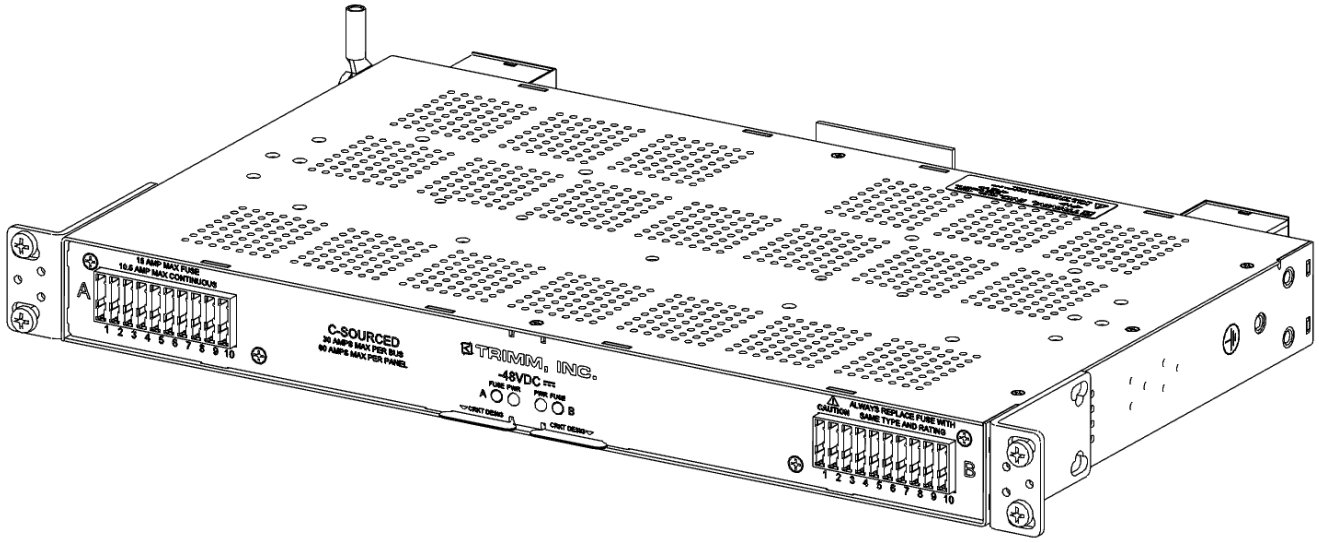
C-sourced GMT Fuse Panel Installation Guide

Document INS-7570219928



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Section 1- General Information

1.1 - Product Description

This fuse panel is available in a dual bus version with 10 fuse positions per side. This panel features the "C-source" diode o'ring functionality on the input battery feeds to evenly distribute power to each side for redundancy. This product is suitable for central office locations, network telecommunication facilities, data centers, and outside plant enclosures. This product may be used with CBN (Common bonding network) or IBN (Isolated bonding network) installations.

1.2 - Inspection

Inspect the panel for any noticeable defects, missing parts (See "What's Included" below), or shipping damage. Please retain the original packaging in case you need to return the product to Trimm. Please notify Trimm, Inc. if any problems are found at 1-800-298-7466. No products may be returned to Trimm, Inc. without the proper Return Material Authorization (RMA) number.

1.3 - What's Included

This unit should be packaged with the following items. Please notify Trimm, Inc. if any of these items are not included so a replacement can be sent out right away.

- GMT fuse panel (verify part number from sticker on top of the unit)
- 4 x #12-24 x ½" self-tapping mounting screws
- 6 AWG compression lugs (For Earthing/grounding connection only)
- Input connector fasteners
- Installation instruction packet

Section 2 – Before You Begin

⚠ WARNING

This panel should be installed in a restricted access location by qualified service personnel only.

No field service is required on the unit.

All connections/methods should meet all national/local electrical codes as well as company specific methods or procedures. Failure to do so may result in damage to the equipment, and or personal injury.

A readily accessible disconnect device must be incorporated into the supply wiring for this product. This disconnect device must be capable of interrupting the maximum available fault current determined by analysis for your system.

2.1 - Tools Required For Installation

Depending on the part number ordered the following tools are needed to install this product.

- Multimeter
- Wire cutter/stripper
- No. 2 Phillips head torque screw driver
- Small regular (slotted) head torque screw driver
- Torque wrench with 7/16 socket
- Suitable crimp tooling for the field wiring terminals
- Cable ties or lacing cord
- Writing utensil or label maker for circuit designation

2.2 – Fuse Panel Amperage Rating
Maximum amperage for each bus is 60 Amps. In the event of a single input power loss, the remaining input must be capable of providing the current for both busses combined. Therefore, the maximum amperage for each bus must not exceed 30 Amps. Each input shall be externally protected to ensure that in the event of a single input power loss the increased current level does not cause that inputs overcurrent device to trip.

2.3 - Fuse Sizing Information
The fuse manufacturer recommends that GMT fuses rated 8 to 15 Amps be continuously operated at no more than 70% of their nominal current rating. All other fuse types/amperages may be continuously operated at 80% of their nominal current rating.

2.4 - Fuse Replacement Information
The correct fuses may be ordered from the table at the end of this document. See section 7

2.5 - Wiring Temperature Information
The wiring for this product should be rated 90° C or better. Wiring protected by GMT fuses shall be at least one size larger than the minimum required wire based on the National Electric Code, NFPA 70 ampacity tables.

