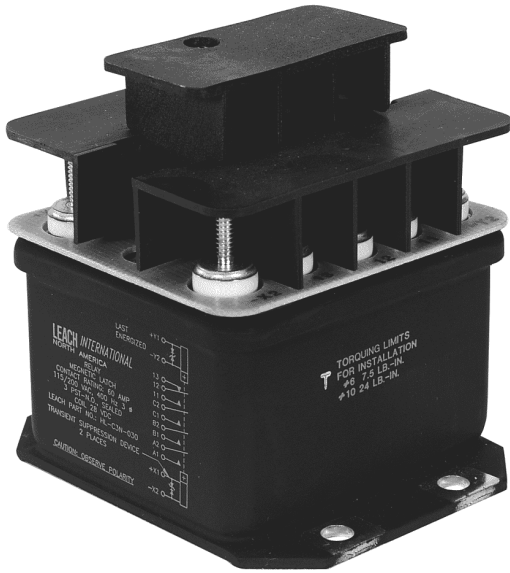


SERIES HL,HLT,HLD,HLP

ENGINEERING DATA SHEET

**CONTACTOR
MAGNETIC LATCH
60 AMP**



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	-



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Units 602-603 6/F Lakeside 1
No.8 Science Park West Avenue
Phase Two, Hong Kong Science Park
Pak Shek Kok, Tai Po, N.T.
Hong Kong

Tel: (852) 2 191 3830
Fax: (852) 2 389 5803

Data sheets are for initial product selection and comparison. Contact Esterline Power Systems prior to choosing a component.

COIL CHARACTERISTICS (Vdc)**SERIES HL,HLT,HLD,HLP**

CODE	A Vdc	B Vdc	C Vdc	F Vac 400Hz	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 $\pm 10\%$ 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	1500 Vrms
- Coil to ground and aux. contacts	1000 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 μ s
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

