Larson Electronics LLC
9419 E US HWY 175, Kemp, TX 75143
Phone: 800.369.6671

www.LarsonElectronics.com
Email: sales@LarsonElectronics.com
Fax: 903.498.3364

MT-UPM-R7-1P-GNF-50KVA-SLZ-BB-D6-BM-CZ-1ZZ-M1

50 KVA Overhead Distribution Transformer, Pole Mount, 4160Y/2400 Grounded Wye Primary, 120/240V Secondary, Mineral Oil/ONAN, Copper, Light Grey

Product ID: 310455



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-GNF-50KVA-SLZ-BB-D6-BM-CZ-1ZZ-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: 50 KVA
Primary Voltage: 4160Y/2400
Primary Voltage Switch: N/A
Primary Voltage Class: 5 kV Class
Primary Phasor: Grounded Wye
Primary BIL: 60 kV
Low Frequency Test Voltage (Dry, 1 min.): 21 kV
Low Frequency Test Voltage (Wet, 10 Sec.): 20 kV
Secondary Voltage: 120/240V (L-N-L)
Secondary Voltage Class: 1.2 kV Class
Secondary Phasor: Dual Windings, Single Phase
Secondary BIL: 30 KV
Frequency: 60 Hz
Temperature Rise: 65°C
Maximum Short Circuit Capacity: 35 times the nominal current
Maximum Partial Discharge Magnitude: 100 µV
Maximum Partial Discharge Level Increase Of 1 Hour: 30 µV
Maximum Radio Interference Voltage RIV (NEMA 107: 1 MHz @ +105% $V_{nom.}$): 100 µV

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: (0) FCAN Above, (4) FCBN Below

Ratings

Meets/Exceeds DOE 2016 Efficiency Ratings
Meets/Exceeds CSA Efficiency Ratings
Complies with ANSI / IEEE C57 12.00
Complies with ANSI / IEEE C57 12.10
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 C57.12.90
Complies with ANSI / IEEE C62.11
Complies with ANSI / IEEE C62.22
Complies with NEMA TP-1 2002
Complies with CAN / CSA C233.1-87
Complies with ANSI / IEEE C2
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 CAN / CSA C802.1-13
Complies with CSA C2.2:06
Complies with CAN / CSA C50

Tap %: 2.5%
Tap Changer Switch Location: Middle of Tank Body, Left of Mounting Provisions
Impedance: 1.0-4.5% Typical, 1.2-6.4% Target
Primary Connection Type: Live Bushing Lug
Primary Termination: Wet Processed High Voltage Porcelain Bushing, ANSI 70 Light Grey
Primary Connection Qty: (2)
Primary Frequency Test Voltage (Dry, 1 min.): 21 kV
Primary Frequency Test Voltage (Wet, 10 sec.): 20 kV
Primary Minimum Creepage Distance: 3.31 inches
Primary Conductor Size: 8 AWG Solid - 2 AWG Wire
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 Connections: Threaded Stud Terminals
Secondary Connection Qty: (3)
Secondary Conductor Size: 2 AWG Slid to 350 MCM -19H
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 CSA Standards Meets ANSI/IEEE Standards
K-Factor Rating (Harmonic Mitigation): K-1 (Standard)
Pulse Drive Rating: N/A
Insulation Fluid: Mineral Oil, Type II, Non-PCB Fluid
Fluid Capacity*: 15.16 Gallons
Fluid Weight*: 136.68 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
Coil Winding Mode Two 120V (60V) sections and one primary section in "Low-High-Low" configuration
Ambient Temperature Rating: 40°C
Ambient Operating Temperature Range: -40°C to +40°C (-50°F to +104°F)
Wind Speed Rating: 62 mph
Average Relative Humidity: 79%
Precipitation: 78.7 inch/Year
Solar Radiation: 60.78 W/ft^2
Climate: Tropical
Seismic Conditions: 0.5 g Horizontal, 0.4 g Vertical, 15.7 inch/s Speed, 11.8 inch/s Displacement
Sound Level: 48 dBA (Complies To NEMA TR-1)
Elevation Level: 6,600ft Above Sea Level (2,000m)
Core Material: Cold Rolled Grain Oriented Silicon Steel
Magnetic Flux Density: 1.95 Tesla
Nameplate Material: Stainless Steel
Tank Material: Coated Steel
Housing Material: Coated Steel w/ Corrosion Resistant Cover Band, Removable Top Cover
Hardware Material: Stainless Steel Hardware
Tank Welding Type: Continuous By Resistance, MIG-MAG
Paint Type: Weatherproof and UV Resistant Epoxy Coating and Undercoating
Total Paint Thickness: 120 m
Finish Color: Munsell™ 5BG 7.0/0.4 Light Grey (ANSI #70)

Features:
Non-PCB Insulating Fluid
Lifting Lugs Included
Corrosion Resistant Cover Band

Efficiency: 99.11% (99.014% min.)
Based on transformer operating at 50% of nameplate base kVA.

