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MT-PSTH-R7-3P-YNY-7.5MVA-GMR-HT-LT-A6-CMF-CZ-2ZZ-M1

7.5-8.4/9.375-10.5 MVA Hermetically Sealed Substation Transformer - 23000V Wye Primary, 12470Y/7200 Grounded Wye Secondary, 55-65°C, ONAN/ONAF, Light Grey, NEMA 4X

Product ID: 342468



Image: MT-PSTH-R7-3P-YNY-7.5MVA-GMR-HT-LT-A6-CMF-CZ-2ZZ-M1

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-PSTH-R7-3P-YNY-7.5MVA-GMR-HT-LT-A6-CMF-CZ-2ZZ-M1 Substation Transformer	Ratings
Transformer Type: Substation Power Transformer, Hermetically Sealed Type	Listed for United States and Canada
Transformer Configuration: Liquid Filled Pad Mounted	Meets/Exceeds DOE 2016 Efficiency Ratings
Phase: Three Phase	Meets/Exceeds CSA Efficiency Ratings
Transformer Feed Type: Radial Feed	Complies with ANSI / IEEE C57.12.00
Capacity (w/o Fans, @ 55-65°C): 7.5 MVA (7,500 KVA) - 8.4 MVA (8,400 KVA)	Complies with ANSI / IEEE C57 12.28
Capacity (w/ Fans, @ 55-65°C): 9.375 MVA (9,375 KVA) - 10.5 MVA (10,500 KVA)	Complies with CSA C802.1
Primary Voltage: 23000V	Complies with ANSI / IEEE C57 12.29
Primary Voltage Class: 25 kV	Complies with ANSI / IEEE C57 12.34
Primary BIL: 125 kV	Complies with ANSI / IEEE C57 12.35
Primary Phasor: Wye	Complies with ANSI / IEEE C57.12.70
Secondary Voltage: 12470Y/7200V	Complies with ANSI / IEEE C57.12.110
Secondary Voltage Class: 15 kV	Complies with ANSI / IEEE C57.12.131
Secondary BIL: 110 kV	Complies with ANSI / IEEE C62.11
Secondary Neutral BIL: 110 kV	Complies with ANSI / IEEE C37.47
Secondary Phasor: Grounded Wye	Complies with ANSI / IEEE C62.22
Vector Group: Yyn0	Complies with ANSI / IEEE 386
Frequency: 60 Hz	Complies with ANSI / IEEE C2
Temperature Rise: 55°C/65°C	Complies with CSA C2.1-06
Forced Air (Fans): Included, 240VAC, 1-PH, 60Hz, Meets OSHA safety requirements, w/ Stainless-steel fan covers	Complies with ANSI Z535.4
Radiator: Included, Welded Panel Type	Complies with ASTM D3487
HV Tap Changer: 5-Position De-energized Tap Changer	Complies with ASTM D6871
HV Tap Qty: (2) FCAN Above Taps, (2) FCBN Below Taps	Complies with NEMA 260-1996
HV Tap %: 2.5% Taps	Complies with 10 CFR Part 431
HV Tap Rating: 25 kV	Complies with CSA C50

LV Tap Changer: N/A
LV Tap Qty: N/A
LV Tap %: N/A
LV Tap Rating: N/A
Impedance (@ 7.5 MVA, 55°C): 8.00%
Primary Connection Type: Live Front
Primary Termination Arrangement: Cover Mounted
Primary Connection: Interchangeable wet process Porcelain Bushings, w/ 1-1/8”-12 356-T6 Aluminum Stud Type, with Aluminum alloy hardware to accept conductor range #2-2000 MCM Aluminum, SefCor ASXR-series
Primary Connection Qty: (3) Primary Connections
Primary Bushing Rating: 25 kV Class, 125 kV BIL
Primary Neutral Connection: N/A
Primary Surge Arrestors: Included, Polymer, station class, metal-oxide varistor (MOV)
Primary Surge Arrestor Voltage Rating: 60 kV
Primary Surge Arrestor MCOV Rating: 48 kV
Primary Overcurrent Protection (OCP): N/A
Primary Overcurrent Protection Method: N/A
Primary Overcurrent Protection Holder: N/A
Primary Current Transformer: (1) Per Each Phase [600:5 MR, C800 Accuracy Class, 5 lead, Bushing type, 2.0Thermal Rating Factor]
Primary Neutral Current Transformer: N/A
Primary Grounding Provisions: N/A
Secondary Connection Type: Live Front
Secondary Termination Arrangement: Cover Mounted
Secondary Connections: Interchangeable wet process Porcelain Bushings, w/ 1-1/8”-12 356-T6 Aluminum Stud Type, with Aluminum alloy hardware to accept conductor range #2-2000 MCM Aluminum, SefCor SXR-series
Secondary Connection Qty: (4)
Secondary Bushing Rating: 15 kV Class, 110 kV BIL
Secondary Connection Supports: N/A
Secondary Overcurrent Protection (OCP): N/A
Secondary Current Transformer: (1) Per Each Phase [600:5 MR, C800 Accuracy Class, 5 lead, Bushing type, 2.0Thermal Rating Factor]
Secondary Neutral Connection: Electrical Bronze Stud-type 1-1/8”-12 size, silver/cadmium plated, with Silicon Bronze hardware to accept conductor range #2-2000 MCM copper, SefCor SXR-series
Neutral Current Transformer: N/A
Secondary Surge Arrestors: Included, Polymer, station class, metal-oxide varistor (MOV)
Secondary Surge Arrestor Voltage Rating: 10 kV
Secondary Surge Arrestor MCOV Rating: 8.4 kV
Secondary Grounding Provisions: (1) NEMA Ground Bar attached to tank via (2) Welded Ground Bungs
Core Grounding Connection: In a weather proof box outside of tank (NEMA 4X)
Insulation Fluid: Mineral Oil Insulating Fluid, Type II, Non-PCB Fluid
Fluid Capacity: TBD
Cooling Class: ONAN/ONAF
Remote Monitoring Capability: Ethernet-capable monitoring package
Liquid Preservation System: Included, Sealed Tank Per IEEE C57.12.10
Liquid Level Gauge: Included, Magnetic Type, w/ Low & High Alarm Contacts
Liquid Temperature Gauge: Included, Analog Type, w/ (3) Sets of Contacts
Winding Temperature Gauge: Included, Analog Type, w/ Contacts
Pressure/Vacuum Gauge: Included, w/ Alarm Contacts
Pressure Relief Device: Included, Automatic Action, w/ Alarm Contacts
Fault Pressure Device: N/A
Pressure Relief Valve: Included
Sudden Pressure Relay: Included, w/ Seal-In Relay
Bleeder Valve: Included
Fill Valve: Included, 1"
Drain Valve: Included, 2" NPT, w/ Sampler Valve
Nitrogen Blanket: Included, w/ Purge Valve
Load Break Switch: N/A
Winding Material: Electrolytic copper with high conductivity characteristics, conforming to