2.6 - General Notes on Terminal Connections
- Bare conductors should be coated with appropriate antioxidant compound before crimp connections are made.
- Use appropriate shrink tubing over un-insulated terminal barrels.
- Ensure that the mating surface of both the terminals and their connection point are clean and free of paint.
- Appropriate antioxidant should be applied to the mating surfaces of all connections.
- Use only listed terminals and crimp tooling when making connections.

2.7 - Operating Voltage Ranges
This panel has been designed for a nominal voltage of +12-24VDC. It should operate in a voltage range of 10 to 30VDC.

2.8 - Battery Return Treatment
This product has been designed with the battery return connection isolated from the chassis ground (Earthing) connection. This product is suitable for use with either DC-I or DC-C (Isolated or Common) battery return connection applications.

To facilitate proper operation of the C-source O'ring diodes the input return busses have been internally connected.

Section 3 – Rack Mounting

3.1 - Rack Mounting
Secure the panel to the rack using the self tapping screws provided. For a 23" rack or offset mounting, remove the screws holding the brackets to the chassis, adjust the brackets to allow for optional mounting and torque the screws to 10 in-lbs. max.

3.2 - Additional Rack Mounting Instructions
If installed in a closed or multi-unit rack assembly, the operating ambient temperature of the rack environment may be greater than room ambient. Therefore, consideration should be given to installing the equipment in an environment compatible with the unit's maximum operating temperature. Mounting of the equipment in the rack should be such that a hazardous condition is not achieved due to uneven mechanical loading.

Section 4 – Input and Grounding Cabling

⚠ WARNING

Before installation, verify that the input power disconnect device is turned “OFF”

4.1 - Chassis Grounding (Earthing)

This product is suitable for use in either a Common or Isolated (CBN or IBN) Bonding Network. This panel includes a 6 AWG compression lug for grounding. Crimp the ground wire to the terminals provided. Attach the wires to the panel using the supplied bolts and washers. Torque fasteners to 24 in-lbs. Attach other end of ground pigtail to the rack or other suitable grounding location. Reliable Earthing of rack-mounted equipment should be maintained.

4.2 - Input Wiring (Compression Lug Connection)

Remove the input covers and locate the flat washers and #1/4-20 locking nuts supplied with this panel. Crimp the battery and return wires to the proper terminals. Attach the wires to the panel using the supplied flat washers and locking nuts. Torque the fasteners to 40 in-lbs.

4.3 - Power Verification Test

This test is to verify proper function of the panel prior to the connection of loads. Turn on the over current protection/disconnect device supplying power to the A side bus. Use a multi meter to verify that voltage and polarity are correct at the input connection. Verify that the A side PWR LED is illuminated “green” and FUSE ALARM LED is not illuminated. The B side bus PWR LED should also be illuminated “green”. Verify that continuity is present between C and NC power alarm contacts on the A side bus. Verify the continuity is present between C and NC power alarm contacts on the B side bus. Install a failed fuse if possible and verify that the FUSE ALARM LED changes to “red”. With the failed fuse in place verify that continuity is present between C and NO fuse alarm contacts. Repeat these steps for the B side bus if applicable.

Section 5 – Output and Alarm Cabling

⚠ WARNING

Before continuing installation, verify that the over current protection/disconnect device is turned “OFF”

5.1 - Output Wiring (Set Screw Connections)

This panel accepts #12 to #22 AWG copper wire to feed into the equipment and return connections. Strip the wires approximately .275” and insert into the equipment and return connections for each fused position. Torque the screw to 3.5 in-lbs.

5.2 - Alarm Wiring

The alarm connector is standard wire wrap pins or set screw type connection. Attach the wire to the appropriate pins. Continuity is established at positions C and NC when there is no fuse failure or no power. Continuity is established at positions C and NO when a fuse failure has occurred.

Section 6 – Final Installation

6.1 - Fuse Installation

Orientate and install the correct fuse into its position. Record the protected equipment identification and location on the supplied designation card.

6.2 - Energizing the Panel

Once all steps have been completed above, and a final inspection of the installation has been completed, you may energize the fuse panel by switching the corresponding interrupt device to its “ON” position.

Section 7 – Fuse Ordering Information

GMT FUSES			
PART NUMBER	FUSE AMPERAGE	PART NUMBER	FUSE AMPERAGE
0300097000	18/100 AMP	0300097008	3 AMP
0300097001	1/4 AMP	0300097013	3-1/2 AMP
0300097016	3/8 AMP	0300097012	4 AMP
0300097002	1/2 AMP	0300097009	5 AMP
0600097065	65/100 AMP	0300097011	7-1/2 AMP
0300097003	3/4 AMP	0300097010	10 AMP
0300097004	1 AMP	0300097014	12 AMP
0300097005	1-1/3 AMP	0300097015	15 AMP
0300097006	1-1/2 AMP	0300097100	DUMMY FUSE
0300097007	2 AMP	0300097209	GMT/X FUSE COVER

Revision Record

Legend: Type R=Revision T=Typo A=Addition N=New D=Deletion V=Review

Revision	Date	Type	Section/Comments
A	10/24/2011	N	New Document