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**MT-UPM-R106-1P-GMR-167KVA-SLZ-BB-A6-BM-CS-Z-M1**

# 012-05608 LUMA 167 KVA Overhead Distribution Transformer, Pole Mount, 12470GrdY/7200 Grounded Wye Pri., 120/240V Sec., Mineral Oil, Copper, ONAN - 304 Stainless, Asset Suite #59224

**Product ID: 316087**

**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-UPM-R7-1P-GMR-167KVA-SLZ-BB-A6-BM-CS-Z-M1 Pole Mount Overhead Transformer**

**Transformer Type: Overhead Distribution Transformer, Conventional Type**
**Transformer Configuration: Liquid Filled Pole Mounted**
**Transformer Polarity Type: Additive**
**Phase: Single Phase**
**Capacity: 167 KVA**
**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: 120/240V (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**
**Forced Air (Fans): None**
**Cooling Class: ONAN; Self-Cooled**
**Tap Changer: 5-Position Tap Changer w/ External Operating Handle**
**Tap Qty: (2) FCAN Above, (2) FCBN Below**

**Ratings**

Meets/Exceeds DOE 2016 Efficiency Ratings
Complies with ANSI / IEEE #C57.12.00
Complies with ANSI / IEEE #C57.12.20
Complies with ANSI / IEEE #C57.12.28
Complies with ANSI / IEEE #C57.12.31
Complies with ANSI / IEEE C57.12.70
Complies with ANSI / IEEE C57.12.80
Complies with ASTM D3487
Non-PCB Insulating Fluid
Lifting Lugs Included
100% Stainless Steel Construction, Corrosion Resistant

**Efficiency: 99.05%**
*Based on transformer operating at 50% of nameplate base kVA.*

**Load Losses Based on 85°C Reference Temp.**
**No Load Loss (in watts): +/- 137W**
**Full Load Loss (in watts): +/- 468W**
**Total Load Loss (in watts): +/- 605W**

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

**Tap %: 2.5%**
**Tap Changer Switch Location: Middle of Tank Body, Left of Mounting Provisions**
**Impedance: 1.0-4.5% Typical**
**Primary Connection Type: Live Bushing Lug**
**Primary Termination: Porcelain High Voltage Bushing**
**Primary Connection Qty: (2)**
**Primary Lightning Arrestors: N/A**
**Primary Lightning Mounting Provision: Mounting Provisions for Installing Lightning Arrestor on H1 & H2 Primary Terminals**
**Primary Lightning Arrestors Voltage Rating: N/A**
**Primary Lightning Arrestors MCOV Rating: N/A**
**Secondary Connection Type: Live Bushing Lug**
**Secondary Connections: Threaded Stud Terminals**
**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**
**Terminals: Tin Plated Primary and Secondary - Accepts Copper or Aluminum Connections**
**Grounding Provisions: (1) Lug w/ Grounding Strap, Tank Grounding Lug**
**Transformer Protection: N/A**
**Load Break Switch: N/A**
**Efficiency Standard(s): Meets DOE 2016 Standards, 10 CFR Part 431, 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 Capacity*: 33.73 Gallons**
**Fluid Weight*: 304.23 lb**
**Liquid Level Indicator: Internal In-Tank Oil Level Line**
**Temperature Indicator: N/A**
**Pressure/Vacuum Indicator: N/A**
**Pressure Relief Device: Included, Automatic Action, w/ Internal Fault Indicator Type Compatible w/ IFD, Vent Pressure 8-12 PSI, Resealing Pressure 5-8 PSI**
**Fault Indicator: Included**
**Oil Level Marking: Internal**
**Fill Valve: N/A (Tank Filled via Removable Lid)**
**Drain Valve: 1/2" NPT Port w/ Removable Bolt**
**Winding Material: Copper, Polarity Index 2.0**
**Ambient Temperature Rating: 40°C**
**Sound Level: 48 dBA**
**Elevation Level: N/A**
**Core Material: High Quality Grain Oriented Silicon Steel, w/ flat rolled and low loss permeability laminations**
**Tank Material: 304 Stainless Steel**
**Housing Material: 304 Stainless Steel w/ Corrosion Resistant Cover Band, Removable Top Cover**
**Hardware Material: Stainless Steel Hardware**
**Paint Type: Weatherproof and UV Resistant Epoxy Coating and Undercoating**
**Finish Color: ANSI 70 Gray**
**Mounting: Double Hanger Bracket**
**Mounting: Pole Mount via Hangar Brackets**
**Lifting Lugs: Included**
**Dimensions*: 43.31"-W x 35.04"-D x 51.18"-H**
**Tank Diameter*: 24" OD**
**Dry Weight*: 749.56 lb**
**Total Weight (Liquid Filled)*: 1542 lb**
*Please note that numbers are approximate and subject to change

