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Product ID: 297617

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-R23-1P-GMR-75KVA-SZ-LT-DF-Z6-BM-CG-3B2-M1 Pad Mount Transformer

Transformer Type: Pad Mounted, Compartmental-Type II
Transformer Configuration: Liquid Filled Pad Mounted
Transformer Feed Type: Loop Feed
Polarity: Additive
Phase: Single Phase (Connects to 3-Phase electrical grid)
Capacity: 75 KVA
Vector Group: II6
Primary Voltage: 12470GrdY/7200
Primary Voltage Switch: N/A
Primary Voltage Class: 15 kV Class
Primary Phasor: Grounded Wye
Primary BIL: 95 KV
Secondary Voltage: 240/120V (L-N-L)
Secondary Voltage Class: 1.2 kV Class
Secondary Phasor: Dual Winding Single Phase
Secondary BIL: 30 KV
Frequency: 60 Hz
Temperature Rise: 65°C
Insulation Rating: Class E Insulation - 120°C, 248°F
Cooling Class: ONAN; Self-Cooled
Forced Air (Fans): None
Tap Changer: N/A
Tap Qty: N/A
Tap %: N/A

Ratings

Meets/Exceeds DOE 2016 Efficiency Ratings
Meets/Exceeds CSA Efficiency Ratings
Complies with ANSI / IEEE C57.12.00
Complies with ANSI / IEEE C57.12.21
Complies with ANSI / IEEE C57.12.25
Complies with ANSI / IEEE C57 12.28
Complies with ANSI / IEEE C57 12.29
Complies with ANSI / IEEE C57 12.35
Complies with ANSI / IEEE C57 12.38
Complies with ANSI / IEEE C57.12.70
Complies with ANSI / IEEE C57.12.110
Complies with ANSI / IEEE C57.12.131
Complies with ANSI / IEEE C62.11
Complies with ANSI / IEEE C62.22
Complies with ANSI / IEEE 386
Complies with ANSI / IEEE C2
Complies with ANSI / IEEE C37.47
Complies with ANSI Z535.4
Complies with ASTM D3487
Complies with ASTM D6871
Complies with NEMA 260-1996
Complies with 10 CFR Part 431
Complies with CSA C2.1-06
Complies with CSA C50

Tap Changer Switch Rating: N/A
Tap Changer Switch Location: N/A
Impedance: 1.4-2.4% Typical
Primary Connection Type: Dead Front
Primary Termination Arrangement: ANSI Type II Arrangement
Primary Termination: Externally Clamped Well Bushings w/ Removable Studs, 200A Load Break Elbows w/ Inserts
Primary Connection Qty: (2) Primary Connections for use w/ Load Break Elbow Connectors
Primary Parking Stand Qty: (1) Welded Bracket for Installing Accessory Parking Stand Bushings
Primary Bushing Rating: 8.3/14.4kV, 95 kV BIL, 200A, Load Break
Primary Surge Arrestors: (1) Under Oil, In-Tank Surge Arrestor
Primary Surge Arrestor Voltage Rating: 10 kV Class
Primary Surge Arrestor MCOV Rating: 8.4 kVrms
Primary Over Current Protection (OCP): (1) C09 Curve, 25-Amp Rated Dual Element Bayonet-type current-sensing fuse w/ draw out fuse holder, in series with (1) A03 Curve liquid immersed, in-tank mounted Isolation Link.
Primary Over Current Protection Method: Bayonet Fuse in Series w/ Isolation Link
Primary Over Current Protection Holder: Hot-Stick Operable Bayonet Fuse Holder w/ Flapper Valve and External Drip Shield
Primary Neutral Connection: Primary H2 Neutral Internally Bonded to Tank
Primary Grounding Provisions: (1) Welded Ground Bung, 1/2”-13 UNC Tapped Hole, 7/16” Deep Bung, w/ Grounding Terminal Clamp for 2/0-8 AWG Stranded Wire

