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REVISIONS					
P	LTR	DESCRIPTION	DATE	DWN	APVD
	A	INITIAL RELEASE	26SEP2019	RV	BM

Specifications

Contact Data				
Contact Form	1 Form X (SPST-NO-DM)			
Contact Rating in Amps (Continuous Duty)				
	Type of Load	Life (Min.) Cycles	28 Vdc	
	Resistive	50,000	50	
	Inductive (L/R=5ms)	20,000	20	
	Motor	20,000	20	
	None	100,000	-	
Overload Current (Resistive)	200 A, 50 cycles			
Max. Contact Drop at 10A	Initial 30mV; After Life 175mV			
Operate Time at Nominal Voltage	15ms			
Release Time	15ms			
Bounce Time	1ms			
Coil Data				
Coil Code	1	2	3	4
Nominal Operating Voltage (Vdc)	6	12	28	28
Maximum Operating Voltage (Vdc)	7.3	14.5	29	29
Maximum Pick-Up Voltage at +125°C	4.5	9	18	18
Maximum Pick-Up Voltage at +125°C, continuous current test (Vdc)	5.7	11.25	22.5	22.5
Drop-Out Voltage at OTR	0.3 – 2.5	0.75 – 4.5	1.5 – 7.0	1.5 – 7.0
Maximum Coil Current at +25°C (A)	.50	.26	.15	.15
Back EMF Suppressed to (Vdc) (Max)	N/A	N/A	N/A	-42
Coil Resistance ±10%	18Ω	70Ω	290Ω	290Ω

Specifications

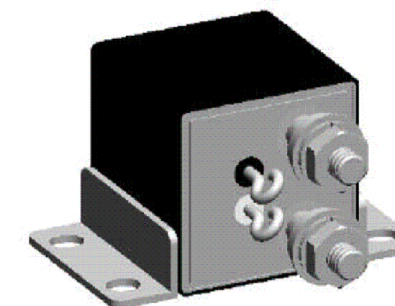
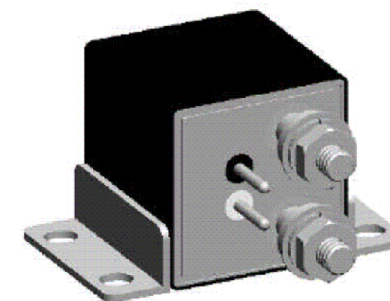
Electrical Data	
Initial Insulation Resistance (note 1)	100 megohms, minimum, at 500Vdc, between each pin and case
Insulation Resistance After Life or Environmental Test (note 1)	50 megohms, minimum, at 500Vdc, between each pin and case
Dielectric Strength At Sea Level	
Contacts to Ground and Between Contacts	1,250Vrms, 60 Hz.
Coil to Ground	1,000Vrms, 60 Hz.
Dielectric Strength at 80,000 ft (25,000m), All Points (note 4)	500Vrms, 60 Hz
Environmental Data	
Ambient Temperature Range, Operating	-70°C to +125°C
Altitude	300,000 feet
Shock Resistance	50 G's, 11 ms.
Vibration Resistance, Sinusoidal	20 G's, 75-3000Hz.
Mechanical Data	
Approximate Weight	3.2 oz. (90g) Max.

NOTES

1. All wired terminals must be connected together during this test. Dielectric withstanding voltage and insulation resistance are measured between all mutually insulated wired terminals and between all these terminals and case.

Product Facts

- Non-latching relay
- Balanced force design
- Corrosion protected metal enclosure
- All welded hermetically sealed enclosure occupies about 1 in³ (16.4 cm³)
- 1 Form X (SPST-NO-DM)
- 6, 12 and 28 Vdc coils
- Weight: 90 grams
- Designed and built in accordance to MIL-PRF-6106



The FCA-150 series relay is a polarized, single-side stable design, where the flux from a permanent magnet provides the armature holding force in the deactivated state, and its flux path is switched and combined

with the coil flux in the operated state. This results in appreciably increased contact pressure in both states over that of a spring return non-polar design.

