

EL415 RELAY (4PDT/15A MAGNETIC LATCHING)

Built to MIL-PRF-83536

FEATURES

- Balanced force design provides the benefit of consistently high contact pressure, reduced bounce, and less arching leading to extended contact life
- 12 and 28 Vdc coils, optional suppression
- Welded hermetically sealed, non-corrosive enclosure
- Portfolio includes 2 and 4 pole, 5 to 15 Amp devices
- Wide choice of mounting and terminal styles

APPLICATIONS

- Rail
- Aerospace
- Ground vehicle
- Qualified to MIL-PRF-83536 for severe condition applications

GENERAL CHARACTERISTICS

- No. of Poles: 4 Form C (4PDT)
Dimensions: 1.025" x 1.025" x 1.010"
(26.0 x 26.0 x 25.7) mm
- Weight
Mounting Code 4: 0.20 lb. (90.6 grams)
All Others: 0.17 lb. (77 grams)

SWITCHING CHARACTERISTICS

- Operate Time (Latch and Reset) @ +25°C
Mounting Code 4: 20 ms. Max
All Others: 15 ms. Max
- Bounce Time: 1 ms. Max
- Mechanical Life: 400,000 Cycles

ENVIRONMENTAL CHARACTERISTICS

- Temperature Range: -70°C to +125°C
- Vibration (Sinusoidal): 30g 10-3,000 Hz
- Shock (Any Axis): 200g, 6 ms
- Seal: Hermetic (1x10⁻⁸ atm cm³/s)



ELECTRICAL CHARACTERISTICS

- Contact Voltage Drop (at Rated Resistive Load)
Initial: 150 mV Max.
After Guaranteed Life: 175 mV Max.
- Dielectric Strength @ Sea Level

Mounting Code 4:	Coil to Case	All Other Points
Initial @ 60 Hz:	1,000 V _{rms}	1,250 V _{rms}
After Life Test @ 60 Hz:	1,000 V _{rms}	1,000 V _{rms}

All Others		
Initial @ 60 Hz:	1,050 V _{rms}	1,500 V _{rms}
After Life Test @ 60 Hz:	1,050 V _{rms}	1,250 V _{rms}
- Insulation Resistance
Initial: 100 MΩ Min, @ 500 Vdc
After Life Tests (Mounting Code 4): 100 MΩ Min, @ 500 Vdc
After Life Tests (All Others): 50 MΩ Min, @ 500 Vdc
Max. Leakage Current (Mounting Code 4): 100 μA RMS

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CONTACT RATING (AMPS)

Type of Load (High Level)	Cycles x 10 ³	28 Vdc	115 Vac 400 Hz 1 Phase	115 Vac 50/60 Hz 1 Phase	115/200 Vac 400 Hz 3 Phase	115/200 Vac 50/60 Hz 3 Phase
Resistive	100	15	15	3.75	15	3.75
Inductive	20	12	12	N/A	12	N/A
Inductive	10	N/A	N/A	3.75	N/A	3.75
Motor	100	6	6	3	6	3
Lamp	100	3	3	1.5	N/A	N/A

Note: 115 Vac 50/60 Hz life reduced to 10,000 Cycles for all load types

PART NUMBERING

BASIC SERIES

EL415	4PDT
ELS415	4PDT w/ Standard Internal Voltage Suppression
ELR415	4PDT w/ Heavy Duty Internal Voltage Suppression

