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REVISIONS

P	LTR	ECO NO.	DESCRIPTION	DATE	DWN	APVD
	A	— INIT	AL RELEASE	18OCT2019	RV	MB
	B	20—006207	FCA—215 ADDED IN ATTRIBUTE PAGE 2	04MAY2020	RV	MB

General Specifications

Temperature Rating —  
-70°C TO + 125°C

Altitude — 300,000 Feet

Shock\* —  
Z, Y, & X Enclosures —  
200 g for 6 mS  
W & M Enclosures (Stud Mtg.) —  
100 g for 6 mS

Vibration, Sinusoidal\* —  
Z, Y, & X Enclosures —  
30 g 33-3000Hz  
W & M Enclosures (Stud Mtg.) —  
20 g 33-3000Hz

Vibration, Random\* —  
Z, Y, & X Enclosures —  
0.4 g<sup>2</sup>/Hz 50-2000Hz  
W & M Enclosures (Stud Mtg.) —  
0.2 g<sup>2</sup>/Hz 50-2000Hz

Dielectric Strength —  
At Sea Level —  
All circuits to ground and circuit to  
circuit — 1250 V rms  
Coil to ground — 1000 V rms  
At 80,000 Feet — 350 V rms

Insulation Resistance —  
Initial (500 VDC) — 100 MΩ Min.  
After Life or Environmental Tests —  
50 MΩ Min.

Operate Time at Nominal  
Voltage —  
DC Relays — 10 ms or less  
AC Relays — 15 ms or less

Release Time at Nominal  
Voltage —  
DC Relays — 10 ms or less  
AC Relays — 50 ms or less

\* Max. contact opening under vibration  
or shock 10 microseconds

Coil Data

Coil Code	Nominal Voltages	Freq. Hz	DC Res. AC Amps (B)	Over Temperature Range		
				Pickup or Below Volts	Dropout or Above Volts	Must Hold Voltage (C)
1	6	DC	20 Ω	4.5	0.3	2.5
2	12	DC	80 Ω	9.0	0.75	4.5
3	28	DC	320 Ω	18.0	1.5	7.0
4 (A)	28	DC	320 Ω	18.0	1.5	7.0
5	48	DC	920 Ω	32.0	2.5	14.0
6	28	400Hz	180 mA	22.0	1.25	10.0
7	28	50/400Hz	100 mA	22.0	1.25	10.0
8	115	400 Hz	40 mA	90.0	5.0	40.0
9	115	50/400 Hz	30 mA	95.0	5.0	40.0

A. CODE 4 COILS HAVE BACK EMF SUPPRESSION TO 42 VOLTS MAX.  
B. DC COIL RESISTANCE ± 10% AT 25°C; AC COIL MAX. CURRENT AT NOMINAL VOLTAGE.  
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 50/60HZ.

Contact Rating — Amperes  
Ratings Are Continuous Duty

Type of Load	Life (Min.) Cycles x 10 <sup>3</sup>	28 VDC	115VAC 400Hz	115/200VAC 3Ø	
				400Hz	60Hz*
Resistive	100	10	10	10	2.5
Inductive	20	8	8	8	2.5
Motor	100	4	4	4	2.0
Lamp	100	2	2	2	1

\*60 Hz loads rated for 10,000 operations

Overload Current — 40 AMPS DC, 60 AMPS 400Hz  
Rupture Current — 50 AMPS DC, 80 AMPS 400Hz  
Contact Make Bounce —1 MILLISECOND AT NOMINAL VOLTAGE  
Max. Contact Drop at 10 Amps — INITIAL 0.100 VOLTS  
End of Life — 0.125 VOLTS

The Series FCA-210 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 nonpolar design. We also

manufacture other versions of this relay:  
**FCA-410** — 10 Ampere 4PDT Relay  
**FCA-610** — 10 Ampere 6 PDT Relay  
**Available:**  
**FCA-215** — 15 Ampere DPDT Relay, Has the same specifications as the FCA-210 except is rated at 15 amps. (Commercial Only)

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DIMENSIONS:  
INCHES

TOLERANCES UNLESS OTHERWISE SPECIFIED:

0 PLC ± —  
1 PLC ± —  
2 PLC ± —  
3 PLC ± —  
4 PLC ± —  
ANGLES ± —

MATERIAL

—

DWN RV 18OCT2019  
CHK RV 18OCT2019  
APVD MB 18OCT2019

PRODUCT SPEC  
—  
APPLICATION SPEC  
—  
WEIGHT —

CUSTOMER DRAWING

TE Connectivity

NAME  
FCA—210—SERIES  
—  
—

SIZE A3  
CAGE CODE —  
DRAWING NO. ©=FCA—210—SERIES  
RESTRICTED TO —

SCALE NTS  
SHEET 1 OF 2  
REV B

1470—19 (1/15)

