

Square D® PowerLogic® Factory Assembled Enclosures For Communications, Control and Metering

Retain for future use.

INTRODUCTION

This bulletin contains instructions for installation and maintenance of the Square D® PowerLogic® Factory Assembled Enclosures for communication, control and metering equipment.

Read these instructions carefully in conjunction with all provided device manuals and look at the equipment to become familiar with the device(s) before trying to install, operate, service, or maintain it.

The enclosure systems are designed to order and have varying installation considerations listed herein. Systems described in this bulletin can be wall-mounted or free-standing. Enclosures are available with optional pad-lockable latches (padlocks are not included).

Note: Electrical equipment should be installed, operated, serviced and maintained only by qualified personnel. This document is not intended as an instruction manual for untrained persons. No responsibility is assumed by Schneider Electric for any consequences arising out of the use of this manual.

TOPICS NOT COVERED

Separate device documentation is shipped with the enclosure. Refer to these individual documents for specific device and panel wiring details.

SAFETY PRECAUTIONS

⚠ DANGER
HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH
<ul style="list-style-type: none">• Apply appropriate personal protective equipment (PPE) and follow safe electrical work practices. See NFPA 70E.• This equipment must only be installed and serviced by qualified electrical personnel.• Turn off all power supplying this equipment before working on or inside equipment.• Always use a properly rated voltage sensing device to confirm power is off.• Replace all devices, doors, and covers before turning on power to this equipment.
Failure to follow these instructions will result in death or serious injury.

RECEIVING

Upon receipt, check the packing list against the equipment received to ensure the order and shipment are complete. Also upon receipt, immediately inspect enclosure for any damage that may have occurred in transit. If damage is found or suspected, file a claim with the carrier immediately and notify the nearest Schneider Electric representative.

HANDLING

Ensure that proper equipment, such as a dolly, pallet jack, fork lift or overhead crane, is available at the installation site to handle the enclosure(s). The shipping weight of each unit is marked on the packing list. Verify the lifting capacity of the equipment being used is sufficient per the listed weight. Square D recommends using lifting straps and cables or chains when overhead cranes are utilized and safety straps for all other methods.

STORAGE

If the unit is not placed in service immediately, store it in a clean, dry location. Ensure that there is a uniform temperature to prevent condensation. Store the unit in a heated or air conditioned building, allowing adequate air circulation and protection from dirt and moisture. If possible, store the enclosure in the original shipping packaging, including skid (if provided), until it is at or near the final installation location.

MOUNTING AND INSTALLATION

CAUTION
<p>EQUIPMENT DAMAGE HAZARD</p> <ul style="list-style-type: none"> Do not allow metal shavings or debris to fall into components during installation. All metal shavings and debris must be removed from the enclosure prior to energizing the unit. <p>Failure to follow this instruction can result in equipment damage.</p>

Correct installation of Square D® PowerLogic® Factory Assembled Enclosures is essential for proper operation of all enclosed components. Panel installation and required working clearances in conjunction with the location chosen for installation should comply with the National Electrical Code® (NEC®) and any local requirements. Verify that units installed with ventilation systems have enough clearance to allow for proper operation.

No assembly of the enclosure is required for mounting. The enclosure does not include any conduit knockouts or holes. It is the installer's responsibility to determine the best conduit entry point into the panel. On outdoor rated panels it is recommended that all conduit entries come through the bottom of the enclosure only.

▲ CAUTION
<p>LIFTING HAZARD</p> <ul style="list-style-type: none"> Note weight of enclosure before lifting. Observe safe lifting practices when installing the enclosure. <p>Failure to follow these instructions can result in personal injury.</p>

If necessary use stabilizing supports until the enclosure is securely mounted. The enclosure must be mounted to a permanent structure that can completely support the weight of the unit and all of its contents. It is the installer's responsibility to determine what the specific mounting and installation requirements are per installation location.

For earthquake zones and seismic qualifications an expert in this type of installation should be involved in determining the necessary requirements.

Environmental Considerations

Square D® PowerLogic® Factory Assembled Enclosures are designed to operate in either indoor or outdoor applications. It is the responsibility of the installer to ensure the panel is installed per its intended environmental rating. Factory Assembled Enclosures include the environmental rating type listed on the label located inside the unit.

Table 1: UL Environmental Ratings

Designation	Description
Type 1	Intended for indoor use, primarily to provide a degree of protection against incidental contact with the enclosed equipment and in locations where unusual service conditions do not exist.
Type 12	Intended for indoor use, primarily to provide a degree of protection against incidental contact with the enclosed equipment, dust, falling dirt, and dripping non-corrosive liquids.
Type 3R	Intended for indoor or outdoor use, primarily to provide a degree of protection against incidental contact with the enclosed equipment, falling rain, snow & sleet but not hose directed water; and to be undamaged by the formation of ice on the enclosure.
Type 4	Intended for indoor or outdoor use, primarily to provide a degree of protection against incidental contact with the enclosed equipment, windblown dust, rain, sleet and snow, splashing water, and hose directed water; and to be undamaged by the formation of ice on the enclosure.

