

| REVISIONS |     |                 |           |     |      |
|-----------|-----|-----------------|-----------|-----|------|
| 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<br>Code | Nominal<br>Voltages | Freq.<br>Hz | DC Res.<br>(B) | Over Temperature Range   |                           |                          |
|--------------|---------------------|-------------|----------------|--------------------------|---------------------------|--------------------------|
|              |                     |             |                | Pickup or<br>Below Volts | Dropout or<br>Above Volts | Must Hold<br>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<br>Load | Life (Min.)<br>Cycles x 10 <sup>3</sup> | 28 VDC | 115VAC<br>400Hz | 115/200VAC<br>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



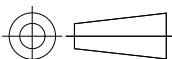
Product Facts

- 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

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

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





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