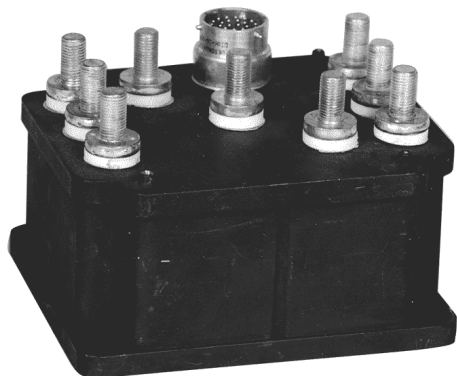


# ENGINEERING DATA SHEET

# SERIES W

## POWER CONTACTOR

### 275 AMP



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 115/200Vac, 400Hz, 3 Ø**

Weight **4.50lbs max**

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

**APPLICATION NOTES:**

- [101](#)
- [102](#)
- [105](#)
- [007](#)

### 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
Resistive	125	275	275
Inductive [2]	75	275	275
Motor	75	175	175



Featuring **LEACH**® power and control solutions  
[www.esterline.com](http://www.esterline.com)

**AMERICAS**  
 6900 Orangethorpe Ave.  
 P.O. Box 5032  
 Buena Park, CA 90622

Tel: (01) 714-736-7599  
 Fax: (01) 714-670-1145

**EUROPE**  
 2 Rue Goethe  
 57430 Sarralbe  
 France

Tel: (33) 3 87 97 31 01  
 Fax: (33) 3 87 97 96 86

**ASIA**  
 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 W**

CODE	A Vdc	F Vac 400Hz	N [5] Vdc	Y [6] Vdc	YN [6][5] Vdc
Nominal operating voltage	28	115	28	28	28
Maximum operating voltage	29	124	29	29	29
Pick-up voltage, maximum					
- Nominal	18	90	18	18	18
- High temp test	20	95	20	20	20
- Continuous current test	22.5	100	22.5	22.5	22.5
Drop-out voltage, maximum	7	30	7	7	7
Coil resistance in Ohms $\pm 10\%$ at +25° C	72	-	72	8/90	8/90
Coil current max. @ nom. Volt. and +25° C	-	.15 Amp	-	-	-

**GENERAL CHARACTERISTICS**

Temperature range	-55°C to +85°C
Minimum operating cycles (life) at rated resistive load	50,000
Minimum operating cycles (life) at 25% rated resistive load	100,000
Dielectric strength at sea level	
- All circuits to ground and circuit to circuit	1500 Vrms
- Coil to ground and aux. contacts	1250 Vrms
Dielectric strength at altitude:	
- Main contacts	700 Vrms
- Coil and aux. contacts	500 Vrms
Insulation resistance	
- Initial (500 Vdc)	100 M $\Omega$ min
- After environmental tests (500 Vdc)	50 M $\Omega$ min
Sinusoidal vibration	10 G / 60 to 2000 Hz
Shock (10-12 ms duration)	20 G
Maximum contact opening time under vibration and shock	10 $\mu$ s
Operate time at nominal voltage (Including bounce)	60 ms max
Operate time at nominal voltage (Including bounce) Economizer coil	25 ms max
Release time at nominal voltage (Including bounce)	
- DC	40 ms max [7]
- AC	125 ms max

**GENERAL CHARACTERISTICS CONTINUED**

**SERIES W**

Release time at nominal voltage (Including bounce), Economizer coil	
- DC	25 ms max [7]
- AC	100 ms max
Contact bounce at nominal voltage	4 ms max
Weight	4.50lbs max.
Overload - 115/200 Vac, 400Hz	1375 Amperes
Rupture - 115/200 Vac, 400Hz	1925 Amperes
Altitude	80,000 Feet

