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Product ID: 305964

Please see last page for supporting documentation for this product (certificates, CAD files & drawings, IES files, wiring diagrams, etc).



Image:

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-PSTC-R7-3P-DMQ-7.5MVA-GNF-HS-LS-A6-BMF-CZ-2ZZ-M1 Conservator Substation Transformer

Transformer Type: Distribution Transformer, Conservator-Type
Transformer Configuration: Liquid Filled Substation
Transformer Feed Type: Radial Feed
Operation: Step Down
Phase: Three Phase
Capacity (w/o fans): 7.5 MVA (7,500 KVA)
Capacity (w/ fans): 9 MVA (9,000 KVA)
Vector Group: Dyn1
Primary Voltage: 13200V
Primary Voltage Switch: N/A
Primary Voltage Class: 15 kV Class
Primary Phasor: Delta
Primary BIL: 95 kV
Secondary Voltage: 4160Y/2400
Secondary Voltage Class: 5 kV Class
Secondary Phasor: Grounded Wye
Secondary BIL: 60 kV
Frequency: 60 Hz
Temperature Rise: 65°C
Insulation Rating: Class E Insulation - 120°C, 248°F
Cooling Class: ONAN/ONAF; Self-Cooled/Fan-Cooled
Forced Air (Fans): Included, 220 V AC 3 phases, 60 Hz, One-Piece Cast Iron Blades. Aluminum, Designed For High Efficiency And Low Level Of Noise, They Have a Front And

Ratings

Meets/Exceeds IEC 60076 Ratings
Non-PCB Insulating Fluid
Tamper Proof Housing

No Power Factor Efficiency @ 100% Load: 99.04%
No Power Factor Efficiency @ 75% Load:99.23%
No Power Factor Efficiency @ 50% Load:99.41%
No Power Factor Efficiency @ 25% Load:99.49%
0.8 Power Factor Efficiency @ 100% Load:98.80%
0.8 Power Factor Efficiency @ 75% Load:99.04%
0.8 Power Factor Efficiency @ 50% Load:99.26%
0.8 Power Factor Efficiency @ 25% Load:99.36%
No Load Loss: 4320W, 10% Tolerance
Full Load Loss: 31300W, 10% Tolerance
Note: *Losses offered are typical only, not guaranteed*

Rear Protective Grille For Prevent The Entry Of Objects Larger Than 12.5 mm In Diameter Into The Blades And Be Balanced As a Complete Unit
Cooling Radiator: Included, tubular sheet A-283 grade A ASTM, Equipped with blocking valves made of iron cast, leak-proof, with stainless steel drive stem
Tap Changer: 5-position Tap Changer, Manual Off
Tap Qty: (2) FCAN Above Taps, (2) FCBN Below Taps
Tap %: 2.5%
Tap Changer Switch Rating: 15 KV, 900 A
Tap Changer Switch Location: High Voltage (HV) Front Compartment
Impedance (Typical): 6%
Primary Connection Type: Dead Front
Primary Termination Arrangement: Side Mounted
Primary Termination: Cable Boxes in Highly Contaminated Area
Primary Connection Qty: (3)
Primary Bushing Rating: 15 KV., 95 KV BIL, 900 A
Primary Neutral Connection: N/A
Primary Surge Arrestors: Included on Primary Side
Primary Surge Arrestor Voltage Rating: 14 KV
Primary Surge Arrestor MCOV Rating: 14 KV
Primary Over Current Protection (OCP): N/A
Primary Over Current Protection Method: N/A
Primary Over Current Protection Holder: N/A
Primary Grounding Provisions: N/A
Secondary Connection Type: Live Front
Secondary Termination Arrangement: Side Mounted
Secondary Connections: Cable Boxes
Secondary Connection Qty: (4)
Secondary Connection Supports: N/A
Secondary Over Current Protection (OCP): N/A
Secondary Neutral Connection: Included
Grounding Provisions: (1) Grounding lug, accepts #2 copper
Metering Current Transformer (CT): N/A
Metering Panel: N/A
Control Panel: Buchholz Relay (alarm and trip), Pressure Relief Device (alarm and trip), Oil Level Indicator (alarm and trip), Dehydrating Breather, Oil Temp (alarm and trip), Coil Winding Control Panel Temp (alarm and trip)
Load Break Switch: N/A
Load Break Switch Qty: N/A
Load Break Switch Rating: N/A
Load Break Switch Location: N/A
Efficiency Standard(s): Meets ANSI/IEEE Standards
K-Factor Rating (Harmonic Mitigation): K-1 (Standard)
Pulse Drive Rating: N/A
Insulation Fluid: Mineral Oil Insulating Fluid - Insulation Fluid Non-PCB Fluid
Fluid (Oil) Capacity*: N/A
Fluid (Oil) Weight*: N/A
Liquid Level Indicator: Analog Dial Gauge w/ 2 Contacts
Oil Temperature Indicator: Analog Dial Gauge w/ 2 Contacts
Winding Temperature Indicator: Analog Dial Gauge w/ 2 Contacts
Pressure/Vacuum Indicator: Analog Dial Gauge
Pressure Relief Device: Included, Automatic Action w/ 2 Contacts
Buchholz Relay: Included, w/ 2 Contacts
Fault Indicator: N/A
Gas Sampler Valve: N/A
Fill Valve: Removable Bolt
Fill Valve Location: Front Compartment
Drain Valve: Included w/ Sampler
Drain Valve Location: Front Compartment