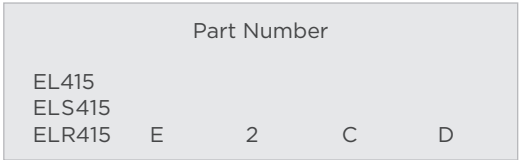
COIL CODE

MOUNTING CODE

TERMINAL CODE

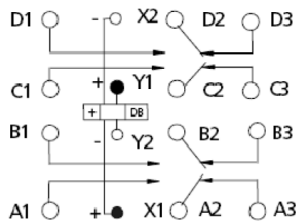
OPTIONS

D	Catalog Standard
A	Delete Arc Barriers
xxxx	Special Code, Assigned by TE

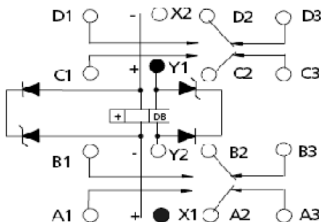


CIRCUIT DIAGRAM

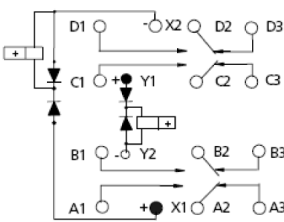
*Y Coil Last Energized



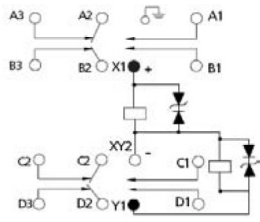
EL415



ELS415 Standard
Internal Voltage
Suppression



ELR415 Heavy Duty
Internal Voltage
Suppression



ELS415 Standard
Internal Voltage Suppression
(Mounting Code 4 Only)

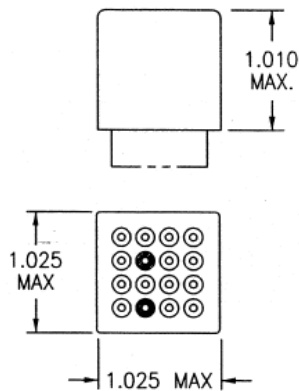
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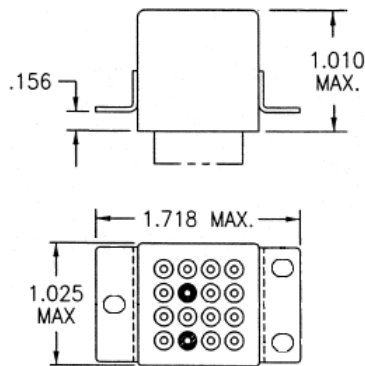
COIL CODE

Coil Code	Vdc						
	A	B	D	E	F	G	J
Nominal Coil Voltage	6	12	26.5	28	28	48	110
Minimum Latch and Reset Voltage @ +25°C	3.5	6.5	13.5	14.5	14.5	24	55
Maximum Latch and Reset Voltage @ +125°C	4.5	9.0	18	18.7	18	36	70
Coil Resistance ($\Omega \pm 10\%$ @ +25°C)	15	60	300	300	450	1000	5000
Maximum Standard Coil Transient Suppression (ELS410 Only) Vdc	-42	-42	-42	-42	-42	-100	-227
Maximum Heavy Duty Coil Transient Suppression (ELR410 Only) Vdc	-5	-5	-5	-5	-5	-5	-5

