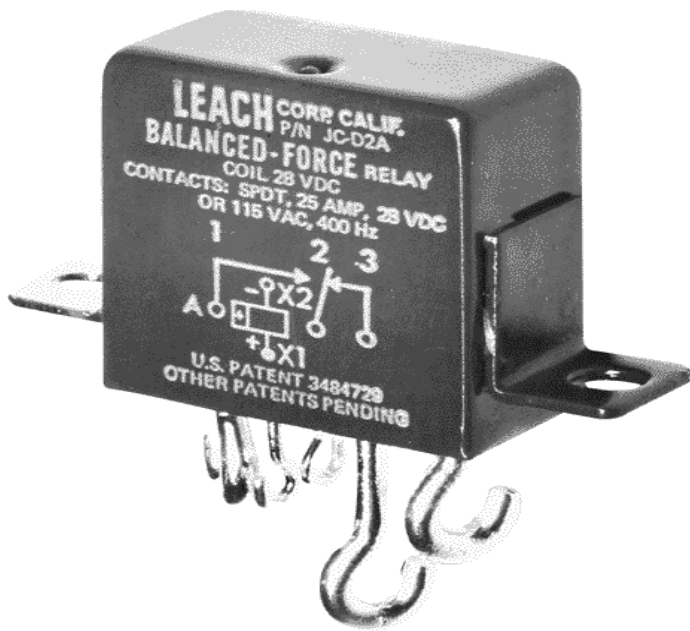


# ENGINEERING DATA SHEET

# SERIES JC AND JCA

RELAY - NONLATCH  
1 PDT, 25 AMP



**APPLICATION NOTES:**

- [101 \(JC\)](#)
- [102 \(JCA\)](#)
- [103E](#)
- [007](#)

**APPLICABLE SOCKETS:**

- [SO-1063-9033/9034](#)

All welded construction

Contact arrangement **1 PDT**

Qualified to **MIL-PRF-6106**

**PRINCIPLE TECHNICAL CHARACTERISTICS**

Contacts rated at **28 Vdc; 115 Vac, 400 Hz, 1Ø**

Weight **0.10lb max**

Dimensions **1.01in x .51in x 1.00in (JC)**  
**1.01in x .51in x 1.12in (JCA)**

Special models available upon request.

Hermetically sealed, corrosion resistant metal can.

**CONTACT ELECTRICAL CHARACTERISTICS**

Contact rating per pole and load type [1]	Load current in Amps		
	@28 Vdc	@115 Vac, 400 Hz, 1Ø	@115/200 Vac, 60 Hz, 1Ø [9]
Resistive [6]	25	25	2.5
Inductive [5]	12	15	2.5
Motor	10	10	2
Lamp	4	4	1
Overload	50	80	N/A
Rupture	60	100	N/A



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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 JC AND JCA

CODE	A (VDC)	B (VDC)	C (VDC)	M (VDC)	N [7] (VDC)	E (400 Hz)	F (400 Hz)	J (50 Thru 400 Hz)	K (50 Thru 400 Hz)
Nominal operating voltage	28	12	6	48	28	28	115	28	115
Maximum operating voltage	29	14.5	7.3	50	29	30	122	30	122
Maximum pickup voltage									
- Cold coil at +125° C	18	9	4.5	36	18	22	90	23	95
- During high temp test at +125° C	19.8	9.9	5	38	19.8	24.4	95.4	24.6	100
Drop-out voltage (maximum)	7	4.5	2.5	14	7	10	30	10	30
Coil resistance $\Omega$ $\pm 10\%$ +25° C or max coil current (Amps) at +25° C	320 $\Omega$	80 $\Omega$	20 $\Omega$ +20% +10%	1000 $\Omega$	320 $\Omega$	.240A	.040A	.100A	.024A

