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MT-PML-R7-3P-GMR-225KVA-YT-LT-DF-A6-BF-CS-2B4-M1

225 KVA Pad Mount Transformer - 12470Y/7200 Grounded Wye Primary, 208Y/120 Wye-N Secondary - FR-3 Fluid /KNAN - 304 Stainless Steel

Product ID: 316230



Image: MT-PML-R7-3P-GMR-225KVA-YT-LT-DF-A6-BF-CS-2B4-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-GMR-225KVA-YT-LT-DF-A6-BF-CS-2B4-M1 Pad Mount Transformer

Transformer Type: Pad Mounted, Compartmental-Type
Transformer Configuration: Liquid Filled Pad Mounted
Transformer Feed Type: Loop Feed (Feed Through)
Operation: Step-Down Operation (Not Approved for Step-Up)
Phase: Three Phase
Capacity: 225 KVA
Vector Group: YNyn0
Primary Voltage: 12470Y/7200
Primary Voltage Switch: N/A
Primary Voltage Class: 15 kV Class
Primary Phasor: Grounded Wye
Primary BIL: 95 KV
Secondary Voltage: 208Y/120
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
Tap Changer: 5-position Tap Changer
Tap Qty: (2) FCAN Above Taps, (2) FCBN Below Taps

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 C57.12.70
Complies with ANSI / IEEE C62.11
Complies with ASTM D3487
Penta-head Bolt Entry Assembly
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

Efficiency %: 99.00%
Based on transformer operating at 50% of nameplate base kVA.

Load Losses Based on 85°C Reference Temp.
No Load Loss (in watts): +/- 400W
Full Load Loss (in watts) at 100%: +/- 2,300W

Tap %: 2.5%

Tap Changer Switch Rating: 200-Amp, 15 kV

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

Impedance (Typical): 1.2-6.0%

Primary Connection Type: Dead Front

Primary Termination Arrangement: V Terminal Arrangement

Primary Termination: Externally Clamped Well Bushings w/ Removable Studs, 200A Load Break Elbows, w/ Load Break Inserts (Elastimold)

Primary Connection Qty: (6) Primary Connections for use w/ Elbow Connectors

Primary Parking Stand Qty: (6) Welded Brackets for Installing Accessory Parking Stand Bushings

Primary Bushing Rating: 15 kV Class, 95 kV BIL, 200A, Load Break

Primary Neutral Connection: Primary HO Neutral Internally Bonded to Tank

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

Primary Surge Arrestor Voltage Rating: 15 kV Class Elbow Arrestor

Primary Surge Arrestor MCOV Rating: 12.7 kVrms

Primary Over Current Protection (OCP): Bayonet Expulsion 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: Live Front

Secondary Termination Arrangement: Staggered Terminal Arrangement

Secondary Connections: Aluminum Alloy Stud Mount Terminals, 600V, Accommodate with (6) 500 Kcmil - #10 AWG Cables, (RLS500-6I)

Secondary Connection Qty: (4) Externally Clamped One-Piece Epoxy Bushings Copper Threaded Studs

Secondary Connection Supports: N/A

Secondary Over Current Protection (OCP): N/A

Secondary Neutral Connection: Secondary X0 Neutral Grounded to Tank via 1/2”-13 UNC Tapped Hole, 7/16” Deep Bung & Copper Ground Strap

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

Metering Current Transformer (CT): N/A

Metering Panel: N/A

Auxiliary Control Panel: N/A

Load Break Switch: 4-Position Load Break Switch

Load Break Switch Qty: (1)

Load Break Switch Rating: 200-Amp, 15 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*: 126 Gallons

Fluid (Oil) Weight*: 970 Lbs

Liquid Level Indicator: Analog Dial Gauge

Temperature Indicator: Analog Dial Gauge

Pressure/Vacuum Indicator: Analog Dial Gauge

Pressure Relief Device: Included, Automatic Action

Fault Indicator: N/A

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: 55 dBA

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

Total Load Loss (in watts) at 100%: +/- 2,700W

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

Total Load Loss (in watts) at 50%: +/- 942W

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*

Core Material: Grain Oriented Steel
Tank Material: 304 Stainless Steel
Cabinet Material: 304 Stainless Steel
Base Platform Material: 304 Stainless 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*: 16"-W x 5"-D

MV/LV Compartment Cabinet Depth*: 20"-D
Tank Cover Access Handhole: N/A
Dimensions*: 61"-W x 49"-D x 69"-H
Dry Weight (w/o Oil)*: 1,463 Lbs
Total Weight (Liquid Filled)*: 3,420 Lbs
*Please note that numbers are approximate and subject to change

Special Orders - Special Requirements
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The MT-PML-R7-3P-GMR-225KVA-YT-LT-DF-A6-BF-CS-2B4-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 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 225 KVA, the industrial transformer features a primary voltage of three-phase 12470Y/7200 grounded Wye and a secondary voltage of three-phase 208Y/120 Wye-N. The unit has a primary loop feed for daisy chain installations and dead-front primary connections. We also offer systems with radial 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 in voltage.

The system features copper windings for high strength and thermal/electrical conductivity. This transformer consists of a 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-GMR-225KVA-YT-LT-DF-A6-BF-CS-2B4-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 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 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 225 KVA. 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-GMR-225KVA-YT-LT-DF-A6-BF-CS-2B4-M1 features FR-3 cooling fluid (KNAN). We offer transformers with biodegradable or mineral oil fluids, 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.

Load Breaker Switch: The transformer is equipped with a load break switch. This switch has four positions: A side on + transformer on, B side on + transformer on, A and B sides + transformer on, and A and B sides + transformer off.

Valves: The MT-PML-R7-3P-GMR-225KVA-YT-LT-DF-A6-BF-CS-2B4-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-GMR-225KVA-YT-LT-DF-A6-BF-CS-2B4-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.

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Frequently Asked Questions (FAQ)

There are no Faqs