

# ENGINEERING DATA SHEET

# SERIES WC

CONTACTOR, CENTER-OFF  
250 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, 400 Hz, 1 Ø and 115/200 Vac, 400Hz, 3 Ø**

Weight **4.50lbs**

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

**APPLICATION NOTES:**

- [101](#)
- [102](#)
- [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, 3 Ø
Resistive	100	250	250
Inductive [1]	75	250	250
Motor	75	125	125



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

**COIL CHARACTERISTICS (Vdc)****SERIES WC**

CODE	A Vdc	F Vac 400Hz	N Suppressed [5] Vdc
Nominal operating voltage	28	115	28
Maximum operating voltage	29	124	29
Pick-up voltage, maximum			
- Nominal	18	90	18
- High temp test	20	95	20
- Continuous current test	22.5	100	22.5
Drop-out voltage, maximum	7	30	7
Coil resistance in Ohms $\pm 20\%$ at $+25^\circ\text{C}$ [4]	100	-	100
Coil current max. @ nom. Volt.and $+25^\circ\text{C}$	-	.10 Amperes	-

**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	10G / 60 to 2000 Hz
Shock (6 ms duration)	20G
Maximum contact opening time under vibration and shock	10 $\mu\text{s}$
Operate time at nominal voltage (Including bounce)	60 ms max
Release time at nominal voltage (Including bounce)	
- DC	40 ms max [3]
- AC	80 ms max
Contact bounce at nominal voltage	4 ms max
Weight	4.50lbs max.
Overload	1250 Amperes
Rupture	1750 Amperes
Altitude	80,000 Feet

## NUMBERING SYSTEM

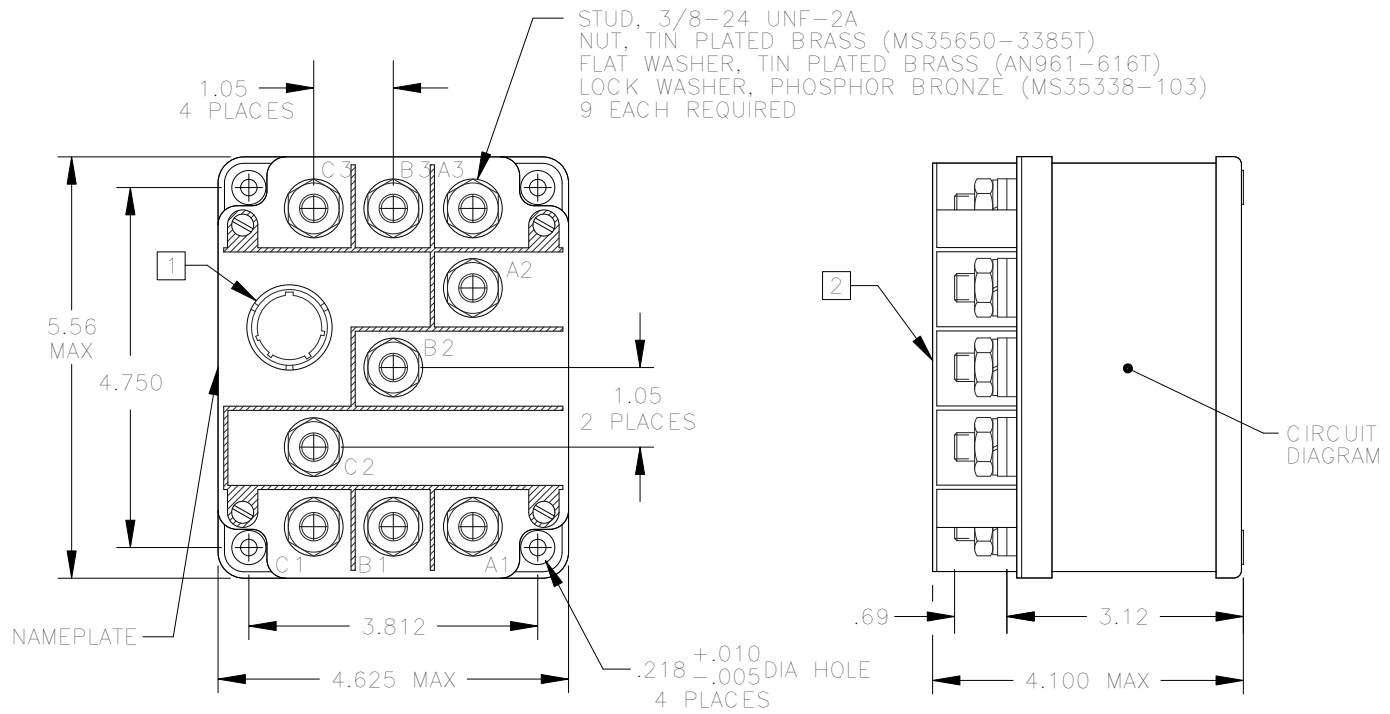
## SERIES WC

	WC	-	X	0	X
Relay family_____					
1-Mounting Style(A,B,Etc.)_____					
2-Terminal & Circuit_____					
3-Coil Voltage(A,B,C,F & N)_____					