## GENERAL CHARACTERISTICS

Temperature range	-70°C to 125°C
Minimum operating cycles (life) at rated load	50,000
Minimum operating cycles (life) at 25% rated load	200,000
Dielectric strength at sea level	
- All circuits to ground and circuit to circuit	1250 Vrms
- Coil to ground	1000 Vrms
Dielectric strength at altitude 80,000 ft	500 Vrms [2]
Insulation resistance	
- Initial (500 Vdc)	100 M $\Omega$ min
- After environmental tests (500 Vdc)	50 M $\Omega$ min
Sinusoidal vibration (A, D and J mounting)	0.12DA / 10 to 70 Hz 30G / 70 to 3000 Hz
Random vibration	
- Applicable specification	MIL-STD-202
- Method	214
- Test condition - A, D, and J mounting	1G (0.4G <sup>2</sup> /Hz, 50 to 2000 Hz)
- Duration	15 minutes each plane
Shock (A, D and J mounting)	200G / 6 ms
Maximum contact opening time under vibration and shock	10 $\mu$ s
Operate time at nominal voltage (either coil)	
- Series JC	10 ms max
- Series JCA	15 ms max
Release time at nominal voltage (either coil)	
- Series JC	10 ms max
- Series JCA	50 ms max
Contact make bounce at nominal voltage @25°C	1 ms max
Contact release break bounce at nominal voltage @25°C	0.1 ms max [8]
Weight maximum	0.10lb

Unless otherwise noted, the specified temperature range applies to all relay characteristics.

# NOTES

# SERIES JC AND JCA

- [1] Standard Intermediate current test applicable.
- [2] 500 Vrms with silicone gasket compressed, 350 Vrms all other conditions.
- 3. Applicable military specification: MIL-PRF-6106 and M6106/19.
- [4] Special models available dry circuit, established reliability testing, etc.
- [5] Inductive load life, 20,000 cycles for AC 10,000 cycles DC.
- [6] For full rated load, max temp and altitude use no. 12 wire or larger, solder hook relays to be mounted to limit mounting bracket temperature to 160° C for JC series and 135° C for JCA series.
- [7] "N" coil has back EMF suppression to 42 volts maximum.
- [8] Applicable to JCA, Applicable to JC with "N" coil only.
- [9] 60 Hz load life, 10,000 cycles.
- 10. Time current relay characteristics per MIL-PRF-6106.
- 11. JC series: Relay will not operate, but will not be damaged by application of reverse polarity to coil.

## NUMBERING SYSTEM

	JC OR JCA	-	A	2	A
Basic series designation _____					
1-Mounting Style (A,D or J) _____					
2-Terminal Types (1,2,4,7) _____					
3-Coil Voltage see coil characteristics (A,B,C,E,F,J,K,M or N) _____					

