

Product ID: 313621

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



Image:

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-DMT-1MVA-YE-LT-DF-A6-BF-CS-2C6-M1 3PH Pad Mount Transformer

Transformer Type: Pad Mounted, Compartmental-Type

Transformer Configuration: Liquid Filled Pad Mounted

Transformer Feed Type: Loop Feed

Phase: Three Phase

Capacity: 1 MVA

Vector Group: Dyn1

Primary Voltage: 12000V

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

Cooling Class: KNAN; Self-Cooled

Forced Air (Fans): None

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

Ratings

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

Penta-head Entry Assembly

High-Fire Point Natural Ester Insulating Fluid

Non-PCB Insulating Fluid

Tamper Proof Housing

Hinged Front Compartment Doors, Pad Lockable

Hot Stick Included, HV Door Mount

UL Listed

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

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

Primary Connection Type: Dead Front

Primary Termination: Standoff Well Bushings (Cooper) w/ Removable Studs, 200A
Load Break Elbows w/ Inserts

Primary Connection Qty: (6)

Primary Bushing Rating: 15 kV Class, 95 kV BIL

Primary Surge Arrestors: Included, High Voltage Elbow Surge Arrestors, Distribution
Class

Primary Surge Arrestor Voltage Rating: 15 kV Class

Primary Surge Arrestor MCOV Rating: 12 kVrms

Primary Over Current Protection (OCP): (3) Oil Immersed Bayonet Fuses, in Series
with Partial Range Current Limiting Fuses (3)

Primary Over Current Protection Method: Fused

Primary Over Current Protection Holder: Bayonet Fuse Holder w/ Drip Shield

Secondary Connection Type: Live Font

Secondary Connections: NEMA Spade Terminals, 12-Hole Screw-On Spade,
Externally Clamped, Accepts up to (12) Double Lug connections with (6) cables per
side of Spade connector

Secondary Connection Qty: (4)

Secondary Over Current Protection (OCP): N/A

Grounding Provisions: Stainless Steel Pad w/ (2) 1/2"-13 NC-tapped holes, 7/16"
Deep

Metering Current Transformer (CT): N/A

Metering Panel: N/A

Auxiliary Control Panel : N/A

Load Break Switch: 2-Position Load Break Switch

Load Break Switch Qty: (3)

Load Break Switch Location: High Voltage (HV) Front Compartment

Load Break Switch Rating: 15-38 kV, 300 A

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: Enviro-Temp FR-3 Insulating Fluid, Non-PCB Fluid

Fluid Capacity: 212 Gallons

Liquid Level Indicator: Magnetic Dial Gauge

Temperature Indicator: Analog Dial Gauge

Pressure/Vacuum Indicator: Analog Dial Gauge

Pressure Relief Device: Included, Automatic Action, 50 SCFM

Fault Device: Included, Non-Resettable Fault Indicator

Schrader Valve: Included

Fill Valve: Removable Bolt

Fill Valve Location: Front Compartment

Drain Valve: Included, 1" Drain Valve w/ Sampler

Drain Valve Location: Front Compartment

Nitrogen Blanket: Included

Anchoring Hold-Down Cleats: Included, (2)

Winding Material: Copper

Ambient Temperature Rating: 40°C

Sound Level: 55 dBA

Elevation Rating: 3300ft (1000 meters) Above Sea Level

Core Material: Grain Oriented Steel

Tank Material: 304L Stainless Steel

Cabinet Material: 304L Stainless Steel

Base Platform Material: 304L Stainless Steel

Enclosure Rating: NEMA 3R Weatherproof

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

Note: Losses offered are typical only, not guaranteed

Factory Tests:

Winding Resistance Test

Insulation Resistance Test

Voltage Ratio Error Test

Short-circuit Impedance Test

No-load Loss (Wattage) Test

Load Loss (Wattage) Test

Induced Voltage Withstand Test

Separate Source Voltage Withstand Test

Dissolved Gas Analysis Test

Pressure Integrity Test

Labeling:

Externally Stencilled (Painted) KVA Rating

Externally Stencilled (Painted) Voltage Rating

External Non-PCB Label

External Warning & Danger Label

External Barcode Label

Internal Busing & Accessory Labeling

Stainless Steel Riveted Nameplate

Shipping:

Shipped on pallet on open flatbed

Palletized on Wooden Pallet w/ Skid Pockets

Pallet Skid Facing Outward Sides of Truck

*Note: Crated shipping in lieu of palletizing can be done upon
request for an additional fee*

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

Mounting: Pad Mounted

Conduit Opening: Bottom Feed Underground Entry/Exit

HV Compartment Base Wireway Dimensions: 20"-W x 5"-D

LV Compartment Base Wireway Dimensions: 20"-W x 5"-D

Cabinet Depth: 24"

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

Weight: 6,834 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-DMT-1MVA-YE-LT-DF-A6-BF-CS-2C6-M1 Industrial Pad Mount Transformer from Larson Electronics 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 makes 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 1 MVA, the industrial transformer features a primary voltage of three-phase 12000V Delta and a secondary voltage of three-phase 480Y/277 Wye-N. The unit has a primary loop feed for dual installations and dead-front primary connections. We also offer systems with loop feed and live 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 for voltage.

The system features copper windings for high strength and thermal/electrical conductivity. This transformer consists of rectangular coil and 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-DMT-1MVA-YE-LT-DF-A6-BF-CS-2C6-M1 is air cooled and does not have fans or mounting provision for fans.

Enclosure Design: This pad mounted transformer is a compartmental design. The tank and housing are fabricated from 304L stainless 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 allows 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 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-DMT-1MVA-YE-LT-DF-A6-BF-CS-2C6-M1 FR-3 cooling fluid (KNAN) with a capacity of 212 gallons. We offer transformers with biodegradable 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.

Load Break Switch: This transformer is equipped with three independently operated 2-position load break switches. One is for the transformer, one is for the Primary A lines, and one is for the Primary B lines.

Valves: The MT-PML-R7-3P-DMT-1MVA-YE-LT-DF-A6-BF-CS-2C6-M1 is equipped with a pressure relief valve, fill valve and drain valve with sampler port.

Protection Fuses: This transformer contains bayonet protection fuses on the primary side. For units without protection fuses, upstream protection is provided. We recommend provisions for protection fuses when possible, as blown fuses may require more frequent oil changes.

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-DMT-1MVA-YE-LT-DF-A6-BF-CS-2C6-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 Faqs



Image:



Image:



Image:



Image:



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Export Control Classification Number (ECCN): EAR99

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- **Video2**(<https://www.youtube.com/watch?v=mN2qPmdLwW4>)
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