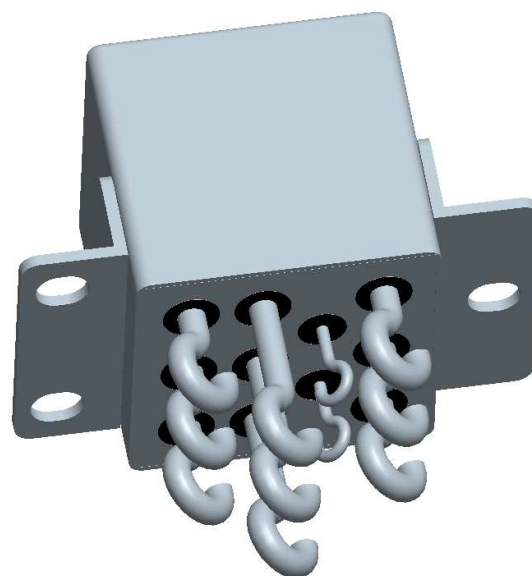
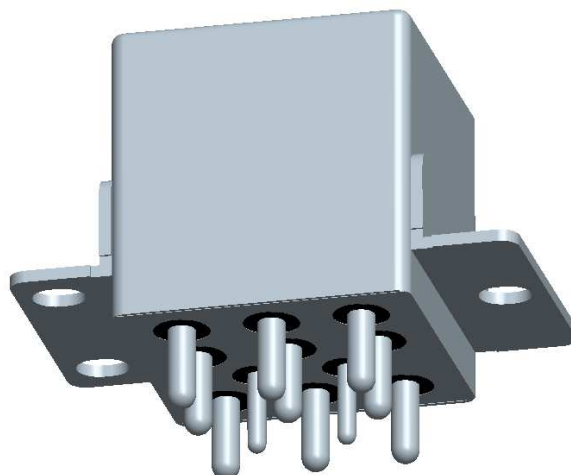


SERIES FCAV-325 **RELAY-NONLATCH** 10 Ampere/ 230VAC-400 Hz, 3PDT*

*Contacts rated at 230 VAC for higher voltage systems on more electric aircraft.

PRODUCT FACTS:

- o Non latching Hermetically Sealed Relay.
- o Balanced force design.
- o Permanent magnet drive. Polarized single side stable design.
- o All welded construction.
- o Coils available:
DC: 6, 12, 28, 48 VDC.
AC: 28,115 VAC (50/400 Hz).
- o Contacts: Silver Cadmium oxide with Gold plating.
- o Designed and built in accordance to MIL- PRF-83536.
- o Weight 82 grams (2.89 ounces) Max.



PRODUCTION DATA SHEET

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1396 CHARLOTTE HIGHWAY, FAIRVIEW, NC 28730

SERIES FCAV-325

Dimensions shown for reference
Only. Specifications subject to change.

CAGE CODE

SCALE

NONE

SHEET

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GENERAL CHARACTERISTICS	
Temperature range	-70° C to +125° C
Altitude	300,000 feet
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 (all points)	350 Vrms
Initial Insulation resistance at 500 Vdc	100 MΩ min
Insulation resistance after life or environmental test	50 MΩ min.
Sinusoidal vibration:* Z, Y & X Enclosures	30g/ 33-3000 Hz
W Enclosures(STUD MTG)	20g/ 33 – 3000 Hz
Random vibration:* Z, Y & X Enclosures	0.4g ² / Hz 50-2000 Hz
W Enclosures (STUD MTG)	0.2g ² / Hz 50-2000 Hz
Shock:* Z, Y & X Enclosures	200g for 6 ms
W Enclosures (STUD MTG)	100g for 6 ms
Operate time at nominal voltage :DC Relays	15 ms max.
: AC relays	20 ms max.
Release time at nominal voltage :DC Relays	15 ms max.
:AC Relays	50 ms max.

*Max. Contact opening under vibration or shock 10 microseconds.