NUMBERING SYSTEM

SERIES HL,HLT,HLD,HLP

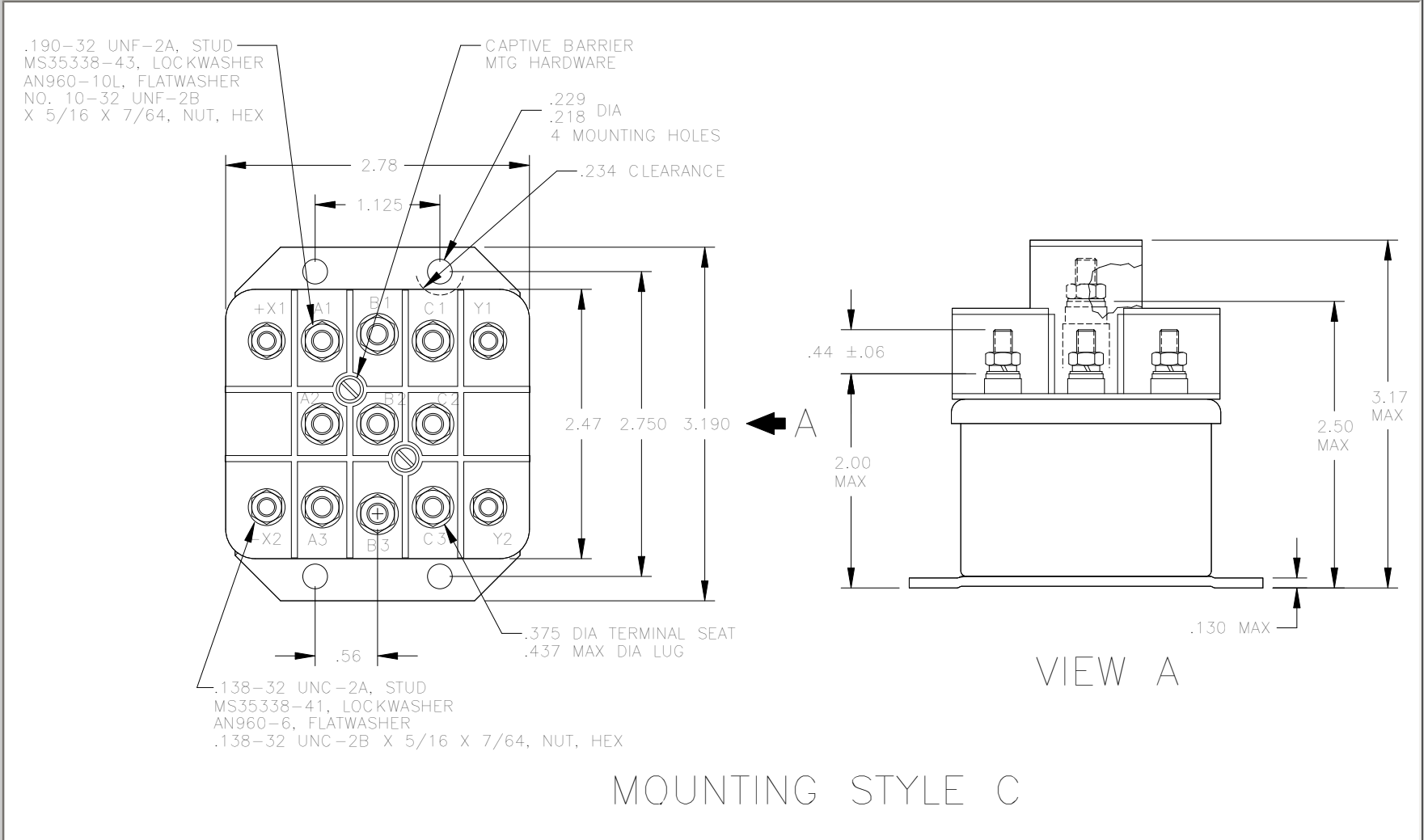
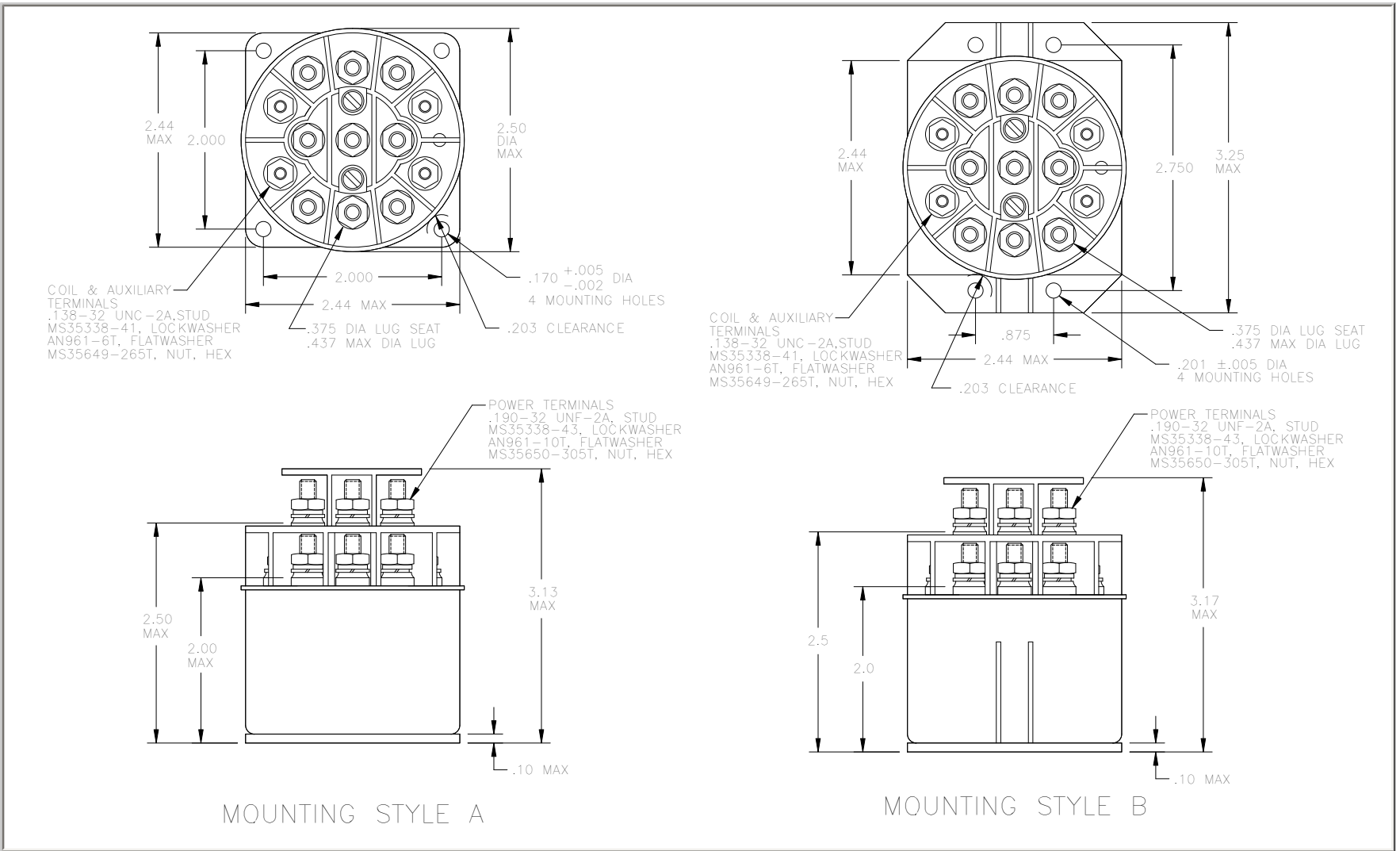
	HL	-	X	0	X
	[5]HLD	-	X	0	X
	[6]HLP	-	X	0	X
	HLT	-	X	0	X
Relay family_____					
1-Mounting Style(A,B,Etc.)_____					
2-Terminal & Circuit _____					
3-Coil Voltage(A,B,C,F,N,Y or YC)_____					

