

MT-PML-R7-3P-DVD-1.5MVA-GC-RT-DF-A6-BF-CZ-2C2-M1

1.5 MVA Pad Mount Transformer - 25000V Delta Primary, 600Y/347 Grounded Wye Secondary - KNAN - Bell Green

Product ID: 311329

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



Image: MT-PML-R7-3P-DVD-1.5MVA-GC-RT-DF-A6-BF-CZ-2C2-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-DVD-1.5MVA-GC-RT-DF-A6-BF-CZ-2C2-M1 Pad Mount Transformer

Transformer Type: Pad Mounted, Compartmental-Type
Transformer Configuration: Liquid Filled Pad Mounted
Transformer Feed Type: Radial Feed
Operation: Step-Down Operation (Not Approved for Step-Up)
Phase: Three Phase
Capacity (w/o Fans): 1.5 MVA (1500 KVA)
Vector Group: Dyn1
Primary Voltage: 25000V
Primary Voltage Switch: N/A
Primary Voltage Class: 25 kV Class
Primary Phasor: Delta
Primary BIL: 125 KV
Secondary Voltage: 600Y/347
Secondary Voltage Class: 1.2 kV Class
Secondary Phasor: Grounded Wye
Secondary BIL: 30 kV
Frequency: 60 Hz
Temperature Rise: 65°C
Insulation Rating: Class E Insulation - 120°C, 248°F

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 12.29
Complies with ANSI / IEEE C57 12.34
Complies with ANSI / IEEE C57 12.35
Complies with ANSI / IEEE C62.11
Complies with ASTM D3487
Complies with ANSI / IEEE C57.12.70
High-Fire Point Insulating Fluid
Non-PCB Insulating Fluid
Tamper Proof Housing
Hinged Front Compartment Doors, Pad Lockable
NEMA 3R Wiring Compartment
Hot Stick Included, HV Door Mount
Penta-head Bolt Entry Assembly
Efficiency %: 99.30%
Based on transformer operating at 50% of nameplate base kVA.

Cooling Class: KNAN

Forced Air (Fans): Included, 600V, 60 Hz, 3-Ph

Tap Changer: 5-Position De-Energized Tap Changer

Tap Qty: (2) FCAN Above Taps, (2) FCBN Below Taps

Tap %: 2.5%

Tap Changer Switch Rating: 600-Amp, 25 kV

Tap Changer Switch Location: High Voltage (HV) [Left Side] Front Compartment

Impedance (Typical): 5.0-7.5% Typical

Primary Connection Type: Dead Front

Primary Termination Arrangement: In-Line Terminal Arrangement

Primary Termination: Externally Clamped Integral Bushings w/ Removable Studs, 600A Load Break Elbows. Size for 4/0 AWG Cable

Primary Connection Qty: (3) Primary Connections for use w/ Elbow Connectors

Primary Parking Stand Qty: (3) Welded Brackets for Installing Accessory Parking Stand Bushings

Primary Bushing Rating: 25 kV Class, 125 kV BIL, 600A, Load Break

Primary Neutral Connection: N/A

Primary Surge Arrestors: Included, (3) High Voltage Elbow Surge Arrestors

Primary Surge Arrestor Voltage Rating: 24 kV Class Elbow Arrestor

Primary Surge Arrestor MCOV Rating: 19.5 kVrms

Primary Over Current Protection (OCP): Bayonet Expulsion Fuses in series w/ Partial-Range Current-Limiting Fuses

Primary Over Current Protection Method: Fused, Oil-Immersed

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

Primary Grounding Provisions: (1) NEMA Ground Bar attached to tank via (2) Welded Ground Bungs in HV Cabinet

Secondary Connection Type: Dead Front

Secondary Termination Arrangement: Inline Terminal Arrangement

Secondary Connections: Externally Clamped Integral Bushings w/ Removable Studs

Secondary Connection Qty: (3) Secondary Connections for use w/ Elbow Connectors

Secondary Connection Supports: N/A

Secondary Over Current Protection (OCP): N/A

Secondary Neutral Connection: Secondary XO Neutral Internally Bonded to Tank

Secondary Grounding Provisions: (1) NEMA Ground Bar attached to tank via (2) Welded Ground Bungs in LV Cabinet

Neutral Grounding Resistor: Included, 5A Rating

Metering Current Transformer (CT): N/A

Metering Panel: N/A

Auxiliary Control Panel : Included Fan Control Panel

Load Break Switch: 2-Position Load Break Switch, T-Blade Type

Load Break Switch Qty: (1)

