

MT-PML-R7-3P-DMP-1MVA-YE-LT-DF-A6-BB-CZ-2B6-M1

1 MVA Pad Mount Transformer - 13800V Delta Primary, 480Y/277 Wye-N Secondary - KNAN/Bell Green

Product ID: 339736

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



Image: MT-PML-R7-3P-DMP-1MVA-YE-LT-DF-A6-BB-CZ-2B6-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.

MT-PML-R7-3P-DMQ-1MVA-YE-LT-DF-A6-BB-CZ-2B6-M1 3PH Pad Mount Transformer Ratings

Transformer Type: Pad Mounted, Compartmental-Type

Transformer Configuration: Liquid Filled Pad Mounted

Transformer Feed Type: Loop Feed

Phase: Three Phase

Capacity: 1 MVA (1000 KVA)

Vector Group: Dyn1

Primary Voltage: 13800V

Primary Voltage Class: 15 kV Class

Primary Phasor: Delta

Primary BIL: 95 KV

Secondary Voltage: 480Y/277

Secondary Voltage Class: 1.2 kV Class

Secondary Phasor: Wye-N

Secondary BIL: 30 KV

Frequency: 60 Hz

Temperature Rise: 65°C

Insulation Rating: Class E Insulation - 120°C, 248°F

Cooling Class: KNAN; Self-Cooled

Forced Air (Fans): None

Meets/Exceeds DOE 2016 Efficiency Ratings

Complies with ANSI / IEEE C57.12.00

Complies with ANSI / IEEE C57.12.28

Complies with ANSI / IEEE C57.12.34

Complies with ANSI / IEEE C57.12.70

Complies with ASTM D3487

Pentahead Entry Assembly

High-Fire Point Natural Ester Insulating Fluid

Non-PCB Insulating Fluid

Tamper Proof Housing

Hinged Front Compartment Doors, Padlockable

Hot Stick Included, HV Door Mount

Efficiency %: 99.20%

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

Load Losses Based on 85°C Reference Temp.

