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MT-PML-R4-3P-GMR-4.25MVA-YRJ-LT-DF-A6-BB-CZ-2B4-M2

4.25 MVA Step-Up Pad Mount Transformer - 820Y/462 Grounded Wye, 12470Y/7200 Wye-N, Copper, KNAN/Bell Green

Product ID: 301368



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-R4-3P-GMR-4.25MVA-YRJ-LT-DF-A6-BB-CZ-2B4-M2 3PH Pad Mount Transformer

Transformer Type: Pad Mounted, Compartmental-Type
Transformer Configuration: Liquid Filled Pad Mounted
Transformer Feed Type: Loop Feed
Operation: Step-Up or Step-Down Operation
Phase: Three Phase
Capacity: 4.25 MVA (4250 KVA)
Vector Group: -
Primary Voltage: 800GrdY/462
Primary Voltage Class: 1.2 kV Class
Primary Phasor: Grounded Wye
Primary BIL: 30 KV
Secondary Voltage: 12470Y/7200
Secondary Voltage Class: 15 kV Class
Secondary Phasor: Wye-N
Secondary BIL: 95 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, Target 6%

Primary Connection Type: Dead Front

Primary Termination: Externally Clamped Integral Bushings w/ Removable Studs, 600A

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
Pentahead 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
H0 and X0 not connected internally
Viewing of gauges unobstructed by LV bushing supports
SS Riveted Nameplate
External Bar Code Label
Warning Label
Non-PCBs Label
KVA Stenciled Externally
Voltage Stenciled Externally
Shipped on pallet on open flatbed
Pallet Skid Facing Outward Sides of Truck

Efficiency %: 98.00%
Based on transformer operating at 50% of nameplate base kVA.

Dead Break Elbows
Primary Connection Qty: (6)
Primary Bushing Rating: 15 kV Class, 95 kV BIL, 600A Dead Break
Primary Neutral Connection: External Primary Neutral H0 Porcelain Bushing w/ NEMA 4-Hole Spade
Primary Surge Arrestors: High Voltage Elbow Surge Arrestors, Included
Primary Surge Arrestor Voltage Rating: 10 kV Class
Primary Surge Arrestor MCOV Rating: 8.4 kVrms
Primary Over Current Protection (OCP): (1) Bayonet Type Expulsion Fuse in Series w/ (1) Partial-Range Current-Limiting Fuse
Primary Over Current Protection Method: Fused
Primary Over Current Protection Holder: Bayonet Fuse Holder w/ Drip Shield
Primary Grounding Provisions: (1) NEMA Ground Bar attached to tank via (2) Welded Ground Bungs in HV Cabinet
Primary Neutral Grounding Provisions: (1) Welded Ground Bung, 1/2”-13 UNC Tapped Hole, 7/16” Deep Bung in HV Cabinet
Secondary Connection Type: Live Font
Secondary Connections: NEMA Spade Terminals, Externally Clamped
Secondary Connection Qty: (4), Staggered Terminal Arrangement, w/ Phenolic Spade End Supports
Secondary Over Current Protection (OCP): N/A
Secondary Grounding Provisions: (1) NEMA Ground Bar attached to tank via (2) Welded Ground Bungs in LV Cabinet
Secondary Neutral Grounding Provisions: (1) Welded Ground Bung, 1/2”-13 UNC Tapped Hole, 7/16” Deep Bung in LV Cabinet
Metering Current Transformer (CT): N/A
Metering Panel: N/A
Auxilary Control Panel : N/A
Load Break Switch: 4-Position Load Break Switch
Load Break Switch Qty: (1)
Load Break Switch Location: High Voltage (HV) Front Compartment
Efficiency Standard(s): Meets ANSI/IEEE Standards
Electrostatic Shield (Including Core and Coils): One-foil type, located between primary and secondary windings, Bonded Externally to Ground in LV Cabinet
K-Factor Rating (Harmonic Mitigation): K-0 (Standard)
Pulse Drive Rating: N/A
Insulation Fluid: Biodegradable Natural Vegetable Oil Ester Insulating Fluid - Non-PCB Fluid
Fluid Capacity: 560 Gallons
Fluid Weight*: 560 Gallons
Liquid Level Indicator: Magnetic Analog Dial Gauge w/ (4) Dry Type Form C Auxiliary Contacts for Remote Alarms (2NO + 2NC) located in Aux Control Cabinet
Temperature Indicator: Analog Dial Gauge w/ (4) Dry Type Form C Auxiliary Contacts for Remote Alarms (2NO + 2NC) located in Aux Control Cabinet
Pressure/Vacuum Indicator: Analog Dial Gauge w/ (4) Dry Type Form C Auxiliary Contacts for Remote Alarms (2NO + 2NC) located in Aux Control Cabinet
Pressure Relief Device: Automatic Action w/ Pull Tab, Cracking Pressure @ 10 PSIG, Releasing Pressure @ 8 PSIG, Flow @ 15 PSIG (50 SCFM) @ 14.7 PSGI
Gas Sampler Valve: Included, Schrader Valve
Fill Valve: 1" NPT Port w/ Removable Bolt
Fill Valve Location: Front Compartment
Drain Valve: 1" NPT Port w/ 5/8" Sampler Valve
Drain Valve Location: Front Compartment
Winding Material: Copper
Ambient Temperature Rating: 40°C
Sound Level: 64 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
Portability: Lifting lugs, provisions for jacking under base, w/ base construction suitable for using rollers or skidding
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
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:21"-7 x 7"-D
LV Compartment Base Wireway Dimensions: 26"-W x 7"-D