**Labeling:**
Externally Stenciled (Painted) KVA Rating placed below LV bushing (min. dim. 3"W x 3"H, max. dim. 4"W x 4"H")
Externally Stenciled (Painted) Voltage Rating
External Non-PCB Label
External Warning & Danger Label
External Barcode Label
Stainless Steel Riveted Nameplate
Externally Stenciled (Painted) "STAINLESS STEEL" placed under KVA Rating label
Externally Stenciled (Painted) Property Number placed on top of transformer

**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
Polarity & Phase Relationship Test
Exciting Current Test
Impulse Test

**Special Orders - Special Requirements**
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**The MT-UPM-R106-1P-GMR-167KVA-SLZ-BB-A6-BM-CS-Z-M1 Overhead Distribution Pole Mounted Transformer from Larson Electronics offers powerful, reliable and efficient power distribution in 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. This power distribution system is designed for overhead, pole mount installations and use.**
***PLEASE NOTE: ANY FREE SHIPPING OFFERS DO NOT APPLY TO POWER***

***DISTRIBUTION PANELS, TRANSFORMERS, OR SUBSTATIONS****

**Transformer Features:** With a transformer rating of 167 kVA, the industrial transformer features a primary voltage of 12470GrdY/7200 Grounded Wye and a secondary voltage of single-phase 120/240V (L-L-N). This transformer connects to a three phase electrical grid system to provide single phase low voltage power for indoor distribution. This pole mount transformer features porcelain high-voltage, dual bushings on the primary side and three bushings on the secondary side. Equipped with Copper windings and a grain oriented steel core, this overhead distribution transformer consists of one coil and two core loops. Tin plated terminals on the primary and secondary side accepts copper or aluminum connections.

The MT-UPM-R106-1P-GMR-167KVA-SLZ-BB-A6-BM-CS-Z-M1 is air cooled and does not have fans or mounting provision for fans. This unit features a 65°C temperature rise for reduced heat waste, increased reliability and longer life. 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-UPM-R106-1P-GMR-167KVA-SLZ-BB-A6-BM-CS-Z-M1 features mineral oil insulation fluid. Internal marking is available for proper oil level monitoring. We offer transformers with FR-3 oil fluid, if needed.

**Gauges:** There are no gauges on this transformer. We can add liquid level, temperature and pressure/vacuum gauges at an additional cost. Standard liquid level, temperature and pressure/vacuum gauges are analog, manual reading types.

**Pressure Relief Device:** An automatic pressure relief device is included with this transformer.

**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 is not equipped with lightning arresters. Mounting provisions for installing customer provided lightning arrestor on the H1 and H2 primary terminal are included for installing arresters in-field.

**Valves:** The MT-UPM-R106-1P-GMR-167KVA-SLZ-BB-A6-BM-CS-Z-M1 is not equipped with fill or dtrain valves. The transformer can be filled via removing the top lid. A drain port w/ bolt plug is equipped.

**Protection Fuses:** This transformer does not contain fuses or circuit breakers. 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 and outdoor applications. Equipped with hangar brackets and lifting lugs, this overhead power distribution system can be mounted on poles.

**Benefits:** The MT-UPM-R106-1P-GMR-167KVA-SLZ-BB-A6-BM-CS-Z-M1 heavy-duty 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.

We offer completely self protected (CSP) pole mount overhead transformers at an additional cost.

**Applications:** General purposes, industrial sites, electrical rooms, public locations, 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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