

**MT-UPM-R4-1P-DE-167KVA-SNC-BB-A3-BM-CZ-1ZZ-M2**

**167 KVA Overhead Distribution Transformer, Pole Mount, 480V Delta Primary, 7200V (L-L)**

**Secondary, Mineral Oil, Copper, ONAN**

**Product ID: 314773**



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-R4-1P-DE-167KVA-SNC-BB-A3-BM-CZ-1ZZ-M1 Pole Mount Overhead Transformer**

**Transformer Type: Overhead Distribution Transformer, Conventional Type**

**Transformer Configuration: Liquid Filled Pole Mounted**

**Transformer Polarity Type: Subtractive**

**Operation: Step-up Operation (Not Approved for Step-down)**

**Phase: Single Phase**

**Capacity: 167 KVA**

**Primary Voltage: 480V (L-L)**

**Primary Voltage Switch: N/A**

**Primary Voltage Class: 1.2 kV Class**

**Primary Phasor: Single Phase**

**Primary BIL: 30 kV**

**Secondary Voltage: 7200V (L-L)**

**Secondary Voltage Class: 1.2 kV Class**

**Secondary Phasor: Single Phase**

**Secondary BIL: 125 KV**

**Frequency: 100 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**

**Tap Qty: (2) FCAN Above, (2) FCBN Below**

**Tap %: 2.5%**

**Tap Changer Switch Location: Secondary (Medium Voltage) Side**

**Impedance: 3.0%**

**Primary Connection Type: Live Bushing Lug**

**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 #C57.12.80

Complies with ANSI / IEEE #C57.12.28

Complies with ANSI / IEEE #C57.12.31

Complies with ANSI / IEEE #C57.12.70

Complies with ASTM D3487

Lifting Lugs Included

Non-PCB Insulating Fluid

**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***

Primary Connections: Threaded Stud Terminals

Primary Connection Qty: (2)

Primary Neutral Connection: N/A

Secondary Connection Type: Live Bushing Lug

Secondary Termination: Porcelain High Voltage Bushing

Secondary Connection Qty: (2)

Secondary Lightning Arrestors: N/A

Secondary Lightning Mounting Provision: Mounting Provisions for Installing  
Lightning Arrestor on H1 & H2 Secondary Terminals

Secondary Lightning Arrestors Voltage Rating: N/A

Secondary Lightning Arrestors MCOV Rating: N/A

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 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

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

Winding Material: Copper

Ambient Temperature Rating: 40°C

Sound Level: 55 dBA

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

Core Material: Grain Oriented Steel

Tank Material: Coated Steel

Housing Material: Coated Steel w/ Corrosion Resistant Cover Band, Removable Top  
Cover, minimum 7 gauge

Hardware Material: Stainless Steel Hardware

Paint Type: Weatherproof and UV Resistant Epoxy Coating and Undercoating

Finish Color: White

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 lbs

Total Weight (Liquid Filled)\*: 1542 lbs

\*Please note that numbers are approximate and subject to change

#### Special Orders - Special Requirements

Contact us for special requirements

Toll Free: 1-800-369-6671

Intl: 1-903-270-1187

Fax: 1-903-498-3364

E-mail: [sales@larsonelectronics.com](mailto:sales@larsonelectronics.com)

**The MT-UPM-R4-1P-DE-167KVA-SNC-BB-A3-BM-CZ-1ZZ-M2 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 480V Delta and a secondary voltage of single-phase 7200V (L-L). This transformer connects to a single phase electrical grid system to provide single phase Medium voltage power for outdoor distribution. This pole mount transformer features porcelain high-voltage, dual bushings on the primary side and dual 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-R4-1P-DE-167KVA-SNC-BB-A3-BM-CZ-1ZZ-M2 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-R4-1P-DE-167KVA-SNC-BB-A3-BM-CZ-1ZZ-M2 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 secondary terminals are included for installing arresters in-field.

**Valves:** The MT-UPM-R4-1P-DE-167KVA-SNC-BB-A3-BM-CZ-1ZZ-M2 is not equipped with fill or drain 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, 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 outdoor applications. Equipped with hangar brackets and lifting lugs, this overhead power distribution system can be mounted on poles.

**Benefits:** The MT-UPM-R4-1P-DE-167KVA-SNC-BB-A3-BM-CZ-1ZZ-M2 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](mailto:sales@larsonelectronics.com) to discuss your specific requirements.









## **Frequently Asked Questions (FAQ)**