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**MT-PML-R15-1P-GRU-100KVA-SZ-LT-DB-A6-BM-2B4-M1**

# Austin Energy 1510-31-05, 100 KVA Pad Mount Transformer, 15000GrdY/8660 Pri., 240/120V Sec., Mineral Oil, ONAN, CU, Green, City of Austin Spec

**Product ID: 301587**

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



**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-R15-1P-GRU-100KVA-SZ-LT-DB-A6-BM-2B4-M1 Pad Mount Transformer | Ratings |
|---|---|
| **Transformer Type: Pad Mounted, Compartmental-Type II** | Meets/Exceeds DOE 2016 Efficiency Ratings |
| **Transformer Configuration: Liquid Filled Pad Mounted** | Meets/Exceeds CSA Efficiency Ratings |
| **Transformer Feed Type: Loop Feed** | Complies with ANSI / IEEE C57.12.00 |
| **Polarity: Additive** | Complies with ANSI / IEEE C57.12.21 |
| **Phase: Single Phase (Connects to 3-Phase electrical grid)** | Complies with ANSI / IEEE C57.12.25 |
| **Capacity: 100 KVA** | Complies with ANSI / IEEE C57 12.28 |
| **Vector Group: II6** | Complies with ANSI / IEEE C57 12.29 |
| **Primary Voltage: 15000GrdY/8660** | Complies with ANSI / IEEE C57 12.35 |
| **Primary Voltage Switch: N/A** | Complies with ANSI / IEEE C57 12.38 |
| **Primary Voltage Class: 15 kV Class** | Complies with ANSI / IEEE C57.12.70 |
| **Primary Phasor: Grounded Wye** | Complies with ANSI / IEEE C57.12.110 |
| **Primary BIL: 95 KV** | Complies with ANSI / IEEE C57.12.131 |
| **Secondary Voltage: 240V/120 (L-N-L)** | Complies with ANSI / IEEE C62.11 |
| **Secondary Voltage Class: 1.2 kV Class** | Complies with ANSI / IEEE C62.22 |
| **Secondary Phasor: Dual Winding Single Phase** | Complies with ANSI / IEEE 386 |
| **Secondary BIL: 30 KV** | Complies with ANSI / IEEE C2 |
| **Frequency: 60 Hz** | Complies with ANSI / IEEE C37.47 |
| **Temperature Rise: 65°C** | Complies with ANSI Z535.4 |
| **Insulation Rating: Class E Insulation - 120°C, 248°F** | Complies with ASTM D3487 |
| **Cooling Class: ONAN; Self-Cooled** | Complies with ASTM D6871 |
| **Forced Air (Fans): None** | Complies with NEMA 260-1996 |
| **Tap Changer: 5-Position Tap Changer, Hot Stick Operable** | Complies with 10 CFR Part 431 |
| **Tap Qty: (2) FCAN Above Taps, (2) FCBN Below Taps** | Complies with CSA C2.1-06 |
| **Tap %: 2.50%** | Complies with CSA C50 |
| **Tap Changer Switch Rating: 200-Amp, 15 kV** | Complies with CSA C88 |

**Tap Changer Switch Location: Front Compartment, High Voltage (HV) Left Side**
**Impedance: 1.0-4.5% Typical**
**Primary Connection Type: Dead Front**
**Primary Termination Arrangement: ANSI Type I 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/ Elbow Connectors**
**Primary Parking Stand Qty: (1) Welded Bracket for Installing Accessory Parking Stand Bushings**
**Primary Bushing Rating: 15 kV Class, 95 kV BIL, 200A, Load Break, IEEE 386 Color Red**
**Primary Surge Arrestors: (1) 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): C10 Curve, 25 Amp Rated Dual Rated Bayonet Fuse in series w/ (2) 80 Amp Partial Current Limiting Fuses (Wired in Parallel)**
**Primary Over Current Protection Method: Fused, Oil-Immersed**
**Primary Over Current Protection Holder: Bayonet Fuse Holder w/ Flapper Valve and External Drip Shield, Drip Shield Non-Metallic nad Removable**
**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 I Arrangement**
**Secondary Over Current Protection (OCP): N/A**
**Secondary Connections: NEMA Spade Terminals, 6-Hole Single Row Spade, Externally Clamped, Accepts up to (6) Single Lug connections with (1) cables per side of Spade connector**
**Secondary Connection Qty: (3) Externally Clamped One-Piece Epoxy Bushings w/ 5/8"-11 x 1-1/2" Long Copper Threaded Studs**
**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 - Non PCB Fluid**
**Fluid (Oil) Capacity*: 63.56 Gallons**
**Fluid (Oil) Weight*: 573.19 lb**
**Liquid Level Indicator: Analog Gauge**
**Temperature Indicator: Analog Gauge**
**Pressure/Vacuum Indicator: Analog Gauge**
**Pressure Relief Device: Automatic Action, Combination Fault Indicator & Pressure Relif Device, (comparable to IFD Corporation part number IFD-ORCA-10PSI-aA), Resettable, Installed on Tank Face Inside HV Cabinet**
**Fault Indicator: Combination Fault Indicator & Pressure Relif Device; External Fault Indicator Light Mounting Provisions (Light not included)**
**Gas Sampler Valve: N/A**
**Fill Valve: 1/2" NPT w/ Removable Bolt Plug, Fill Plug at 25°C Oil Level**
**Fill Valve Location: Front Compartment**
**Drain Valve: 1/2" NPT w/ Removable Bolt Plug, w/o Sampler Valve**
**Drain Valve Location: Front Compartment**
**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 Steel**