Load Losses Based on 85°C Reference Temp.
No Load Loss (in watts)): +/- 7,547W

Full Load Loss (in watts) at 100%: +/- 30,484W

Total Load Loss (in watts) at 100%: +/- 38,030W

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

Total Load Loss (in watts) at 50%: +/- 15,147W

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

Special Orders - Requirements
Contact us for special requirements

Cabinet Depth: 24"

Dimensions: 118"-W x 89"-D x 85"-H

Dry Weight*: 9,921 Lbs

Total Weight (Liquid Filled)*: 16,424 Lbs

*Please note that numbers are approximate and subject to change

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The MT-PML-R4-3P-GMR-4.25MVA-YRJ-LT-DF-A6-BB-CZ-2B4-M2 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. The MT-PML-R4-3P-GMR-4.25MVA-YRJ-LT-DF-A6-BB-CZ-2B4-M2 is designed to step up power fed to it from renewable energy sources and feed that current to the grid.

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

Transformer Features: With a transformer rating of 4.25 MVA (4250 kVA), the industrial transformer features a primary voltage of three-phase 800GrdY/462 Grounded Wye and a secondary voltage of three-phase 12470Y/7200 Wye-N. This transformer is designed for reverse feed applications, including stepping up low voltage output from solar inverters and diesel powered generators for feeding to the local utility grid. The MT-PML-R4-3P-GMR-4.25MVA-YRJ-LT-DF-A6-BB-CZ-2B4-M2 is ideal for use in renewable and emergency backup energy systems. It is designed to take power fed to it from customer provided power sources that are part of emergency energy systems (such as solar systems, battery backups, and generators) step up that current, and feed it into the electrical grid.

Copper transformer winding material helps improve performance, reduce weight and lower cost. Compared to copper, aluminum 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-R4-3P-GMR-4.25MVA-YRJ-LT-DF-A6-BB-CZ-2B4-M2 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 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 4000 KVA (4 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-R4-3P-GMR-4.25MVA-YRJ-LT-DF-A6-BB-CZ-2B4-M2 features biodegradable cooling fluid (KNAN) with a capacity of 350 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% loan 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-R4-3P-GMR-4.25MVA-YRJ-LT-DF-A6-BB-CZ-2B4-M2 is equipped with a pressure relief valve, fill valve, and drain valve with sampler port.

Protection Fuses: This transformer does not contain 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-R4-3P-GMR-4.25MVA-YRJ-LT-DF-A6-BB-CZ-2B4-M2 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: Step-Up operations from solar generation arrays, step-up generators, back-feeding electrical grids, renewable energy generation, windmills, commercial generators, battery back-up arrays, emergency power generation, mini grids, and any application where low voltage needs to be stepped up to medium voltage.

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)