Secondary Connection Type: Live Font

Secondary Termination Arrangement: ANSI Type II Arrangement
Secondary Termination: Externally Clamped One-Piece Epoxy Bushings w/ 5/8"-11 x 1-1/2" Long Copper Threaded Studs
Secondary Over Current Protection (OCP): N/A
Secondary Connections: (1) Jam Nut on X1 & X3, (2) Jam Nuts on X2
Secondary Connection Qty: (3)
Secondary Neutral Connection: Secondary X2 Neutral Grounded to Tank via 1/2”-13 UNC Tapped Hole, 7/16” Deep Bung & Copper Ground Strap
Secondary Grounding Provisions: (1) Welded Ground Bung, 1/2”-13 UNC Tapped Hole, 7/16” Deep Bung, w/ Grounding Terminal Clamp for 2/0-8 AWG Stranded Wire
Metering Current Transformer (CT): N/A
Metering Panel: N/A
Auxiliary Control Panel : N/A
Load Break Switch: 4-Postion LBOR, Hot Stick Operable
Load Break Switch Qty: 1
Load Break Switch Rating: 200-Amp, 15 kV
Load Break Switch Location: Front Compartment
Efficiency Standard(s): Meets DOE 2016 Standards, Meets CSA Standards Meets ANSI/IEEE Standards
K-Factor Rating (Harmonic Mitigation): K-1 (Standard)
Pulse Drive Rating: N/A
Insulation Fluid: Mineral Oil Insulating Fluid - Non-PCB Fluid
Fluid (Oil) Capacity*: 66 Gallons
Fluid (Oil) Weight*: 595.24 lb
Liquid Level Indicator: Fill Plug, for Oil Level at 25°C Ambient
Temperature Indicator: N/A
Pressure/Vacuum Indicator: N/A
Pressure Relief Device: Automatic Action, Hot-Stick Operable, Cracking Pressure @ 10 PSIG, Releasing Pressure @ 8 PSIG, Flow @ 15 PSIG (50 SCFM) @ 14.7 PSGI
Fault Indicator: N/A
Gas Sampler Valve: N/A
Fill Valve: 1/2" NPT w/ Removable Bolt Plug
Fill Valve Location: Front Compartment, LV Side

Complies with CSA C88
Complies with CSA C88.1
Complies with CSA C88-16
Complies with CSA C227.3
Complies with CSA C802.1
Complies with CSA C802.2
Complies with CSA C802.3

Features

Pentahead Bolt Entry Assembly
High-Fire Point Insulating Fluid
Non-PCB Insulating Fluid
Tamper Proof Housing
NEMA 3R Wiring Compartment
Lift-Up Pad lockable Lid

Efficiency: 98.70%

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

Load Losses Based on 85°C Reference Temp.

No Load Loss (in watts)*: +/- 104W
Load Loss (in watts)*: +/- 377W
Total Load Loss (in watts)*: +/- 481W

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

Labeling:

Externally Stencilled (Painted) KVA Rating
Externally Stencilled (Painted) Primary Voltage Rating
External Non-PCB Label
External Warning & Danger Label
External Barcode Label
Internal Busing & Accessory Labeling
(2) 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 Test

Shipping:

Drain Valve: 1/2" NPT w/ Removable Bolt Plug, w/o Sampler Valve
Drain Valve Location: Front Compartment, LV Side
Winding Material: Copper

Ambient Temperature Rating: 40°C

Ambient Operating Temperature Range: -40°C to +40°C (-50°F to +104°F)

Sound Level: 51 dBA
Elevation (Altitude): 3300ft (1000 meters) Above Sea Level or Below
Core Material: Grain Oriented Steel
Tank Material: Coated 409 Stainless Steel

Cabinet Material: Coated 409 Stainless Steel

Base Platform Material: Coated 304 Stainless Steel
Portability: Lifting lugs
Housing Type: Low Profile Air-Filled Cabinet w/ Locking Hinged Door, HV/LV in Same Compartment ,Tamper Resistant, w/ Pad-lockable Lift-up Lid
Enclosure Rating: NEMA 3R Weatherproof Wiring Cabinet, Sealed Tank
Paint Type: Weatherproof and UV Resistant Epoxy Coating and Undercoating
Finish Color: Munsell™ 7.0 GY 3.29/1.5 Bell Green
Mounting: Pad Mount, w/ (2) Hold-Down Cleats
Compartment Locking: 1/2" Eye-Hole w/ Hinged Strap for accepting Padlocks, 1/2"-13 Captive, Spring-Loaded Pentahead Bolt w/ Floating Nut Assembly
Base Access Hole: (1) 2.5" OD Access Hole in Center of LV side on front of transformer base sill, w/ 304 Stainless Steel Cover Plate and (2) Mounting Holes Cover
Conduit Opening: Bottom Feed Underground Entry/Exit
Compartment Base Wireway Dimensions*: 37"-L x 21"-D
Compartment Cabinet Depth: 19"-D
Dimensions*: 45.4"-L x 31"-W x 32.7"-H
Dry Weight (w/o Oil)*: 617.25 lb
Total Weight (Liquid Filled)*: 1433 lb

