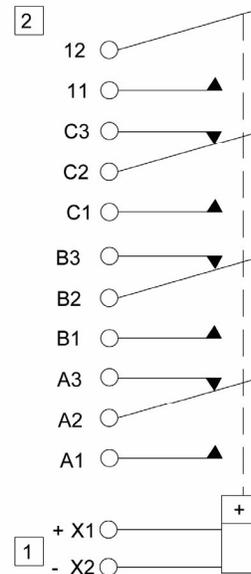
AVAILABLE MOUNTING STYLES: A (SHOWN), B, H AND K

TERMINAL TYPE 3 3 PST-N.O. WITH SPST-N.O. & SPST-N.C. AUXILIARY CONTACTS



AVAILABLE MOUNTING STYLES: A (SHOWN), B, H AND K

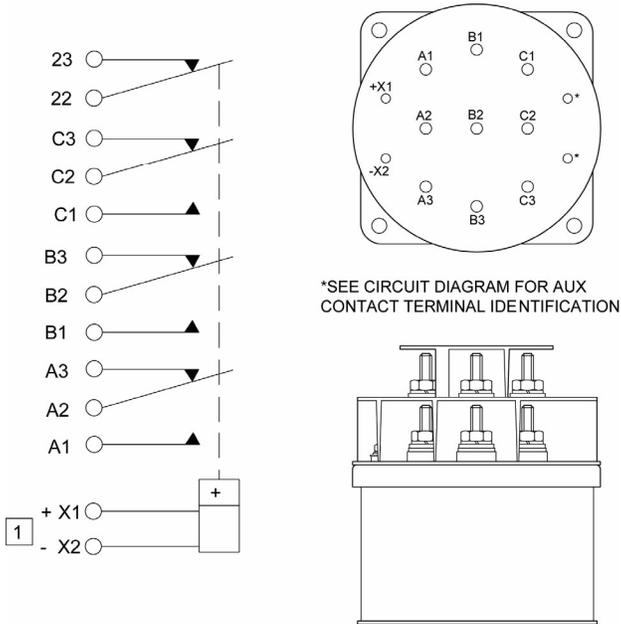
TERMINAL TYPE 4 3 PDT WITH SPST- N.O. AUXILIARY CONTACTS



AVAILABLE MOUNTING STYLES: A, B AND K

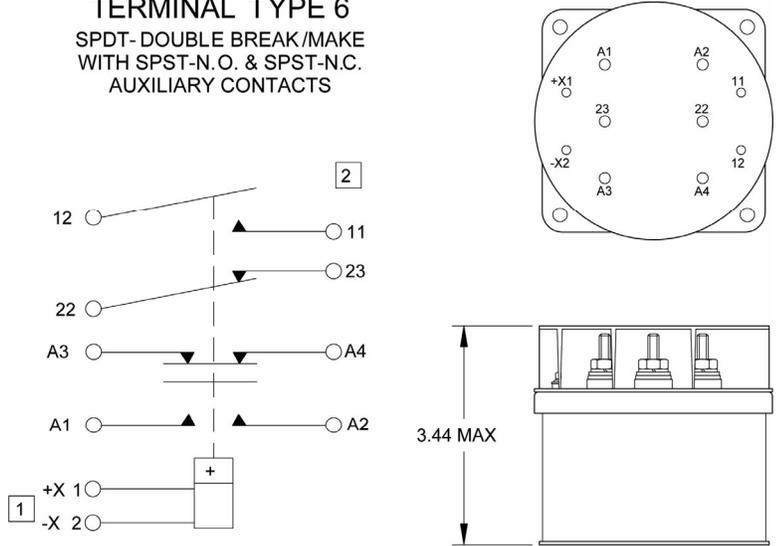
TERMINAL CONFIGURATION AND CIRCUIT DIAGRAMS

TERMINAL TYPE 5 3 PDT WITH SPST-N.C. AUXILIARY CONTACTS



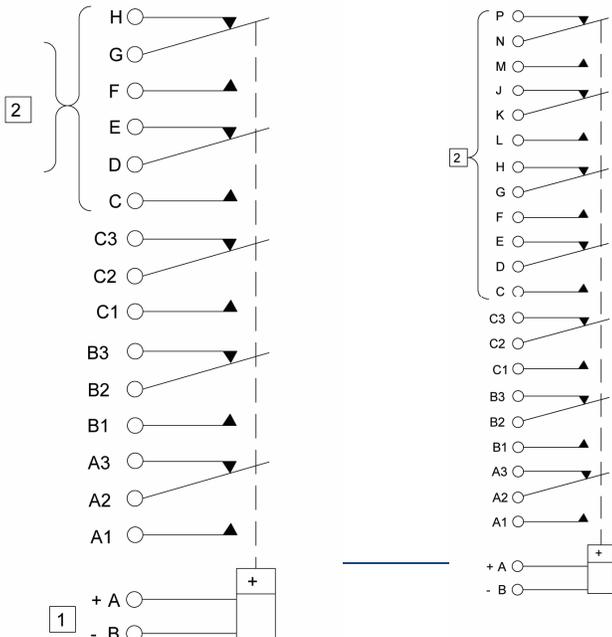
AVAILABLE MOUNTING STYLES: A (SHOWN), B AND K

TERMINAL TYPE 6 SPDT-DOUBLE BREAK/MAKE WITH SPST-N.O. & SPST-N.C. AUXILIARY CONTACTS



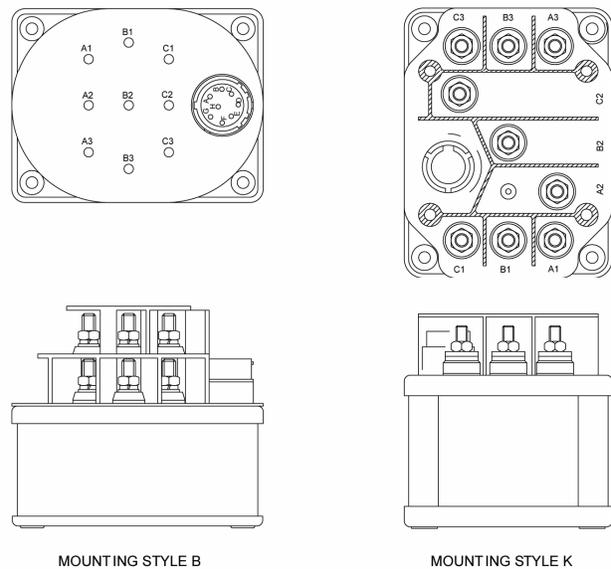
AVAILABLE MOUNTING STYLES: A (SHOWN), B AND K

TERMINAL TYPE 7 3 PDT WITH 2 PDT AUXILIARY CONTACTS



AVAILABLE MOUNTING STYLES: B AND K

TERMINAL TYPE 8 3 PDT WITH 4 PDT AUXILIARY CONTACTS



AVAILABLE MOUNTING STYLES: B AND K (BOTH SHOWN)

TERMINAL CONFIGURATION AND CIRCUIT DIAGRAMS

TERMINAL TYPE 9

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

1 POLARITY INDICATION APPLIES TO D.C. COILS ONLY