COIL DATA

Coil Code	Nominal Voltages	Freq. HZ	Over Temperature Range			
			DC Res. AC AMPS(B)	Pick up or Below Volts	Dropout or above Volts	Must Hold voltage(C)
1	6	DC	18 Ohms	4.5	0.3	2.5
2	12	DC	70 Ohms	9.0	0.75	4.5
3	28	DC	290 Ohms	18.0	1.5	7.0
4(A)	28	DC	290 Ohms	18.0	1.5	7.0
5	48	DC	865 Ohms	32.0	2.5	14.0
6	28 VAC	400 Hz	225 mA	22.0	1.25	10.0
7	28 VAC	50/400 Hz	120 mA	22.0	1.25	10.0
8	115 VAC	400 Hz	40 mA	90.0	5.0	40.0
9	115 VAC	50/400 Hz	30 mA	95.0	5.0	40.0



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- A. Code 4 coils have back EMF suppression to 42 Volt max.
 B. DC Coil Resistance $\pm 10\%$ at 25°C.
 C. Relay will stay in picked-up state down to Must Hold Voltages shown.
 D. Max Overvoltage: 6 & 12 VDC Coils 120% of Nominal; All others 110% of nominal.
 E. Coils available for other voltages and for AC 50/60 Hz.

CONTACT ELECTRICAL CHARACTERISTICS

Type of Load	Life(Min.) Cycles X10 ³	28VDC	115VAC 400 Hz	230VAC 400Hz	115/200 VAC 3 ϕ	
					400Hz	60Hz*
Resistive	50	25	25	10	25	2.5
Inductive	10	12	-	-	-	2.5
Motor	50	10	10	-	10	2
Lamp	50	5	5	-	5	1
* 60 Hz Loads rated for 10000 operations						

- A. Overload Current 50 Amps DC, 80 Amps 400 Hz.
 B. Rupture Current 60 Amps DC, 100 Amps 400 Hz.
 C. Contact Make Bounce 1 Millisecond at Nominal Voltage.
 D. Max. Contact drop at 25 Amps: initial 0.150 Volts.
 E. End of Life 0.175 Volts.

All endurance ratings are subject to validation - consult factory

PART NUMBERING SYSTEM

How to order-:

(Example)

	<u>FCAV- 325</u>	<u>A</u>	<u>Y</u>	<u>4</u>
RELAY TYPE				
TERMINALS (Socket Pins, DC Coil)				
ENCLOSURE (With Flanges)				
COIL (28 VDC with transient Suppression)				



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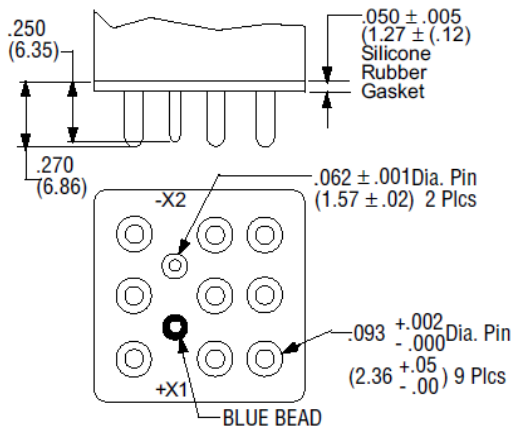
SHEET

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TERMINALS

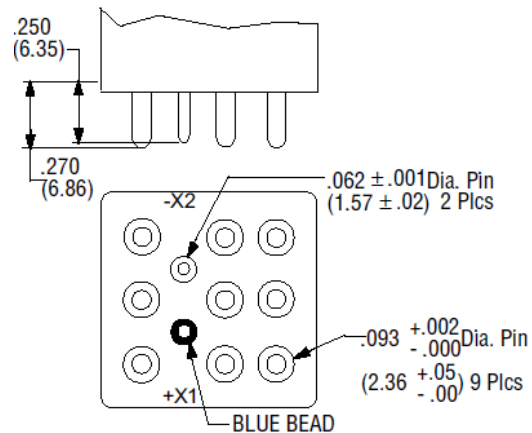
CODE "A"

Socket Pins - All DC Coils PIN TERMINALS ARE GOLD PLATED



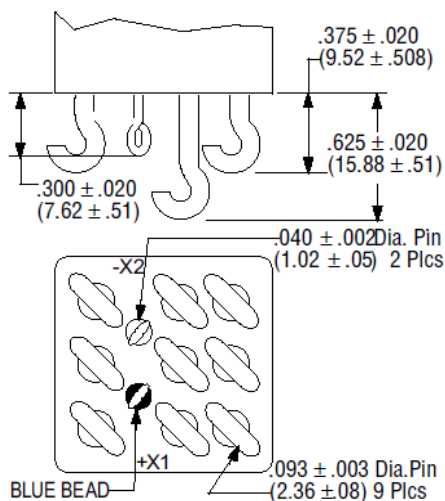
CODE "B"