No Load Loss (in watts): +/- 1,300W

Full Load Loss (in watts) at 100%: +/- 8,500W

Tap Changer: 5-position Tap Changer
Tap Qty: (2) FCAN Above Taps, (2) FCBN Below Taps
Tap %: 2.5%
Tap Changer Switch Location: High Voltage (HV) Front Compartment
Impedance (Typical): 5.0-7.5% Typical
Primary Connection Type: Dead Front
Primary Termination: Standoff Well Bushings w/ Removable Studs, 200A Load Break Elbows
Primary Connection Qty: (6) Primary Connections w/ (6) Standoff Brackets for Parked Elbows
Primary Surge Arrestors: Included, (3) High Voltage Elbow Surge Arrestors
Primary Surge Arrestor Voltage Rating: 18 kV Class
Primary Surge Arrestor MCOV Rating: 15.3 kVrms
Primary Overcurrent Protection (OCP): Bayonet Fuse
Primary Overcurrent Protection Method: Fused
Primary Overcurrent Protection Holder: Bayonet Fuse Holder w/ Drip Shield
Primary Grounding Provisions: (1) Grounding Lug Bar in HV Cabinet, accepts #2 copper
Secondary Connection Type: Live Font w/ End Supports for Spade Terminals
Secondary Connections: NEMA Spade Terminals, 6-Hole Spade, Externally Clamped, Accepts up to (6) Double Lug Connections with (3) Cables per Side of Spade connector
Secondary Connection Qty: (4), Staggered Terminal Arrangement
Secondary Over Current Protection (OCP): N/A
Secondary Grounding Provisions: (1) Grounding Lug Bar in LV Cabinet, accepts #2 copper
Metering Current Transformer (CT): N/A
Metering Panel: N/A
Auxiliary Control Panel: Aux Panel, Left side, w/ (1) Pressure Gauge , (1) Liquid Level Gauge, (1) Temperature Gauge , (1) Nameplate, (1) Oil Fill Port, (1) Oil Drain Port w/ Sampler Valve, (1) Pressure Relief Valve, (1) Schrader valve
Load Break Switch: 2-Position Load Break Switch
Load Break Switch Qty: (3)
Load Break Switch Rating: 600A
Load Break Switch Location: High Voltage (HV) Front Compartment
Efficiency Standard(s): Meets DOE 2016 Standards, Meets ANSI/IEEE Standards
K-Factor Rating (Harmonic Mitigation): K-1 (Standard)
Pulse Drive Rating: N/A
Insulation Fluid: Biodegradable Natural Vegetable Oil Ester Insulating Fluid, Non-PCB Fluid
Fluid Capacity: 212 Gallons
Liquid Level Indicator: Analog Dial Gauge, w/ (2) Dry Type Contacts for Remote Alarms, In Aux Cabinet
Temperature Indicator: Analog Dial Gauge, w/ (2) Dry Type Contacts for Remote Alarms, In Aux Cabinet
Pressure/Vacuum Indicator: Analog Dial Gauge, w/ (2) Dry Type Contacts for Remote Alarms
Pressure Relief Device: Included, Automatic Action, w/ (2) Dry Type Contacts for Remote Alarms
Fill Valve: Removable Bolt, 1" NPT
Fill Valve Location: Left Side Auxiliary Cabinet Compartment
Drain Valve: (2) 1" NPT Port w/ 5/8" NPT Sampler Valve
Drain Valve Location: (1) Front Compartment, (1) Left Side Auxiliary Cabinet Compartment
Winding Material: Copper
Ambient Temperature Rating: 40°C
Sound Level: 58 dBA
Elevation Rating: 3300ft (1000 meters) Above Sea Level
Core Material: Grain Oriented Steel
Tank Material: Coated Steel
Cabinet Material: Coated Steel
Base Platform Material: Coated Steel
Enclosure Rating: NEMA 3R Weatherproof

Total Load Loss (in watts) at 100%: +/- 9,800W

Total Losses at 55°C LL Temp. & 20°C NL Temp.

Total Load Loss (in watts) at 50%: +/- 3,221W

Note: Losses offered are typical only, not guaranteed



Housing Type: Compartmental Air-Filled Cabinet w/ Locking Doors, HV Compartment Left, LV Compartment Right, Steel Barrier Separation

Paint Type: Weatherproof and UV Resistant Epoxy Coating and Undercoating

Finish Color: Munsell™ 7.0 GY 3.29/1.5 Bell Green

Mounting: Pad Mounted

Conduit Opening: Bottom Feed Underground Entry/Exit

Dimensions: 73"-W x 69"-D x 73"-H

Weight: 6834 lbs

*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 MT-PML-R7-3P-DMP-1MVA-YE-LT-DF-A6-BB-CZ-2B6-M1 from Larson Electronics is an Industrial Pad Mount Transformer that offers powerful, reliable, and efficient power distribution in indoor, outdoor, and public locations. The low operating costs, low heat emissions, and low cost of ownership make this transformer ideal for a wide range of applications and businesses. An enclosed design caters to installations on concrete pads without protective fencing.

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

Transformer Features: With a transformer rating of 1000 KVA (1 MVA), the industrial transformer features a rated primary voltage of three-phase 13800V Delta and a secondary voltage of three-phase 480Y/277 Wye-N. The unit has a primary loop feed for single installations and dead-front primary connections. This transformer features a 5-position tap changer with two +2.5% taps above and two -2.5% taps below to allow small changes in voltage.

Copper transformer winding material helps improve performance, reduce weight and lower cost. Compared to aluminum, copper windings have lower eddy losses due to higher resistivity. This transformer consists of a rectangular coil and a five-legged wound core design with three coils and four core loops (this is for three-phase transformers only; single-phase units have one coil and two core loops).

The MT-PML-R7-3P-DMP-1MVA-YE-LT-DF-A6-BB-CZ-2B6-M1 is air cooled and does not have fans or mounting provisions for fans.

