



Application Notes:

- 101
- 102
- 104
- 105
- 007

Balanced-Force Design

Hermetically sealed / or available in gasket sealed version

Designed to the Performance standards of

MIL-PRF-6106

PRINCIPLE TECHNICAL CHARACTERISTICS

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

Weight Dependent upon configuration (see pages 3-6)

Special units available upon request, including models with auxiliary contacts.
Optional Ground Fault Protection (GFP) feature available.

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 [8] | DELTA 115/200 Vac, 60 Hz |
| Resistive [1] | 50 | 120 | 120 | 120 | 200 | 60 |
| Inductive [2] | 30 | 120 | 120 | 80 | - | 60 |
| Motor | 30 | 80 | 80 | 80 | - | 60 |
| Load transfer, resistive [7] | - | - | 120 | - | - | - |

COIL CHARACTERISTICS (Vdc)

| CODE | A | B | C | F Vac 400 Hz | N [6] | Y [9] | YN [6] |
|---|------|------|------|-----------------|-------|-------|--------|
| Nominal operating voltage | 28 | 12 | 6 | 115 | 28 | 28 | 28 |
| Maximum operating voltage | 29 | 14.5 | 7.3 | 124 | 29 | 29 | 29 |
| Pick-up voltage, maximum | | | | | | | |
| - 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 Ohms $\pm 10\%$ at +25° C | 113 | 28 | 7 | - | 113 | - | - |
| Coil current Amp max. @ Nom. Volt. And +25° C | 0.31 | 0.60 | 1.20 | 0.12 | 0.31 | 6/68 | 6/68 |

GENERAL CHARACTERISTICS

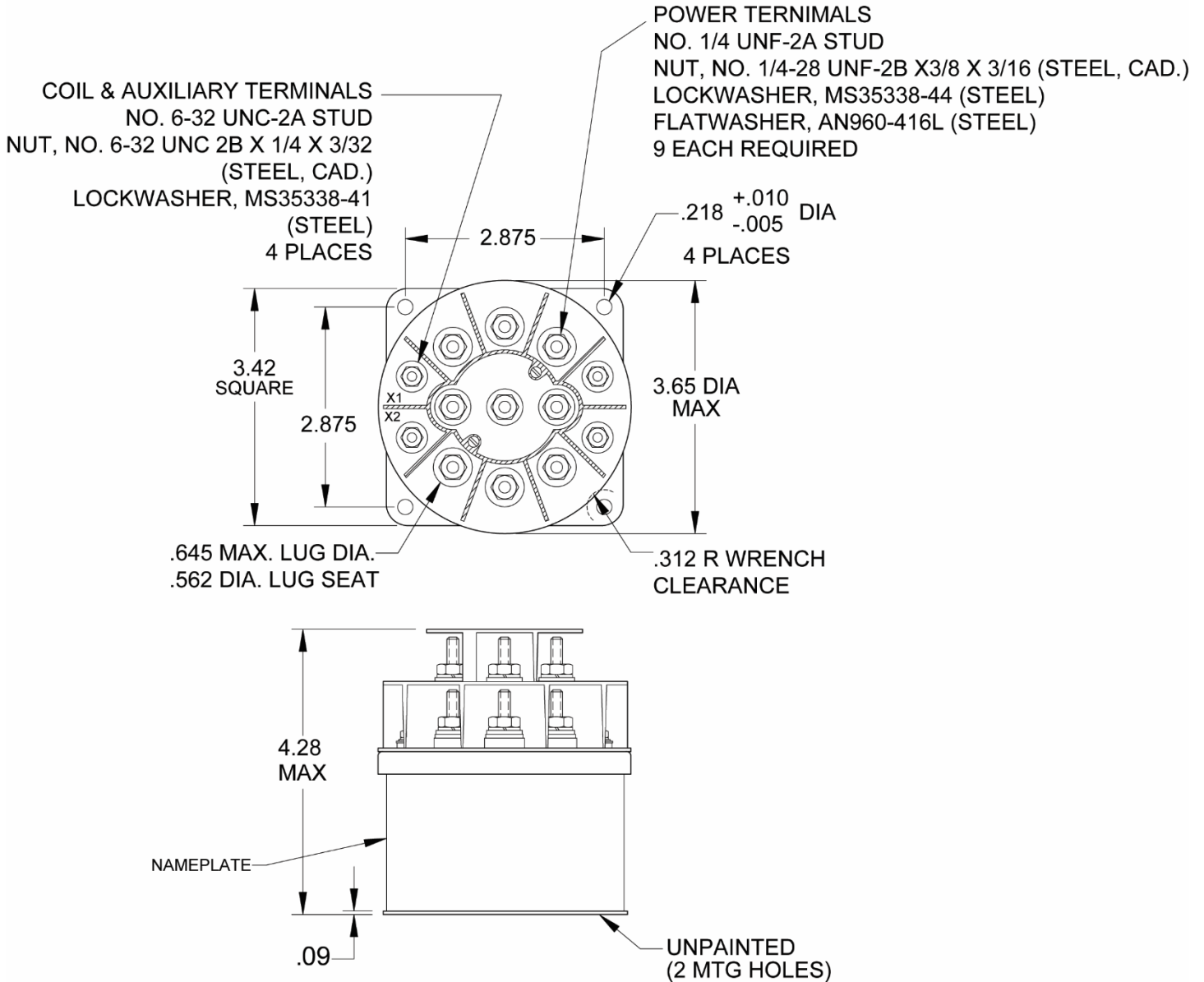
| | |
|---|--|
| Temperature range | -55°C to +71°C |
| Minimum operating cycles (life) at rated load | 50,000 |
| Minimum operating cycles (life) at 25% rated load | 100,000 |
| Dielectric strength at sea level | |
| All circuits to ground and circuit to circuit | 1,500 Vrms |
| Coil to ground and Aux. 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 coil | |
| DC | 35 ms max |
| Contact bounce at nominal voltage | 4 ms max |
| Weight | Noted |
| Overload | 800 Amps @ 115/200 Vac, 400 Hz |
| Rupture | 1200 Amps @ 115/200 Vac, 400 Hz |
| Altitude | 50,000 ft. |

