Larson Electronics LLC
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MPD-MT-PDT-VPM-R7-3P-DMQ-750KVA-YE-A6-HZ-CZ-1A-CP-H-N1-M1

750 kVA Unit Substation - 13.2kV Delta Primary, 480Y/277V Wye-N Secondary - (1) 750 kVA Dry-Type VPI Transformer, Copper ANN - w/ (1) 15kV Fused Load Interrupter Switch - 800A Switchgear w/ (1) 800A Main Breaker - 480Y/277V 3PH, 4W, 60Hz - NEMA 1

Product ID: 337987

Please see last page for supporting documentation for this product (certificates, CAD files & drawings, IES files, wiring diagrams, etc).

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Image: MPD-MT-PDT-VPM-R7-3P-DMQ-750KVA-YE-A6-HZ-CZ-1A-CP-H-N1-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-MT-PDT-VPM-R7-3P-DMQ-750KVA-YE-A6-HZ-CZ-1A-CP-H-N1-M1 Vacuum Pressure Impregnated Transformer

Transformer Type: Vacuum Pressure Impregnated (VPI) Transformer
Transformer Configuration: Dry Type, Ventilated
Phase: Three Phase
Capacity: 750 kVA
Vector Group: Dyn1
Primary Voltage: 13200V AC
Primary Voltage Class: 15 kV Class
Primary Phasor: Delta
Primary BIL: 95 KV
Secondary Voltage: 480Y/277V AC
Secondary Voltage Class: 600V Class
Secondary Phasor: Wye-N
Secondary BIL: 30 KV
Frequency: 60 Hz
Temperature Rise: 150°C

Cooling: ANN

Forced Air (Fans): None
Insulation Class: Class H
Tap Changer: 5-Position Tap Changer
Tap Qty: (2) FCAN Above, (2) FCBN Below
Tap %: 2.5%
Tap Changer Switch Location: HV Side
Impedance (at 120°C): 5.75%
Primary Connection Type: Terminal Lugs
Primary Surge Arrestors: N/A
Primary Surge Arrestor Voltage Rating: N/A
Primary Surge Arrestor MCOV Rating: N/A
Primary Overcurrent Protection (OCP): Included, Fused Load Interrupter Switch
Primary Grounding Provisions: N/A
Secondary Connection Type: Rigid Bus Connection to Switchgear
Secondary Overcurrent Protection (OCP): Included, 800A LV Main Breaker
Metering Current Transformer (CT): Included (Main Section)
Neutral Bus: 100% Rated Copper Neutral Bus Included
Metering Cabinet: Integrated Into Main Switchgear Lineup
Auxiliary Control Panel: N/A
Load Break Switch: Included
Load Break Switch Qty: (1)
Load Break Switch Location: Primary Medium Voltage Section
Efficiency Standard(s): DOE 2016, IEEE, ANSI
K-Factor Rating (Harmonic Mitigation): K-1 (Standard)
Temperature Sensors in Coil: Included

Ratings

NRTL Listed for United States and Canada
Complies with ANSI / IEEE C57.12.00
Complies with ANSI / IEEE C57.12.01
Complies with ANSI / IEEE C57 12.35
Complies with ANSI / IEEE C57.12.59
Complies with ANSI / IEEE C57.12.70
Meets/Exceeds DOE 2016 Efficiency Ratings
Meets/Exceeds CSA Efficiency Ratings
Meets or Exceeds NEMA ST-20 Standards
NEMA 1 Indoor Steel Enclosure
Seismic Qualified for Earthquake Loads
RoHS Certified
CE Certified

Efficiency %: 98.50%
Based on transformer operating at 50% of nameplate base kVA.