1 Form X (SPST-NO-DM) configuration with main contacts rated 50 Amps.

How to Order

Typical Part Number

Series and Contact Arrangement:
 FCA-150 = Relay with 1 Form X Main Contacts

FCA-150 -A Y 3

Terminals (see drawings for details):
 B = Solder Pin Coil Terminals, Stud Power Terminals
 C = Solder Hook Coil Terminals, Stud Power Terminals
 K = Terminal Block, Stud Power Terminals

Enclosure (see drawings for details):
 R = Horizontal Flange Mount, Rotated U = Flush Vertical Flange Mount X = Horizontal Flange Mount
 Y = Raised Vertical Flange Mount Z = No Mount

Coil:
 1 = 6Vdc nominal 2 = 12Vdc nominal 3 = 28Vdc nominal 4 = 28Vdc nominal, with back EMF suppression

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		CHK	RV	26SEP2019				
		APVD	BM	26SEP2019	NAME			
DIMENSIONS: INCHES		TOLERANCES UNLESS OTHERWISE SPECIFIED:			FCA-150 SERIES			
		0 PLC	±	-	-			
		1 PLC	±	-	-			
		2 PLC	±	-	-			
		3 PLC	±	-	-			
		4 PLC	±	-	-			
		ANGLES	±	-	-			
MATERIAL		FINISH			RESTRICTED TO			
					SIZE	CAGE CODE	DRAWING NO	
					WEIGHT			
					A3	-	©-FCA-150-SERIES	
					CUSTOMER DRAWING		SCALE	SHEET
							NTS	1 OF 3
							REV	A

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REVISIONS

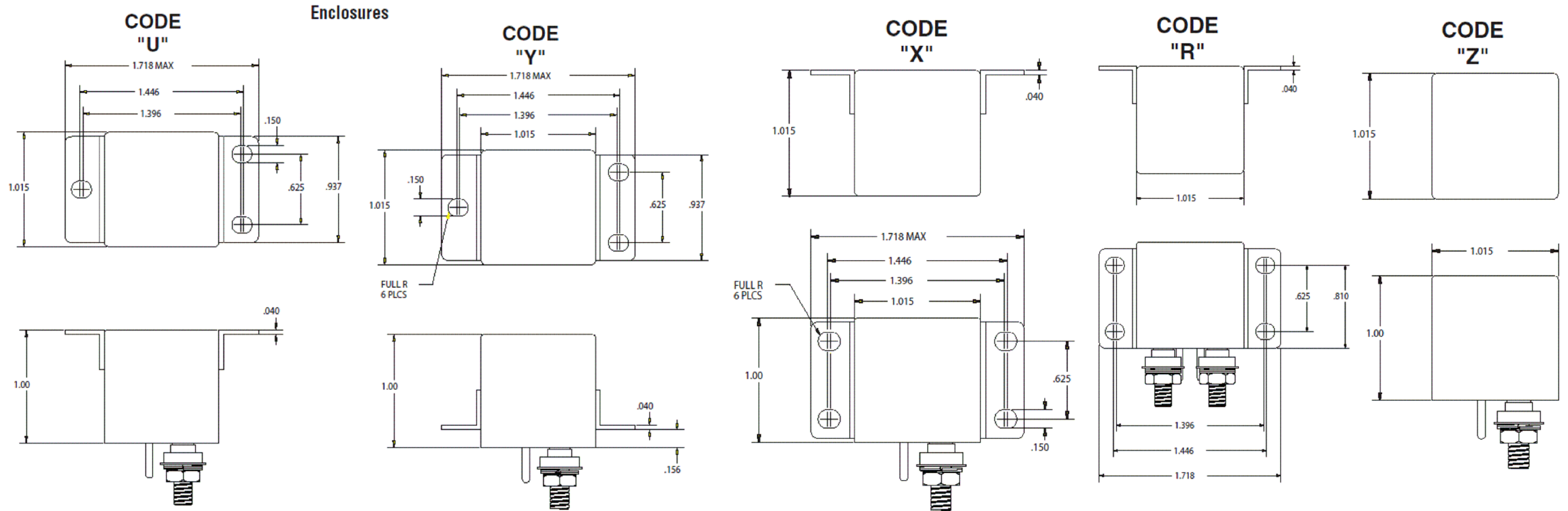
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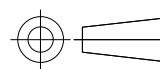
P	LTR	DESCRIPTION	DATE	DWN	APVD
-	-	SEE SHEET 1	-	-	-

Outline Dimensions

The standard terminal types and enclosures are illustrated below with dimensions in inches ± 0.010 and (millimeters ±0.25).