*Please note that numbers are approximate and subject to change

Shipped on pallet on open flatbed
Palletized on Wooden Pallet w/ Skid Pockets
Pallet Skid Facing Outward Sides of Truck
Note: *For low quantity purchases, enclosed truck can be requested*
Note: *Crated shipping in lieu of palletizing can be done upon request for an additional fee*

Cross for Duke Energy DEF Item Number 4154100

Complies with Specification D-Single Phase Padmounted Distribution Transformers
Hybrid 409/304 Design
8.3/14.4 kV Rated Load Break Inserts
Copper Studs & Jam Nuts Secondary Connections
C09 Fuse w/ A03 Isolation Link
Under Oil, In-Tank 10 kV Surge Arrestors
2.5" access service hole on LV side
(2) Nameplates: Tank Face and Tank Back
Duke Energy Temporary Barcode Label
Duke Energy Compliant Labeling & Stenciling

Special Orders - Special Requirements
Contact us for special requirements
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E-mail: sales@larsonelectronics.com

The MT-PML-R23-1P-GMR-75KVA-SZ-LT-DF-Z6-BM-CG-3B2-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 75 kVA, the industrial transformer features a primary voltage of single-phase 12470Y/7200 Grounded Wye and a secondary voltage of single-phase 240/120V (L-N-L). The unit has a primary loop feed and dead-front primary connections. This transformer is not equipped with a primary tap changer. This pad mount transformer features primary well bushings and standard spade connectors on the secondary side. Equipped with copper windings, this transformer consists of one coil and two core loops.

The MT-PML-R23-1P-GMR-75KVA-SZ-LT-DF-Z6-BM-CG-3B2-M1 is air cooled and does not have fans or mounting provision for fans. This unit features a 60°C temperature rise for reduced heat waste, increased reliability and longer life. The transformer meets DOE 2016 efficiency standards. 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-R23-1P-GMR-75KVA-SZ-LT-DF-Z6-BM-CG-3B2-M1 features non-PCB containing (<1% at time of manufacturing) mineral oil insulation fluid. We offer transformers with FR-3 oil fluid, if needed.

Gauges: This transformer is not equipped with any gauges. This unit has an oil level plug for monitoring oil level at 25°C temperatures.

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. This pressure relief device is hot-stick operable with automatic release. The equipped automatic pressure relief device has a brass body for retarding corrosion from salt spray and is equipped with a synthetic rubber and elastomer gasket. The external outlet has a cover, is located on the low voltage side of the compartment so that discharge does not contaminate the high voltage bushings, and does not have an indicating pop-off type cover.

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 voltage under oil surge arresters on the primary and secondary 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 surge arresters that have mounting provisions for customer-provided surge arresters..

Load Break Switch: The MT-PML-R23-1P-GMR-75KVA-SZ-LT-DF-Z6-BM-CG-3B2-M1 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-R23-1P-GMR-75KVA-SZ-LT-DF-Z6-BM-CG-3B2-M1 is equipped with a fill valve and drain valve with sampler port.

Protection Fuses: This transformer contains bayonet protection fuse on the primary side in series with an in-tank mounted isolation link. 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-R23-1P-GMR-75KVA-SZ-LT-DF-Z6-BM-CG-3B2-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

