



CII FC-325 SERIES RELAYS

HERMETICALLY SEALED, NON-LATCHING 25-AMP RELAYS FEATURING DOUBLE MAKE/BREAK CONTACT DESIGN, ALL WELDED ENCLOSURE, AND MS27418 QUALIFICATION. COMMERCIAL VERSIONS WITH 2A SPDT AUXILIARY CONTACT ALSO AVAILABLE.

CII FC-325 Series Relays



Compact, Hermetically Sealed, Non-Latching Relays

FC-325 Series relays from TE Connectivity (TE) are hermetically sealed devices designed for harsh inductive, motor, and lamp load applications in aerospace, defense, and marine markets.

Configured as a 3PST/NO (DM), the double make/break contact design of the CII FC-325 Series relays offer higher capability than comparable relays in the market. It shares the load across two contact sets, resulting in less wear and tear on the relay. This provides stable performance and extends the relay's life. The relay's all welded design creates a reliable alternative to similar solder sealed relays in the market.

CII FC-325 Series Relays



RUGGED

- Hermetically sealed
- Corrosion protected metal can
- All welded construction. No solder sealing

SPACE AND WEIGHT SAVING

- 1.5 inch cube enclosure
- 0.452 lbs

CAPABLE

- Excellent for switching harsh inductive, motor, and lamp loads
- -70°C to +125°C temperature range
- 80,000 feet altitude rating

VERSATILE

- 28 Vdc or 115 Vac coils
- Solder hook or terminal block configurations

QUALIFIED

- Qualified to MS27418 specifications
- Higher current ratings than standard M83536 mid-range relays

APPLICATIONS

- Launch Systems
- Power Distribution
- Fuel Pumps
- Guidance and Navigation Systems
- Aircraft Galley/Cabin Equipment
- Weapons Systems
- Ground Support Equipment

MECHANICAL/ENVIRONMENTAL

- **Temperature Range:** -70°C to +125°C
- **Altitude:** 80,000 feet
- **Sinusoidal Vibration:** 10 g/5 to 1000 Hz
- **Shock:** 50 g/11 ms

ELECTRICAL

Dielectric Strength at Sea Level:

Coil to Case: 1250 V_{rms}

All Other Points: 1500 V_{rms}

- **Dielectric Strength at 80,000 ft (25,000 m):** 500 V_{rms} (all points)

Insulation Resistance at 500 Vdc:

Initial: 100 MΩ min.

After Life or Environmental Test: 50 MΩ min.

Contact Voltage Drop at Nominal Current:

Initial Value: 150 mV max.

After Life: 175 mV max.

OPERATIONAL

Operate Time at Nominal Voltage:

AC: 25 ms max.

DC: 20 ms max.

Release Time at Nominal Voltage:

AC: 50 ms max.

DC: 10 ms max.

- **Bounce Time at Nominal Voltage:** 2 ms max.

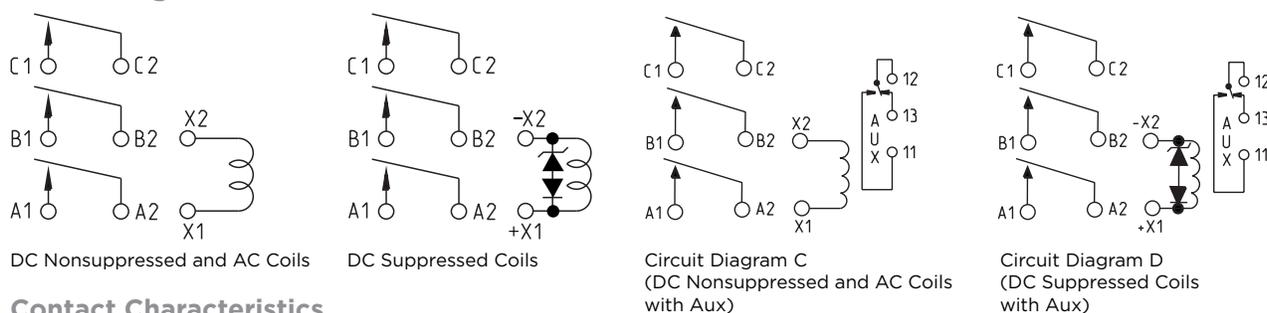


CII FC-325 Series Relays

Coil Characteristics

	AC Coil	DC Coil
Nominal Operating Voltage	115 Vac	28 Vdc
Maximum Operating Voltage	122 Vac	32 Vdc
Maximum Pick-Up Voltage at +125° C	95 Vac	18 Vdc
Maximum Pick-Up Voltage at +125° C (Continuous Current test)	108 Vac	22.5 Vdc
Drop-Out Voltage at +125° C (Amps Max)	5.0 Vac	1.5 Vdc
Coil Current at +25° C	.06 A @ 50/60 Hz 0.055 A @ 400 Hz	—
DC Coil Resistance (±10%)	—	160 Ω
Back EMF Suppresses to (Vdc) (Suppressed Versions)	—	42 Vdc