Load Break Switch Rating: 600-Amp, 25 kV

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: FR-3 Insulating Fluid - Non-PCB Fluid

Fluid (Oil) Capacity*: 281 Gallons

Fluid (Oil) Weight*: 2,160 Lbs

Liquid Level Indicator: Analog Dial Gauge, with one set of contacts

Liquid Temperature Indicator: Analog Dial Gauge, with one set of contacts

Winding Temperature Indicator: Included

Pressure/Vacuum Indicator: Analog Dial Gauge

Pressure Relief Device: Included, Automatic Action

Rapid Pressure Rise Relay: Included

Heater: Included, Strip Type, 120V Rated

Load Losses Based on 85°C Reference Temp.

No Load Loss (in watts): +/- 1,900W

Full Load Loss (in watts) at 100%: +/- 10,500W

Total Load Loss (in watts) at 100%: +/- 12,400W

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

Total Load Loss (in watts) at 50%: +/- 4,375W

Note: Losses offered are typical only, not guaranteed

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

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

Pressure Integrity Test

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

Gas Sampler Valve: Included, Schrader Valve
Fill Valve: 1" NPT Port w/ Removable Bolt Plug
Fill Valve Location: Front Compartment
Drain Valve: 1" NPT Port w/ 5/8" NPT Sampler Valve
Drain Valve Location: Front Compartment
Winding Material: Copper
Ambient Temperature Rating: 40°C
Sound Level: 60 dBA
Elevation (Altitude): 3300ft (1000 meters) Above Sea Level
Core Material: Grain Oriented Silicon Steel
Tank Material: Coated Steel
Cabinet Material: Coated Steel
Base Platform Material: Coated Steel
Portability: Lifting lugs, provisions for jacking under base, w/ base construction suitable for using rollers or skidding
Housing Type: Compartmental Air-Filled Cabinet w/ Locking Doors, HV Compartment Left, LV Compartment Right, Steel Barrier Separation, HV Door Spring-Loaded Release Pin in LV Compartment
Enclosure Rating: NEMA 3R Weatherproof Wiring Cabinet, Sealed Tank
Seismic Rating: Yes
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
HV Compartment Base Wireway Dimensions*: 20"-W x 5"-D
LV Compartment Base Wireway Dimensions*: 20"-W x 5"-D
MV/LV Compartment Cabinet Depth*: 24"-D
Tank Cover Access Handhole: N/A
Dimensions*: 91"-W, 77"-D, 75"-H
Dry Weight (w/o Oil)*: 4,217 Lbs
Total Weight (Liquid Filled)*: 10,830 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: 1-903-498-3364

E-mail: sales@larsonelectronics.com

The MT-PML-R7-3P-DVD-1.5MVA-GC-RT-DF-A6-BF-CZ-2C2-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 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 1500 KVA (1.5 MVA), the industrial transformer features a rated primary voltage of three-phase 25000V Delta and a secondary voltage of three-phase 600Y/347 Grounded Wye. The unit has a primary radial 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 for 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 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-DVD-1.5MVA-GC-RT-DF-A6-BF-CZ-2C2-M1 doesn't 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 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 1500 KVA (1.5 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-DVD-1.5MVA-GC-RT-DF-A6-BF-CZ-2C2-M1 features FR-3 cooling fluid (KNAN) with a capacity of 281 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.

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-DVD-1.5MVA-GC-RT-DF-A6-BF-CZ-2C2-M1 is equipped with a pressure relief valve, fill valve, and drain valve with sampler port.

Protection Fuses: This transformer contains protection fuses. For units without protection fuses, up stream 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-DVD-1.5MVA-GC-RT-DF-A6-BF-CZ-2C2-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