Load Losses at 145°C Reference Temp.
No Load Loss (in watts): +/- 1,450W
Full Load Loss (in watts): +/- 8,200W
Total Load Loss (in watts): +/- 9,650W

Note: *Losses offered are typical only, not guaranteed*

Temperature Gauge: Included
Seismic Bracing: Included
Weather Shield: N/A
Space Heaters: Included
Winding Material: Copper
Ambient Temperature Rating: 40°C
Sound Level: 62 dBA
Elevation (Altitude) Rating: 3300ft (1000 meters) Above Sea Level
Enclosure Material: Coated Steel
Enclosure Rating: NEMA 1 Indoor
System Form Factor: Compact Indoor Unit Substation
Paint Type: Epoxy Paint
Finish: ANSI 61 Grey
Mount: Floor Mount
Dimensions: Approx. 144"L x 60"W x 96"H
Weight: Approx. 11,000 lbs

Primary Medium Voltage Section – Fused Load Interrupter Switch

Switch Type: 15 kV Fused Load Interrupter Switch
Voltage Class: 15 kV
BIL: 95 kV
Configuration: Single Incoming Switch
Continuous Current Rating: 600A
Interrupting Rating: 40 kA Asymmetrical
Fuse Type: Current Limiting Power Fuses
Fuse Rating: Sized for 750 kVA Transformer (~40–50A typical @ 13.2kV)
Operation: Manual, Gang-Operated
Interlocks: Mechanical Safety Interlocks
Enclosure: Metal-Enclosed, NEMA 1

Low Voltage Switchgear Section – 480V Main Distribution

Bus Rating: 800A Copper Bus
Voltage: 480Y/277V AC, 3-Phase, 4-Wire
Configuration: Single Main Breaker Distribution
Short Circuit Rating: 65 kAIC minimum

Main Breakers (1)

Breaker Type: Low Voltage Power Circuit Breaker
Frame Size: 800 AF
Trip Rating: 800 AT
Voltage: 480V
Interrupting Rating: 65 kAIC

Feeder Breakers

Feeder #1:
Breaker: 125 AF / 125 AT

Feeder #2:
Breaker: 50 AF / 50 AT

Feeder #3:
Breaker: 125 AF / 125 AT

Feeder #4:

Breaker: 400 AF / 400 AT

Feeder #5:

Breaker: 400 AF / 400 AT

Feeder #6:

Breaker: 400 AF / 400 AT

Feeder #7:

Breaker: 400 AF / 400 AT

Feeder #8:

Breaker: 350 AF / 350 AT

Temporary Generator Connection

Connection Type: Cam-Lok Style or Mechanical Lug Connection

Voltage: 480Y/277V AC, 3-Phase, 4-Wire

Breaker Rating: 800A, 3P

Interlocking: Key Interlocked with Main Breaker

Purpose: Temporary Emergency Generator Backfeed Connection

*Please note that numbers are approximate and subject to change

Special Orders - Special Requirements

Contact us for special requirements

Toll Free: 1-800-369-6671

Intl: 1-903-270-1187

Fax: 1-903-765-7664

E-mail: sales@larsonelectronics.com

The MPD-MT-PDT-VPM-R7-3P-DMQ-750KVA-YE-A6-HZ-CZ-1A-CP-H-N1-M1 Unit Substation from Larson Electronics converts three-phase 13,200V Delta electrical current to three-phase 480Y/277V Wye-N. This power distribution system provides operators the ability to safely tap into and distribute up to 750 kVA of AC power from utility sources. The integrated indoor lineup combines medium voltage switching, dry-type transformer technology and low voltage distribution into a single coordinated compact assembly designed to fit within an approximate 12' x 5' footprint.

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

Transformer Features: The system utilizes an industrial dry-type VPI transformer rated at 750 kVA with a primary voltage of three-phase 13,200V AC Delta and a secondary voltage of three-phase 480Y/277V AC Wye-N. The transformer is equipped with a 5-position tap changer with five +/-2.5% taps (two FCAN above and two FCBN below) to allow small voltage adjustments. The transformer features copper windings for high strength and conductivity, along with VPI construction that minimizes air gaps and enhances thermal performance, dielectric strength and long-term durability.

The MPD-MT-PDT-VPM-R7-3P-DMQ-750KVA-YE-A6-HZ-CZ-1A-CP-H-N1-M1 does not include fans or provisions for forced air cooling and operates under ANN (Air Natural) cooling.

Transformer Efficiency: The Class H transformer meets standard efficiency requirements.

High efficiency makes this unit suitable for use in electrical rooms, utility spaces, commercial buildings, industrial facilities and similar indoor environments.

Temperature Sensor: The MPD-MT-PDT-VPM-R7-3P-DMQ-750KVA-YE-A6-HZ-CZ-1A-CP-H-N1-M1 is equipped with temperature sensors inside the system for controls and monitoring. A monitoring service is not included with the transformer.

