# FCAC-325 Series, 25 Amperes, 3PST-NO with 2 Amp SPDT Auxiliary Contacts

## Product Facts

- **Hermetically Sealed**
- **All Welded Construction**
- **Balanced Force**
- **Permanent Magnet Drive**
- **Contacts — Silver Cadmium Oxide with Gold Plating**
- **Coils for DC, 50 to 400Hz and 400Hz AC**
- **Weight 2.89 ounces max. (82grams)**

The Series FCAC-325 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-125** — 25 Ampere SPDT Relay

**FCA-325** — 25 Ampere 3PDT Relay

### Contact Rating — Amperes Ratings Are Continuous Duty

| Type of Load | Life (Min.) Cycles x10³ | 28 VDC Main | 28 VDC Aux. | 115VAC 400Hz Main | 115VAC 400Hz Aux. | 115/200VAC 400Hz-3Ø | 115/200VAC 60Hz-3Ø* |
|---|---|---|---|---|---|---|---|
| Resistive | 50 | 25 | 2 | 25 | 2 | 25 | 2.5 |
| Inductive | 10 | 12 | 1 | — | — | — | 2.5 |
| Inductive | 20 | — | — | 15 | 1 | 15 | — |
| Motor | 50 | 10 | — | 10 | — | 10 | 2.0 |
| Lamp | 50 | 5 | .5 | 5 | .5 | .5 | 1.0 |

*60 Hz loads rated for 10,000 operations

**Overload Current** — 50 AMPS DC, 80 AMPS 400Hz
**Rupture Current** — 60 AMPS DC, 100 AMPS 400Hz
**Contact Make Bounce** —1 MILLISECOND AT NOMINAL VOLTAGE
**Auxiliary Contact Bounce** — 4 MILLISECONDS MAX.
**Max. Contact Drop at 25 Amps** — INITIAL 0.150 VOLTS
**End of Life** — 0.175 VOLTS

### General Specifications

**Temperature Rating** —
-70˚C TO + 125˚C

**Altitude** — 300,000 Feet

**Shock*** —
Z, Y, & V Enclosures —
200 g for 6 mS
W, X & M Enclosures —
100 g for 6 mS

**Vibration, Sinusoidal*** —
Z, Y, & VEnclosures —
30 g 33-3000Hz
W, X & M Enclosures —
20 g 33-3000Hz

**Vibration, Random*** —
Z, Y, & V Enclosures —
0.4 $g^2$/Hz 50-2000Hz
W, X & M Enclosures —
0.2 $g^2$/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 — 15 ms or less
AC Relays — 10 ms or less

**Release Time at Nominal Voltage** —
DC Relays — 15 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 | Over Temperature Range: Dropout or Above Volts | Over Temperature Range: Must Hold Voltage (C) |
|---|---|---|---|---|---|---|
| 1 | 6 | DC | 18 Ω | 4.5 | 0.3 | 2.5 |
| 2 | 12 | DC | 70 Ω | 9.0 | 0.75 | 4.5 |
| 3 | 28 | DC | 290 Ω | 18.0 | 1.5 | 7.0 |
| 4 (A) | 28 | DC | 290 Ω | 18.0 | 1.5 | 7.0 |
| 5 | 48 | DC | 865 Ω | 32.0 | 2.5 | 14.0 |
| 6 | 28 | 400Hz | 225 mA | 22.0 | 1.25 | 10.0 |
| 7 | 28 | 50/400Hz | 120 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.





Catalog 5-1773450-5
Revised 3-13

www.te.com

Dimensions are shown for reference purposes only. Specifications subject to change.

Dimensions are in millimeters unless otherwise specified.

USA: +1 800 522 6752
Asia Pacific: +86 0 400 820 6015
UK: +44 800 267 666

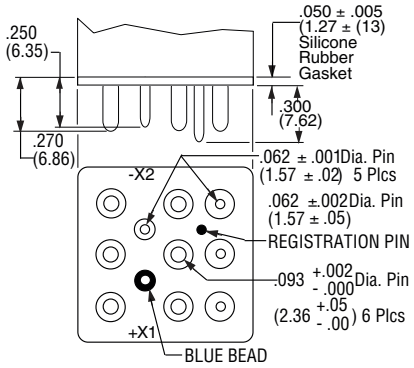
For additional support numbers please visit www.te.com

## FCAC-325 Series (Continued)

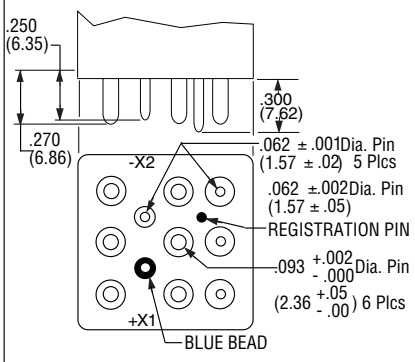
Below are shown the standard terminal types and the enclosures available. Specify the assembly as indicated under How To Order. Dimensions are shown in inches ± .010 and (Millimeters ± .25).