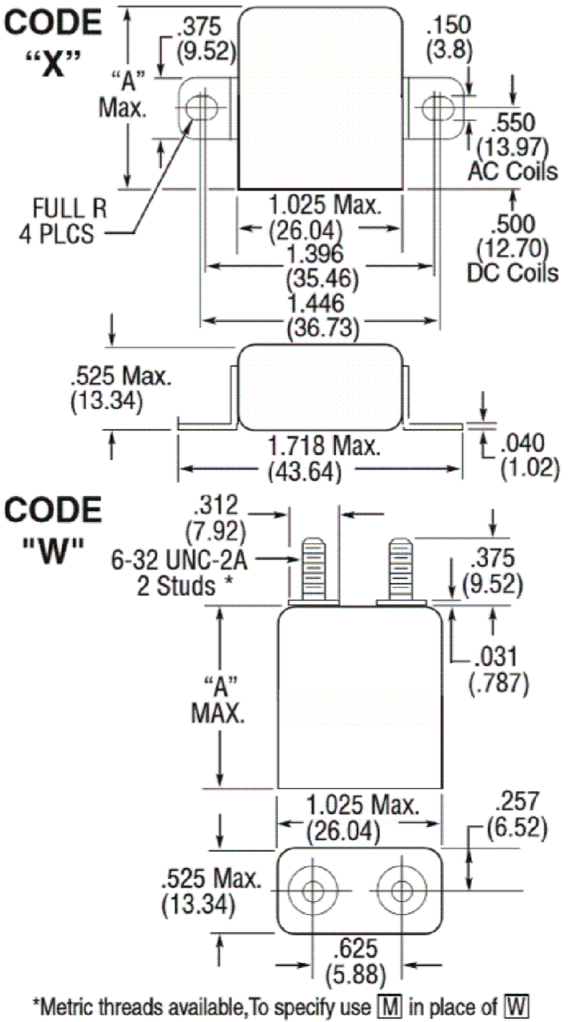
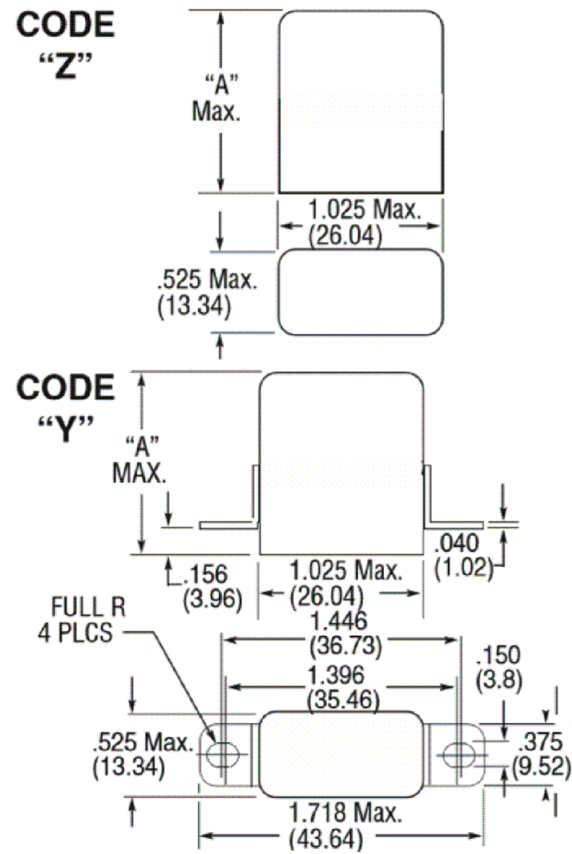


**Enclosures**

All Enclosures have Cupro-Nickel Cans bright acid tin/lead plated after assembly to terminal headers.