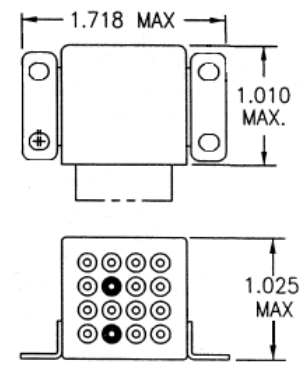
MOUNTING CODE



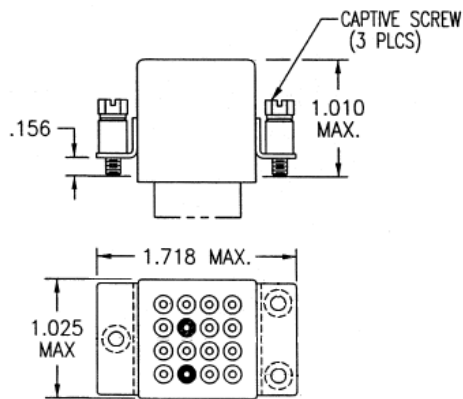
Mount 1



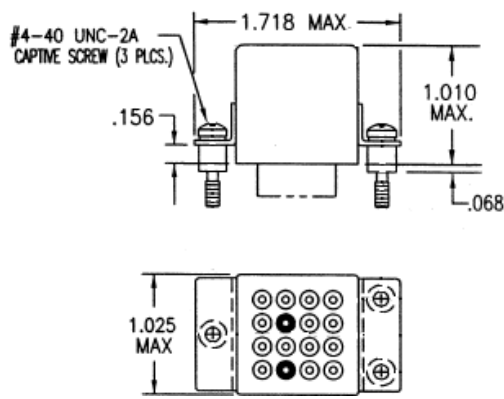
Mount 2



Mount 3



Mount 8: M3
Mount C: #4-40 UNC

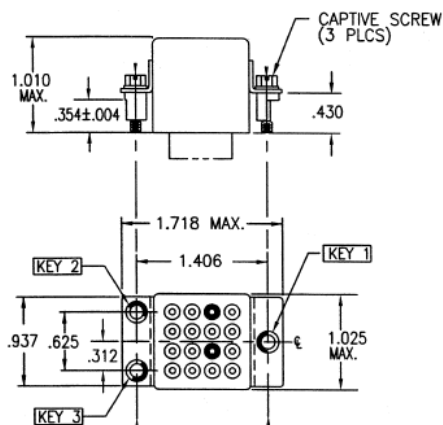


Mount G

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MOUNTING CODE (CONT'D)

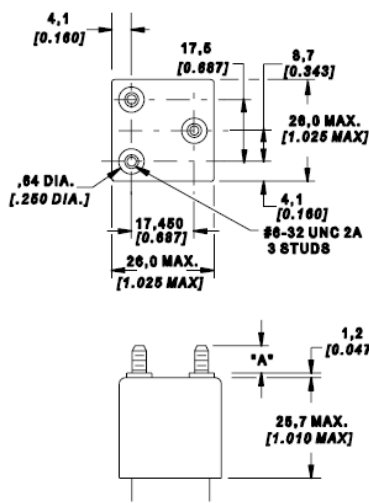
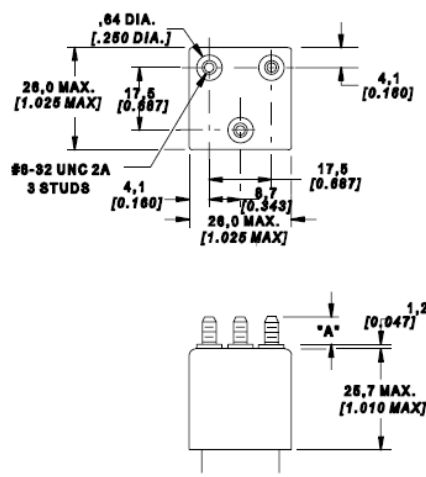


KEYING POSITIONS

U	V	W	X	Y	Z
0°	60°	120°	180°	240°	300°

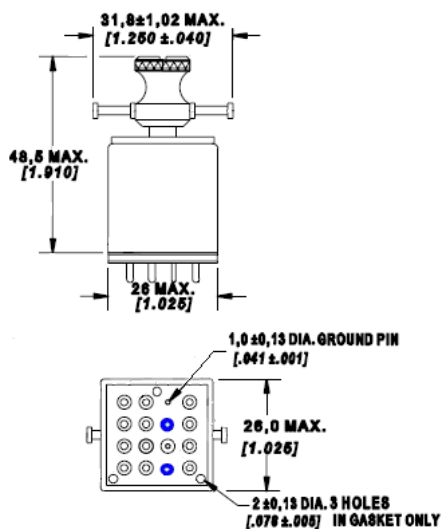
Mount A: M3

Mount B: #4-40 UNC

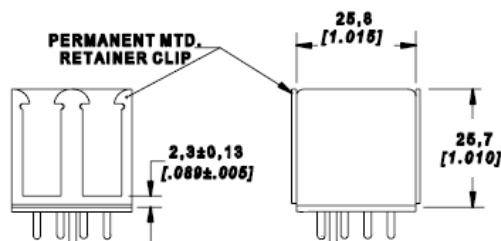


Mount O: A = 0.375" (9.5 mm)
Mount R: A = 0.250" (6.35 mm)