Solder Pin Terminals PIN TERMINALS TIN/LEAD PLATED

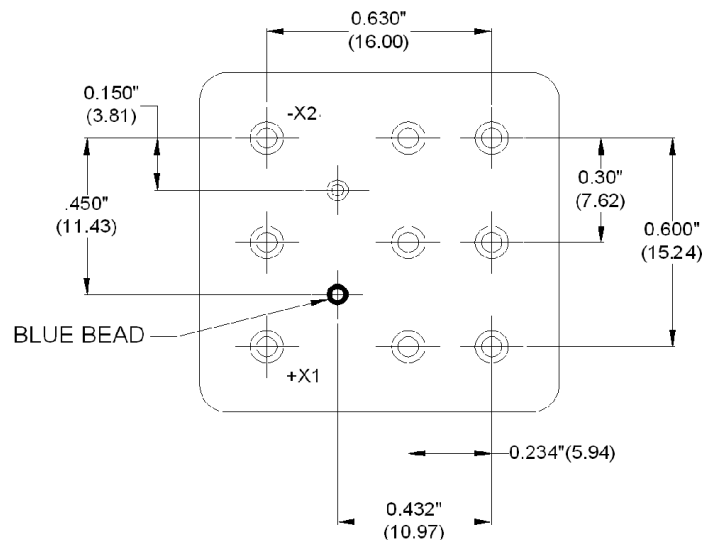


CODE "C"

Solder Hook Terminals HOOK TERMINALS TIN/LEAD PLATED



TERMINAL LAYOUT



*Dimensions are shown in inches ± 0.010 and (Millimeters ± 0.25)



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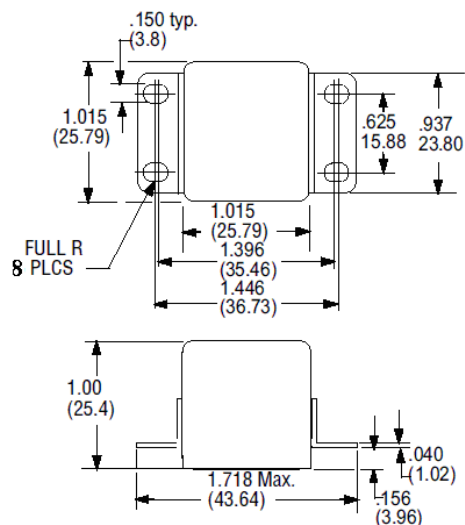
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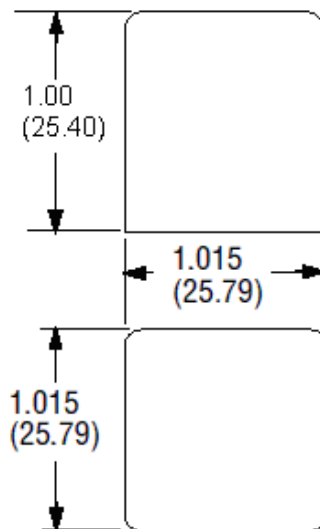
4 of 6

ENCLOSURES

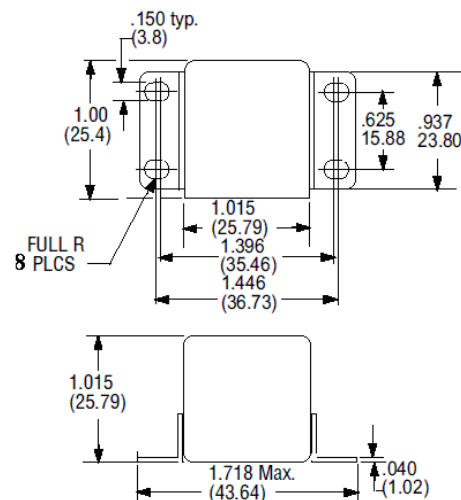
CODE "V"