Enclosure Design: This pad mounted transformer is a compartmental design. The tank and housing are fabricated from steel. The front electrical enclosure carries a NEMA 3R rating. The high voltage and low voltage compartments are located in front of the transformer tank, with the high voltage compartment on the left side and low voltage compartment on the right side. The HV and LV compartments are air filled and separated by a full length steel barrier between the compartments. A removable steel plate at the base of the HV and LV compartments prevents rodents and other intrusions from entering the enclosure once installed. This steel plate allows for underground conduit entry into the enclosure compartments. Two hinged exterior doors allow for access into the compartments. A single pad lockable handle on the low voltage compartment door allows for securing the transformer. A spring loaded pin within the low voltage compartment prevents the high voltage door from being opened without pulling the safety pin. A hot stick is included in the high voltage compartment, mounted to the HV door.

Temperature Rise: This unit features 65°C temperature rise for reduced heat waste, increased reliability and longer life. At 65°C temperature rise, the transformer offers 1000 KVA

(1 MVA). The transformer meets standard efficiency requirements. The combination of low temperature rise and high efficiency makes this unit suitable for use in electrical rooms, air conditioned spaces in buildings, underground vaults and similar locations, in addition to outdoor areas.

Insulation Fluid: The MT-PML-R7-3P-DMP-1MVA-YE-LT-DF-A6-BB-CZ-2B6-M1 features biodegradable cooling fluid (KNAN) with a capacity of 212 gallons. We offer transformers with FR-3 oil fluid, if needed.

Biodegradable Fluid: Biodegradable cooling fluid (vegetable oil) has a higher heat capacity compared to mineral oil, making the liquid safer to use and more reliable during operations. Vegetable oil has a higher flash point and fire point than mineral oil, hydrocarbon oil, silicone oil and synthetic ester. This cooling fluid is also non-toxic and can tolerate higher breakdown voltages than mineral oil. When operating at high temperatures, biodegradable cooling liquid sustains up to 120% load conditions, which helps preserve the transformer's lifespan and performance.

Gauges: The following gauges are included with the system: liquid level, temperature, and pressure/vacuum gauges. Standard liquid level, temperature and pressure/vacuum gauges are analog, manual reading types. These gauges do not have auxiliary contacts.

Fault Pressure Devices: This transformer features an automatic action fault pressure device. Fault pressure devices are used to detect high rates of pressure rise within the tank.

Rapid Rise Relay: There are no rapid rise relays on the unit. This safety component is designed for protection when a rapid increase in tank pressure occurs. The relay is suitable for detecting sudden pressure fluctuations above predetermined safe limits.

Surge arresters: This system comes with high elbow surge arresters on the primary side. 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 high elbow surge arresters that have mounting provisions for customer-provided surge arresters.

Valves: The MT-PML-R7-3P-DMP-1MVA-YE-LT-DF-A6-BB-CZ-2B6-M1 is equipped with a pressure relief valve, fill valve, and drain valve with a sampler port.

Protection Fuses: The MT-PML-R7-3P-DMP-1MVA-YE-LT-DF-A6-BB-CZ-2B6-M1 features protection fuses on the primary side. This transformer is equipped with bayonet expulsion fuses.

Mount: The heavy-duty enclosure makes the unit suitable for both indoor and outdoor applications. This power distribution system can be pad mounted on concrete pads.

Benefits: The MT-PML-R7-3P-DMP-1MVA-YE-LT-DF-A6-BB-CZ-2B6-M1 pad mount transformer offers many benefits to consumers. This transformer provides owners with significant energy savings, as well as offering environmental benefits. Higher efficiency not only extends the life of the transformer, but also turns into cost savings for owners in the form of lower energy bills and decreased cost of ownership.

Applications: General purposes, industrial sites, electrical rooms, underground vaults,



manufacturing facilities, steel plants, offshore, commercial, military, processing plants, electric power distribution, utilities, public locations, and more.

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.



Frequently Asked Questions (FAQ)

There are no Fags



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