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

CONFIGURATION STYLES

MOUNTING STYLE A

WEIGHT: 2 LB 4 OZ MAXIMUM
WEIGHT IS DEPENDENT UPON CONFIGURATION REQUIRED
PLEASE CONSULT FACTORY

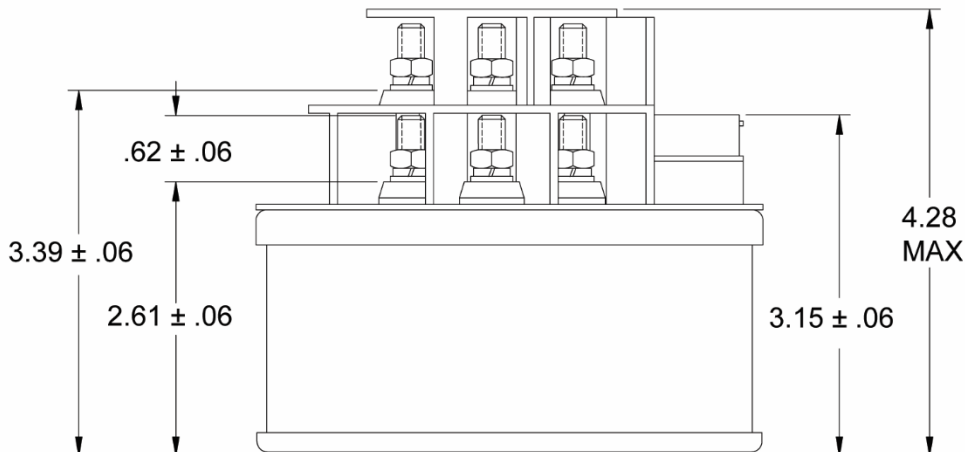
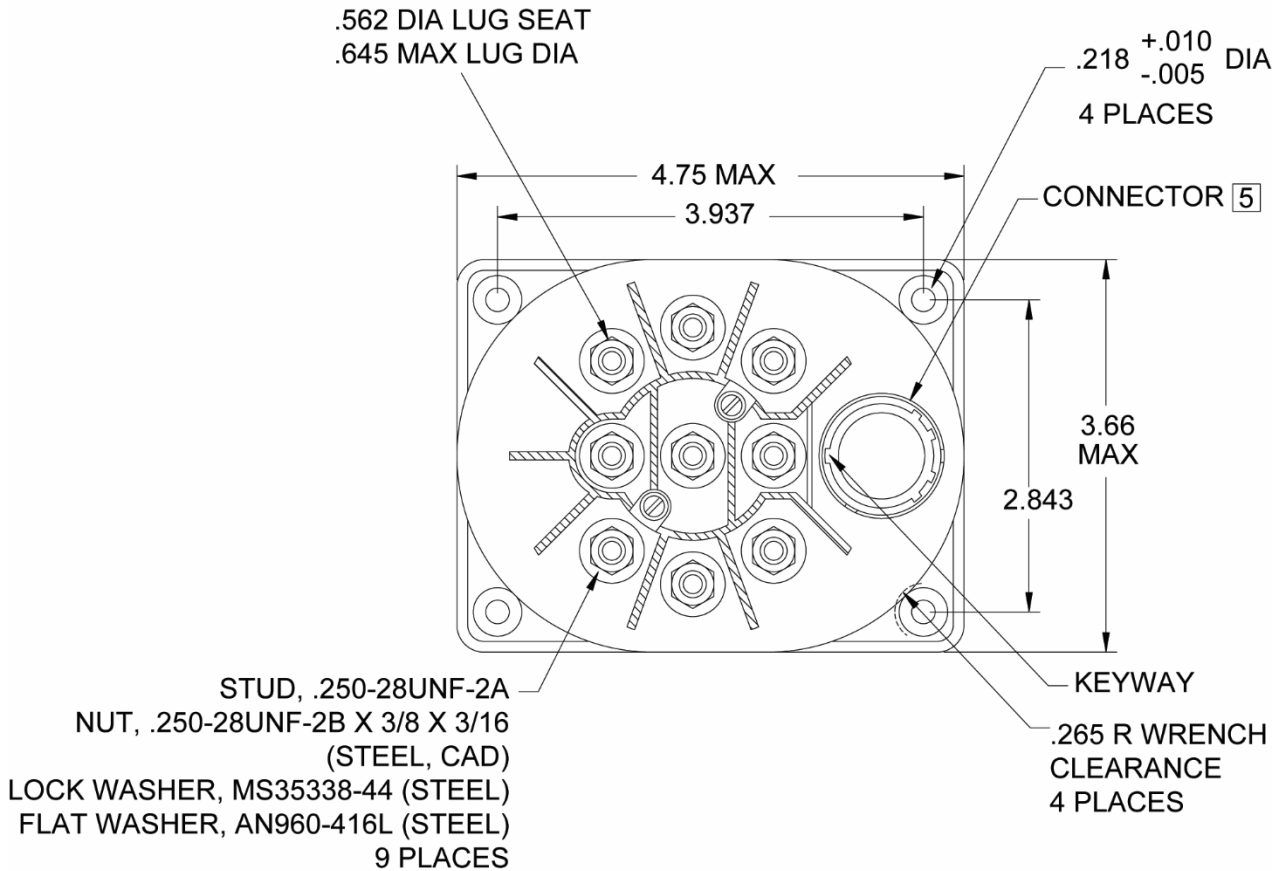