Circuit Diagram



Contact Characteristics

Load Type	Life Cycles	Current Rating (A)				
		28 Vdc	115 Vac, 1 Phase Power		115/200 Vac, 3 Phase Power	
			400 Hz	50/60 Hz	400 Hz	50/60 Hz
Resistive	50,000	25	25	25	25	25
Inductive	10,000	15	25	25	25	25
Motor	50,000	20	20	12	20	12
Lamp	50,000	10	10	10	10	10
Mechanical Life, Reduced Current	200,000	6.3	6.3	6.3	6.3	6.3

Part Numbers (Standard Version)

Coil	Terminal	Mounting	Mil Spec	MS Part No.	Comml Part No.
28 Vdc	Solder Hook	Stud	MS27418-1B	FC-325-2	FC-325-CW3
	Screw	Bracket	MS27418-2B	FC-325-5	FC-325-SY3
28 Vdc (Suppressed)	Solder Hook	Stud	MS27418-1D	FC-325-7	FC-325-CW4
	Screw	Bracket	MS27418-2D	FC-325-8	FC-325-SY4
115 Vac, 50/60 Hz	Solder Hook	Stud	MS27418-1C	FC-325-3	FC-325-CW9
	Screw	Bracket	MS27418-2C	FC-325-6	FC-325-SY9
115 Vac, 400 Hz	Solder Hook	Stud	MS27418-1A	FC-325-1	FC-325-CW8
	Screw	Bracket	MS27418-2A	FC-325-4	FC-325-SY8

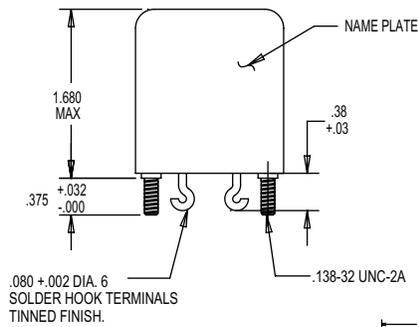
Custom configurations are available. Consult TE.

Part Numbers (With 2A 28VDC SPDT Auxiliary Contact)

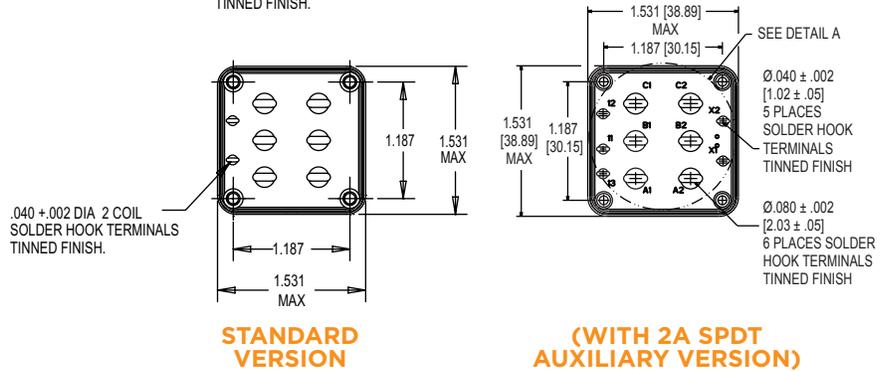
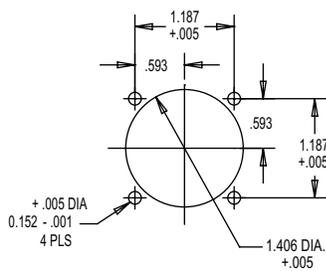
Coil	Terminal	Mounting	Comml Part No.
28 Vdc	Solder Hook	Stud	FCC-325-CW3
28 Vdc (Suppressed)	Solder Hook	Stud	FCC-325-CW4
115 Vac, 50/60 Hz	Solder Hook	Stud	FCC-325-CW9
115 Vac, 400 Hz	Solder Hook	Stud	FCC-325-CW8

