

CII

FC-325 SERIES RELAYS

HERMETICALLY SEALED, NON-LATCHING 25-AMP RELAYS FEATURING DOUBLE MAKE/BREAK CONTACT DESIGN, ALL WELDED ENCLOSURE, AND MS27418 QUALIFICATION

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.



TE Components . . . TE Technology . . . TE Know-how . . .

AMP | Agastat | CII | Hartman | Kilovac | Microdot | Nanonics | Polamco | Raychem | Rochester | DEUTSCH
SEACON Phoenix | L.L. Rowe | Phoenix Optix | AFP | SEACON

Get your product to market faster with a smarter, better solution.



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

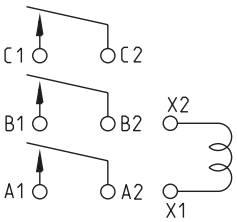
- **Operate Time at Nominal Voltage:**
  AC: 25 ms max.
  DC: 20 ms max.
- **Release Time at Nominal Voltage:**
  AC: 50 ms max.
  DC: 10 ms max.
- **Bounce Time at Nominal Voltage:** 2 ms max.



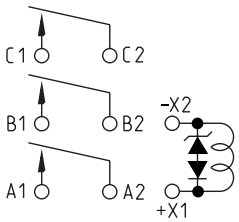
Coil Characteristics

	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 0.55 A @ 400 Hz	—
DC Coil Resistance (±10%)	—	160 mΩ
Back EMF Suppresses to (Vdc) (Suppressed Versions)	—	42 Vdc

Circuit Diagram



DC Nonsuppressed and AC Coils



DC Suppressed Coils

Contact Characteristics

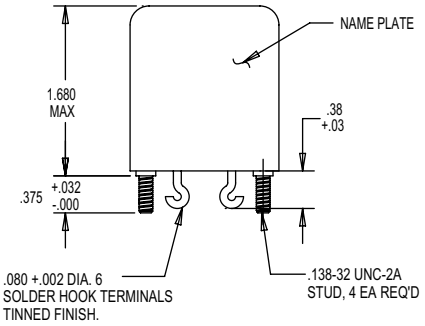
Load Type	Life Cycles	Current Rating (A)				
		28 Vdc	115 Vac, 1 Phase Power		115/200 Vac, 3 Phase Power	
			400 Hz	50/60 Hz	400 Hz	50/60 Hz
Resistive	50,000	25	25	25	25	25
Inductive	10,000	15	25	25	25	25
Motor	50,000	20	20	12	20	12
Lamp	50,000	10	10	10	10	10
Mechanical Life, Reduced Current	200,000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

Part Numbers

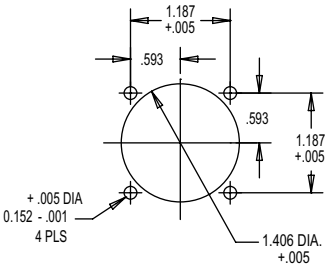
Coil	Terminal	Mounting	Mil Spec	Comml Part No.	Part No.
28 Vdc	Solder Hook	Stud	MS27418-1B	FC-325-CW3	FC-325-2
	Screw	Bracket	MS27418-2B	FC-325-SY3	FC-325-5
28 Vdc (Suppressed)	Solder Hook	Stud	MS27418-1D	FC-325-CW4	FC-325-7
	Screw	Bracket	MS27418-2D	FC-325-SY4	FC-325-8
115 Vac, 50/60 Hz	Solder Hook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

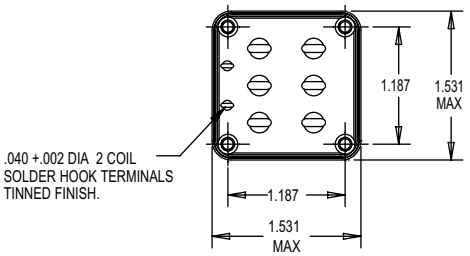
Custom configurations are available. Consult TE.

Dimensions
Solder Hook Terminals
(Shown with Mounting Studs)

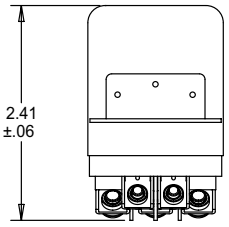


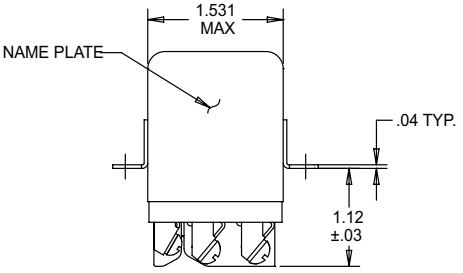
Mounting Layout



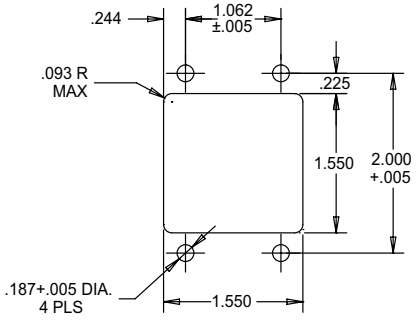


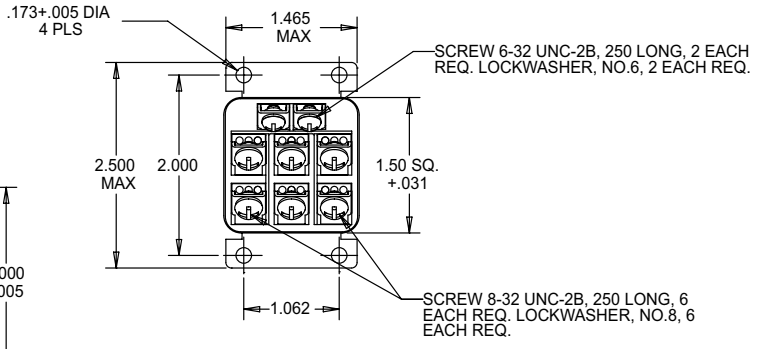
Screw Terminals
(Shown with Mounting Bracket)





Mounting Layout





Tolerances are ±.010 unless otherwise noted.

LET'S CONNECT

We make it easy to connect with our experts and are ready to provide all the support you need. Just call your local support number or visit www.te.com/industrial to chat with a Product Information Specialist.

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Consult TE for the latest dimensions and design specifications.

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