Dimensions in inches
Tolerances, unless otherwise specified, XX ±.03; .XXX ±.010

CONFIGURATION STYLES

MOUNTING STYLE B

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

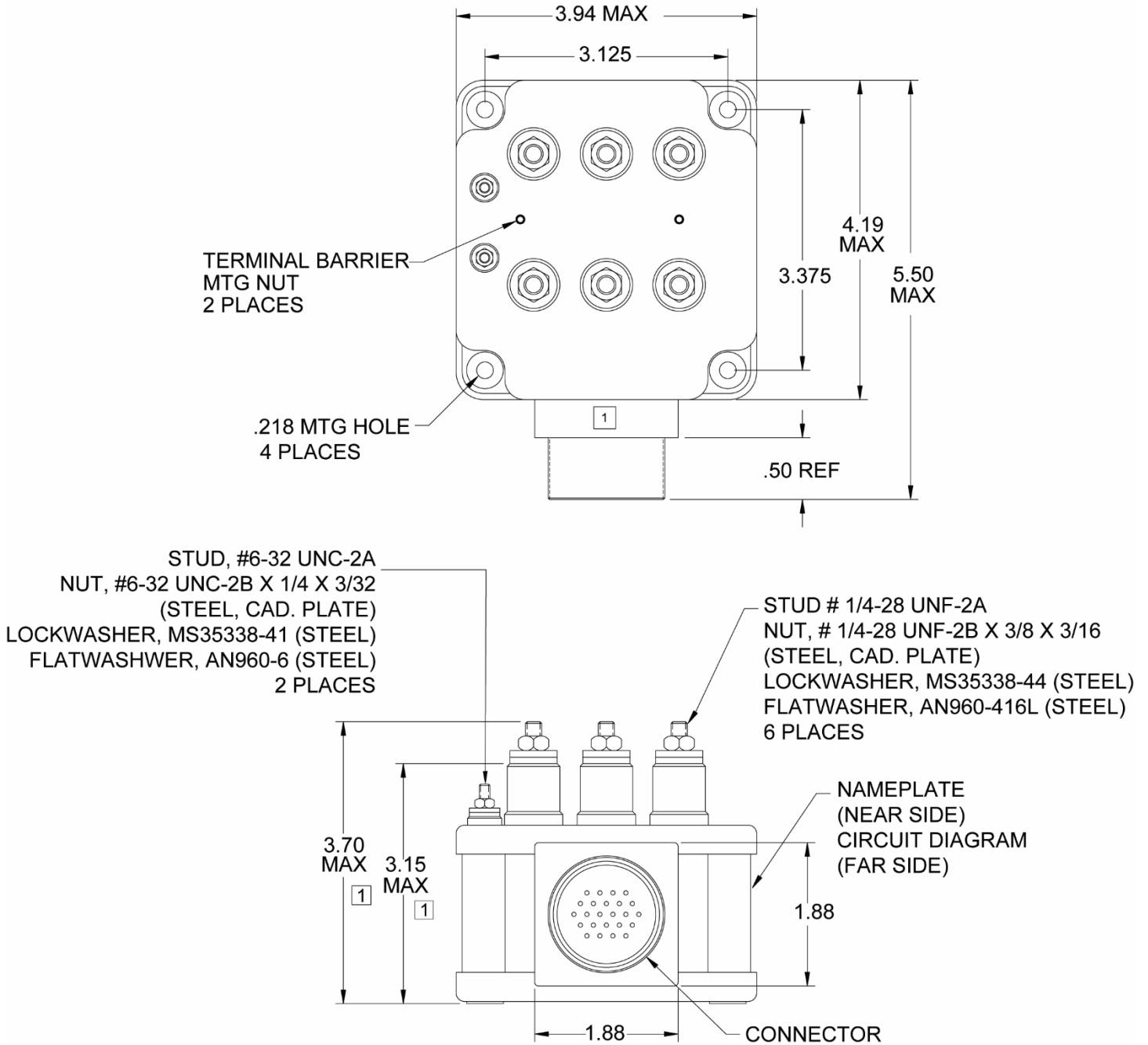


