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MT-UPM-R7-1P-DNE-500KVA-SM-BB-A6-AM-CZ-1ZZ-M1

500 KVA Overhead Distribution Transformer, Pole Mount, 4800V Delta Primary, 277V Secondary, Mineral Oil/ONAN, Copper, Light Grey

Product ID: 313975

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-DNE-500KVA-SM-BB-A6-AM-CZ-1ZZ-M1 Pole Mount Overhead Transformer

Transformer Type: Overhead Distribution Transformer, Conventional Type
Transformer Configuration: Liquid Filled Pole Mounted
Transformer Polarity Type: Subtractive
Phase: Single Phase
Capacity: 500 KVA
Primary Voltage: 4800V
Primary Voltage Switch: N/A
Primary Voltage Class: 5 kV Class
Primary Phasor: Delta
Primary BIL: 75 kV
Secondary Voltage: 277V (L-N)
Secondary Voltage Class: 1.2 kV Class

Secondary Phasor: Single Phase

Secondary BIL: 30 KV
Frequency: 60 Hz
Temperature Rise: 55°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
Tap %: 2.5%
Tap Changer Switch Location: Middle of Tank Body, Left of Mounting Provisions
Impedance: 1.5-7.0% Typical

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 #C57.12.28
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

Efficiency: 99.59%
Based on transformer operating at 50% of nameplate base kVA.

Load Losses Based on 85°C Reference Temp.
No Load Loss (in watts): +/- 1,363W
Full Load Loss (in watts): +/- 5,489W
Total Load Loss (in watts): +/- 6,851W

Note: Losses offered are typical only, not guaranteed

Factory Tests:
Ratio tests
Polarity test
No-load losses by the average-voltage voltmeter method at rated voltage and at 105% of rated voltage

Primary Termination: Wet-Process Porcelain High Voltage Bushing, Sidewall Mounted, ANSI #70 Light Grey
Primary Connection Qty: (2)
Primary Lightning Arrestors: N/A
Primary Lightning Mounting Provision: Mounting Provisions for Installing Lightning Arrestors 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 Termination: Wet-Process Porcelain High Voltage Bushing, w/ NEMA 4-Hole Spade Termianls, Sidewall Mounted, ANSI #70 Light Grey
Secondary Connection Qty: (2)
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, 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*: 127.11 Gallons
Fluid Weight*: 1,146.38 lbs
Liquid Level Indicator: Internal In-Tank Oil Level Line
Temperature Indicator: N/A
Pressure/Vacuum Indicator: N/A
Pressure Relief Valve: Included, Soft Seal Type, 10 PSI ±20% Cracking Pressure Rating, 50 ft^3/min. Flow Rate (@ 15.0 PSIG), w/ Manual Override
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: 48 dBA
Elevation Level: 3,300ft Above Sea Level
Core Material: Grain Oriented Silicon 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: Double Hanger Bracket
Mounting: Pole Mount via Hangar Brackets
Lifting Lugs: Included
Dimensions*: 49.21"-W x 65.35"-H
Tank Diameter*: 38.98" OD
Total Weight (Liquid Filled)*: 3,055 lbs
*Please note that numbers are approximate and subject to change

Exciting current by the average-voltage voltmeter and rms ammeter method at rated voltage and at 105% of rated voltage
Load losses test
Impedance voltage test
Applied potential tests
Insulation resistance tests

Special Orders - Special Requirements
Contact us for special requirements
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The MT-UPM-R7-1P-DNE-500KVA-SM-BB-A6-AM-CZ-1ZZ-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 500 KVA, the industrial transformer features a primary voltage of 4800V Delta and a secondary voltage of single-phase 277V (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 two 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-R7-1P-DNE-500KVA-SM-BB-A6-AM-CZ-1ZZ-M1 is air cooled and does not have fans or mounting provision for fans. This unit features a 55°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-R7-1P-DNE-500KVA-SM-BB-A6-AM-CZ-1ZZ-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 terminals are included for installing arresters in-field.
Valves: The MT-UPM-R7-1P-DNE-500KVA-SM-BB-A6-AM-CZ-1ZZ-M1 is not equipped with fill or drain valves. The transformer can be filled via removing the top lid. A drain port with 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 and outdoor applications. Equipped with hangar brackets and lifting lugs, this overhead power distribution system can be mounted on poles.
Benefits: The MT-UPM-R7-1P-DNE-500KVA-SM-BB-A6-AM-CZ-1ZZ-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)