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).

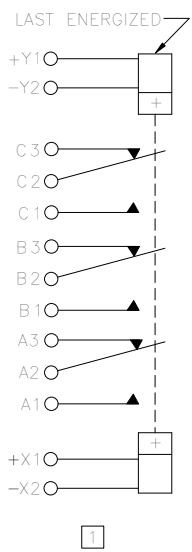
CONFIGURATION STYLES

SERIES HL,HLT,HLD,HLP

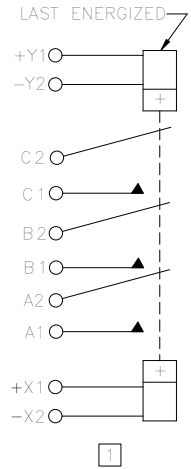


STANDARD TOLERANCE: XX ± .03, XXX ± .010

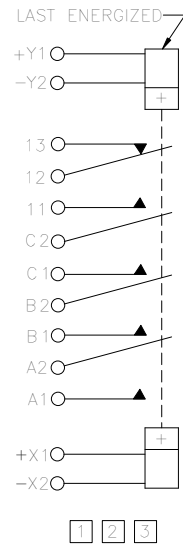
TERMINAL TYPE 1



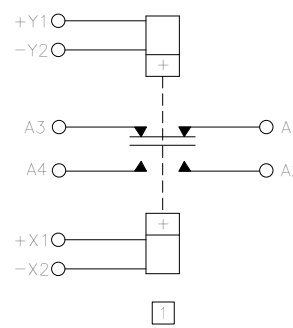
TERMINAL TYPE 2



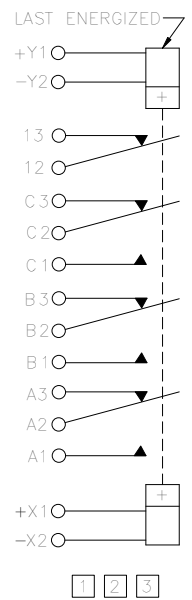
TERMINAL TYPE 3



TERMINAL TYPE 4



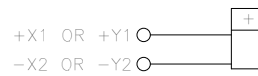
TERMINAL TYPE 5



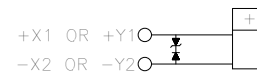
TERMINAL TYPE 9

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

COIL CONFIGURATIONS 4

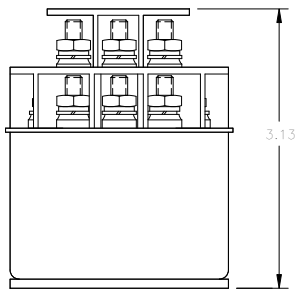


STANDARD COIL "A, B, C & F"

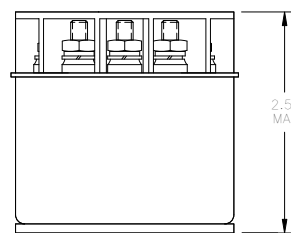


STANDARD COIL WITH SUPPRESSION "N"

*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.