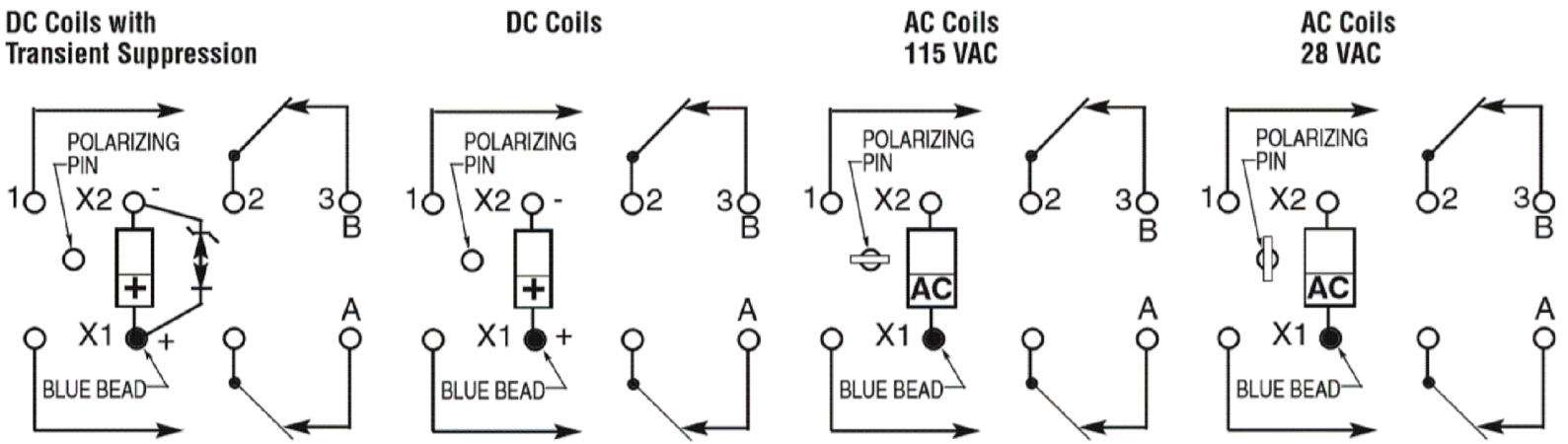
Dimensions: Inches ± .010 (mm ± .25)

**“A”** AC Coils 1.125 in. (28.57) Max.  
DC Coils 1.010 in. (25.65) Max.



\*Metric threads available, To specify use [M] in place of [W]

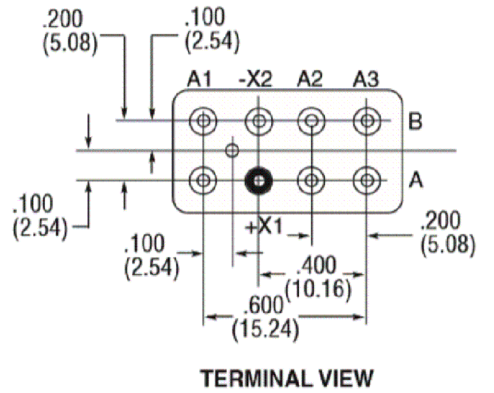
**Terminal Wiring**



**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.

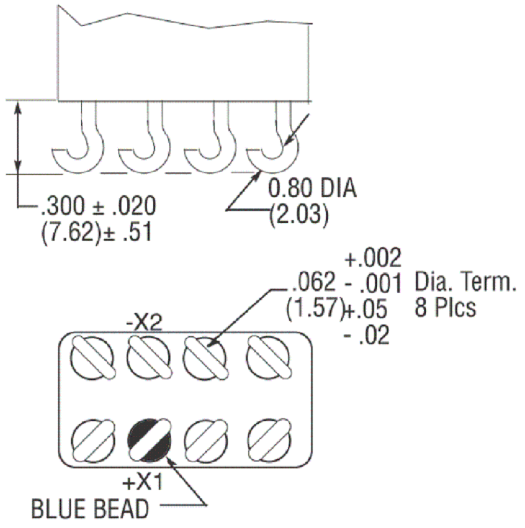
Diodes used in transient suppression and in AC rectifier circuits have peak inverse voltage rating of 600 VDC minimum. Zener diodes have a minimum rating of 1 watt.

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



**CODE “C” Solder Hook**

HOOK TERMINALS TIN/LEAD PLATED



ALL DIMENSIONS ARE IN INCHES(MM)

**HOW TO ORDER**


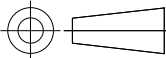
**RELAY TYPE** \_\_\_\_\_

**SOLDER HOOKS, DC COIL** \_\_\_\_\_

**ENCLOSURE** (With Flanges) \_\_\_\_\_

**COIL** (28 VDC With Transient Suppression). \_\_\_\_\_

**FCA-215**  
**FCA-210-A Y 4**

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		CHK RV 18OCT2019						
DIMENSIONS: INCHES	TOLERANCES UNLESS OTHERWISE SPECIFIED:	APVD MB 18OCT2019	NAME					
		PRODUCT SPEC	FCA-210-SERIES					
	0 PLC ± - 1 PLC ± - 2 PLC ± - 3 PLC ± - 4 PLC ± - ANGLES ± -	APPLICATION SPEC	-					
			-					
MATERIAL	FINISH	WEIGHT	SIZE	CAGE CODE	DRAWING NO	RESTRICTED TO		
		-	A3	-	Ⓒ-FCA-210-SERIES	-		
CUSTOMER DRAWING			SCALE	NTS	SHEET	2 OF 2	REV	B

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