



M-TRONIX
B R A M C O
SAFETY INNOVATORS



iF Frozen Contactor Relay

PRODUCT OVERVIEW

The i-F Frozen Contactor Relay forms part of the legacy-generation Bramco product range, originally developed through the late 1990s by Gil Leishman and his engineering team, and now supported exclusively by m-tronix.

m-tronix remains the authorised and exclusive custodian and distributor of these Bramco protection technologies, continuing more than four decades of design evolution, innovation, and field-proven reliability.

The i-F relay provides critical monitoring of switching devices to detect hazardous leakage voltage when a device is expected to be in the open or tripped position. It operates in conjunction with a precision, three-phase Isolation Barrier that separates high-voltage circuits from the detection electronics. Leakage on any monitored phase will energise the detection circuit and cause the relay to trip.

APPLICATION

The i-F Frozen Contactor Relay has been engineered to:

- Detect leakage of 24 V or more across a switching device that should be open or tripped
- Operate in conjunction with a three-phase Isolation Barrier suitable for high-voltage systems
- Trip if leakage is detected on any monitored phase
- Provide protection for motor-starting and high-voltage switching applications
- Operate with a non-fail-safe detection circuit that energises upon leakage
- The relay is internally powered from the system power-supply card.

Typical applications:

- Mining starters and motor-control systems
- Contactor monitoring, including loss-of-vacuum detection
- Underground and surface electrical distribution systems
- OEM switchboard integration
- Installations requiring high-integrity leakage detection across switching devices

FEATURES

- Internal power supply
- Adjustable timer-delay function (4–20 seconds or 10–60 seconds depending on model)
- Suitable for systems where motors are switched directly
- Detection circuit is non-fail-safe and energises on leakage
- Factory-set to detect a leakage of 24 V or more
- LED power indication
- LED warning of Frozen Contactor or Loss-of-Vacuum faults
- Designed for use with a precision Isolation Barrier suitable for systems up to 1100 V

SPECIFICATIONS

Detection:

- Leakage detection threshold: 24 V or more
- Compatible with three-phase Isolation Barrier
- Detection circuit energises when leakage is present

Timer Delay:

- 4–20 seconds (model dependent)
- 10–60 seconds (model dependent)

Supply:

- Internally powered from system power-supply card

ORDERING INFORMATION

Part Number	Description
A00210	i-F Relay 110 V AC / 240 V AC
A01241	i-F Relay 24–48 V AC/DC

Enclosure

Dimensions: 75 mm (W) × 55 mm (H) × 110 mm (D)

Material:

- High-impact resistant polycarbonate construction
- IP20 rating

Mounting: DIN rail

Terminals: Cage screw terminals

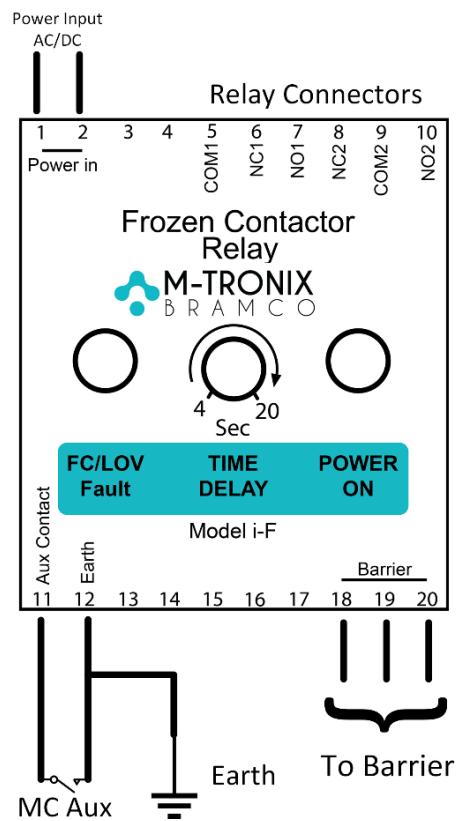
Weight: 216 g

Certification

This product is designed and manufactured in accordance with ISO9001:2000 certified company standards.

It is compliant with AS2081:2011.

i-F Wiring Diagram



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