Note: For Type 3R and 4 enclosures if unit uses door mounted equipment, this equipment will be mounted on an inner swing door. The outer protective door must be opened to access door mounted equipment

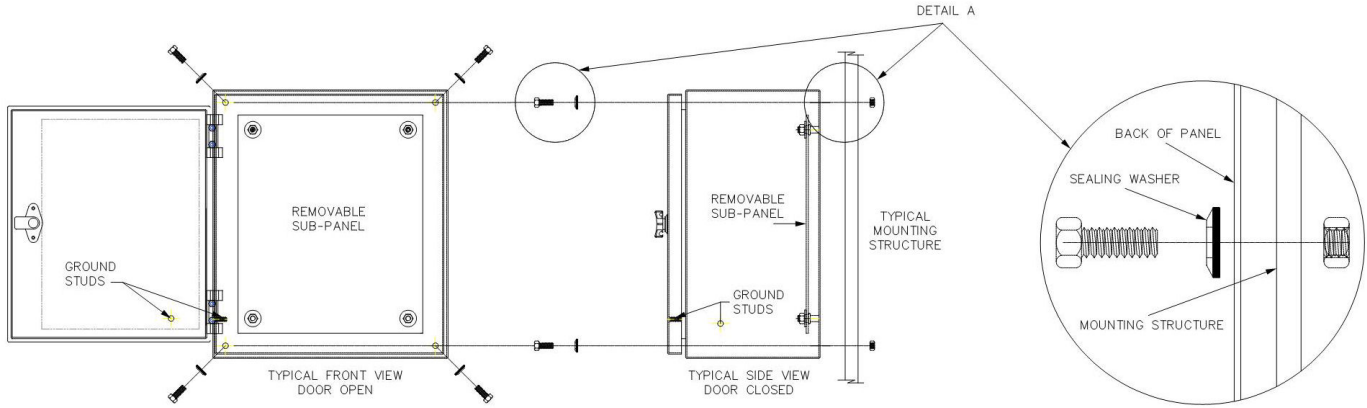
Mounting Hardware

Typical mounting hardware is provided with wall mountable enclosures and free standing units equipped with mounting feet. Other equivalent rated hardware may be used to install enclosures. Be sure to use the sealing washers (provided) with all substitute hardware. Install the sealing washers with the rubber side against the enclosure. All substitute hardware must be rated for the intended application and environment. All mounting hardware, fittings and hubs must have the same environmental rating as the enclosure.

Wall Mountable Enclosures

Install wall mounted enclosures using the four holes in the back of the cabinet or the tabs on the top and bottom of the enclosure. See Figure 1 for typical installation details.

