



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 1.6 ounces max. (45.4 grams)
- Qualified to M6106/19, M83536/36, /37

Contact Rating — Amperes Ratings Are Continuous Duty

Type of Load	Life (Min.) Cycles x 10 ³	28 VDC	115VAC 400Hz	115VAC 60Hz*
Resistive	50	25	25	10
Inductive	10	12	—	10
Inductive	20	—	15	—
Motor	50	10	10	8
Lamp	50	5	5	—

*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

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, & 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 g²/Hz 50-2000Hz
W & M Enclosures (Stud Mtg.) — 0.2 g²/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.

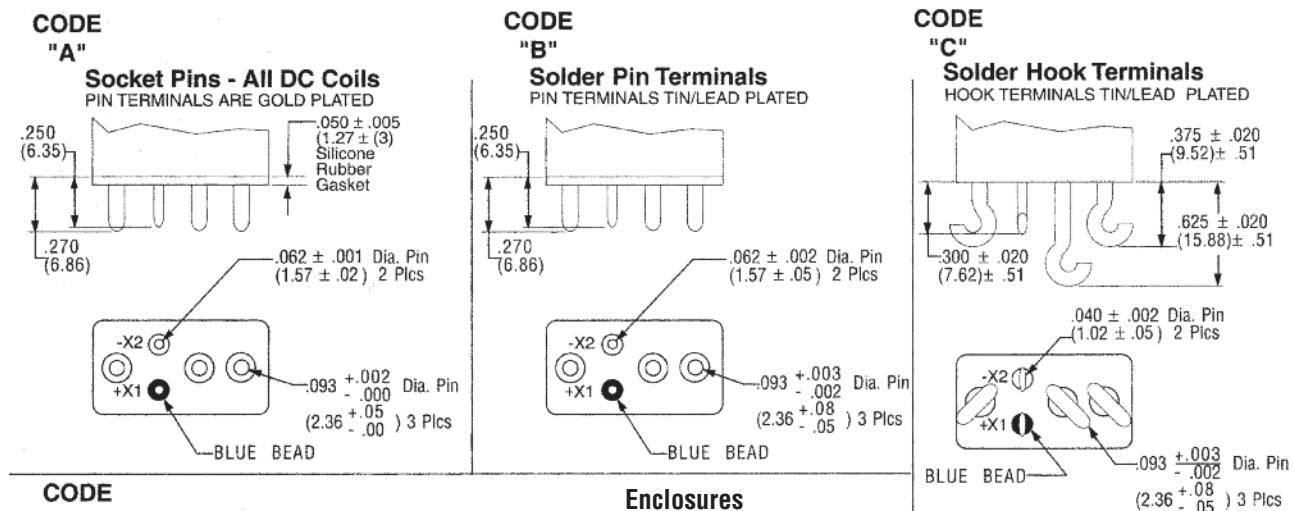
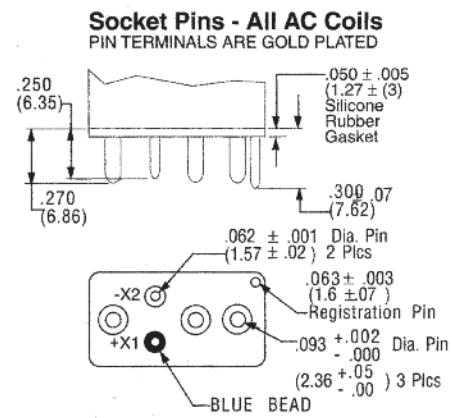
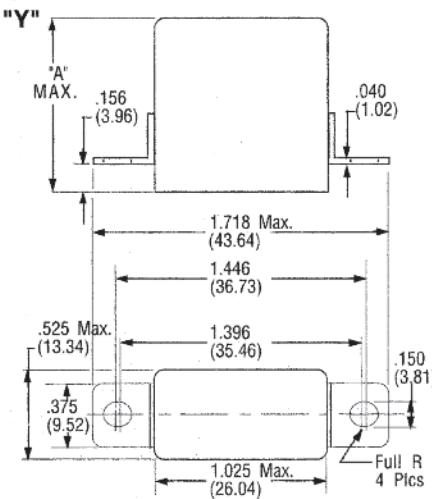
D. MAX. OVERVOLTAGE: 6 & 12 VDC COILS 120% OF NOMINAL; ALL OTHERS 110% OF NOMINAL.

E. COILS AVAILABLE FOR OTHER VOLTAGES AND FOR AC 50/60Hz.

NOTE: Only DC Coil Models are QPL Approved.

