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MT-PSTC-R7-3P-GXK-60MVA-GMA-HS-LS-A6-BMF-CZ-2ZZ-M1

60/80/100 MVA Conservator Substation Transformer - 138000Y/79674 Grounded Wye Primary, 34500Y/19920 Grounded Wye Secondary - 13800V Delta Tertiary Windings, ONAN/ONAF/ONAF, Light Grey

Product ID: 335363



Image: MT-PSTC-R7-3P-GXK-60MVA-GMA-HS-LS-A6-BMF-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-PSTC-R7-3P-GXK-60MVA-GMA-HS-LS-A6-BMF-CZ-2ZZ-M1 Conservator Substation Transformer	Ratings
Transformer Type: Substation Power Transformer, Conservator Type	Meets/Exceeds DOE 2016 Efficiency Ratings
Transformer Configuration: Liquid Filled Pad Mounted	Meets/Exceeds CSA Efficiency Ratings
Transformer Feed Type: Radial Feed	Complies with ANSI / IEEE C57.12.00
Operation: Approved for Step-Up and Step-Down Operations	Complies with ANSI / IEEE C57 12.28
Phase: Three Phase	Complies with ANSI / IEEE C57 12.29
Capacity (w/o Fans): 60 MVA (60000 KVA)	Complies with ANSI / IEEE C57 12.34
Capacity (w/ 1st Stage Fans): 80 MVA (80000 KVA)	Complies with ANSI / IEEE C57.12.131
Capacity (w/ 2nd Stage Fans): 100 MVA (100000 KVA)	Complies with CSA C88.1
Vector Group: YNyn0(d1)	Complies with ANSI / IEEE C57 12.35
Primary Voltage: 138000Y/79674	Complies with ANSI / IEEE C57.12.70
Primary Voltage Switch: N/A	Complies with ANSI / IEEE C57.12.110
Primary Voltage Class: 145 kV Class	Complies with CSA C227.4 & CSA C227.5
Primary Phasor: Grounded Wye	Complies with ANSI / IEEE C62.11
Primary Line BIL: 650 kV	Complies with ANSI / IEEE C62.22
Primary Neutral BIL: 350 kV	Complies with NEMA 260-1996
Primary Short-Circuit Current (symmetrical): 31.5 kA	Complies with CSA C2.1-06
Secondary Voltage: 34500Y/19920	Complies with ANSI / IEEE 386
Secondary Voltage Class: 35 kV Class	Complies with ANSI / IEEE C2
Secondary Phasor: Grounded Wye	Complies with ANSI / IEEE C37.47
Secondary BIL: 200 kV	Complies with ANSI Z535.4
Secondary Short-Circuit Current (symmetrical): 25 kA	Complies with 10 CFR Part 431
Tertiary Winding: 13800V Delta	Complies with CSA C88
Frequency: 60 HZ	Complies with ASTM D3487

Temperature Rise: 65°C
Insulation Rating: Class OA/FA Insulation System
Cooling Class: ONAN/ONAF/ONAF; Self and fan Cooled
Forced Air (Fans): Included, Dual Stage Fans
Radiators: Included, Multiple Panel Radiators
Tap Changer: De-Energized Tap Changer (DETC)
Tap Qty: (2) Above, (2) Below + Neutral
Tap %: 2.5% Per Tap (±10% Total Range)
Tap Changer Switch Rating: 138 kV, De-Energized
Tap Changer Switch Location: HV Side
Impedance (@ ONAF1): 10% ± 7.5%
Primary Connection Type: Live Front
Primary Termination Arrangement: Side Mounted Terminals
Primary Termination: Porcelain Bushings
Primary Connection Qty: (3) Phase + (1) Neutral Hot Stick Included, HV Door Mount
Primary Bushing Rating: 145 kV Class, 650 kV BIL
Primary Neutral Connection: Included
Primary Current Transformer: Included, Multi-Ratio, C800 Accuracy Class
Primary Surge Arrestors: Included
Primary Surge Arrestor Voltage Rating: 120 kV Class
Primary Surge Arrestor MCOV Rating: 98 kV
Primary Overcurrent Protection (OCP): External (Substation Breaker Protected)
Primary Overcurrent Protection Method: Protective Relay Controlled High-Voltage Circuit Breaker
Primary Overcurrent Protection Holder: N/A
Primary Grounding Provisions: NEMA Ground Pads/Welded Bungs
Secondary Connection Type: Live Front
Secondary Termination Arrangement: Side Mounted Porcelain Bushings
Secondary Connections: Porcelain Bushings
Secondary Connection Qty: (3) Phase + (1) Neutral
Secondary Connection Supports: N/A
Secondary Surge Arrestors: Included
Secondary Surge Arrestor Voltage Rating: 30 kV Class
Secondary Over Current Protection (OCP): External (Switchgear Breaker Protected)
Secondary Neutral Connection: Included
Secondary Current Transformer: Included, (2) Per Each Phase, 38 kV, 3000:5 MR, C800 Accuracy Class, 2.0 Rating Factor
Secondary Grounding Provisions: NEMA Ground Pads/Welded Bungs
Metering Current Transformer (CT): N/A
Metering Panel: N/A
Auxiliary Control Panel: 480Y/277V AC 3PH, 125V DC
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: Appropriate For Use With 6-Pulse Drive Equipment On Secondary Side
Insulation Fluid: Mineral Oil, Non-PCB
Fluid (Oil) Capacity*: TBD
Fluid (Oil) Weight*: TBD
Oil Level Indicator: Analog Dial Gauge with an alarm contact
Oil Temperature Indicator: Analog Dial Gauge with an alarm contact
Pressure/Vacuum Indicator: Analog Dial Gauge with an alarm contact
Pressure Relief Device: Included, Automatic Action
Fault Indicator: N/A
Gas Sampler Valve: N/A
Fill Valve: N/A
Fill Valve Location: N/A
Oil Drain Valve: 2" globe-type with 3/8" sampling valve
Drain Valve Location: Front Compartment
Winding Material: Copper