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 w/ HV/LV Barrier

**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)*: +/- 273W**

**Load Loss (in watts)*: +/- 1,105W**

**Total Load Loss (in watts)*: +/- 1,378W**

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

**Labeling:**
“HIGH VOLTAGE SIGN," "SIZE kVA,"
"ONE-CALL SYSTEM" "CLEARANCE REQUIRED,"
and "NO PCBs" labels
per Austin Energy #1000-13
External Barcode Label

Stainless Steel Riveted Nameplate w/ Barcode

**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:**
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 Austin Energy #: (insert Austin Energy part #)**
**Cross for AE MU-ID #: (insert Austin Energy mu-id)**
**Complies with Specification E-1581 & 1510- 31**

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**Cabinet Material: Coated Steel**
**Base Platform Material:Coated Steel**
**Portability: Lifting lugs, 5/8"-11 Thread, Compatible w/ 2.5"-" Lifting Bolts**
**Housing Type: Low Profile Air-Filled Cabinet w/ Locking Hinged Door, HV/LV in Same Compartment, w/ HV/LV Barrier, 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**
**Conduit Opening: Bottom Feed Underground Entry/Exit**
**Compartment Base Wireway Dimensions*: 41"-L x 21"-D**
**Compartment Cabinet Depth: 19"-D**
**Dimensions*: 41.34"-W x 45.28"-D x 29.53"-H**
**Dry Weight (w/o Oil)*: 881.83 lb**
**Total Weight (Liquid Filled)*: 1940.04 lb**
*Please note that numbers are approximate and subject to change

**Residentail**
HV/LV Barrier Between Bushings
30" Minimum Cabinet Width
16" HV & 14" LV Compartment Minimum Widths
Fault Indicator Light Provisions
Resettable Fault Indicator / Pressure Relief Device

**Special Orders - Special Requirements**
Contact us for special requirements
**Toll Free: 1-800-369-6671**
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**E-mail: sales@larsonelectronics.com**

**The MT-PML-R15-1P-GRU-100KVA-SZ-LT-DB-A6-BM-2B4-M1 Industrial Pad Mount Transformer from Larson Electronics is equivilant to Austin Energy # 1510-31-05. This unit complies with the City of Austin Electric Utility Department (Austin Energy) Specification E-1581 for TRANSFORMERS, SINGLE PHASE PADMOUNTED DISTRIBUTION 25 kVA THROUGH 250 kVA.**
***PLEASE NOTE: ANY FREE SHIPPING OFFERS DO NOT APPLY TO POWER DISTRIBUTION PANELS, TRANSFORMERS, OR SUBSTATIONS****
**MU-ID:** XFMRPM1PH120/240-100-LFR
**MU-REF:** 15103105
**MU-DESCRIPTION:** XFMR PM 1PH 120/240 100KVA LP FD RES
**Transformer Design Features:**
Built to 1510-31 for Residential Applications
15000GrdY/8660 High Voltage
95 kV HV BIL
240/120V Low Voltage
30 kV LV BIL
65°C Temp rise (85°C Hotspot)
HV lead length shall be sufficient to allow for 3.0" withdrawal of the bushing well
200A Primary Well Bushings
Type I Primary Bushing Layout
Primary Bay-O-Net type draw out the fuse in a flapper valve holder & removable drip shield (non metallic)
Primary Partial Current Limiting Fuse
HV/LV Barrier
Epoxy Secondary Bushings w/ Copper Studs
6-Hole Single Row Spade Secondary Bushings
Type I Secondary Bushing Layout
Mineral Oil, Non-PCBs Containing Cooling Fluid, ONAN Cooling Class
14.375" Minimum Cabinet Depth
30" Minimum Cabinet Width
16" HV Compartment Width (Left Side)
14" HV Compartment Width (Right Side)
Padlock Provisions & Pentahead Bolt Lock
19/64” hole in the upper left-hand corner 10” from the top and 10” from the left-hand side for customer provided fault indicator light w/ factory installed plug
Resettable Fault Indicator & Pressure Relief Device (comparable to IFD Corporation part number IFD-ORCA-10PSI-aA)
Transformer to fit on 60" x 60" Concrete Pad
Munsell Number 7GY 3.29/1.5 pad-mount green finish
Nameplate w/ Barcode
“HIGH VOLTAGE SIGN," "SIZE kVA," "ONE-CALL SYSTEM" "CLEARANCE REQUIRED," and "NO PCBs" labels per Austin Energy #1000-13
**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)