Mount T: A = 0.375" (9.5 mm)
Mount U: A = 0.250" (6.35 mm)

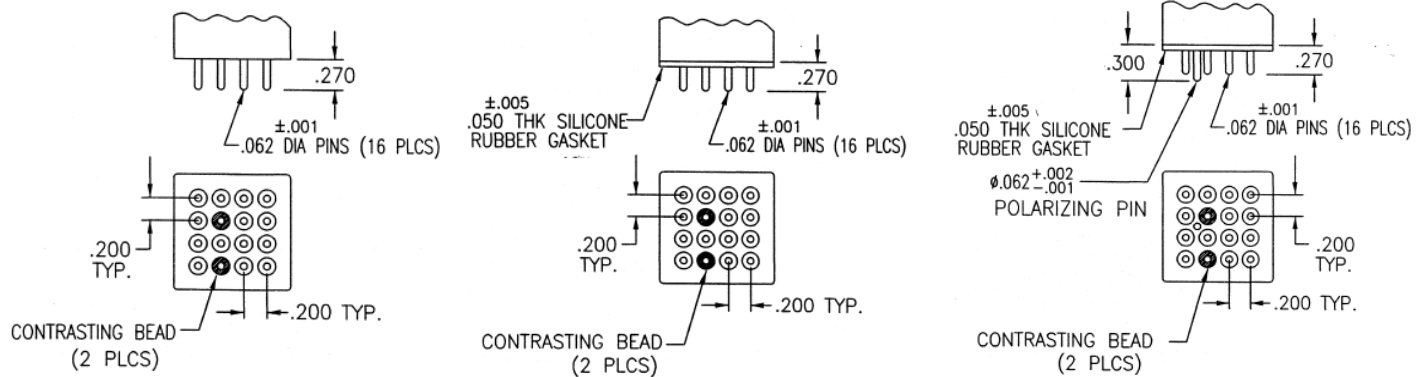


Mount 4: Requires Terminal M



Mount 6: Requires Terminal M or C

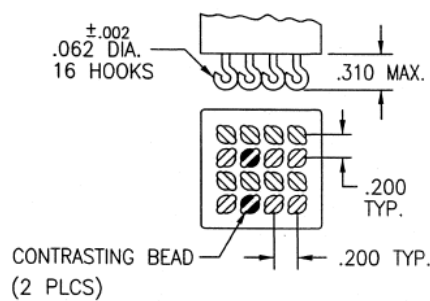
TERMINAL CODE



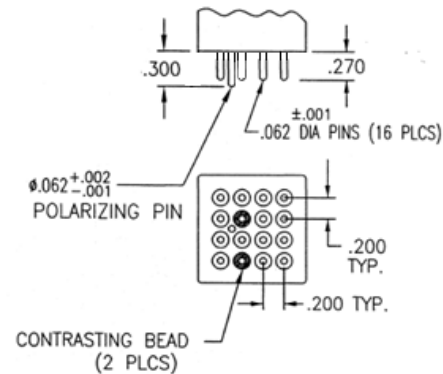
Terminal A: Tin Plated
Terminal B: Solder Dipped

Terminal C: Gold Plated
w/o polarizing Pin

Terminal M: Gold Plated
w/polarizing Pin



Terminal H: Tin Plated
Terminal J: Solder Dipped



Terminal V: Tin Plated

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