Dimensions in inches
Tolerances, unless otherwise specified, XX ±.03; .XXX ±.010

CONFIGURATION STYLES

MOUNTING STYLE H

WEIGHT: 2 LB 8 OZ MAXIMUM

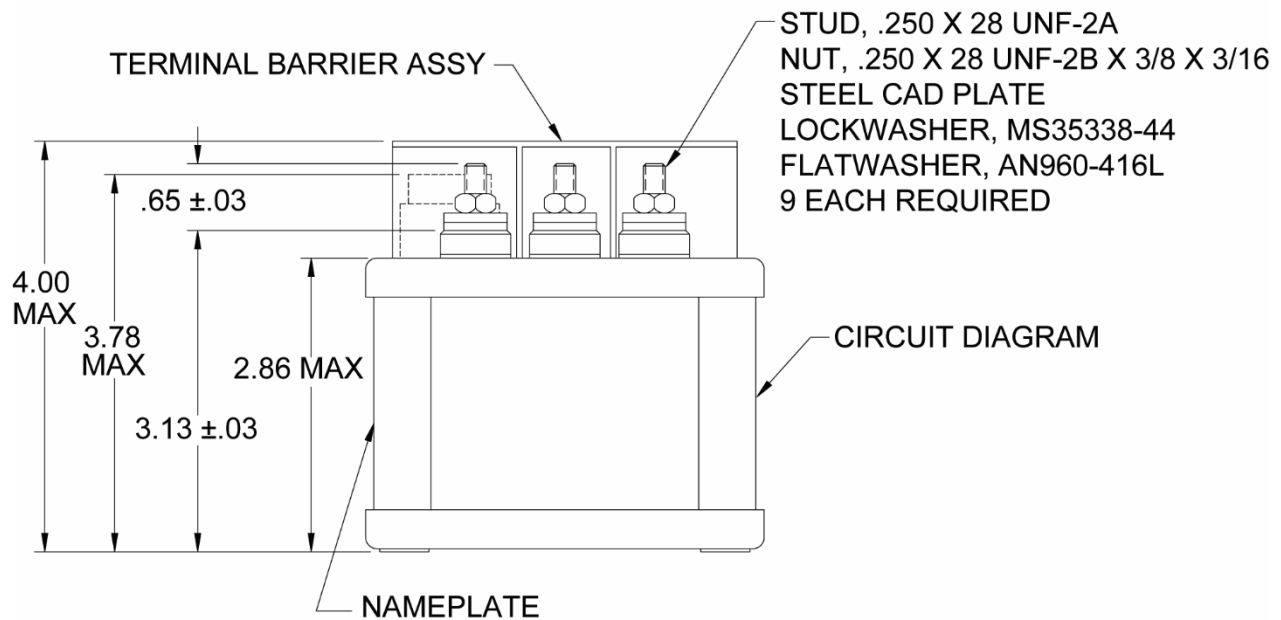
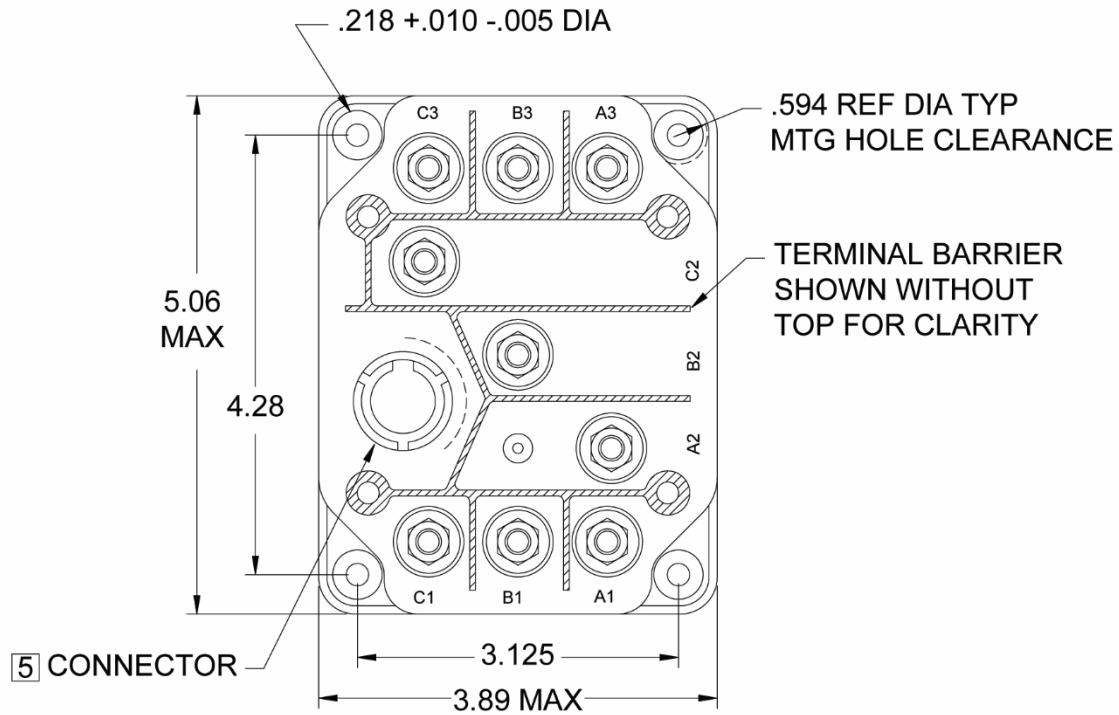