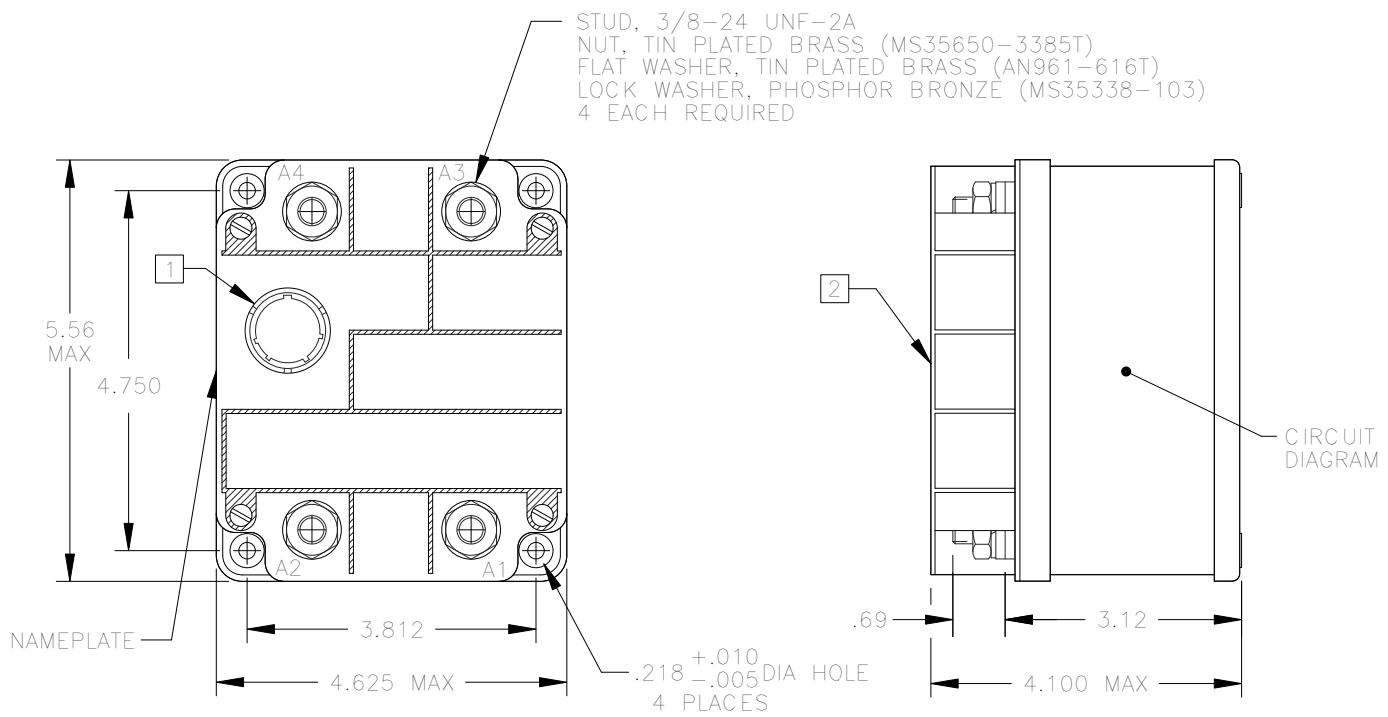
## NOTES

- [1] Inductive load life: 20,000 cycles.
2. Alternate contact configurations and other special models available upon request. Please contact factory.
- [3] Greater values for suppressed coils.
4. Terminal strength per para. 3.4.8.2.1 of MIL-R-6106.
- [5] Suppressed "N" coil has back EMF suppression to 62 volts max.
6. This series drawing is for general use only. Please consult factory for special requirements.

