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MPD-MES-VCB-3P4W-19-480V-3000A-TE-FM-MAR-CU-N3R-M1

LV Metal Enclosed Switchgear – 480V, 3-Phase, 4-Wire – 3000A, 1 IN 9 OUT, Floor Mount, Top Entry, Copper Bus, NEMA 3R, with High Resistance Grounding (HRG)

Product ID: 336218



Image: MPD-MES-VCB-3P4W-19-480V-3000A-TE-FM-MAR-CU-N3R-M1

Larson Electronics LLC manufactures a wide variety of products, including custom built to spec designs. The pictures displayed for this unit are a general representation of form factor for the product line and may not accurately represent this exact configuration in every detail due to custom builds and changes between similar products in our standard catalog. The specifics for this configuration are listed in the specification table and supporting documentation (CAD files, Dimensional Drawing, Name Plate Diagram, Wiring Diagram, etc.). This means that specific details (receptacles, plugs, wires, connections, mounting brackets, external finishes, etc.) may not be accurately represented in images vs specifications. Please review specifications and do not order based solely on images.

MPD-MES-VCB-3P4W-19-480V-3000A-TE-FM-MAR-CU-N3R-M1 Metal Enclosed Switchgear

Unit Type: Metal Enclosed Switchgear – Power Circuit Breaker (ACB), HRG System

Line-In Connections: Front Compartment Cable Terminations via Circuit Breakers

Line-In Orientation: Top Feed

Configuration: Metal-Enclosed, Compartmentalized, Air-Insulated Switchgear Lineup with HRG System Integration

Nominal Voltage: 480 V AC, 3 Phase

Maximum Voltage Rating: 0.6 KV AC, 3 Phase

Voltage BIL: 10 KV

Wire: 4-Wire (Wye via HRG)

System Grounding: High Resistance Grounded (HRG) System

Protection Method: Electronic Solid-State Trip Units

Trip Functions: Long Time, Short Time, Instantaneous, Ground Fault (LSIG Main / LSI Feeders)

Fuse Max. Rating: N/A

Fuse Holder Rating: N/A

Spare Fuses: N/A

Main Bus Continuous Current Rating: 3000 A

Main Bus Short Circuit Rating: 65 kA RMS Symmetrical @ 480V

Bus Material: Silver-Plated Copper Bus Bars

Ratings

NRTL Listed Service Equipment
NRTL Listed to UL 1558 / UL 891 Metal Enclosed Switchgear
NEMA 3R Rated for Outdoor Use

Service Entrance Rated

Not ARC Rated
Made in the USA

Bus Insulation: Fluidized Bed Epoxy Insulated Bus

Bus Joint Plating: Silver-Plated Joints and Fingers

Ground Bus: Continuous Copper Ground Bus

Incomer(s): (1) 3000A – 480V – 3P Draw-Out Air Circuit Breaker, 100% Rated, LSIG, with ERMS

Outgoing(s):
(8) 400A – 480V – 3P Circuit Breakers for Generator Feeders
(1) 100A – 480V – 3P Circuit Breaker for Pump Circuit

Prepared Spaces: (6) Future feeder sections

Breaker Features:
• Electrically operated with manual operation
• Breaker interchangeability maintained
• Line/Load reversible (generator backfeed capable)
• Spring charging motor
• MOC and TOC auxiliary contacts
• Remote control and indication capability

Disconnect Means: Manual/Electrical Operation via Breaker Mechanism

Remote Racking: Optional

Metering: System Monitoring via Ground Fault Monitor

Meter Type: Bender NGRM700-US Ground Fault Monitoring System

Metering Parameters Include: Ground Fault Current, System Status, Alarm Conditions

Current Transformers: ANSI-Rated CTs for Protection and Monitoring

Voltage Transformers: As required for monitoring system

Communications: Ethernet / IP Protocol or Modbus TCP

Protective Relay: Integrated within Breaker Trip Units

Grounding System (HRG)
Type: High Resistance Grounding System
Components:
• Zigzag Transformer Bank
• 5A / 10A Grounding Resistor
• Pulsing Fault Location System
Arc Flash Mitigation:
• Energy Reduction Maintenance Switch (ERMS) on Main Breaker
• Remote operation capability
Safety Features:
• Breaker Compartment Door Interlocks
• Grounded Steel Barriers
• Compartmentalized Construction

Line-Out Connection: Bus Connection via Circuit Breakers

Line-Out Orientation: Top Feed

Ambient Temperature Range: -5°C to +40°C

Humidity: Up to 95%

Altitude: ~5,000 ft (Altitude Derating Required)

Surge Protection Device: N/A

Form Factor: Rectangular Metal-Enclosed Modular Switchgear Lineup with Multiple Vertical Sections and Integrated HRG System
Housing Type: Compartmental Air-Filled Cabinet with Draw-Out Breaker Compartments, Front Cable Access, Hinged Doors with Pad-Lockable Handles

Enclosure Material: #12 Gauge Sheet Steel

Enclosure Finish: ANSI 61 Gray
Enclosure Type: NEMA 3R Outdoor
Mounting: Floor Mounted Switchgear Lineup