Dimensions in inches
Tolerances, unless otherwise specified, XX ±.03; .XXX ±.010

CONFIGURATION STYLES

MOUNTING STYLE K

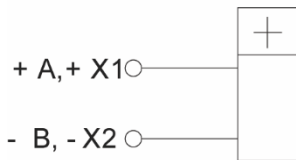
WEIGHT: 2 LB 13 OZ MAXIMUM



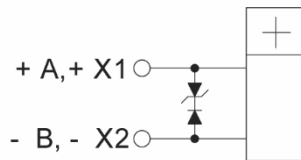
Dimensions in inches
Tolerances, unless otherwise specified, XX ±.03; .XXX ±.010

COIL CIRCUIT CONFIGURATION

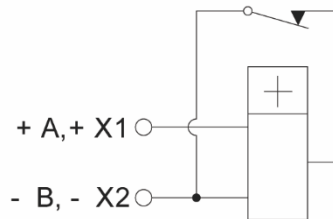
COIL CIRCUIT CONFIGURATION 2 3



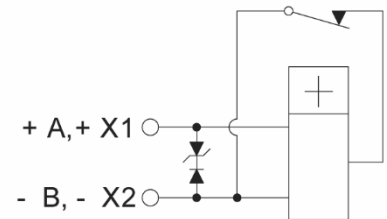
STANDARD
"A, B, C & F" COIL



STANDARD COIL
WITH SUPPRESSION
"N" COIL



ECONOMIZER COIL
"Y" COIL



ECONOMIZER COIL
WITH COIL SUPPRESSION
"YN" COIL

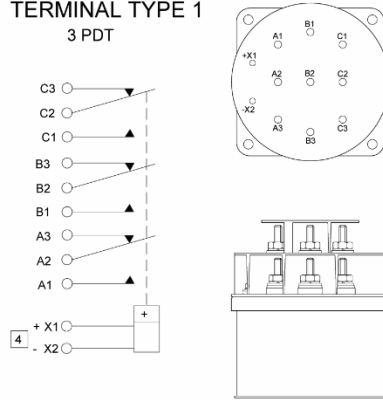
NOTES:

- 1 MAXIMUM DIMENSIONS CAN BE REDUCED BY .500 INCH.
- 2 POLARITY INDICATION APPLIES TO D.C. COILS ONLY.
- 3 COIL TERMINALS MAY BE IDENTIFIED AS A-B, X1-X2, Y1-Y2 OR X-Y.

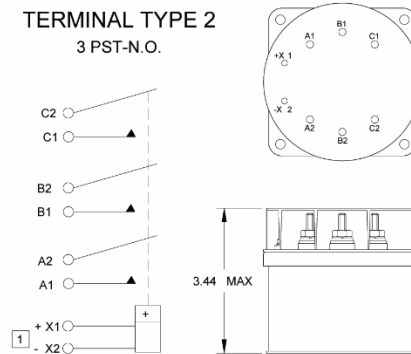
TERMINAL CONFIGURATION AND CIRCUIT DIAGRAMS

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

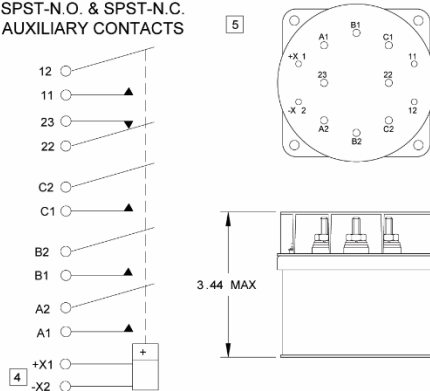
TERMINAL TYPE 1
3 PDT



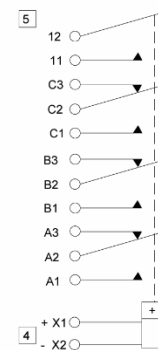
TERMINAL TYPE 2
3 PST-N.O.



