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REVISIONS

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P	LTR	DESCRIPTION	DATE	DWN	APVD
	A	INITIAL RELEASE	28OCT2019	RV	MB

### General Specifications

#### Temperature Rating —

-70°C TO +125°C

#### Altitude —

300,000 Feet

#### Shock\* —

Z & Y Enclosures —

200 g for 6 mS

W, X & M Enclosures —

100 g for 6 mS

T Enclosure (In Track) —

50 g for 11 mS

#### Vibration, Sinusoidal\* —

Z & Y Enclosures —

30 g 70-3000Hz

W, X & M Enclosures —

20 g 70-3000Hz

T Enclosure (Socket Mounted in Track) —

20 g 500-3000 Hz

#### Vibration, Random\* —

Z & Y Enclosures —

0.4 g<sup>2</sup>/Hz 50-2000Hz

T, W, X & M Enclosures —

0.2 g<sup>2</sup>/Hz 50-2000Hz

#### Dielectric Strength —

At Sea Level —

All circuits to ground and circuit to circuit — 1000 V rms

Coil to ground — 1000 V rms

At 80,000 Feet — 250 V rms

#### Insulation Resistance —

Initial (500 VDC) — 100 MΩ Min.

After Life or Environmental Tests —

50 MΩ Min.

#### Operate Time at Nominal Voltage —

6 ms or less

#### Release Time at Nominal Voltage —

6 ms or less

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

### Coil Data

Coil Code	Nominal Voltages	Freq. Hz	DC Res. (B)	Over Temperature Range		
				Pickup or Below Volts	Dropout or Above Volts	Must Hold Voltage (C)
1	6	DC	25 Ω	4.5	0.3	2.5
2	12	DC	78 Ω	9.0	0.75	4.5
3	28	DC	400 Ω	18.0	1.5	7.0
4 (A)	28	DC	400 Ω	18.0	1.5	7.0
5	48	DC	1275 Ω	36.0	2.5	14.0

A. CODE 4 COILS HAVE BACK EMF SUPPRESSION TO 42 VOLTS MAX.

B. DC COIL RESISTANCE ± 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.

### Contact Rating — Amperes Ratings Are Continuous Duty

Type of Load	Life (Min.) Cycles x 10 <sup>3</sup>	28 VDC	115VAC 400Hz	115/200VAC 400Hz-3Ø
Resistive	100	5	5	5
Inductive	20	3	5	5
Motor	100	2	3	3
Lamp	100	1	1	1

Low Level Switching Capability: With contacts operating a load of 10 to 50 microamperes at 10 to 50 millivolts, the contact resistance miss detection level shall be 100 ohms max. Cycling rate is 1 to 12 per second, for 100,000 operations.

**Overload Current** — 20 AMPS DC, 30 AMPS 400Hz

**Rupture Current** — 25 AMPS DC, 40 AMPS 400Hz

**Contact Make Bounce** — 1.0 MILLISECOND AT NOMINAL VOLTAGE

**Max. Contact Drop at 5 Amps** — INITIAL 0.100 VOLTS

**End of Life** — 0.125 VOLTS

The Series FCB-405 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


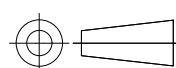


### Product Facts

- Hermetically Sealed
- All Welded Construction
- Balanced Force
- Permanent Magnet Drive
- Contacts rated low level to 5 Amps 28 VDC and 115/200 VAC 400 Hz, 3 Phase
- Weight .93 ounces max. (26.4 grams)
- Qualified to M83536/5 & /6