CII FC-325 Series Relays

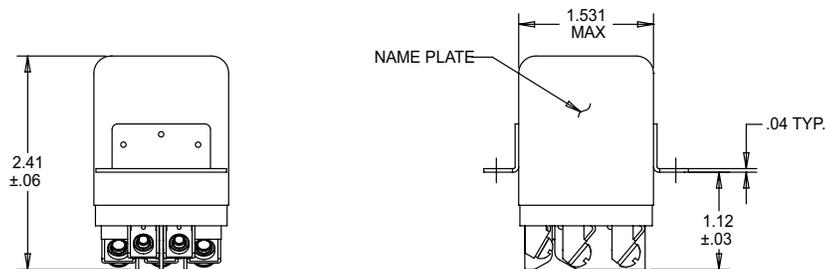
Dimensions Solder Hook Terminals (Shown with Mounting Studs)



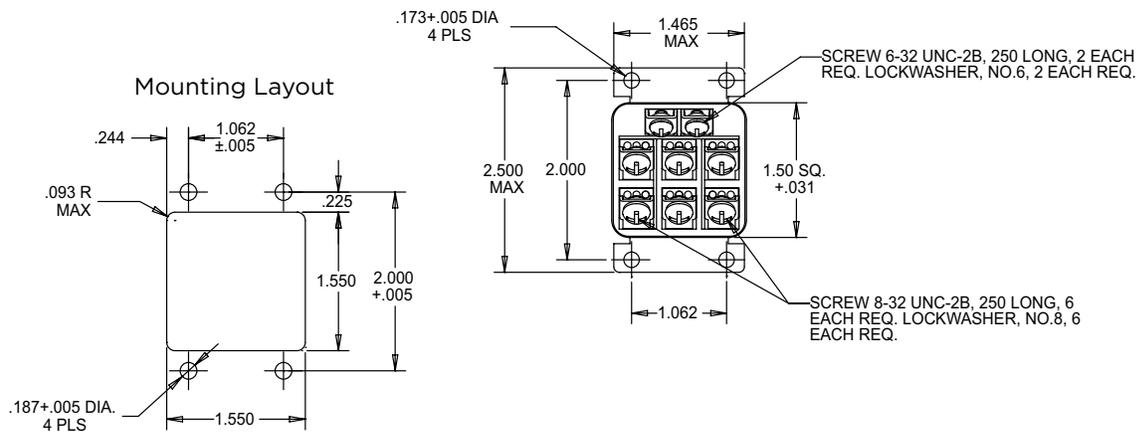
Mounting Layout



Screw Terminals (Shown with Mounting Bracket)



Mounting Layout



Tolerances are ±.010 unless otherwise noted.

Empower Engineers to Solve Problems, Moving the World Forward.

AMP | AGASTAT | CII | HARTMAN | KILOVAC | MICRODOT | NANONICS | POLAMCO | Raychem
SEACON | Rochester | DEUTSCH

Connect With Us

We make it easy to connect with our experts and are ready to provide all the support you need. Visit te.com/support to chat with a Product Information Specialist.

te.com/fc325

AMP, AGASTAT, CII, DEUTSCH, HARTMAN, KILOVAC, MICRODOT, NANONICS, POLAMCO, Raychem, SEACON, TE, TE Connectivity, and TE connectivity (logo) are trademarks. All other logos, products and/or company names referred to herein might be trademarks of their respective owners.

The information given herein, including drawings, illustrations and schematics which are intended for illustration purposes only, is believed to be reliable. However, TE Connectivity makes no warranties as to its accuracy or completeness and disclaims any liability in connection with its use. TE Connectivity's obligations shall only be as set forth in TE Connectivity's Standard Terms and Conditions of Sale for this product and in no case will TE Connectivity be liable for any incidental, indirect or consequential damages arising out of the sale, resale, use or misuse of the product. Users of TE Connectivity products should make their own evaluation to determine the suitability of each such product for the specific application.

© 2020 TE Connectivity All Rights Reserved.

1-1773871-3 08/20

CII FC-325 SERIES RELAYS

TE Connectivity
Aerospace, Defense & Marine
2900 Fulling Mill Road
Middletown, PA 17057