### Terminals

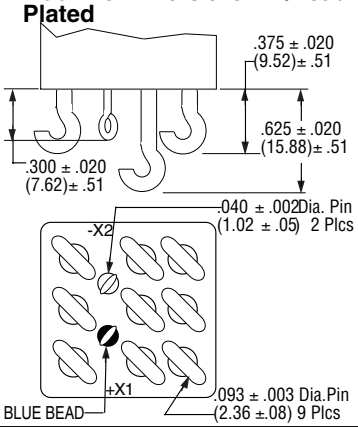
**CODE "A"**
**Socket Pin Terminals**
**Pin Terminals are Gold Plated**



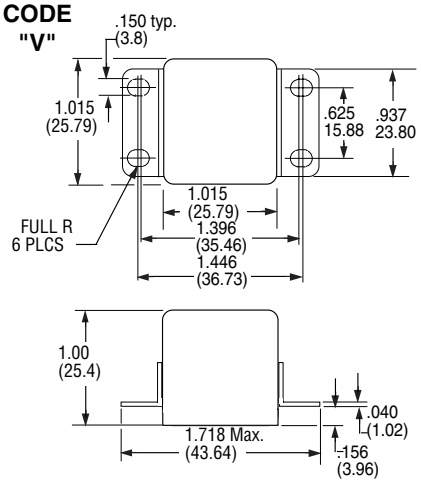

**CODE "B"**
**Solder Pin Terminals**
**Pin Terminals are Tin/Lead Plated**




**CODE "C"**
**Solder Hook Terminals**
**Hook Terminals are Tin/Lead Plated**




**CODE "V"**



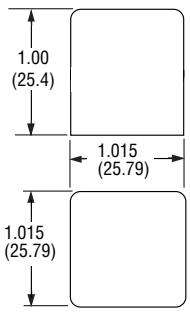

## ENCLOSURES

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

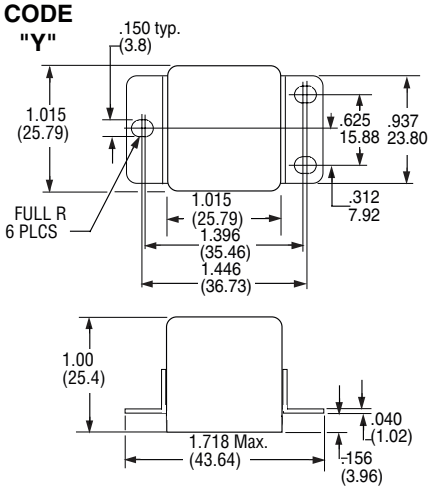
Dimensions: Inches ± .010 (mm ± .25)

**For socket pin terminals: specify "Y" enclosures with DC coils and "V" enclosures with AC coils.**

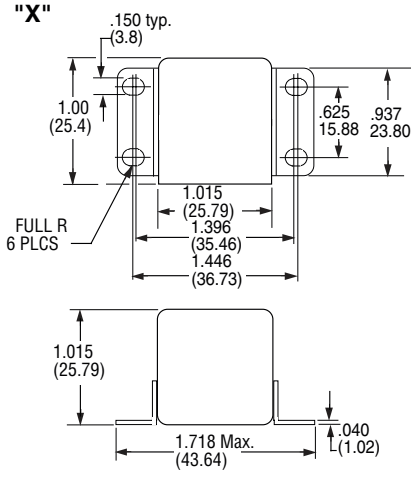
**CODE "Z"**



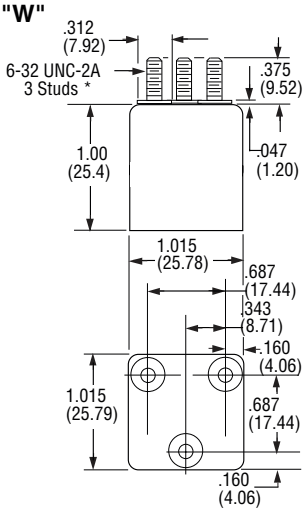

**CODE "Y"**




**CODE "X"**




**CODE "W"**




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



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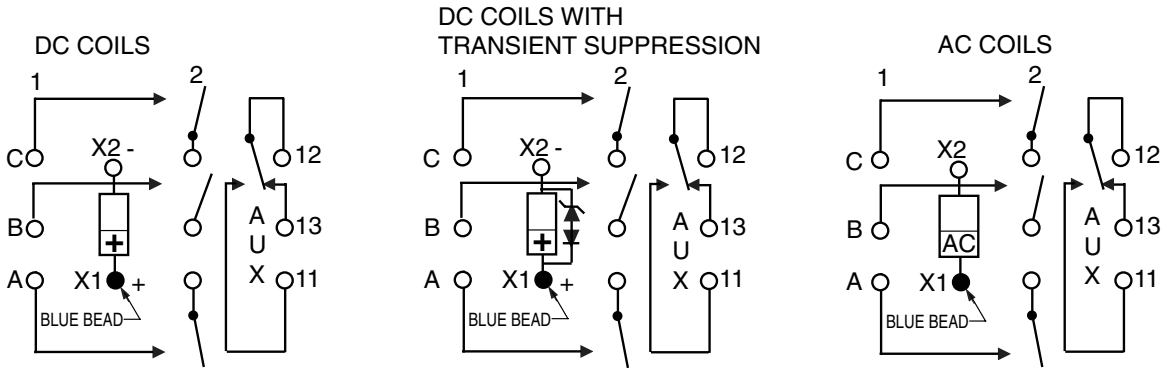
## FCAC-325 Series (Continued)

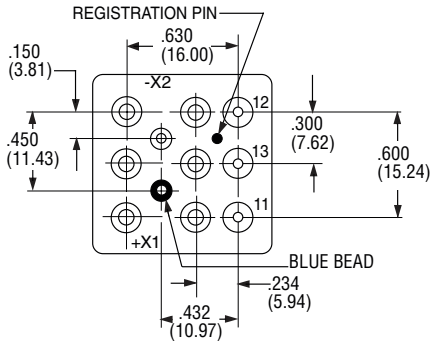
### Terminal Wiring




**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.




**TERMINAL VIEW**

### HOW TO ORDER

**FCAC-325 -A Y 4**

**RELAY TYPE**

**TERMINALS** (Socket Pins, DC Coil)

**ENCLOSURE** (With Flanges and DC Coil)

**COIL** (28 VDC With Transient Suppression)





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