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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 g²/Hz 50-2000Hz

T, W, X & M Enclosures —

0.2 g²/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 ³ | 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


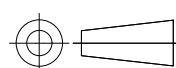


Product Facts

- 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

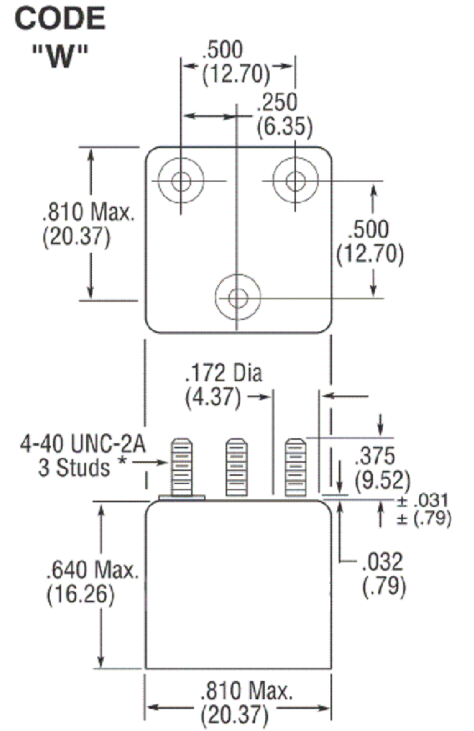
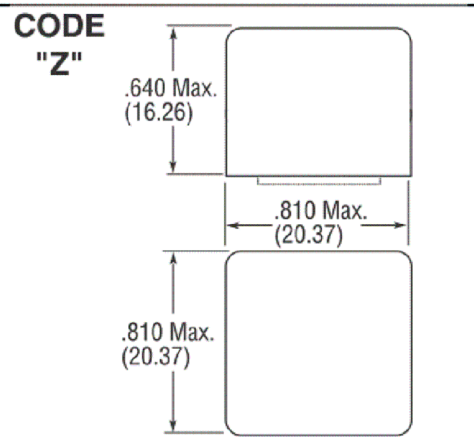
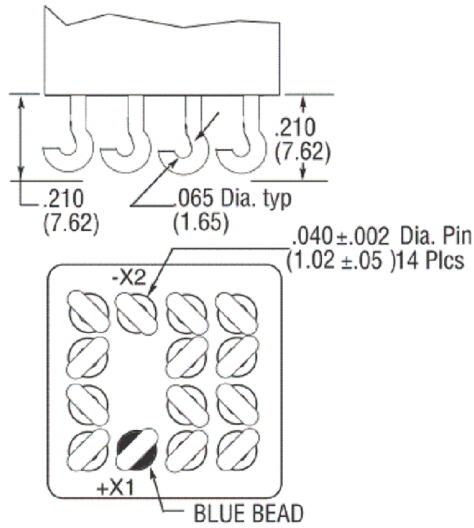
increased contact pressure in both states over that of a spring return nonpolar design. We also manufacture other versions of this relay:

FCB-205 — 5 Amp DPDT Relay

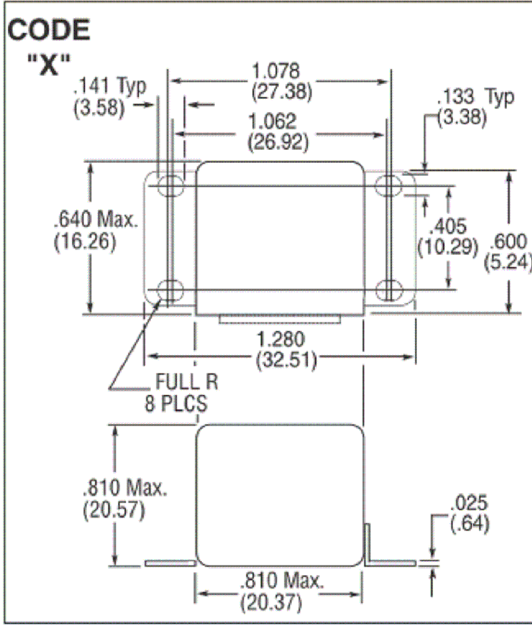
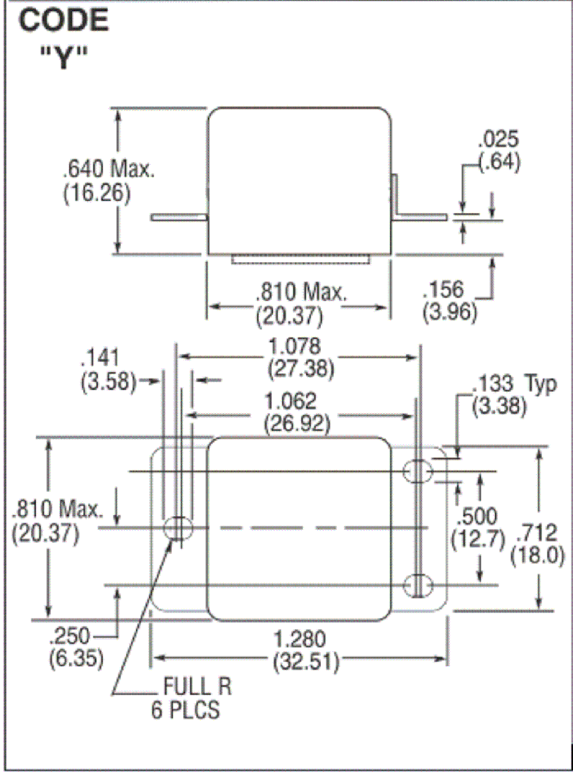
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|---|--|------------------------------|---|------------|---------------|
| THIS DRAWING IS A CONTROLLED DOCUMENT. | | DWN RV 28OCT2019 |  TE Connectivity | | |
| | | CHK RV 28OCT2019 | | | |
| DIMENSIONS: INCHES | | APVD MB 28OCT2019 | NAME C-FCB-405-SERIES | | |
|  | | 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)