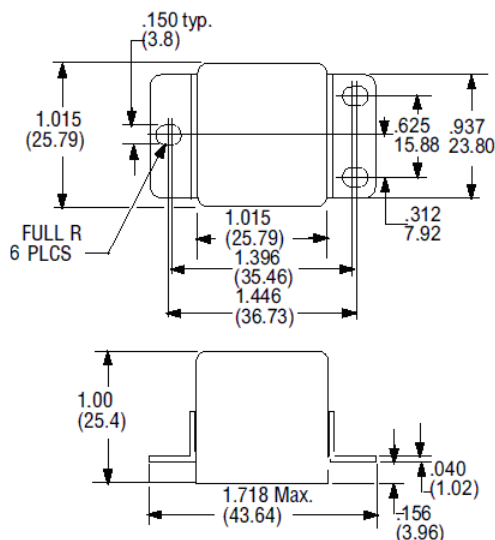
CODE "Z"



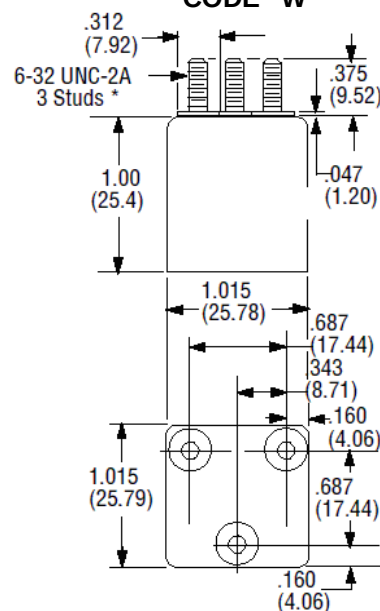
CODE "X"



CODE "Y"



CODE "W"



For Socket pin terminals: specify "Y" enclosure with DC Coils & "V" enclosures with AC Coils.

Note: All Enclosures have Cupro-Nickel Cans bright acid tin/lead plated after Assembly to terminal headers. Dimensions: inches $\pm .010$ (mm $\pm .25$)



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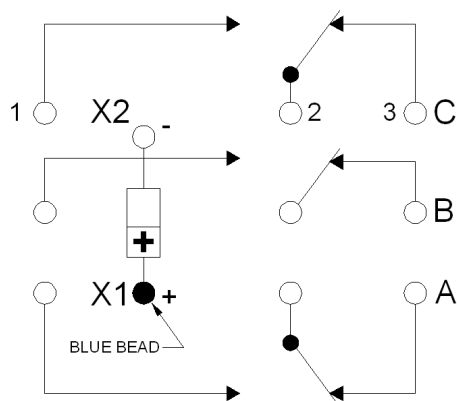
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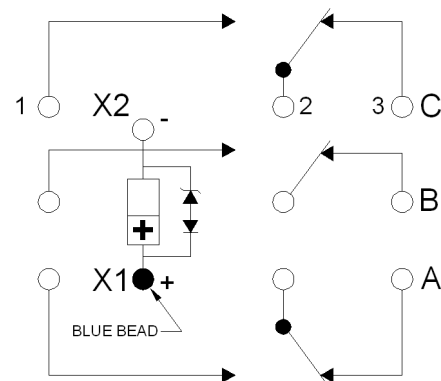
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TERMINAL WIRING DIAGRAM

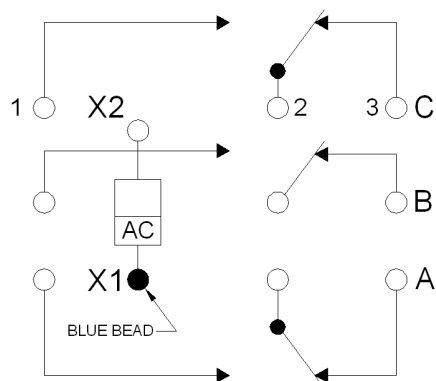
DC COILS



DC COILS WITH TRANSIENT SUPPRESSION



AC COILS



NOTE:

1. THESE RELAYS ARE POLARIZED WITH PERMANENT MAGNET.
2. DIODES USED IN TRANSIENT SUPPRESSION
CIRCUITS HAVE PEAK INVERSE VOLTAGE RATING OF 600 VDC MIN.
ZENER DIODES HAVE MIN. RATING OF 1 WATT.
3. TERMINAL DESIGNATIONS ARE FOR REFERENCE ONLY & DO NOT
APPEAR ON THE HEADER.



Dimensions shown for reference
Only. Specifications subject to change.

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SERIES FCAV-325

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NONE

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