Load Losses Based on 85°C Reference Temp.
No Load Loss (in watts): +/- 118W
Full Load Loss (in watts): +/- 496W
Total Load Loss (in watts): +/- 614W
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
Polarity Test
Excitation Current 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*

Mounting: Double Hanger Bracket
Mounting: Pole Mount via Hangar Brackets
Lifting Lugs: Included
Dimensions*: 24.8"-W x 26.77"-D x 40.16"-H
Tank Diameter*: 20.47" OD
Pole Mount Bracket Spacing: 11"
Dry Weight*: 374.78 lbs
Total Weight (Liquid Filled)*: 605 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

The MT-UPM-R7-1P-GNF-50KVA-SLZ-BB-D6-BM-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 50 KVA, the industrial transformer features a primary voltage of 4160Y/2400 Grounded Wye and a secondary voltage of single-phase 120/240V (L-N-L). 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 copper connections.

The MT-UPM-R7-1P-GNF-50KVA-SLZ-BB-D6-BM-CZ-1ZZ-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-R7-1P-GNF-50KVA-SLZ-BB-D6-BM-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 arrestors on the H1 and H2 primary terminals are included for installing arresters in-field.

Valves: The MT-UPM-R7-1P-GNF-50KVA-SLZ-BB-D6-BM-CZ-1ZZ-M1 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.

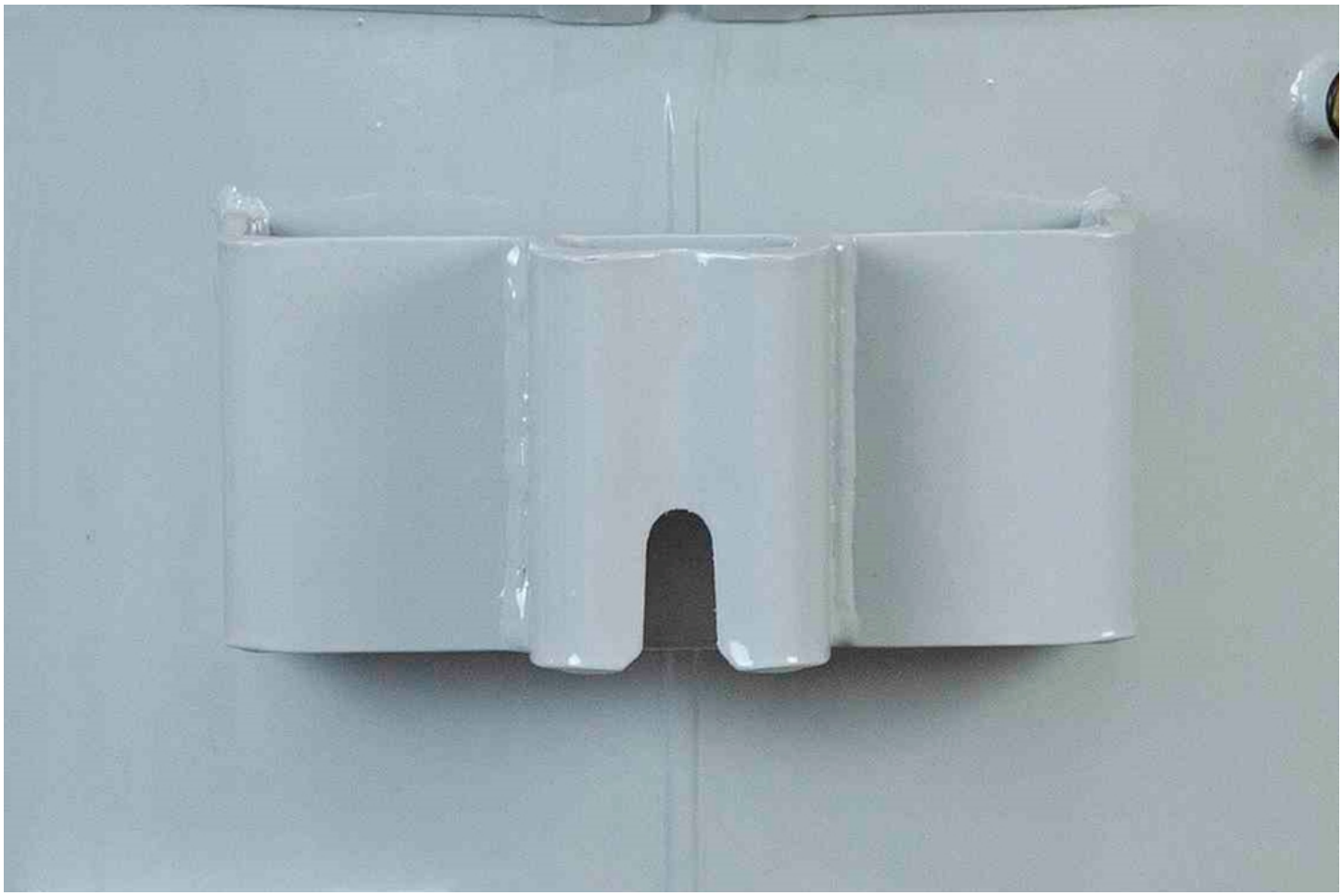
Protection Fuses: This transformer does not contain fuses or circuit breakers. For units without protection fuses, up stream protection is provided. We recommend provisions for protection fuses when possible, as blown fuses may require more frequent oil changes.

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-R7-1P-GNF-50KVA-SLZ-BB-D6-BM-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.


NON-PCBs
X1
X2
X3






X3
X2
X1

Frequently Asked Questions (FAQ)