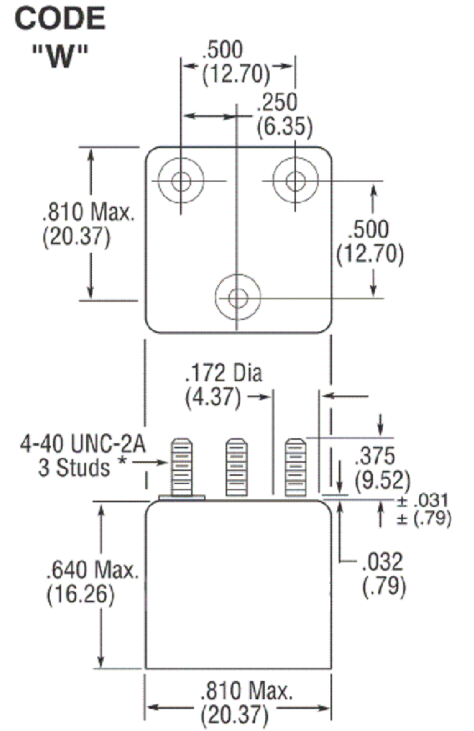
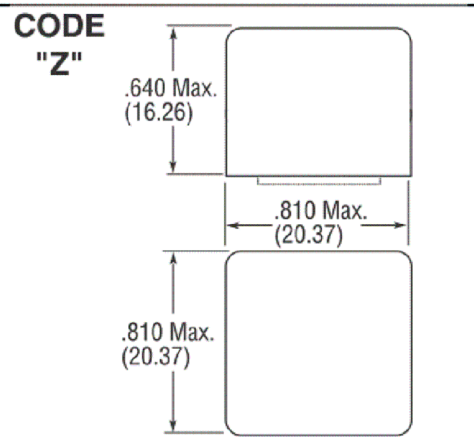
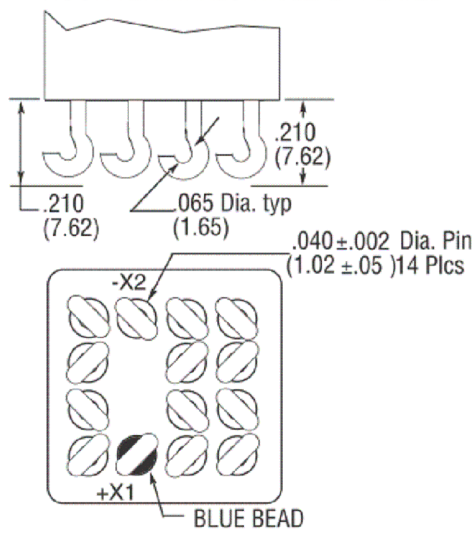
increased contact pressure in both states over that of a spring return nonpolar design. We also manufacture other versions of this relay:

**FCB-205** — 5 Amp DPDT Relay

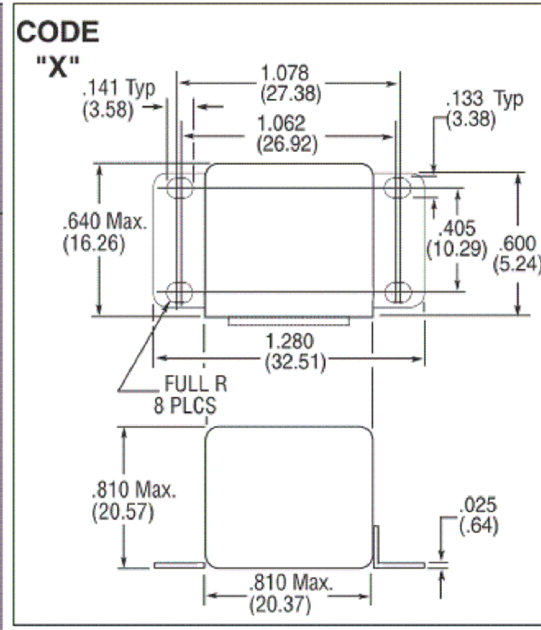
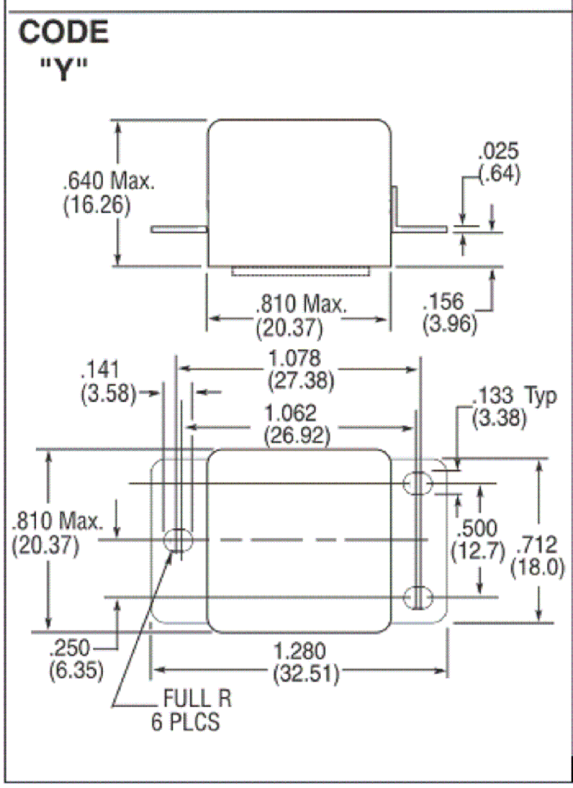
THIS DRAWING IS A CONTROLLED DOCUMENT.		DWN RV 28OCT2019	 TE Connectivity		
		CHK RV 28OCT2019			
DIMENSIONS: INCHES		APVD MB 28OCT2019	NAME C-FCB-405-SERIES		
		PRODUCT SPEC	-		
TOLERANCES UNLESS OTHERWISE SPECIFIED:		APPLICATION SPEC	-		
0 PLC ± -		SIZE	CAGE CODE	DRAWING NO	RESTRICTED TO
1 PLC ± -		—	A3	—	—
2 PLC ± -		WEIGHT	—		
3 PLC ± -		CUSTOMER DRAWING			
4 PLC ± -		SCALE NTS SHEET 1 OF 2 REV A			
ANGLES ± -					
MATERIAL					
FINISH					