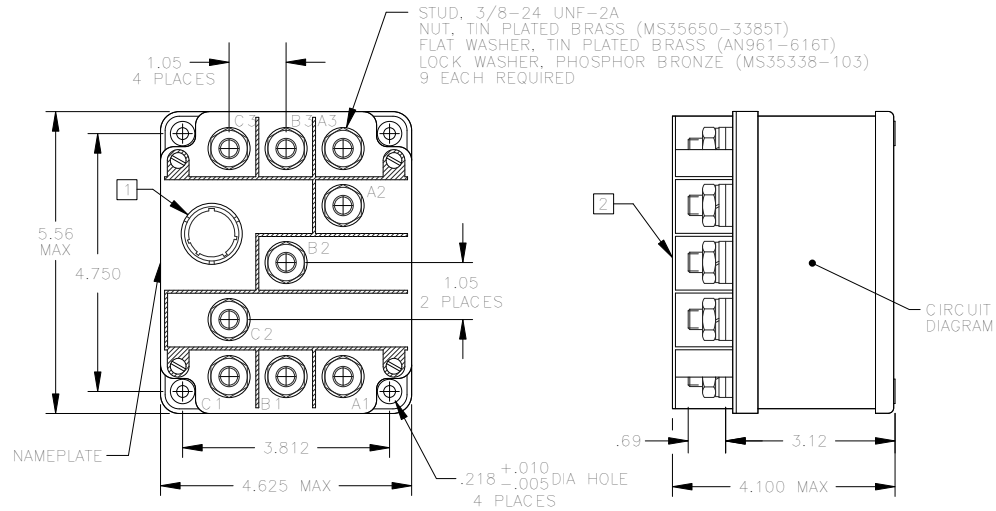
**NUMBERING SYSTEM**

	W	-	X	0	X
Relay family_____					
1-Mounting Style(A,B,Etc.)_____					
2-Terminal & Circuit (1,2,3,Etc.)_____					
3-Coil Voltage(A,F,N,Y,YN)_____					

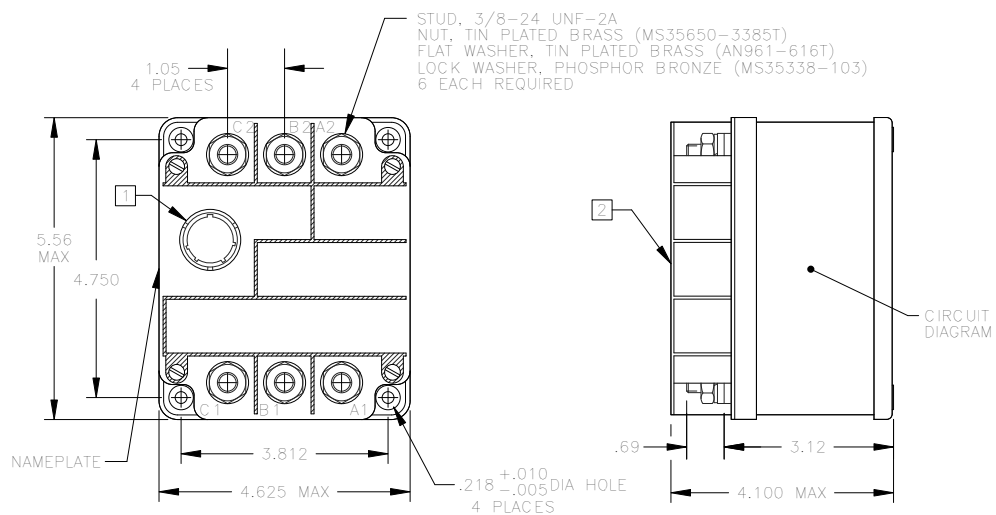
**NOTES**

- [1] Auxiliary contact rating - see page 5, note [2].
- [2] Inductive load life, 20,000 cycles.
- 3. Alternate contact configurations and other special models available upon request. Please contact factory.
- 4. Terminal strength per para. 3.4.8.2.1 of MIL-R-6106.
- [5] Back EMF suppression to 62 volts max.
- [6] 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.
- [7] Greater values for suppressed coils.
- 8. This series drawing is for general use only. Please consult factory for special requirements.