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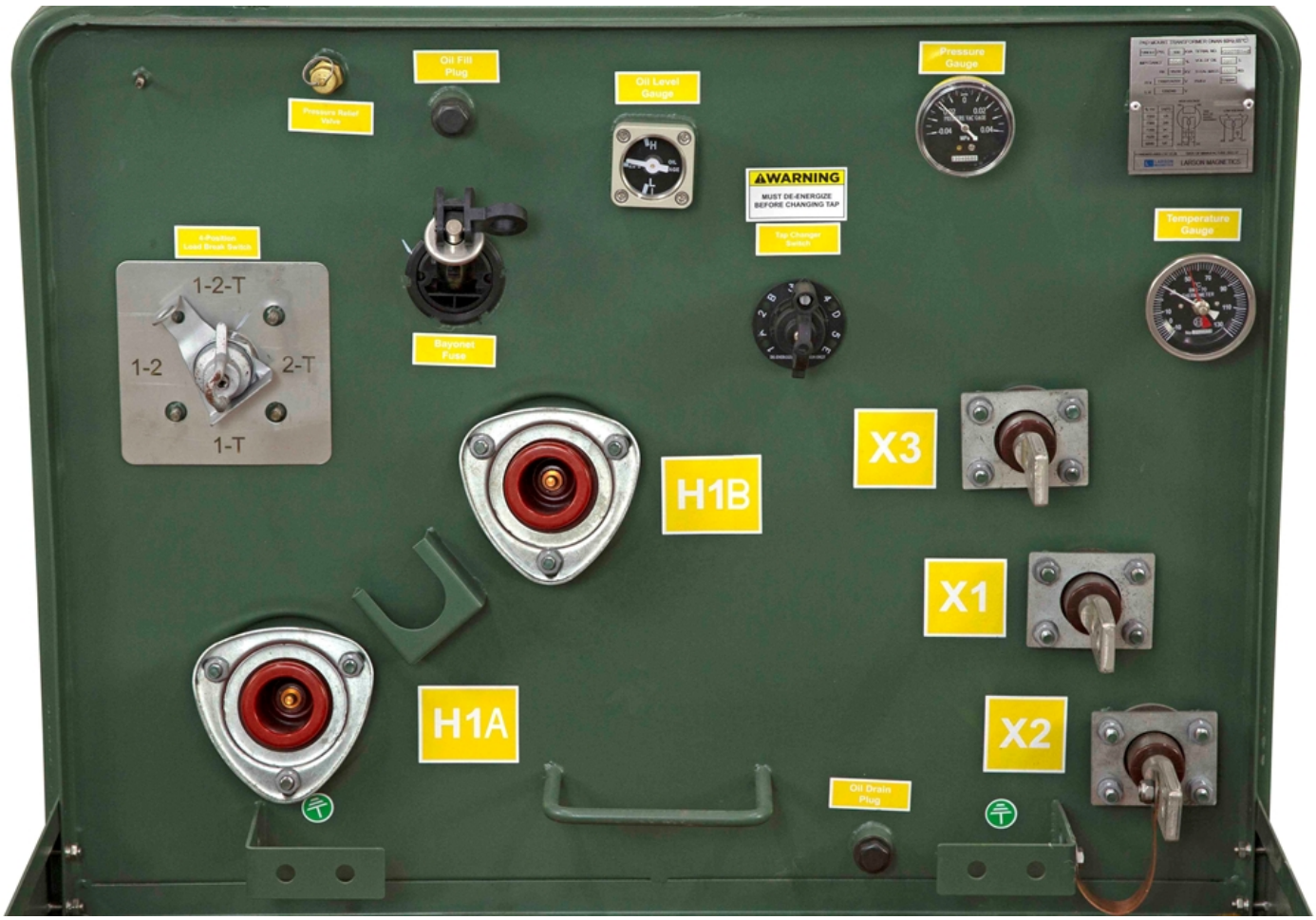


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Export Control Classification Number (ECCN): EAR99

Links (Click on the below items to view):

- **ANSI Certificate 1**(https://www.larsonelectronics.com//images/product/ANSICert1/297617.PDF)
- **Catalog Page - Product Series**(https://www.larsonelectronics.com//images/product/CatalogPage/297617.PDF)
- **Concrete Pad Dimensional Drawing**(https://www.larsonelectronics.com//images/product/PadDimensions/297617.PDF)
- **Dimensional Drawing 2D**(https://www.larsonelectronics.com//images/product/DimensionalDrawing/297617.PDF)
- **Electrical Nameplate Diagram**(https://www.larsonelectronics.com//images/product/Nameplate/297617.PDF)
- **FCC Certificate (Federal Communications Commission, USA)**(https://www.larsonelectronics.com//images/product/FCCCert/297617.PDF)
- **MSDS (Material Safety Data Sheet**(https://www.larsonelectronics.com//images/product/Msds/297617.PDF)
- **Operations Manual**(https://www.larsonelectronics.com//images/product/Manual/297617.PDF)
- **HigResPic1**(https://www.larsonelectronics.com//images/product/HigResPic1/297617.JPG)
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- **HigResPic5**(https://www.larsonelectronics.com//images/product/HigResPic5/297617.JPG)
- **Video1**(https://www.youtube.com/watch?v=mpt7J5hdJp8)
- **Video2**(https://www.youtube.com/watch?v=KIzsyVtvSWM)
- **Video3**(https://www.youtube.com/watch?v=mN2qPmdLwW4)
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