

Power Distribution Panelboard Protective Switchrack Frame - Wall Mount Instruction Manual

Thank you for your purchase of the Larson Electronics PND-PNU-FSU Series switchrack panelboard.

WARNING:

READ CAREFULLY BEFORE INSTALLING FIXTURE. RETAIN THESE INSTRUCTIONS FOR FUTURE REFERENCE. CRITICAL SAFETY INSTRUCTIONS:

- INSTALLATION SHOULD ONLY BE CONDUCTED BY A QUALIFIED ELECTRICIAN IN ACCORDANCE WITH NEC AND ANY RELEVANT LOCAL BUILDING CODES.
- RISK OF FIRE OR ELECTRIC SHOCK. FIXTURE INSTALLATION REQUIRES KNOWLEDGE OF FIXTURE'S ELECTRICAL SYSTEMS. IF NOT QUALIFIED, CONTACT A QUALIFIED ELECTRICIAN.
- BE CERTAIN ELECTRICAL POWER IS OFF BEFORE AND DURING INSTALLATION AND MAINTENANCE.
- MAKE SURE THE SUPPLY VOLTAGE IS THE SAME AS THE FIXTURE'S RATED VOLTAGE.
- TO PREVENT WIRING DAMAGE OR ABRASION, DO NOT EXPOSE WIRING TO EDGES OF SHEET METAL OR SHARP OBJECTS. SUITABLE FOR DAMP LOCATIONS.

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 which might be met in installation, operation and maintenance.

Failure to follow instructions may result in death or serious injury

Inspection upon Receiving

Power distribution 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 shipping company.

⚠ WARNING:

Only qualified personnel should install, inspect, or maintain this unit since the normal operating voltages can be hazardous. Do not place combustible materials on or near panelboard. The nameplate rating on the unit should be checked against the job specifications to ensure correct voltages are used.

The Larson Electronics PND-PNU-FSU Power Distribution Panelboard is designed for reliable, safe and convenient power distribution at industrial work sites. This unit provides operators the ability to safely tap into and distribute power from a variety of sources including generators and direct grid power and direct it to equipment.

MOUNTING

Warning: This panelboard should only be installed by a licensed electrician with knowledge of these systems. Refer to the product label for ratings and other critical information. Always follow all applicable local and national electrical and building codes when installing, operating, and maintaining this unit!

The Larson Electronics PND-PNU-FSU Power Distribution Panelboard is designed for surface mounting applications. This power distribution panel is housed in a heavy-duty enclosure. Mounted on an aluminum switchrack mounting frame, the unit is powder coated for durability, corrosion resistance and protection in outdoor sites. A canopy protects the power distribution system from UV rays, rain and debris. Choose a flat, sturdy location that is capable of supporting the load of the unit. Mark the locations for your mounting holes and drill them out to the proper size for the mounting hardware you will be using. Mounting hardware is not included, but is available to purchase from Larson Electronics, if needed. Secure the panelboard to the desired surface. Use all pre-drilled mount points for maximum security and safety.

WIRING

Only a licensed electrician should install this product, in all locations, especially in outdoor areas where weatherproofing may be required. Be sure all power is disconnected and follow lock out tag out procedure before any work is done.

The Larson Electronics PND-PNU-FSU Power Distribution Panelboard is customizable when ordering, so may come with breakers pre-installed, or open slots where breakers may be installed by the user. For units with pre-installed breakers, refer to the wiring diagram included with your unit to complete wiring connections. For units with no breakers installed, the installation of the breakers should be completed per the instructions for those breakers. If the enclosure does not include entry hardware, select the appropriate hubs or cable connectors for your wiring and install them per the IOM included with that hardware. Use best judgement when making cable entry openings on enclosure for maximum protection against water ingress. For field-installed openings, use a hole saw, metal drill bit, or pneumatic type punch to create an appropriately sized hole for mounting your selected hardware. Always wear appropriate safety glasses when cutting metal.

WIRING (CONTINUED)

Remove the dead front panel inside the unit by removing the screws holding it in place. This will give easy access to the mounting rails and/or terminal blocks or lugs inside the panel. Be sure the breakers are installed so that input/primary side is connected to the internal terminal block, main breaker, or supply power wiring depending on your specific setup, and your equipment to be powered is connected to the output/secondary side of the individual breakers. Not all units will include terminal blocks or lugs, some may be din-rail setups and require breakers to be wired for power individually by the installing electrician. Always use appropriately gauged wire for the breakers installed and the load they will carry. Re-install dead front panel when wiring is complete.

NOTE: The correct type breakers must be used based on your application and setup. Some panels will use rail mount breakers, some will use terminal mount. It is imperative that the correct type breaker is installed, so consider this when sourcing breakers for the panelboard if no breakers are pre-installed. Main lug only panels are typically applied downstream of a main circuit breaker panel and are often referred to as secondary or add-on panels. For MLO panels, the incoming cables are terminated on line side lugs that are attached directly to the bus, no main overcurrent device exists in the panel. For MCB setups, the overcurrent protections are provided by the MCB main breaker in the panel, which sits between the supply power and the individual breakers.

NEC article 408 covers the installation of panelboards, including where overcurrent protection is required. NEC article 408.36 requires that an overcurrent protective device be installed anywhere on the supply side of the panelboard. Based on this requirement the panelboard overcurrent protection is permitted to be provided by the upstream device/feeder breaker serving it, unless that panelboard is supplied by a transformer. If the panelboard is supplied through a transformer, NEC article 408.36 (B) requires overcurrent protection on the secondary side of the transformer albeit with an exception. Where supplied by a transformer typically the panelboard will be provided as an MCB panelboard to meet this requirement. Additional information and clarification for transformer secondary conductors and required overcurrent protection is provided in NEC article 240.21 (C).

USE AND CARE

Unauthorized modification may impair the function and/or safety of this device and could affect the life of the equipment. Always check for damaged or worn out parts before using the device. Store it in a secure place out of the reach of children when not in use. Inspect for good working condition prior to storage and before re-use.

REPLACEMENT PARTS

The PND-PNU-FSU Series is designed to provide years of reliable performance. Should the need for replacement parts arise, please contact Larson Electronics.

THESE INSTRUCTIONS MAY NOT COVER ALL DETAILS OR VARIATIONS OF THIS PRODUCT FOR YOUR EQUIPMENT OR INSTALLATION REQUIREMENTS. SHOULD FURTHER INFORMATION NOT COVERED BY THESE INSTRUCTIONS BE REQUIRED, PLEASE CONTACT LARSON ELECTRONICS BY EMAIL AT SALES@LARSONELECTRONICS.COM OR BY PHONE AT 1-877-348-9680 FOR FURTHER ASSISTANCE.

PLEASE VISIT LARSONELECTRONICS.COM FOR **WARRANTY** AND **RETURN** INFORMATION.