Complies with ASTM D6871
Complies with CSA C802.1
Complies with CSA C802-3
Complies with CSA C50
Complies with CSA C88-16

Features
Hot Stick Included, HV Door Mount
Penta-head Bolt Entry Assembly
High-Fire Point Insulating Fluid
NEMA 3R Wiring Compartment
Non-PCB Insulating Fluid
Tamper Proof Housing
Hinged Front Compartment Doors, Pad Lockable

Efficiency %: ≥ 99.69%
Based on transformer operating at 50% of nameplate base kVA.

Load Losses Based on 85°C Reference Temp.
No Load Loss (in watts): TBD
Full Load Loss (in watts) at 100%: TBD
Total Load Loss (in watts) at 100%: TBD

Total Losses at 55°C LL Temp. & 20°C NL Temp.
Total Load Loss (in watts) at 50%: TBD

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

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

Shipping:
Shipped on pallet on open flatbed

Ambient Temperature Rating: 40°C
Ambient Operating Temperature Range: -40°C to +40°C (-50°F to +104°F)

Sound Level (ONAF): 76 dBA

Elevation (Altitude): 3300ft (1000 meters) Above Sea Level
Core Material/Type: Grain Oriented Steel/Columns
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
Housing Type: Outdoor Substation Transformer
Enclosure Rating: NEMA 3R Weatherproof Wiring Cabinet, Sealed Tank
Seismic Rating: Yes
Paint Type: Weatherproof and UV Resistant Epoxy Coating and Undercoating
Finish Color: Light Grey
Mounting: Skid Type Base w/ Lifting Lugs
Conduit Opening: N/A
Tank Cover Access Handhole: N/A
Dimensions*: 311.02" x 220.47" x 240.16"
Dry Weight (w/o Oil)*: 187,392.7 lbs
Total Weight (Liquid Filled)*: 274,564.29 lbs
*Please note that numbers are approximate and subject to change

Palletized on Wooden Pallet w/ Skid Pockets
Pallet Skid Facing Outward Sides of Truck
Note: *Crated shipping in lieu of palletizing can be done upon request for an additional fee*

Special Orders - Special Requirements
Contact us for special requirements
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The MT-PSTC-R7-3P-GXK-60MVA-GMA-HS-LS-A6-BMF-CZ-2ZZ-M1 Conservator Substation Transformer from Larson Electronics offers powerful, reliable, and efficient power distribution in indoor or 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 air tight transformer does not have doors and must be installed in a contained or protected area away from public access.

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 138000Y/79674 Grounded Wye and a secondary voltage of three-phase 34500Y/19920 Grounded Wye, along with a 13,800V Delta tertiary winding. This system carries the following ratings: 60 MVA (60000 KVA) [Natural Cooled] / 80 MVA (80000 KVA) [1st Stage Fan Cooled] / 100 MVA (100000 KVA) [2nd Stage Fan Cooled]. The unit has a primary radial feed and live front primary connections. We also offer systems with loop feed and dead front primary connections. This transformer features a de-energized tap changer with ±10% adjustment in 2.5% increments to allow voltage regulation under de-energized conditions. There are no load break switches or protection fuses present on the system, as protection is handled by external substation breakers and relay systems.

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).

Temperature Rise: This unit features a 40°C ambient temperature rating and a 65°C temperature rise for reduced heat waste, increased reliability, and longer life. At 65°C temperature rise, the transformer offers 60 MVA (60000 KVA) [Natural Cooled] / 80 MVA (80000 KVA) [1st Stage Fan Cooled] / 100 MVA (100000 KVA) [2nd Stage Fan Cooled]. The

transformer meets standard efficiency requirements. The combination of low temperature rise and high efficiency makes this unit suitable for use in substations, industrial facilities, outdoor installations and similar locations.