Figure 1: Typical Wall Mounting Details

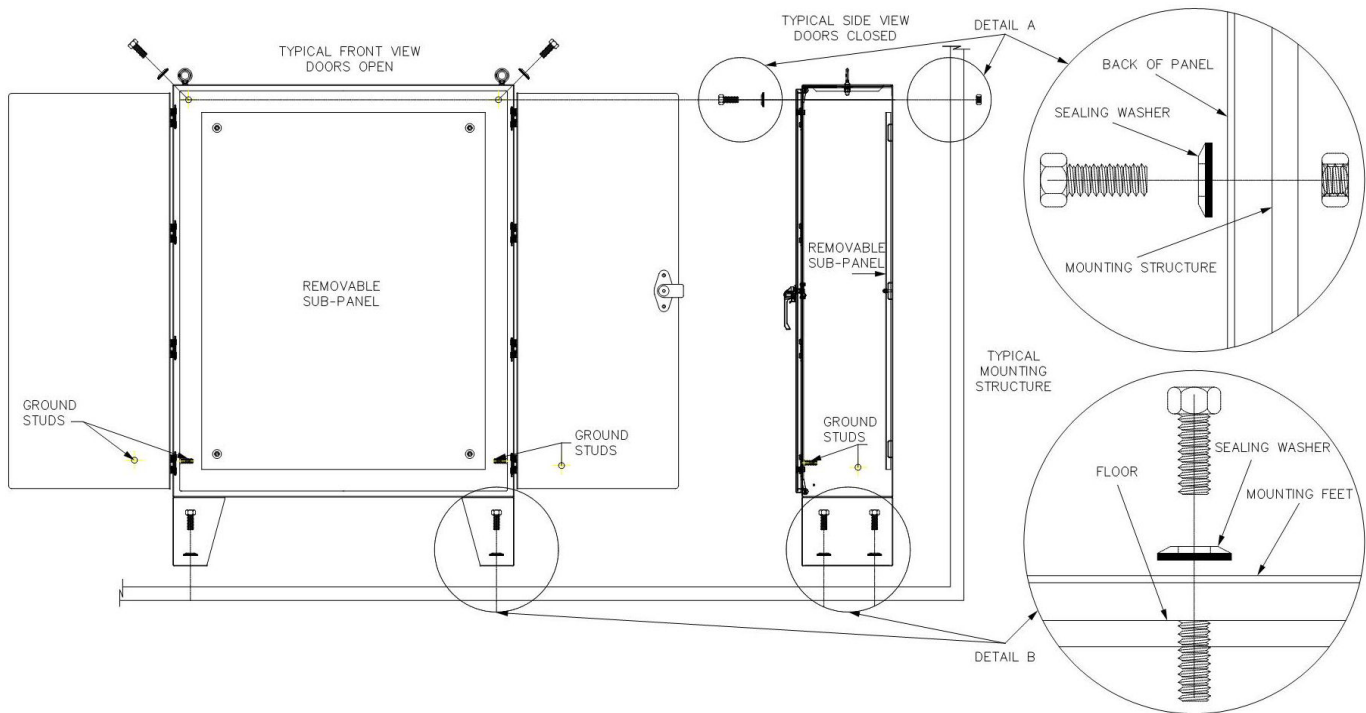


Free Standing Enclosures

It is recommended that free standing units be secured to prevent tipping or movement. Free standing units that sit directly on the floor do not include mounting hardware. It is the installer's responsibility to determine whether or not the top of a free standing unit needs to be secured to prevent tipping. See Figure 2 Detail A for typical free standing unit mounting provisions.

Free standing units that are equipped with mounting feet include sealing washers and mounting hardware. See Figure 2 Detail B for typical mounting of units equipped with mounting feet.

Figure 2: Typical Free Standing Mounting Details



GENERAL ENCLOSURE WIRING SPECIFICATIONS

Refer to the provided customer drawing package for all device voltage, torque, hookup wire, and communication cable specifications.

Note: UL-508A Article 54 in conjunction with NEC Article 725 requires separation of Class 1 and Class 2 conductors. Class 1 and Class 2 conductors are permitted within the same enclosure provided that they are separated by a barrier or routed to maintain separation of at least 2 in. Refer to national and local electrical codes for complete information.

CONTROL POWER, VOLTAGE AND GROUND CONNECTIONS

▲ DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

- Apply appropriate personal protective equipment (PPE) and follow safe electrical work practices. See NFPA 70E.
- All circuit disconnects must be in the off position and de-energized before servicing enclosure.
- Use a properly rated voltage sensing device to verify that the power is off.
- Never open circuit a CT; use the shorting block to short circuit the leads of each CT.
- Use a properly rated clamp on current measuring device to verify that no current is present before removing the CT connection from the device.

Failure to follow these instructions will result in death or serious injury.

Connect a grounding conductor to the equipment ground busbar or grounding terminal block provided in enclosure. Verify all circuit disconnects are in the open position during termination of voltage circuits. Before closing disconnect switches, verify that voltages do not exceed the intended rating of the enclosure. Voltage and short circuit ratings will be listed inside the enclosure and included in the drawing package for reference. Connect all direct current (DC), single phase and three phase alternating current (AC) circuits according to the provided customer drawing package. Refer to the provided device manuals and drawing package for further details.

Protective Relay and Meter Connections

Units equipped with power meters and/or protective relays require power supply, current, and voltage connections in order to operate properly. The wiring configuration depends on the type of electrical system which the device is to monitor or protect. A current transformer (CT) shorting block is supplied for terminating each current input per device. Install CT leads to the shorting block as shown in the provided drawing package wiring details. Refer to the provided device manuals and drawing package for further details.

COMMUNICATIONS, ANALOG I/O AND DIGITAL I/O CONNECTIONS

Ethernet Communication Connections

For enclosures with Ethernet communications, ensure they are connected per the provided drawing package wiring details. Refer to the provided manuals for details on cable type, gauge and distance limitations.

RS-485 Communication and/or Analog Input/Output (I/O) Connections

For enclosures with RS-485 communications and/or Analog I/O, ensure they are wired per the provided drawing package wiring details. RS-485 and Analog wiring requires shielded cable to protect the signal from interference. To ensure the unit operates correctly, the field wiring cable type must match what is specified in the provided drawing package.

Digital Input/Output (I/O) Connections

For enclosures with digital I/O, ensure they are wired per the provided drawing package details. To ensure the unit operates correctly, the field wiring gauge must match what is specified in the drawing package.

ENCLOSURE MAINTENANCE

Visually inspect equipment annually and do maintenance as required. Units equipped with ventilation kits and/or UPS's will require servicing of their filters and batteries. If maintenance is required, verify that all voltage and current circuits are de-energized before proceeding. Refer to the included device manuals for instructions about maintaining the equipment.

Note: Miscellaneous items should never be stored inside or on top of the enclosure.

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Electrical equipment should be installed, operated, serviced, and maintained only by qualified personnel. No responsibility is assumed by Schneider Electric for any consequences arising out of the use of this material.

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