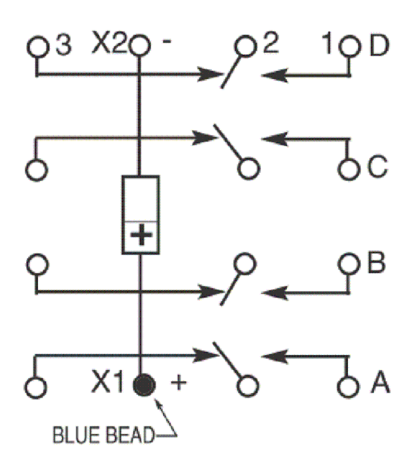


NOTE: Polarity must be observed with DC coil supply. Relay is polarized with a permanent magnet and will not operate or be damaged by reverse polarity.

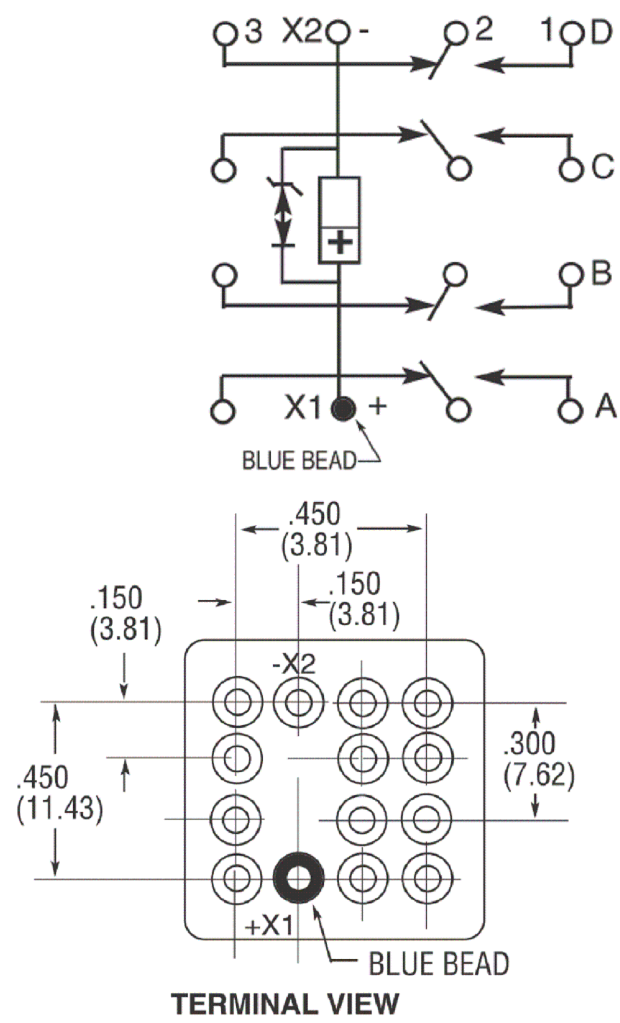
Diodes used in transient suppression and in AC rectifier circuits have peak inverse voltage rating of 600 VDC minimum. Zener diodes have a minimum rating of 1 watt.

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