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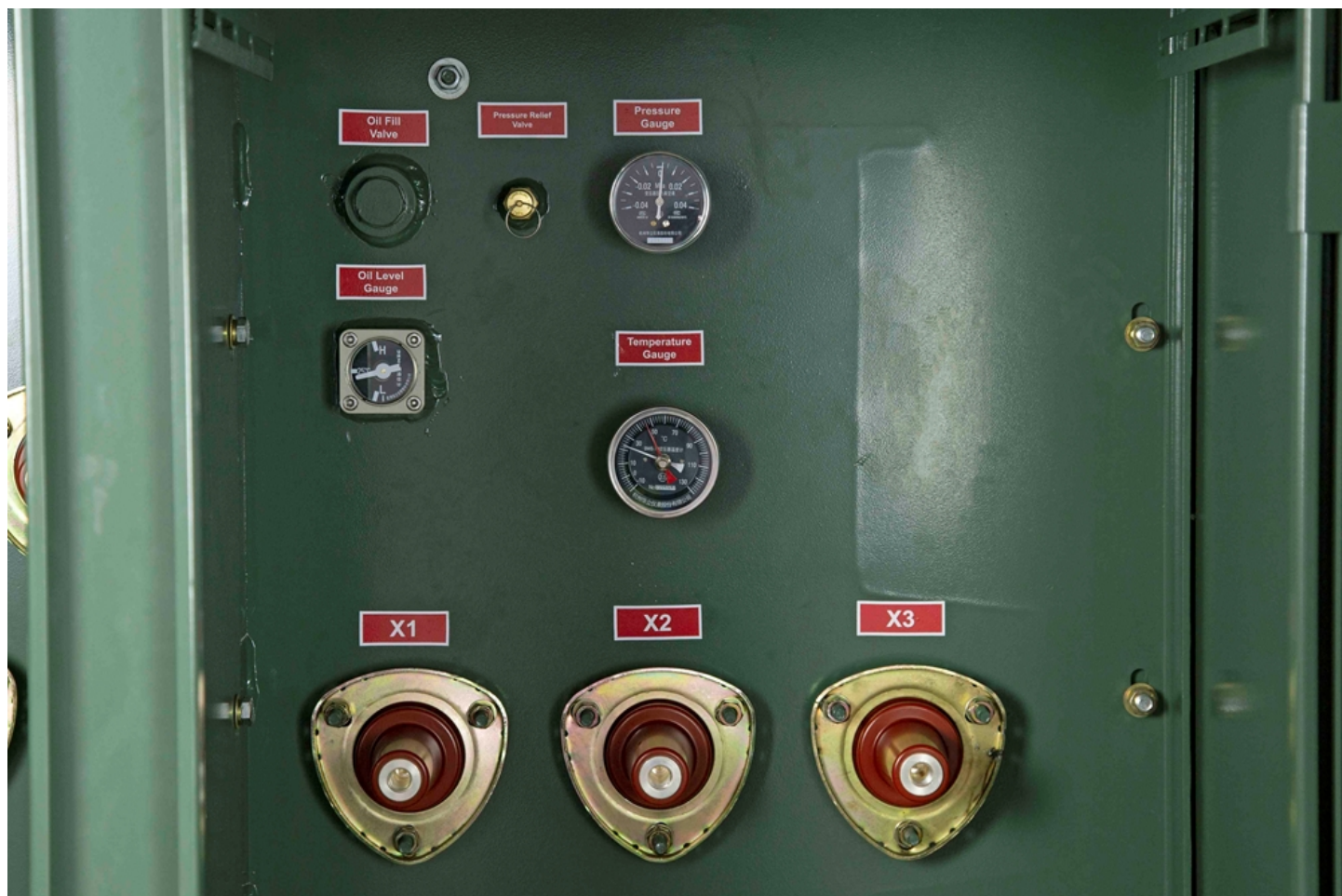


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Export Control Classification Number (ECCN): EAR99



Links (Click on the below items to view):

- **Operations Manual**(<https://www.larsonelectronics.com/images/product/Manual/311329.PDF>)
- **HigResPic1**(<https://www.larsonelectronics.com/images/product/HigResPic1/311329.JPG>)
- **HigResPic2**(<https://www.larsonelectronics.com/images/product/HigResPic2/311329.JPG>)
- **HigResPic3**(<https://www.larsonelectronics.com/images/product/HigResPic3/311329.JPG>)
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- **HigResPic6**(<https://www.larsonelectronics.com/images/product/HigResPic6/311329.JPG>)
- **Video1**(<https://www.youtube.com/watch?v=KlZsyVtvSWM>)
- **Video2**(<https://www.youtube.com/watch?v=mN2qPmdLwW4>)
- **ISO 9001 Certification**(<http://larsonelectronics.com/images/pdfdocs/ISO9001.PDF>)
- **Business Certificate**(<https://www.larsonelectronics.com/images/pdfdocs/w9.PDF>)
- **Shipping Time Map**(<https://www.larsonelectronics.com/images/product/ShippingTimeMap/ShippingTimeMap.pdf>)