Insulation Fluid: The MT-PSTC-R7-3P-GXK-60MVA-GMA-HS-LS-A6-BMF-CZ-2ZZ-M1 features mineral oil insulating fluid (ONAN/ONAF/ONAF).

Gauges: The following gauges are included with the system: oil level indicator, oil thermometer, and pressure/vacuum gauge. Standard oil level indicator, oil thermometer, and pressure/vacuum gauges are analog, manual reading types.

Fault Pressure Devices: The unit includes a pressure relief device to protect against internal overpressure conditions.

Rapid Rise Relay: This unit may be equipped with a sudden pressure/rapid rise relay for detecting rapid internal faults and pressure increases.

Surge arresters: This system is equipped with primary and secondary surge arresters for over-voltage and transient voltage protection. These components help prevent damage caused by lightning, internal switching, or voltage surges.

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

Valves: The MT-PSTC-R7-3P-GXK-60MVA-GMA-HS-LS-A6-BMF-CZ-2ZZ-M1 is equipped with an oil drain valve, an oil sampling valve, and a pressure relief valve.

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.

Terminal Connections: The primary and secondary terminal connections are located on the side of the transformer via porcelain bushings. We can configure the location to be top located or side located for both the high voltage and low voltage sides.

Mount: This hermetically sealed transformer is equipped with a skid type base with lifting lugs.

Benefits: The MT-PSTC-R7-3P-GXK-60MVA-GMA-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.

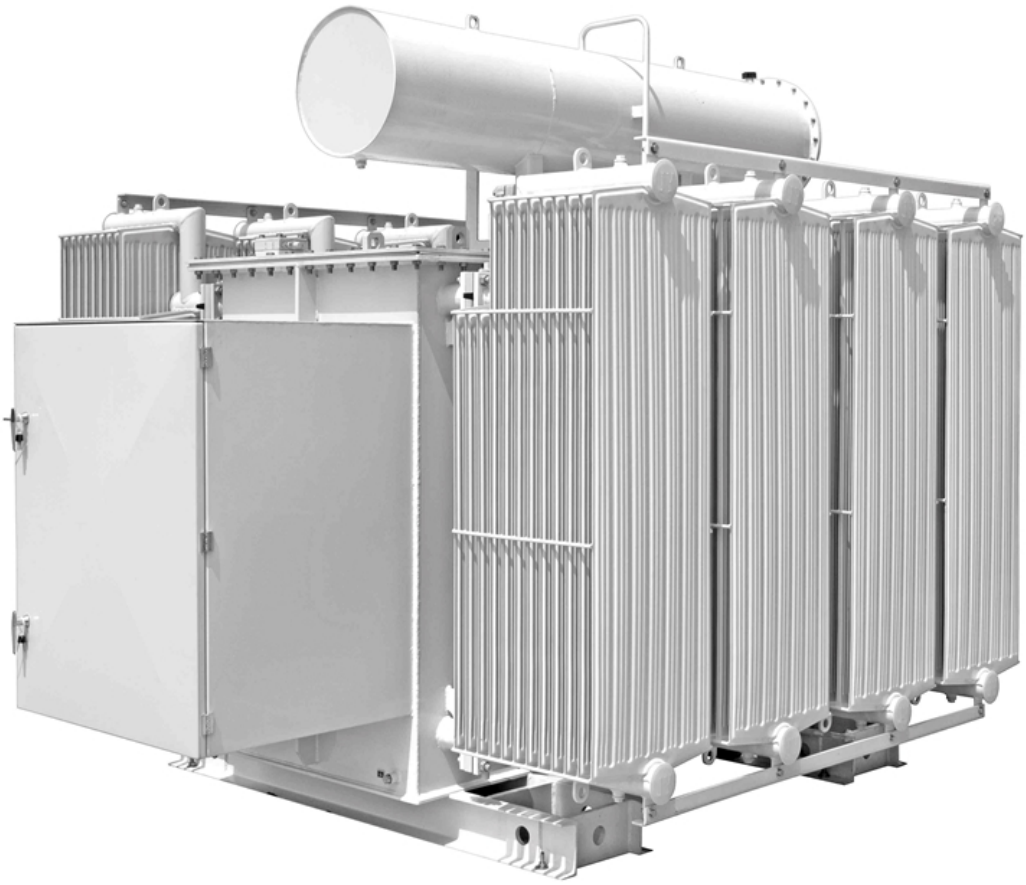
Applications: General purposes, industrial sites, electrical rooms, underground vaults, manufacturing facilities, steel plants, offshore, commercial, military, processing plants, electric power distribution, utilities, and more.

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