
400-1200 Amp Power Distribution Panel with I-Line Components

Installation, Operation, and Maintenance Manual

IMPORTANT:

**Save this instruction sheet for future use of
the product**

Warning

Electrical potentials hazardous to human life can exist within this equipment when energized. Disconnect all input power before opening case or touching internal parts. Use proper lock-out/tag-out procedures.

The Information contained herein may not cover all variations in equipment or provide for all contingencies. Failure to follow instructions may result in death or serious injury.

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Introduction


This manual covers 400-1200 Amp up to 600V single and three phase I-line Cabinets. These instructions set out the limiting factors for satisfactory performance of the cabinets. The information contained herein outlines and describes the proper inspection, installation and maintenance of the cabinets.


Inspection upon Receiving

Cabinets should be carefully inspected upon receipt to ensure that no damage has occurred during shipment. Any damage should be reported at once and a claim should be placed against the transportation company. If any problems are found or parts are missing please contact Trystar at 1-866.TRYSTAR.


Installation and operating safety

The cabinets are provided with access panels to

**Warning**

**Only qualified personnel should install, inspect, or maintain cabinets since the normal operating voltages can be hazardous.**

facilitate installation and should never be operated without these access covers securely mounted in place. A safety program must be established, verified and followed by all personnel involved with the cabinets.

**Caution**

Cabinet is top heavy.

Cabinet Spacing

Cabinet must have at least 36 inch clearance in front of panel per NEC. More clearance may be required for some units with larger swinging doors.

Grounding

The cabinet should be grounded securely and effectively as a safety precaution. Grounding must be in accordance with NEC and local electrical codes. (Grounding mechanical lug attached to cage).

Wire Selection

Connection cables must be rated for at least 90 degrees C insulation. Connection cables must meet NEC and local electrical codes.

Inspection during Installation

The cabinet should be carefully inspected for any damage due to handling after receipt. The nameplate rating on the unit should be checked against the job specifications to ensure installation of the correct cabinet. The cabinet should be connected only as described on its nameplate to match the available line voltage. All bolted electrical connection should be checked and tightened since fasteners may have loosened during shipment.

Installation and Operation Procedures

1. Ensure the area is well ventilated and free from explosive or corrosive gas or vapors. Keep unit away from areas that are subject to physical damage.
2. Check the cabinet nameplate and verify that it is the correct line and load voltage for the application.

3. Shut off primary voltage using approved lock-out/tag-out procedures. If the unit will be powered by a generator, keep the generator turned off until all connections are made.
4. Ground the cabinet (cage) in accordance with the NEC and local electrical codes.
5. Use properly sized cable determined by the NEC.
6. Connect any hardwired loads to the I-Line breakers. Utilize the hinged access panel in the bottom of the enclosure. Connect any exterior Cam Lock loads at this time as well.
7. Connect Cam Lock line wires to the appropriate labeled and color coded Cam Locks. If the unit is setup for a hardwired line connection, utilize the smaller hinged access panel in the bottom right side for Line cable entry into the enclosure.
8. Close and secure the dead front, and any doors or access panels on the I-Line enclosure.
9. If for any reason you suspect the unit has been exposed to moisture during transit or storage, it should be dried out before being energized.
10. Re-energize the voltage powering the I-Line, or start generator to supply power to the Horizontal I-Line
11. Check voltage readings to make sure the I-Line has correct voltage for the application.
12. If voltage is correct, the main door of the unit may be opened in order to control any I-Line breakers needed to power the loads.

Note: After installation of cables and connectors, a minimum of 1" clearance should be maintained between the enclosure and any energized parts, unless insulated by another means.

Installation Outdoors

- Select appropriate location, cable, installation, and mounting hardware to meet applicable codes.
- Only use access panels on the bottom of the unit for direct wire applications.

Torque Values for Screws and Bolts

When attaching the wires to the terminals use the recommended bolts for the wiring lugs. It is recommended to use two wrenches "where applicable" when tightening or loosening bolted connections to prevent damage. Torque 2S350 lugs to 375 IN. LBS and 2S600 lugs to 500 IN. LBS. The chart below shows recommended torque values for standard size bolts.

| Torque Values for Screws and Bolts | |
|------------------------------------|-------------------------|
| Screw/bolt Size (SAE Grade 5) | Torque Value (+/-5%) |
| 1/4 | 8 ft-lbs |
| 5/16 | 17 ft-lbs |
| 3/8 | 30 ft-lbs |
| 7/16 | 50 ft-lbs |
| 1/2 | 75 ft-lbs |

Maintenance

I-Line Cabinets shall only be maintained, serviced and inspected by qualified personnel.

All power to the I-Line must be disconnected and tested to confirm that the box is safe to work on.

Check Integrity of the enclosure by visually inspecting it for any defects.

Check all badges

1. Make sure all badges are clean and legible.
2. If badges are losing adhesion, replace.

Check door latches and cams

1. Make sure that the door latches turn freely.
2. Make sure that when latched the door is firmly closed so that the gasket creates a good seal.

Check door hinges

1. Make sure door hinges swing freely and do not bind.
2. Make sure the fasteners for door hinges are tight.

Check bottom access panel.

1. Make sure panel opens and closes without binding.
2. Make sure that the latches on panel are tight.