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

**CODE "C"**  
**Solder Hook Terminals**  
HOOK TERMINALS TIN/LEAD PLATED

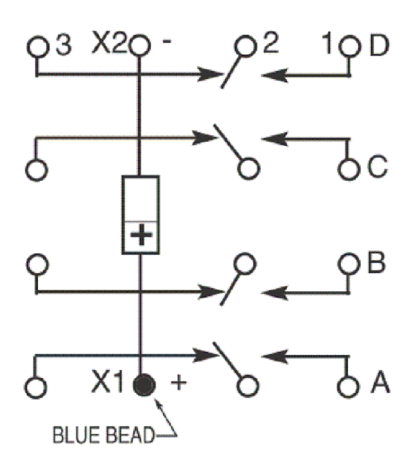


**Enclosures**  
All Enclosures have cupro-Nickel cans bright acid tin/lead plated after assembly to terminal headers.  
Dimensions: Inches ± .010 (mm ± .25)

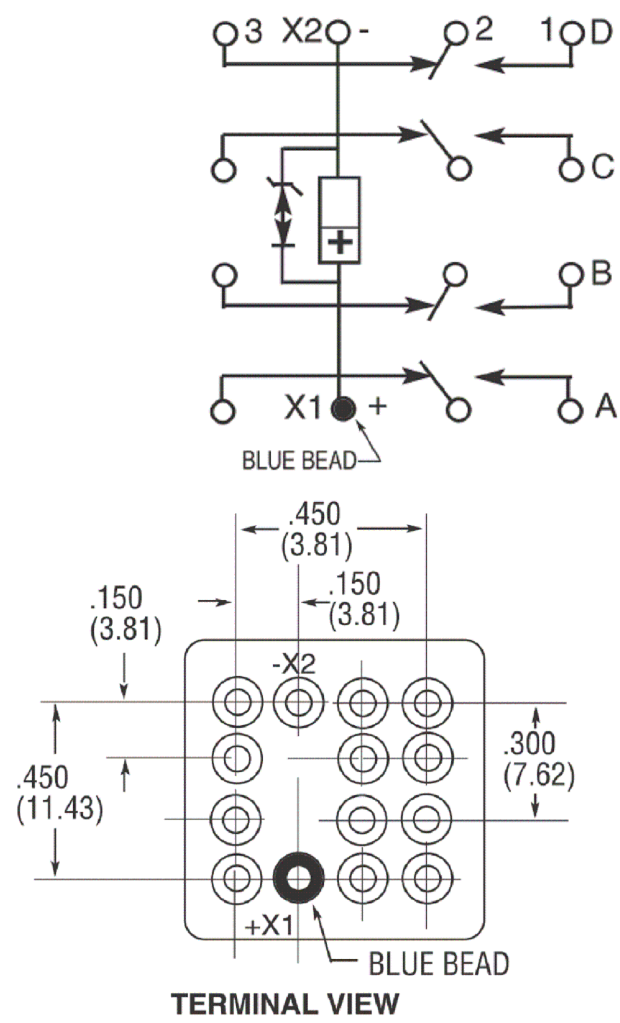


**NOTE:** Polarity must be observed with DC coil supply. Relay is polarized with a permanent magnet and will not operate or be damaged by reverse polarity.  
Diodes used in transient suppression and in AC rectifier circuits have peak inverse voltage rating of 600 VDC minimum. Zener diodes have a minimum rating of 1 watt.  
Terminal designations are for reference only and do not appear on the header.

**Terminal Wiring DC Coils**



**DC Coils with Transient Suppression**



**HOW TO ORDER**

**RELAY TYPE** \_\_\_\_\_  
**SOLDER HOOKS, DC COIL** \_\_\_\_\_  
**ENCLOSURE (With Flanges)** \_\_\_\_\_  
**COIL (28 VDC With Transient Suppression).** \_\_\_\_\_

**TERMINAL VIEW**  
**FCB-405-A Y 4**

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		CHK RV	28OCT2019		
		APVD MB	28OCT2019	NAME	
DIMENSIONS: INCHES		TOLERANCES UNLESS OTHERWISE SPECIFIED:		C-FCB-405-SERIES	
		0 PLC	± -	SIZE	
		1 PLC	± -	CAGE CODE	DRAWING NO
		2 PLC	± -	RESTRICTED TO	
		3 PLC	± -	A3 - C-FCB-405-SERIES	
		4 PLC	± -		
		ANGLES	± -		
MATERIAL		FINISH		SCALE	
				NTS	
				SHEET	
				2 OF 2	
				REV	
				A	
				CUSTOMER DRAWING	

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