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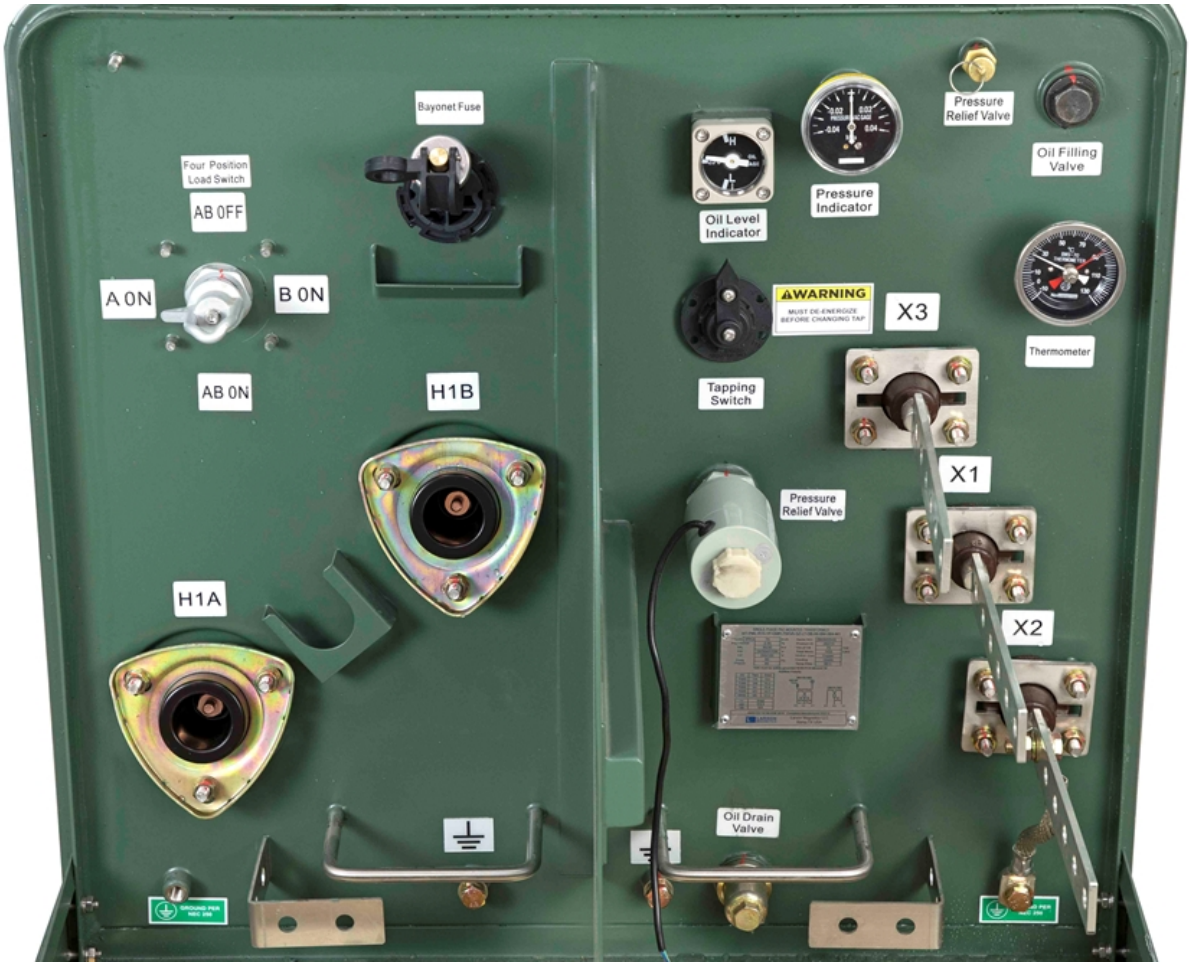






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**Export Control Classification Number (ECCN):** EAR99

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- **Video4**
- **ISO 9001 Certification**
- **Business Certificate**
- **Shipping Time Map**