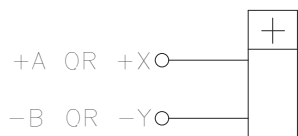
MOUNTING STYLE A



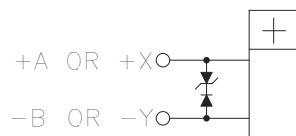
MOUNTING STYLE C



COIL CIRCUIT CONFIGURATION<sup>3</sup>



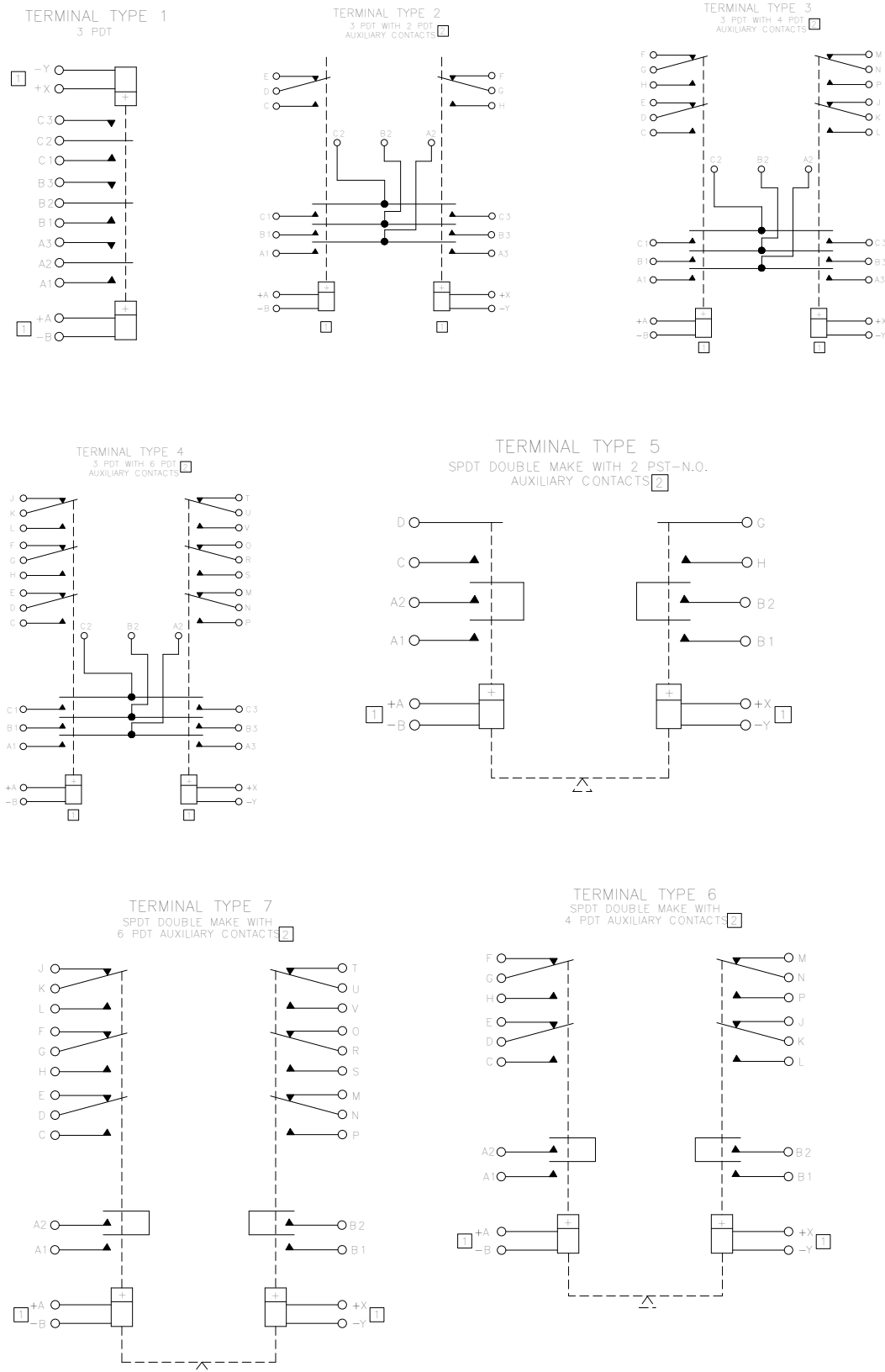
STANDARD  
 "A & F" COIL



STANDARD  
 WITH  
 COIL SUPPRESSION  
 "N" COIL

NOTES:

- 1] CIRCULAR CONNECTOR MS-STYLE OR EQUIVALENT
- 2] TERMINAL BARRIER (SHOWN WITHOUT COVER IN TOP VIEW, FOR CLARITY).
- 3] COIL TERMINALS MAY BE IDENTIFIED AS A-B OR X-Y.



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.