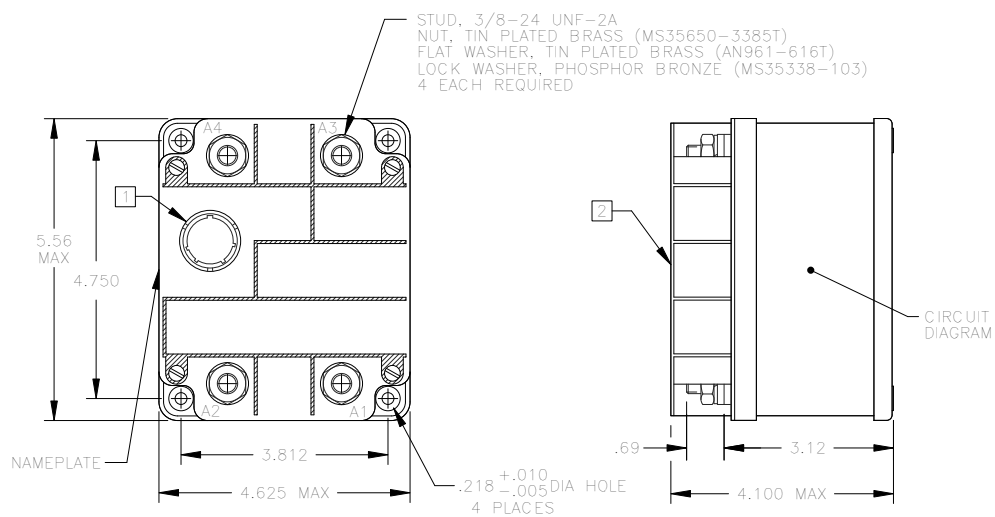
MOUNTING STYLE A



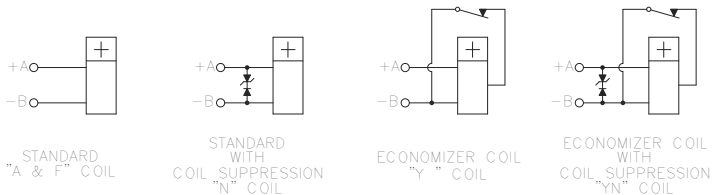
MOUNTING STYLE B



MOUNTING STYLE C



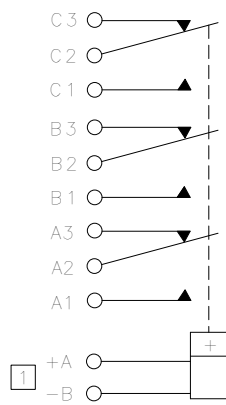
COIL CIRCUIT CONFIGURATION



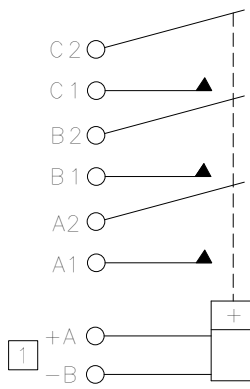
- 1 CIRCULAR CONNECTOR MS-STYLE OR EQUIVALENT
- 2 TERMINAL BARRIER (SHOWN WITHOUT COVER IN TOP VIEW, FOR CLARITY).

STANDARD TOLERANCE: .XX  $\pm$  .03, .XXX  $\pm$  .010

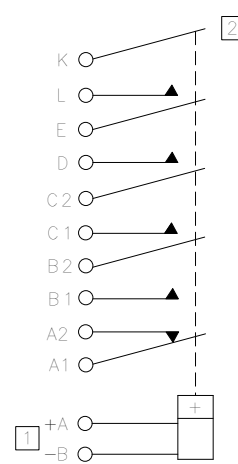
TERMINAL TYPE 1  
3 PDT



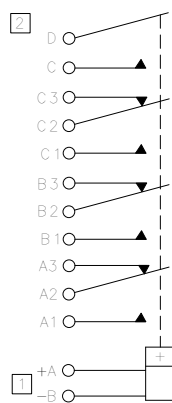
TERMINAL TYPE 2  
3 PST - N.O.



