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**MT-PMUT-R7-1P-GMP-250KVA-SM-HT-LT-A6-EFP-CC-1C3-M1**

# 250 KVA Submersible Distribution Transformer, Vault Mount, 13800Y/7970 Grounded Wye Primary, 277V Secondary, FR-3, Copper, 316L S.S, KNAN, Tap Changer

**Product ID: 305275**

**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-PMUT-R7-1P-GMP-250KVA-SM-HT-LT-A6-EFP-CC-1C3-M1 Submersible Vault Distribution Transformer**

**Transformer Type: Submersible Vault Distribution Transformer**
**Transformer Configuration: Underground Vault Installation, Suitable for Temporary Submersion**
**Transformer Polarity Type: Subtractive**
**Phase: Single Phase**
**Capacity: 250 KVA**
**Primary Voltage: 13800GrdY/7970**
**Primary Voltage Switch: N/A**
**Primary Voltage Class: 15 kV Class**
**Primary Phasor: Grounded Wye**
**Primary BIL: 95 kV**
**Secondary Voltage: 277V (L-N)**
**Secondary Voltage Class: 1.2 kV Class**
**Secondary Phasor: Dual Winding**
**Secondary BIL: 30 KV**
**Frequency: 60 Hz**
**Temperature Rise: 55-75°C**
**Insulation Rating: Class E Insulation - 120°C, 248°F**
**Forced Air (Fans): None**
**Mounting Provision For Fans:** Included
**Cooling Radiator:** Included
**Cooling Class: KNAN; Self-Cooled**

**Ratings**

Meets/Exceeds DOE 2016 Efficiency Ratings
Complies with ANSI / IEEE #C57.12.00
Complies with ANSI / IEEE #C57.12.23
Complies with ANSI / IEEE #C57.12.31
Complies with ANSI / IEEE #C57.12.32
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: 99.20%**
*Based on transformer operating at 50% of nameplate base kVA.*

**Load Losses Based on 85°C Reference Temp.**
**No Load Loss (in watts): +/- 683W**
**Full Load Loss (in watts): +/- 2,763W**
**Total Load Loss (in watts): +/- 3,445W**

**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: 1.5-6.0% Typical**
**Primary Connection Type: Load Break Bushing**
**Primary Bushing Rating: 15 kV Class, 95 kV BIL, 200A, Load Break, IEEE 386 Color Red, MFR: Cooper Industries**
**Primary Termination: Externally Clamped Well Bushings w/ Removable Studs, 200A Load Break Elbows w/ Inserts**
**Primary Connection Qty: (2) Primary Connections for Use w/ Elbow Connectors**
**Primary Neutral Connection: Primary HO Neutral Internally Bonded to Tank**
**Primary Parking Stand Qty: (1) Per Each Phase, Welded Brackets for Installing Accessory Parking Stand Bushings**
**Primary Surge Arrestors: N/A**
**Primary Surge Arrestor Voltage Rating: N/A**
**Primary Surge Arrestor MCOV Rating: N/A**
**Secondary Connection Type: Live Bushing Lug**
**Secondary Connections: H-Spade, 4 Hole**
**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**
**Primary Over Current Protection (OCP):** Bayonet Expulsion Fuse in series w/ Partial-Range Current-Limiting Fuse, MFR: Cooper Industries, Provided (2) spare fuses
**Primary Over Current Protection Method:** Fused, Oil-Immersed, Drawout
**Primary Over Current Protection Holder:** Bayonet Fuse Holder w/ External Drip Shield
**Load Break Switch:** 2-Position Load Break Switch
**Load Break Switch Qty:** (2)
**Load Break Switch Rating:** 200-Amp, 15 kV
**Load Break Switch Location:** On the load side of the incoming primary bushings
**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: FR-3 - Non PCB Fluid**
**Fluid Capacity*: 61.11 Gallons**
**Fluid Weight*: 551.15 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, Diaphragm Type, Replaceable, Designed to re-seal after operating**
**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: N/A**
**Core Material: Grain Oriented Steel**
**Tank Material: 316L Stainless Steel**
**Housing Material: 316L Stainless Steel Steel w/ Corrosion Resistant Cover Band, Removable Top Cover**
**Hardware Material: 316L Stainless Steel Hardware**
**Paint Type: Weatherproof and UV Resistant Epoxy Coating and Undercoating**
**Finish Color: ANSI 70 Light Grey**
**Mounting: Floor Mount**
**Lifting Lugs: Included**
**Dimensions*: TBD**
**Overall Tank Height:** 52.00"
**Dry Weight*:** 1382.27 lbs
**Total Weight (Liquid Filled)*:** 2123 lbs

*Please note that numbers are approximate and subject to change

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

**Special Orders - Special Requirements**
Contact us for special requirements
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**The MT-PMUT-R7-1P-GMP-250KVA-SM-HT-LT-A6-EFP-CC-1C3-M1 from Larson Electronics is a Submersible Vault Distribution Transformer that 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 submersible vault power distribution system is designed for underground installation in concrete vaults where flooding may happen and the transformer may be temporarily submerged.**

***PLEASE NOTE: ANY FREE SHIPPING OFFERS DO NOT APPLY TO POWER DISTRIBUTION PANELS, TRANSFORMERS, OR SUBSTATIONS***

**Transformer Features:** With a transformer rating of 250 kVA, this submersible industrial transformer features a primary voltage of 13800Y/7970 Grounded Wye 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 load break 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-PMUT-R7-1P-GMP-250KVA-SM-HT-LT-A6-EFP-CC-1C3-M1 is air cooled and does not have fans or but has a radiator and mounting provision for fans. This unit features a 55/75°C temperature rise for reduced heat waste, increased reliability and longer life. The submersible design makes this unit suitable for use in concrete vaults where flooding may occur or in other areas where the transformer may be temporarily submerged such as underground.

**Insulation Fluid:** The MT-PMUT-R7-1P-GMP-250KVA-SM-HT-LT-A6-EFP-CC-1C3-M1 features FR-3 insulation fluid. Internal marking is available for proper oil level monitoring. We offer transformers with biodegradable fluid, if needed.

**Gauges:** There is a liquid level gauge. We can add temperature, and pressure/vacuum gauges at an additional cost. Standard liquid level gauge is analog, manual reading type.

**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 doesn't contain surge arrestors.

**Valves:** The MT-PMUT-R7-1P-GMP-250KVA-SM-HT-LT-A6-EFP-CC-1C3-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 contains Bayonet fuses. 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 underground applications such as concrete vaults where flooding may occur. This submersible vault distribution transformer can be floor mounted.

**Benefits:** The MT-PMUT-R7-1P-GMP-250KVA-SM-HT-LT-A6-EFP-CC-1C3-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.

**Applications:** Underground installation applications, such as concrete vaults, where the transformer may be temporarily submerged due to flooding.

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)



**Export Control Classification Number (ECCN):** EAR99

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