Temperature Gauge: This transformer comes with a temperature gauge.

Primary Switching: The unit substation includes (1) 15kV fused load interrupter switch, providing primary isolation and overcurrent protection for the transformer.

Low Voltage Distribution: The system features a 480Y/277V, 800A copper bus switchgear lineup with (1) 800A main breaker in a single-main configuration. The system includes a full-rated neutral bus to support 4-wire distribution for both 480V three-phase and 277V single-phase loads.

Metering Section: Metering equipment may be integrated within the switchgear lineup to minimize overall footprint requirements and maintain a compact installation profile.

Surge Arresters: This transformer does not include surge arresters. Designed for over-voltage and transient voltage protection, the components prevent damage caused by lightning, internal switching or voltage surges. We can offer models without surge arresters that have mounting provisions for customer-provided surge arresters.

Control Transformer: This system includes control power provisions for breaker operation and metering functions.

Seismic Bracing: This system includes seismic bracing for added structural integrity.

Weather Protection: This transformer does not include a weather shield and is designed for indoor NEMA 1 applications.

Space Heaters: This system includes space heaters to prevent condensation during periods of inactivity.

Enclosure Design: The complete substation is housed in a rugged steel enclosure with a NEMA 1 rating, designed for indoor industrial and commercial applications.

Mount: The power distribution system is mounted on an integrated structural base designed for simplified installation and alignment within electrical rooms and indoor utility areas.

Benefits: The MPD-MT-PDT-VPM-R7-3P-DMQ-750KVA-YE-A6-HZ-CZ-1A-CP-H-N1-M1 compact unit substation provides reliable medium voltage to low voltage power distribution in a space-saving configuration. The integrated lineup design reduces installation complexity while providing centralized switching, transformer protection and low voltage distribution in a coordinated assembly.

Applications: Industrial facilities, manufacturing plants, utilities, commercial buildings, military installations, processing plants, data centers, oil and gas sites, and other applications requiring reliable medium voltage to low voltage power distribution.

Larson Electronics is a manufacturer and as such can build stationary and portable transformer systems to your specifications. Although we carry several models of power distribution transformer systems, we can deliver custom ordered units almost as quickly as our prebuilt units. If this model does not meet your needs, please contact us at 1-800-369-6671 or sales@larsonelectronics.com to discuss your specific requirements.

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Frequently Asked Questions (FAQ)

There are no Faqs

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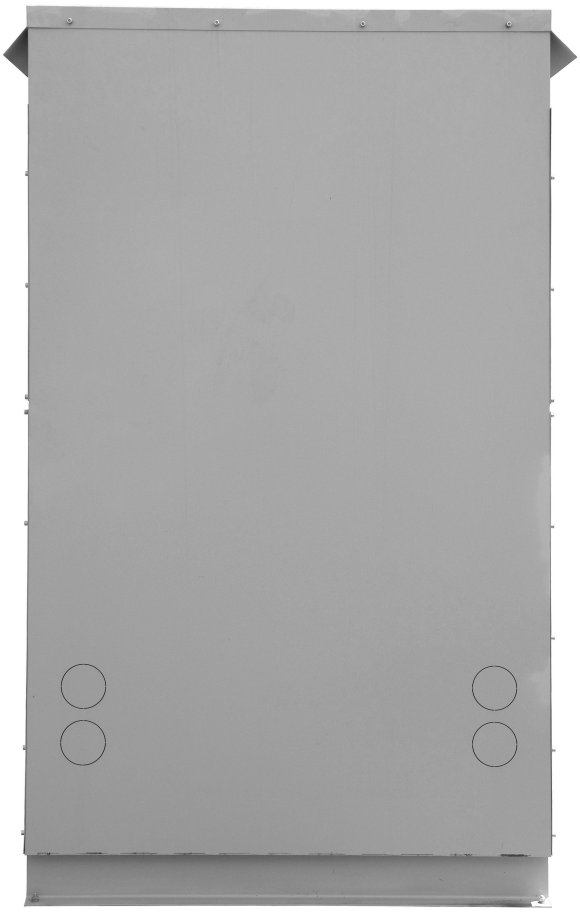


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Export Control Classification Number (ECCN): EAR99

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