## MOUNTING STYLES

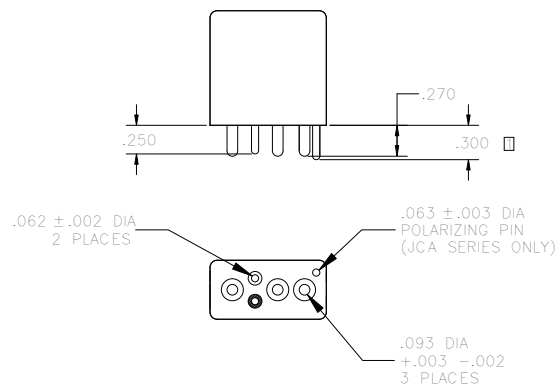
☐ DIMENSION OF JCA IS 1.125 MAX.  
MOUNTING STYLE A

☐ DIMENSION OF JCA IS 1.125 MAX  
MOUNTING STYLE D

☐ DIMENSION OF JCA IS 1.125 MAX.  
☒ DIMENSION OF JCA IS .550.  
MOUNTING STYLE J

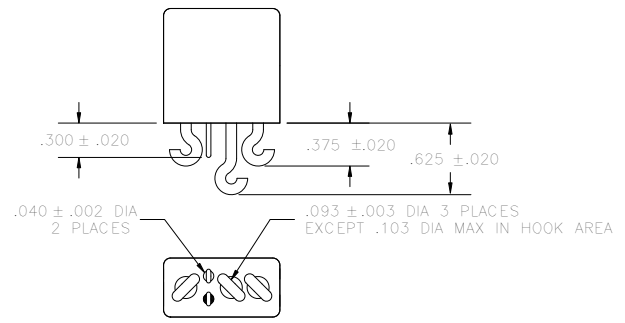
FOR USE WITH TRACK MOUNT SYSTEM. NOTE: TRACK SYSTEM NOT AVAILABLE FROM LEACH

MOUNTING STYLE W



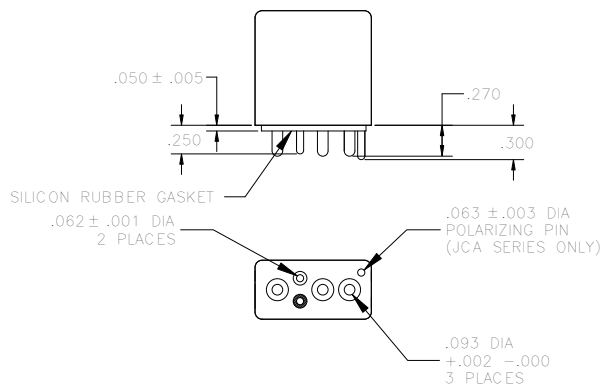
TERMINAL TYPE 1

FINISH:  
CASE-PAINTED LEACH BLUE  
TERMINALS-TIN/LEAD



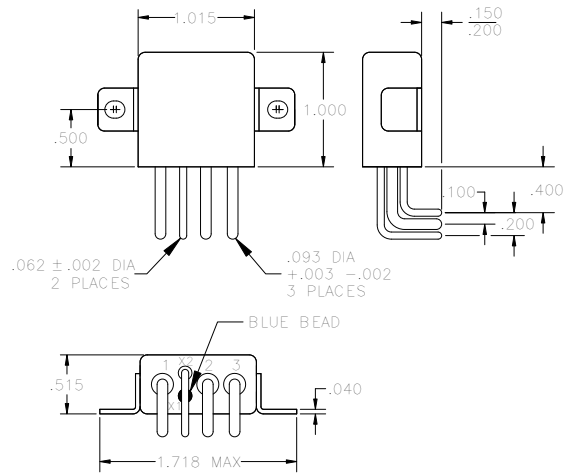
TERMINAL TYPE 2

FINISH:  
CASE-PAINTED LEACH BLUE  
TERMINALS-TIN/LEAD



TERMINAL TYPE 4

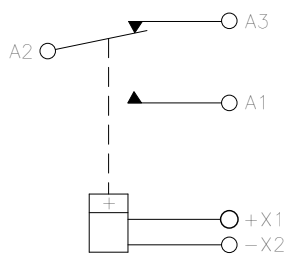
FINISH:  
CASE-PAINTED LEACH BLUE  
TERMINALS-GOLD PLATED  
POLARIZING PIN-TIN/LEAD



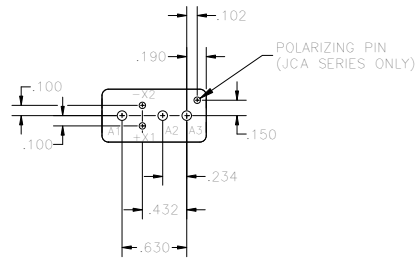
TERMINAL TYPE 7

FINISH:  
CASE-PAINTED LEACH BLUE  
TERMINALS-TIN/LEAD

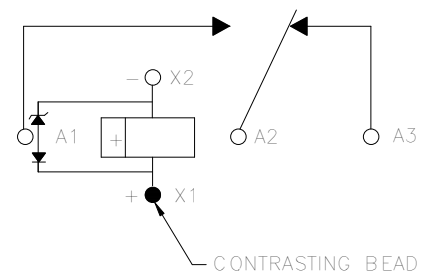
SCHEMATIC DIAGRAM  
COIL POLARITY NOT APPLICABLE TO AC VERSIONS



STANDARD TERMINAL LAYOUT  
COIL POLARITY NOT APPLICABLE TO AC VERSIONS



WIRING DIAGRAM  
COIL POLARITY NOT APPLICABLE TO AC VERSIONS



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