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**MT-UPM-R117-1P-GMQ-167KVA-SNB.NF-BP-Z6-BM-CZ-2ZZ-M1**

# 167 KVA Overhead Distribution Transformer, Pole Mount, 13200Y/7620 Grounded Wye Primary, 4800/8320V x 2400/4160V Secondary - Mineral Oil Fluid /ONAN - Light Grey - No Tap Changer - National Grid ID 9300907

**Product ID: 312647**



**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-R117-1P-GMQ-167KVA-SNB.NF-BP-Z6-BM-CZ-2ZZ-M1 Pole Mount Overhead Transformer**

**Transformer Type: Overhead Distribution Transformer, Conventional Type**
**Transformer Configuration: Liquid Filled Pole Mounted**
**Transformer Polarity Type: -**
**Phase: Single Phase**
**Capacity: 167 KVA**
**Primary Voltage: 13200Y/7620**
**Primary Voltage Switch: N/A**
**Primary Voltage Class: 15 kV Class**
**Primary Phasor: Grounded Wye**
**Primary BIL: 95 kV**
**Secondary Voltage: 4800/8320V x 2400/4160 (L-N-L)**
**Secondary Dual Voltage Switch:** Included, Shipped In The High Position
**Secondary Voltage Class: 8.7 kV Class**
**Secondary Phasor: Dual Winding, Single Phase**
**Secondary BIL: 95 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: N/A**
**Tap Qty: N/A**
**Tap %: N/A**
**Tap Changer Switch Location: N/A**
**Impedance: 2.5% ± 7.5%**

**Ratings**

Meets/Exceeds DOE 2016 Efficiency Ratings
Meets/Exceeds CSA Efficiency Ratings
Complies with ANSI / IEEE C57 12.00
Complies with ANSI / IEEE C57 12.20
Complies with ANSI / IEEE C57 12.30
Complies with ANSI / IEEE C57 12.31
Complies with ANSI / IEEE C57 12.35
Complies with ANSI / IEEE C57.12.70
Complies with ANSI / IEEE C62.11
Complies with ANSI / IEEE C62.22
Complies with ANSI / IEEE C2
Complies with CAN / CSA C802.1-13
Complies with ANSI / IEEE C37.47
Complies with ANSI Z535.4
Complies with ASTM D3487
Complies with ASTM D6871
Complies with 10 CFR Part 431
Complies with CSA C2.2:06
Complies with CAN / CSA C50
Complies with CAN / CSA C233.1-87

**Features:**

Non-PCB Insulating Fluid
Lifting Lugs Included

**Primary Connection Type: Live Bushing Lug**
**Primary Termination: Porcelain High Voltage Bushing**
**Primary Connection Qty: (2)**
**Primary Lightning Arrestors: Included, (1) Polymer Housed Metal Oxide Varistor Heavy Duty Distribution Class Surge Arrester**
**Primary Lightning Arrestors Voltage Rating: 12 kV**
**Primary Lightning Arrestors MCOV Rating: 10.2 kV**
**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**
**Secondary Lightning Arrestors:** Included, (2) Polymer Housed Metal Oxide Varistor Heavy Duty Distribution Class Surge Arrester (Mounted On X1 and X3)
**Secondary Lightning Arrestors Voltage Rating:** 10 kV
**Secondary Lightning Arrestors Voltage Rating:** 8.4 kV
**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, 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 Capacity*: 33.73 Gallons**
**Fluid Weight*: 304.23 lbs**
**Liquid Level Indicator: Internal In-Tank Oil Level Line**
**Temperature Indicator: N/A**
**Pressure/Vacuum Indicator: N/A**
**Pressure Relief Device: Included, Automatic Action, Qualitrol 202 Series**
**Fault Indicator: N/A**
**Oil Level Marking: Internal**
**Fill Valve: N/A (Tank Filled via Removable Lid)**
**Drain Valve: 1/2" NPT Port w/ Removable Bolt**
**Wildlife Protector:** Included, Integral handwheel type, Central Moloney 703803 series with 703804-50 handwheel
**Winding Material: Copper**
**Ambient Temperature Rating: 40°C**
**Ambient Operating Temperature Range: -40°C to +40°C (-50°F to +104°F)**
**Sound Level: 55 dBA**
**Elevation Level: N/A**
**Core Material: Grain Oriented Steel**
**Tank Material: Coated Steel**
**Housing Material: Coated 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: Munsell™ 5BG 7.0/0.4 Light Grey (ANSI #70)**
**Mounting: Pole Mount via Double 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 lbs**
**Total Weight (Liquid Filled)*: 1,542 lbs**
*Please note that numbers are approximate and subject to change

Corrosion Resistant Cover Band

**Efficiency: 99.10%**
*Based on transformer operating at 50% of nameplate base kVA.*
**Load Losses Based on 85°C Reference Temp.**
**No Load Loss (in watts): +/- 455W**
**Full Load Loss (in watts): +/- 1,833W**
**Total Load Loss (in watts): +/- 2,288W**
***Note: Losses offered are typical only, not guaranteed***

**Labeling:**
Externally Stencilled (Painted) KVA Rating
Externally Stencilled (Painted) Voltage Rating
External Non-PCB Label
External Barcode Label
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: 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***

**Special Orders - Special Requirements**
Contact us for special requirements
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**Fax: 1-903-498-3364**
**E-mail:** sales@larsonelectronics.com

**The MT-UPM-R117-1P-GMQ-167KVA-SNB.NF-BP-Z6-BM-CZ-2ZZ-M1 Pole Mount Distribution Transformer from Larson Electronics is powerful and designed with the environment in mind. Suitable for both indoor and outdoor applications, the conventional type transformer provides increased reliability and protection against critical equipment failures.**
***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 MT-UPM-

R117-1P-GMQ-167KVA-SNB.NF-BP-Z6-BM-CZ-2ZZ-M1 pole mount distribution transformer is a single phase unit with a primary voltage of 13200Y/7620 Grounded Wye. It also provides a secondary voltage of 4800/8320V x 2400/4160, 60Hz. Featuring robust construction, this unit is equipped with an amorphous core. The conventional type transformer contains double bushings on the primary side and three bushings on the secondary side. Efficiency at 100% load is 99.12 percent.

This unit boasts a low cost of ownership and is highly energy efficient. Lower heat emissions mean less cooling is needed as well. The unit also features mineral oil insulation fluid (oil immersed) and copper windings.

**Mount:** The MT-UPM-R117-1P-GMQ-167KVA-SNB.NF-BP-Z6-BM-CZ-2ZZ-M1 is compatible with pole mounting applications.

**Applications:** General purposes.

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.

# Frequently Asked Questions (FAQ)