FAULT ISOLATION UNIT (FIU)

Product Description

With increasing growth in the sophistication of military / government electronic systems, the need to protect critical power distribution against high-current faults and overloads is essential for mission success.

The FIU is a unique and innovative device designed to protect critical 400 Hz power distribution systems by providing a controlled maximum allowable current draw in each individual circuit connected to the distribution system. Controlling the maximum current draw of each load minimizes the effects of faults and over current conditions.

Electronically monitoring each phase of the load, the FIU operates a high-speed electronic switch to insert a high-impedance current limiting device into the circuit, preventing low voltages due to excessive current draw and possible over current damage to the power generating system.

- High-speed, three-phase, solid-state electronic switch operates within 25 µsec of over current sensing
- Limits excessive current draw to levels sustainable by the power system bus without excessive voltage drop, which could affect other critical systems
- Lightweight, all-electronic design supports a broad range of applications for virtually any military and/or government power system installation: land, sea, or air

FEATURES

- Continuous monitoring of sources
- Bulkhead mounted
- Fast 25 µsec response time
- Built-in self-test feature for rapid diagnostics
- Fan-cooled
- External circuit breaker shunt trip to remove non-correctable faults from the critical bus
- Solid-state
- High reliability / low maintenance design requires no operator intervention

APPLICATIONS

- Naval ships and submarines
- Data and communication centers
- Hospitals
- Industrial / maintenance facilities
- Airports and military bases
- Critical power installations

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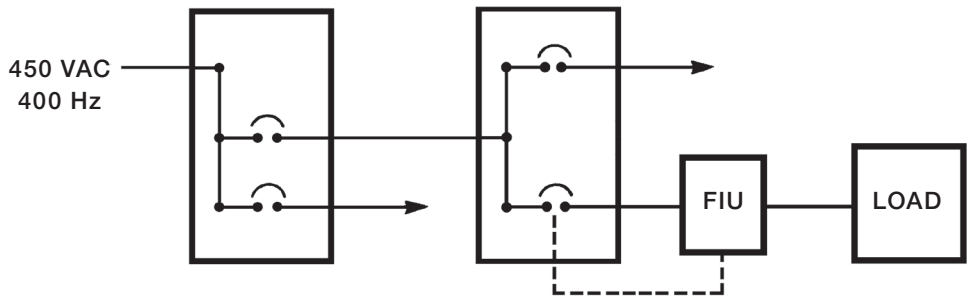
ENVIRONMENTAL CHARACTERISTICS

- Input Voltage 440 ±20% Vrms according to MIL-STD-1399, Section 300
- Current 125 A continuous max. low impedance mode
- Frequency 400 Hz, ±40 Hz
- Operating temperature range 0 °C to 50 °C
- Storage temperature range -62 °C to 75 °C
- Humidity 0% to 95% RH noncondensing
- Weight 74 lbs/35 kg
- Dimensions 25.5” H x 10.5” W x 10.5” D (648 mm x 267 mm x 267 mm)
- Mounting provision bulkhead
- Let through current 200 A to 800 A (designed to meet customer specifications)
- Current trip point 125 A max. (factory adjustable)
- Trip response 25 µs to high impedance 1.5 ms return to low impedance after decrease to 5% below trip point current (factory adjustable)
- Voltage drop 6 V max. per phase @125 A
- Auxiliary output (for circuit breaker shunt trip circuit) 6 A, 120 V AC/DC max.
- Self-test function one-sixth cycle transfer to high-impedance state and return to low impedance (accomplished via front-panel switch)
- Status Indicators, including:
  - -resettable trip memory
  - -switch open/closed (impedance high/low)
  - -over-temp
  - -fuse open
  - -self-test pass/fail

*Specifications subject to change

SIMPLIFIED DISTRIBUTION SYSTEM DIAGRAM
SHOWING TYPICAL FIU PLACEMENT



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