2 AUXILIARY CONTACT RATING 28 VDC OR 115 VAC

RESISTIVE 5 AMP

INDUCTIVE 3 AMP

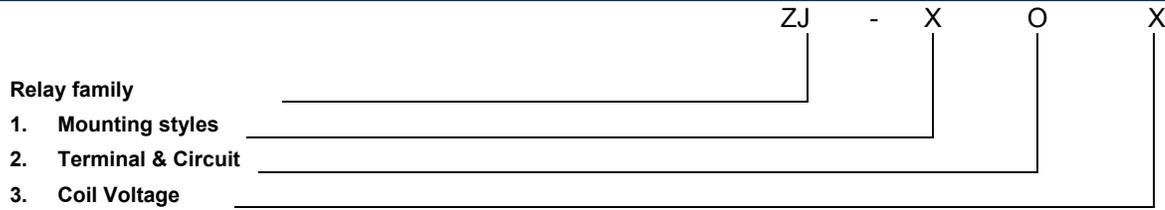
LAMP 1 AMP

BOUNCE AT NOMINAL VOLTAGE .004 SEC MAX

OTHER AUXILIARY CONTACT FORMS AVAILABLE,
INCLUDING LOW LEVEL CAPACITY

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



NOTES

1. Auxiliary contact rating - see page 10, note [2].
2. Inductive load life, 20,000 cycles.
3. Rating are for double break/make terminal type 6.
4. Alternate contact configurations and other special models available upon request. Please contact factory.
5. Back EMF suppression to 62 Volts Max.
6. Suitable for transfer between unsynchronized AC power sources at rating shown.
7. 200 Amps resistive, 25,000 cycles only, terminal style 6.
8. Economizer coils have a lower resistance primary coil for faster operate time. Once relay operates, the coil switches to a higher resistance for lower power drain. Do not ramp up voltage on these coils.
9. This series drawing is for general use only. Please consult factory for special requirements.

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