ALL DIMENSIONS ARE IN INCHES

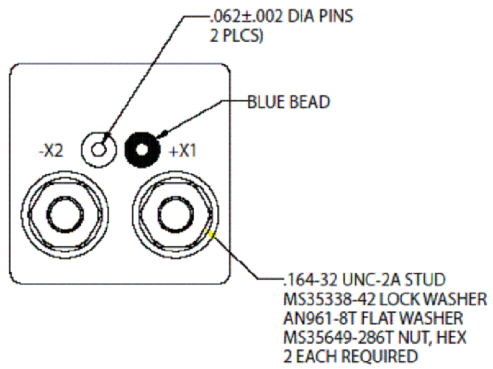
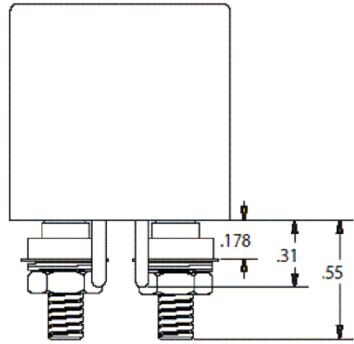
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DIMENSIONS: INCHES		CHK	RV	26SEP2019	
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TOLERANCES UNLESS OTHERWISE SPECIFIED:		PRODUCT SPEC		NAME	
0 PLC ± -		-		FCA-150 SERIES	
1 PLC ± -		-		-	
2 PLC ± -		-		-	
3 PLC ± -		-		-	
4 PLC ± -		-		-	
ANGLES ± -		APPLICATION SPEC		-	
FINISH		-		SIZE	RESTRICTED TO
-		WEIGHT		A3	-
		CUSTOMER DRAWING		CAGE CODE	DRAWING NO
				-	©-FCA-150-SERIES
		SCALE		SHEET	REV
		NTS		2 of 3	A

P	LTR	DESCRIPTION	DATE	DWN	APVD
-	-	SEE SHEET 1	-	-	-

Terminals

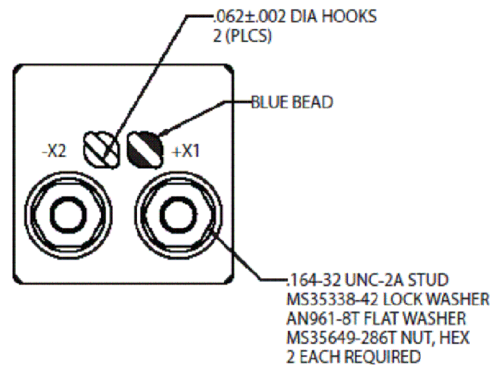
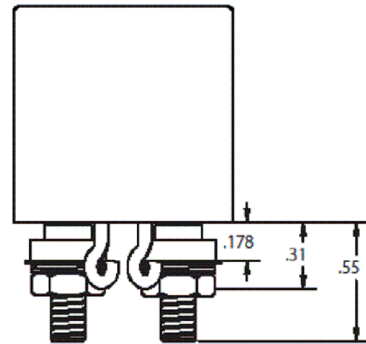
CODE "B"

Solder Pin Terminals
Tin/Lead Plated



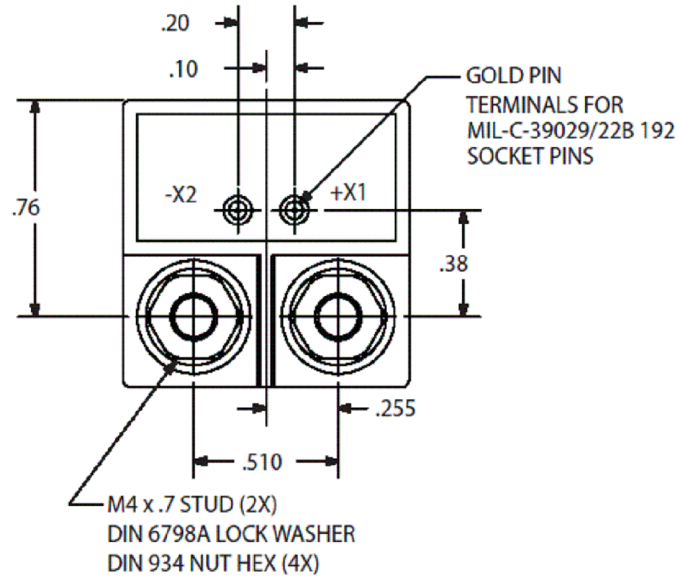
CODE "C"