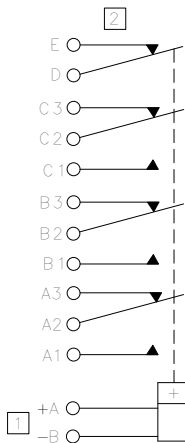
TERMINAL TYPE 3  
3 PST - N.O. WITH  
SPST - N.O. & SPST - N.C.  
AUXILIARY CONTACTS



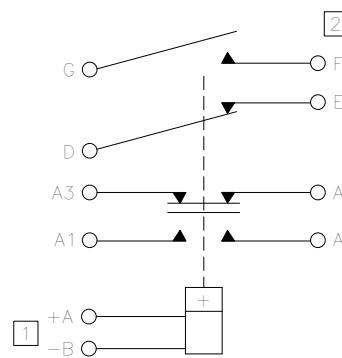
TERMINAL TYPE 4  
3 PDT - WITH SPST - N.O.  
AUXILIARY CONTACTS



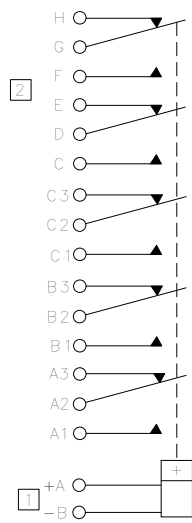
TERMINAL TYPE 5  
3 PDT WITH SPST - N.C.  
AUXILIARY CONTACTS



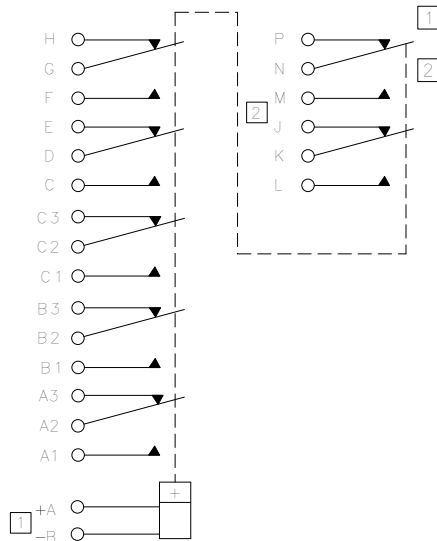
TERMINAL TYPE 6  
SPDT - DOUBLE BREAK/MAKE WITH SPST - N.O.  
& SPST - N.C. AUXILIARY CONTACTS



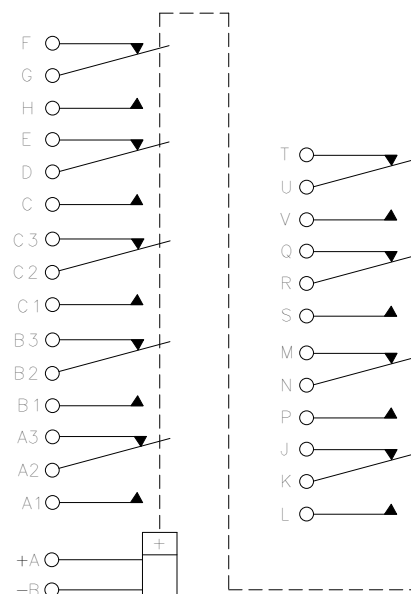
TERMINAL TYPE 7  
3 PDT WITH 2 PDT  
AUXILIARY CONTACTS



TERMINAL TYPE 8  
3 PDT WITH 4 PDT  
AUXILIARY CONTACTS



TERMINAL TYPE 10  
3 PDT WITH 6 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.

- 1 POLARITY INDICATION APPLIES TO D.C. COILS ONLY
  - 2 AUXILIARY CONTACT RATING: 28 VDC OR 115 VAC
 

RESISTIVE	8 AMP
INDUCTIVE	5 AMP
LAMP	3 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.