Complies with CSA C88-16
Complies with CSA C88
Complies with CSA C88.1
Complies with CSA C227.5
Complies with CSA C227.4
Complies with CSA C227.5
Complies with CSA C802-3

UL Listed

Features

Non-PCB Insulating Fluid
Tamper Proof Housing
Hinged Front Compartment Doors, Padlockable
NEMA 4X Wiring Compartment
Hot Stick Included, HV Door Mount
High-Fire Point Insulating Fluid

Labeling:

Externally Stencilled (Painted) KVA Rating
Externally Stencilled (Painted) Voltage Rating
External Non-PCB Label
External Warning & Danger Label
External Barcode Label
Internal Busing & Accessory Labeling
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
Operational Test on Auxiliary Devices

Special Tests:

Fluid PCB Test

ASTM B3-74
No Load Loss: -
Full Load Loss: -
Service Location: Outdoor
Ambient Temperature Range: -20°C to 40°C
Sound Level: < 78 dBA
Altitude: 3,300ft Above Sea Level
Seismic Qualification: Zone 1, per IEEE Std 693-2005
Environment: Trace amounts of H2S, SO2 and coke dust, corrosive environment
Control Box Rating: NEMA 4X Weatherproof
Control Box Accessories: Rigid Galvanized Steel Conduit For Control Wiring > 30" & Flex Metalic, Space Heater w/ Thermostat and Loss of Power To Fans Relay
Paint Type: Light Grey (ANSI #61)
Handhole: Included
Manhole: Included, (1) Over HV & (1) Over LV
Mounting: Pad Mounted
Conduit Opening: Bottom
Concrete Pad Dimensions: 153" x 72"
Dimensions: 142"-L x 122"-W x 127"-H
Weight (Liquid Filled): 31,900 Lbs

Corrosive Sulfur Test
Dissolved Gas In Oil Analysis
Fluid Dielectric Test

Special Orders - Special Requirements
Contact us for special requirements
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The MT-PSTH-R7-3P-YNY-7.5MVA-GMR-HT-LT-A6-CMF-CZ-2ZZ-M1 Hermetically Sealed 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 make 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 23000V Wye and a secondary voltage of three-phase 12470Y/7200 Grounded Wye. This system is rated for 7.5 MVA (7,500 KVA) [Natural Cooled] / 9.375 MVA (9,375 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 off-load tap changer with two +2.5% taps above and two -2.5% taps below to allow small changes in voltage.

The system features copper windings for high strength and thermal/electrical conductivity. This transformer consists of a rectangular coil and a 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-PSTH-R7-3P-YNY-7.5MVA-GMR-HT-LT-A6-CMF-CZ-2ZZ-M1 has fans for forced air cooling.

Temperature Rise: This unit features 55/65°C temperature rise for reduced heat waste, increased reliability and longer life. At 55°C temperature rise, the transformer offers 7.5 MVA (7,500 KVA) [Natural Cooled] / 9.375 MVA (9,375 KVA) [Fan Cooled]. At 65°C temperature rise, the transformer offers 8.4 MVA (8,400 KVA) [Natural Cooled] / 10.5 MVA (10,500 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-PSTH-R7-3P-YNY-7.5MVA-GMR-HT-LT-A6-CMF-CZ-2ZZ-M1 features mineral oil fluid (ONAN/ONAF). We offer transformers with biodegradable or FR-3 fluids, if needed.

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.

Fault Pressure Devices: There are no fault pressure devices on the unit. Fault pressure devices are used to detect high rates of pressure rise within the tank.

Rapid Rise Relay: There is a rapid rise relay 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 come with surge arresters on the primary or secondary sides. Surge arresters are designed for over-voltage and transient voltage protection, the components prevent damage caused by lightning, internal switching or voltage surges. We can offer models without high elbow surge arresters that have mounting provisions for customer-provided surge arresters.

Load Breaker Switch: The transformer is not equipped with load breaker switches.

Valves: The MT-PSTH-R7-3P-YNY-7.5MVA-GMR-HT-LT-A6-CMF-CZ-2ZZ-M1 is equipped with a pressure relief valve, fill valve and drain valve with a sampler port.

Protection Fuses: This transformer does not have bayonet protection fuses on the primary side. 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: This substation transformer is pad mounted.

Benefits: The MT-PSTH-R7-3P-YNY-7.5MVA-GMR-HT-LT-A6-CMF-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