Solder Hook Terminals
Tin/Lead Plated



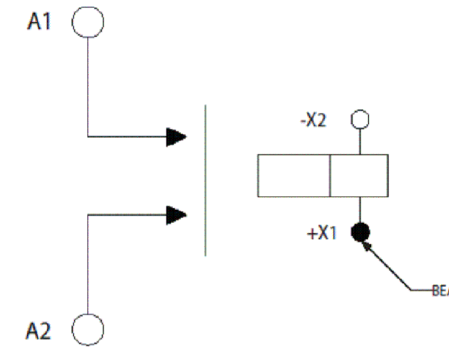
CODE "K"

Terminal Shield

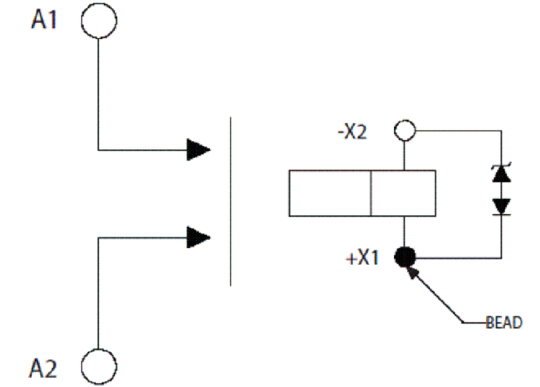


Terminal Wiring

DC Coils



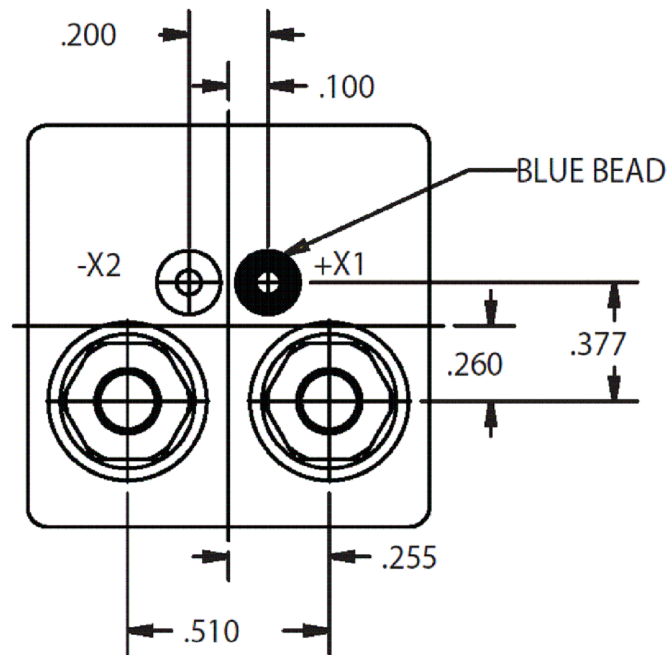
DC Coils with Transient Suppression



NOTE: Polarity must be observed with DC coil supply. Relay is polarized with a permanent magnet and will not operate or be damaged by reverse polarity.

Diodes used in transient suppression and in AC rectifier circuits have peak inverse voltage rating of 600 VDC minimum. Zener diodes have a minimum rating of 1 watt.

Terminal designations are for reference only and do not appear on the header.



TERMINAL VIEW

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DIMENSIONS: INCHES		CHK RV 26SEP2019				NAME											
TOLERANCES UNLESS OTHERWISE SPECIFIED:		APVD BM 26SEP2019	FCA-150 SERIES														
<table border="1"> <tr> <td>0 PLC</td> <td>± -</td> </tr> <tr> <td>1 PLC</td> <td>± -</td> </tr> <tr> <td>2 PLC</td> <td>± -</td> </tr> <tr> <td>3 PLC</td> <td>± -</td> </tr> <tr> <td>4 PLC</td> <td>± -</td> </tr> <tr> <td>ANGLES</td> <td>± -</td> </tr> </table>		0 PLC	± -	1 PLC	± -	2 PLC	± -	3 PLC	± -	4 PLC	± -	ANGLES	± -	PRODUCT SPEC	SIZE		
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MATERIAL		APPLICATION SPEC	CAGE CODE	DRAWING NO	RESTRICTED TO												
FINISH		WEIGHT	A3 - C-FCA-150-SERIES		-												
CUSTOMER DRAWING			SCALE	SHEET	REV												
			NTS	3 OF 3	A												