Winding Material: Copper
Ambient Temperature Rating: 40°C
Ambient Operating Temperature Range: -30°C ~ +40°C
Sound Level: 67 dBA
Elevation (Altitude): 3412ft (1040 meters) Above Sea Level
Core Material: Iron
Tank Material: Coated Steel
Cabinet Material: Coated Steel
Base Platform Material: Coated Steel
Portability: Lifting lugs, provisions for jacking under base, w/ base construction suitable for using rollers or skidding, jacking shall be not less than 12"
Housing Type: Cable Box w/ Doors, HV Compartment Right, LV Compartment Housing Type Left
Enclosure Rating: NEMA 3R Weatherproof Wiring Cabinet
Seismic Rating: RS-10 Zone III
Relative Humidity: 55-85%
Wind Speed Rating: 218.5 ft/s
Paint Type: Weatherproof and UV Resistant Epoxy Coating and Paint Type Undercoating
Finish Color: Grey
Mounting: Supporting Structures
Conduit Opening: Bottom Feed Underground Entry/Exit
Tank Cover Access Handhole: N/A
Dimensions*: N/A
Dry Weight (w/o Oil)*: N/A
Total Weight (Liquid Filled)*: N/A
*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: 1-903-765-7664
E-mail: sales@larsonelectronics.com

The MT-PSTC-R7-3P-DMQ-7.5MVA-GNF-HS-LS-A6-BMF-CZ-2ZZ-M1 Conservator Substation Transformer from Larson Electronics offers powerful, reliable and efficient power distribution in outdoor 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 transformer ensures extra space for storing oil and is equipped with breathers to facilitate air flow. The conservator transformer should be installed on supporting structures.

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

Transformer Features: The industrial transformer features a primary voltage of three-phase 13200V Delta and a secondary voltage of three-phase 4160Y/2400 Grounded Wye. This system is rated for 7.5 MVA (7,500 KVA) [Natural Cooled] / 9 MVA (9,000 KVA) [Fan Cooled]. We offer systems with loop or radial feed, as well as dead front or live front primary connections. This transformer features a 5-position tap changer with two, +/- 2.5% taps above and two, +/- 2.5% taps below to allow small changes for voltage. There are no rapid rise relays or protection fuses present on the system.

The system features copper windings for high strength and thermal/electrical conductivity. This transformer consists of rectangular coil and five-legged wound core design with three coils and four core loops (this is for three-phase transformers only; single-phase units have one coil and two core loops).

The MT-PSTC-R7-3P-DMQ-7.5MVA-GNF-HS-LS-A6-BMF-CZ-2ZZ-M1 does not have fans for forced air cooling.

Temperature Rise: This unit features 65°C temperature rise for reduced heat waste, increased reliability and longer life. At 65°C temperature rise, the transformer offers 7.5 MVA (7,500 KVA) [Natural Cooled] / 9 MVA (9,000 KVA) [Fan Cooled]. The transformer meets standard efficiency requirements. 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-PSTC-R7-3P-DMQ-7.5MVA-GNF-HS-LS-A6-BMF-CZ-2ZZ-M1 features mineral oil cooling fluid (ONAN/ONAF). We offer transformers with biodegradable or FR-3 fluids, if needed.

Biodegradable Fluid: Biodegradable cooling fluid (vegetable oil) has a higher heat capacity compared to mineral oil, making the liquid safer to use and more reliable during operations. Vegetable oil has a higher flash point and fire point than mineral oil, hydrocarbon oil, silicone oil and synthetic ester. This cooling fluid is also non-toxic and can tolerate higher breakdown voltages than mineral oil. When operating at high temperatures, biodegradable cooling liquid sustains up to 120% loan conditions, which helps preserve the transformer's lifespan and performance.

Gauges: The following gauges are included with the system: liquid level, temperature and pressure/vacuum gauges. Standard liquid level, temperature, and pressure/vacuum gauges are analog, manual reading types.

Pressure Relief Devices: The pressure relief device on the system features automatic action.

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 come with surge arresters on the primary side.

Load Break Switch: The transformer is not equipped with a load break switch.

Valves: The MT-PSTC-R7-3P-DMQ-7.5MVA-GNF-HS-LS-A6-BMF-CZ-2ZZ-M1 is equipped with a pressure relief valve, fill valve, and drain valve with sampler port.

Protection Fuses: This transformer does not have bayonet protection fuses on the primary side. 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: This conservator substation transformer should be installed on supporting structures, such as the roof of the transformer main tank.

Benefits: The MT-PSTC-R7-3P-DMQ-7.5MVA-GNF-HS-LS-A6-BMF-CZ-2ZZ-M1 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: General purposes, industrial sites, electrical rooms, underground vaults, manufacturing facilities, steel plants, offshore, commercial, military, processing plants, electric power distribution, utilities, 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)

There are no Faqs

Product ID: 305964

Warranty: 24 Months.

Export Control Classification Number (ECCN): EAR99

Links (Click on the below items to view):

- **Operations Manual**(https://www.larsonelectronics.com//images/product/Manual/305964.PDF)
- **HigResPic1**(https://www.larsonelectronics.com//images/product/HigResPic1/305964.JPG)
- **Video1**(https://www.youtube.com/watch?v=4-JEyYeYcn8)
- **Video6**(https://www.youtube.com/watch?v=olihKUo24KU)
- **Video7**(https://www.youtube.com/watch?v=Yez7eCilgDE)
- **Video8**(https://www.youtube.com/watch?v=Ac5BDPSy964)
- **ISO 9001 Certification**(http://larsonelectronics.com/images/pdfdocs/ISO9001.PDF)
- **Business Certificate**(https://www.larsonelectronics.com/images/pdfdocs/w9.PDF)
- **Shipping Time Map**(https://www.larsonelectronics.com/images/product/ShippingTimeMap/ShippingTimeMap.pdf)