FCA-125 Series, 25 Amperes, SPDT (Continued)

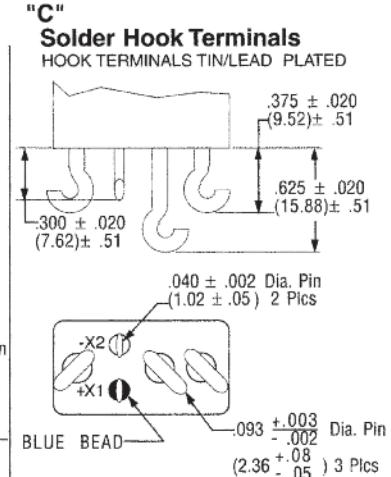
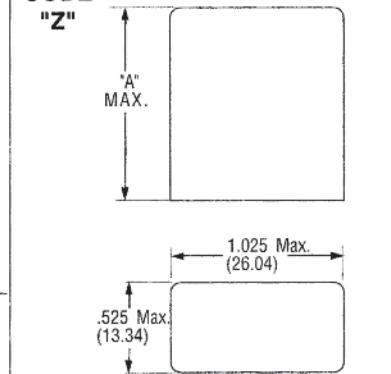
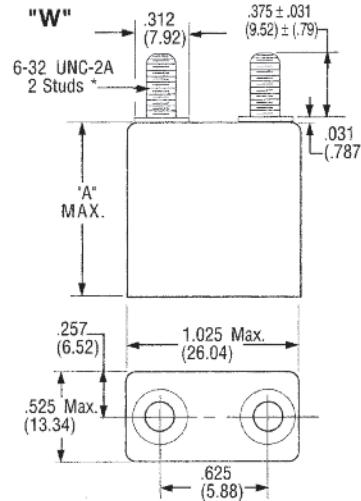
Below are shown the standard terminal types and the enclosures available. Specify the assembly as indicated under How To Order. Dimensions are shown in inches $\pm .010$ and (Millimeters $\pm .25$).

Terminals

**CODE
"D"**

**CODE
"Y"**

Enclosures

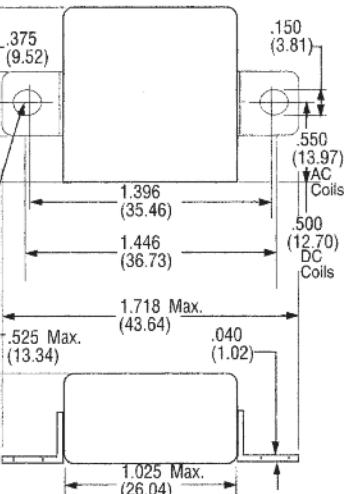
All Enclosures have cupro-Nickel cans bright acid tin/lead plated after assembly to terminal headers.

Dimensions: Inches $\pm .010$ (mm $\pm .25$)

"A" - AC Coils 1.125 in. (31.91) Max
DC Coils 1.010 in. (28.65) Max..

**CODE
"C"**

**CODE
"Z"**

**CODE
"W"**


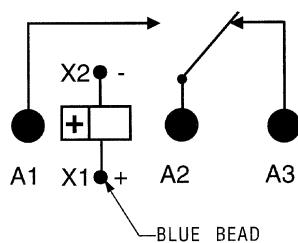
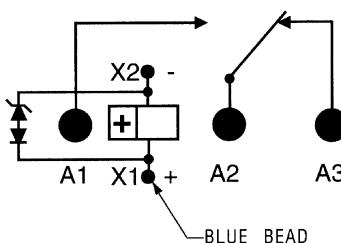
*Metric threads available.
To specify use **W** in place of **W**



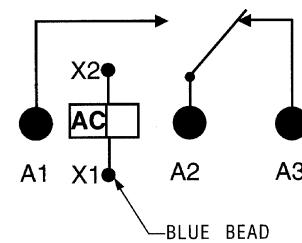
FCA-125 Series, 25 Amperes, SPDT (Continued)

Terminal Wiring

DC COILS


 DC COILS WITH
TRANSIENT SUPPRESSION


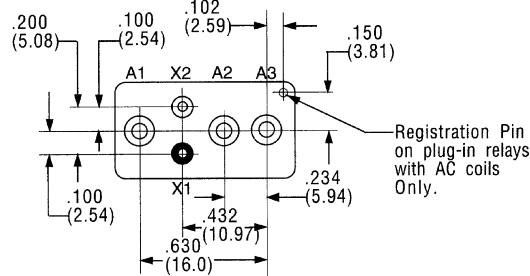
AC COILS



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

RELAY TYPE _____

TERMINALS (Socket Pins, DC Coil) _____

ENCLOSURE (With Flanges) _____

COIL (28 VDC With Transient Suppression) _____

FCA-125-A Y 4

NOTE: Only DC coil models are QPL Approved

* The part number example shown on this page is for catalog items. For a list of specific QPL part numbers, please see the index in Section 15.

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