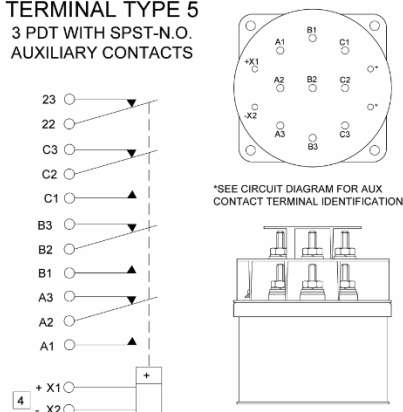
TERMINAL TYPE 3
3 PST-N.O. WITH
SPST-N.O. & SPST-N.C.
AUXILIARY CONTACTS



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



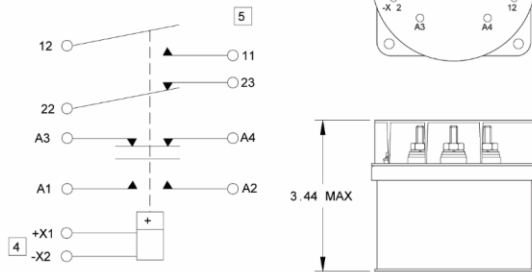
TERMINAL TYPE 5
3 PDT WITH SPST-N.O.
AUXILIARY CONTACTS



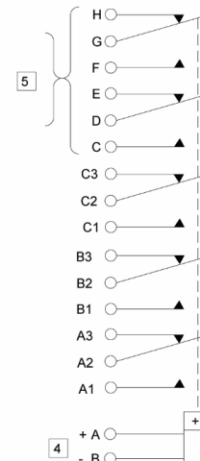
Dimensions in inches
Tolerances, unless otherwise specified, XX ±.03; .XXX ±.010

TERMINAL CONFIGURATION AND CIRCUIT DIAGRAMS

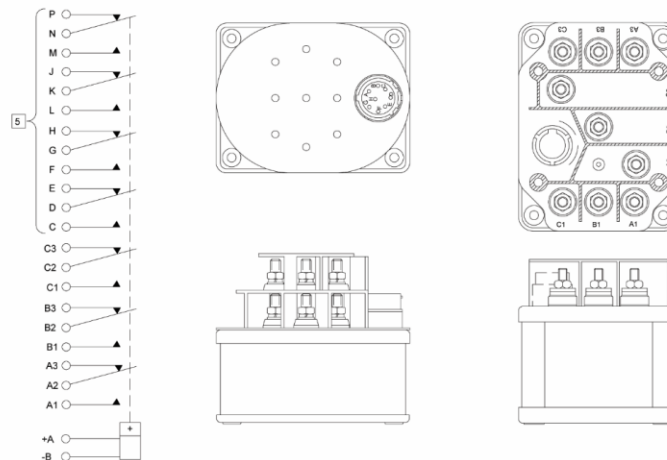
TERMINAL TYPE 6
SPDT-DOUBLE BREAK/DOUBLE MAKE
WITH SPST-N.O. & SPST-N.C.
AUXILIARY CONTACTS



TERMINAL TYPE 7
3 PDT WITH 2 PDT
AUXILIARY CONTACTS



TERMINAL TYPE 8
3 PDT WITH 4 PDT
AUXILIARY CONTACTS



TERMINAL TYPE 9

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

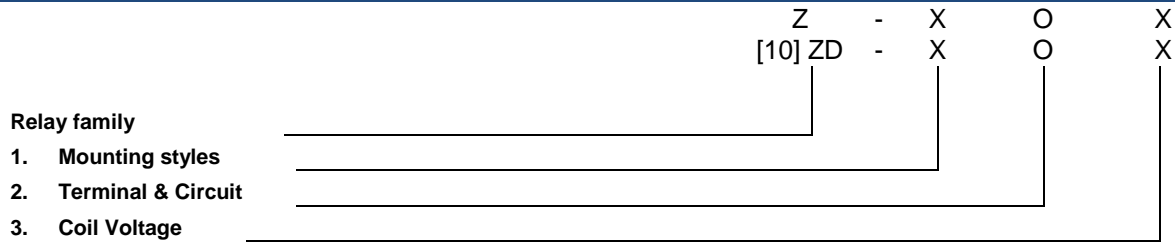
4 POLARITY INDICATION APPLIES TO D.C. COILS ONLY

5 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 9, note [2].
2. Inductive load life, 20,000 cycles.
3. Ratings are for double break/double make terminal type 6.
4. Alternate contact configurations and other special models available upon request. Please contact factory.
5. Terminal strength per para. 3,4,8,2,1 of MIL-R-6106F, Dated 8-25-67.
6. Suppressed back EMF suppression to 62 Volts max.
7. Suitable for transfer between unsynchronized AC power sources at rating shown.
8. 200 Amps resistive, 25,000 cycles only, terminal style 6.
9. 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.
10. Non hermetic gasket sealed version.
11. 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