Cable Entry: Top Entry

Control Power: 240/120V Single Phase Control Power Transformer

Breaker Control Power: As required (AC or DC control scheme configurable)

Remote Operation: Remote Hand-Held Control Station and Remote Control / Mimic Panel
Space Heaters: Internal Strip Heaters (Minimum 250W per Section) with Thermostat Control
Dimensions: TBD
Weight: TBD
Shipping Dimensions: TBD
Shipping Weight: TBD

Larson Electronics manufactures a wide variety of custom power distribution systems. The pictures displayed for this unit are a general representation of form factor and may not accurately represent this exact configuration in every detail due to being custom builds. The specifics for this configuration are listed in the specification table and one-line diagram.

Special Orders - Special Requirements
Contact us for special requirements

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All grounding shall comply with state and local codes and meet the minimum requirements of the National Electronic Code section 250

Made in the USA

The Larson Electronics MPD-MES-VCB-3P4W-19-480V-3000A-TE-FM-MAR-CU-N3R-M1 Metal Enclosed Switchgear is designed for reliable, safe and efficient power distribution in industrial and power generation applications. This switchgear lineup features a 3000-amp main bus rating with a single incoming main circuit breaker and nine outgoing feeder breakers, supporting multiple generator inputs and auxiliary loads. Designed for floor mounted installations, this top feed switchgear is housed in a NEMA 3R rated steel enclosure, making it suitable for outdoor environments with protection against rain, sleet and external ice formation.

PLEASE NOTE: ANY FREE SHIPPING OFFERS DO NOT APPLY TO POWER DISTRIBUTION PANELS, TRANSFORMERS, OR SUBSTATIONS

The MPD-MES-VCB-3P4W-19-480V-3000A-TE-FM-MAR-CU-N3R-M1 metal enclosed switchgear provides a safe and dependable solution for aggregating and distributing power from multiple sources. Compatible with 480V AC, three-phase systems, this unit utilizes draw-out air circuit breakers with electronic solid-state trip units for protection against overloads, short circuits and ground faults. The lineup consists of one 3000-amp main breaker, eight 400-amp feeder breakers for generator inputs, and one 100-amp feeder breaker for auxiliary loads, all supported by a 65 kA RMS symmetrical short circuit rating for robust system protection.

Operation: The switchgear features front-accessible breaker compartments and cable termination areas with lockable doors for controlled access. Draw-out breaker construction allows safe inspection, maintenance and replacement without disrupting the main bus. Breakers support both electrical and manual operation, with remote control capability and status indication. The compartmentalized design includes grounded barriers, door interlocks and segregated sections to enhance operator safety during operation and servicing.

Protection & Monitoring: The system is equipped with solid-state trip units providing long-time, short-time, instantaneous and ground fault protection. An integrated High Resistance Grounding (HRG) system with zigzag transformer, 5A/10A resistor, and Bender NGRM700 monitoring unit enables ground fault detection and location without requiring generator shutdown. Communication capability via Ethernet/IP or Modbus TCP allows integration into plant monitoring and control systems.

Arc Flash & Safety Features: This switchgear includes an energy reduction maintenance switch (ERMS) on the main breaker to reduce arc flash incident energy during maintenance operations. Additional safety features include breaker compartment interlocks, grounded metal barriers, and compartmentalized construction for enhanced personnel protection.

Enclosure Design: The switchgear is housed in a heavy-duty steel enclosure with ANSI 61 gray finish. The NEMA 3R outdoor-rated design provides protection against environmental conditions, while internal strip heaters with thermostat control help prevent condensation in cold or high-humidity environments.

Certification: This switchgear is NRTL listed and compliant with UL 1558 and UL 891 standards for low voltage metal enclosed switchgear assemblies.

Mount: Operators can floor mount the switchgear lineup on concrete pads or flat surfaces for permanent installation in substations, generator yards, and industrial facilities.

Customization: The MPD-MES-VCB-3P4W-19-480V-3000A-TE-FM-MAR-CU-N3R-M1 switchgear can be customized to meet specific operating and power requirements. Examples of customizations include:

• Adding surge protection devices (SPD)

• Adding advanced power quality meters

• Integrating SCADA or plant monitoring systems

• Adding redundant protection relays

• Integrating bus duct or cable bus connections

Applications: This switchgear is ideal for generator paralleling systems, geothermal and renewable energy sites, industrial power distribution, processing facilities, and heavy-duty infrastructure projects where reliable multi-source power collection and distribution is required.

At Larson Electronics, we do more than meet your lighting needs. We also provide replacement, retrofit, and upgrade parts as well as industrial grade power accessories. Our craftsmen can custom build any lighting system and/or accessories to fit the unique demands of your operation. A commitment to honesty, quality, and dependability has made Larson Electronics a leader in the lighting and electronics business since 1973. Contact us today at 800-369-6671 or message sales@larsonelectronics.com for more information about our custom options tailored to meet your specific industry needs.

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Frequently Asked Questions (FAQ)

There are no Faqs