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Product ID: 305647

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-ETX-R7-3P-DTP-630KVA-YQ-HT-LS-A5-BX-CZ-1ZZ-M1 3PH Explosion Proof Conservator Substation Transformer

Transformer Type: Distribution Transformer, Explosion Proof, Conservator-Type
Transformer Configuration: Liquid Filled Substation,
Transformer Feed Type: Radial Feed
Phase: Three Phase
Capacity: 630 KVA
Vector Group: Dyn1
Primary Voltage: 6000V
Primary Voltage Class: 8.7 kV Class
Primary Phasor: Delta
Primary BIL: 60 KV
Secondary Voltage: 230Y/133
Secondary Voltage Class: 1.2 kV
Secondary Phasor: Wye-N
Secondary BIL: 30 kV
Frequency: 50 Hz
Temperature Rise: 65°C
Cooling Class: KNAN; Self-Cooled
Forced Air (Fans): None
Tap Changer: 5-position Tap Changer
Tap Qty: (2) FCAN Above Taps, (2) FCBN Below Taps
Tap %: 2.5%
Tap Changer Switch Location: Front Compartment
Impedance (Typical): 4.1 %

Ratings/Approvals

Meets/Exceeds IEC 60076 Ratings
Non-PCB Insulating Fluid
NEMA 7 Explosion Proof Cabinet
Class A Insulation
IP67 Rated
Class I, Divisions 1 & 2, Groups C and D
Class II, Divisions 1 & 2, Groups E,F,G

No Power Factor Efficiency @ 100% Load: 98.81%
No Power Factor Efficiency @ 75% Load: 99.05%
No Power Factor Efficiency @ 50% Load: 99.25%
No Power Factor Efficiency @ 25% Load: 99.32%

0.8 Power Factor Efficiency @ 100% Load: 98.52%
0.8 Power Factor Efficiency @ 75% Load: 99.81%
0.8 Power Factor Efficiency @ 50% Load: 99.07%
0.8 Power Factor Efficiency @ 25% Load: 99.15%

No Load Loss: 0.51 KW
Full Load Loss: 5.50 KW
Note: *Losses offered are typical only, not guaranteed*

Primary Connection Type: Live Front in Explosion Proof Box
Primary Termination: Top Mounted Cable Explosion Proof Box
Primary Connection Qty: (3)
Primary Surge Arrestors: N/A
Primary Surge Arrestor Voltage Rating: N/A
Primary Surge Arrestor MCOV Rating: N/A
Primary Over Current Protection (OCP): N/A
Primary Over Current Protection Method: N/A
Primary Over Current Protection Holder: N/A
Secondary Connection Type: Live Font
Secondary Connections: Cable Boxes
Secondary Connection Qty: (4)
Secondary Over Current Protection (OCP): N/A
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 Temp (alarm and trip)
Load Break Switch: N/A
Load Break Switch Qty: 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: Biodegradable Natural Vegetable Oil Ester Insulating Fluid - Non-PCB Fluid (Type: Midel 7131)
Fluid Capacity: N/A
Liquid Level Indicator: Analog Dial Gauge
Temperature Indicator: Analog Dial Gauge - Measuring Oil and Coil Temperature
Pressure/Vacuum Indicator: Analog Dial Gauge
Pressure Relief Device: Included, Automatic Action
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: 55°C
Sound Level: N/A
Elevation Rating: 3300ft (1000 meters) Above Sea Level
Core Material: Grain Oriented Steel
Tank Material: Coated Steel
Cabinet Material: Coated Steel
Base Platform Material: Coated Steel
Housing Type: NEMA 7 Compartmental Explosion Proof Cabinet w/ Doors, HV Compartment Left, LV Compartment Right
Paint Type: Weatherproof and UV Resistant Epoxy Coating and Undercoating
Finish Color: Grey
Mounting: Supporting Structures
Conduit Opening: Bottom Feed Underground Entry/Exit
Dimensions: -
Weight: -
*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
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E-mail: sales@larsonelectronics.com

The MT-PSTC-ETX-R7-3P-DTP-630KVA-YQ-HT-LS-A5-BX-CZ-1ZZ-M1 Explosion Proof

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 6000V Delta and a secondary voltage of three-phase 230Y/133 Wye-N. This system is rated for 630 KVA. 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. We offer systems with loop or radial feed, as well as dead front or live front primary connections.

The distribution transformer is equipped with a rigid tank with a level indicator and a rubber bag inside the unit. An accessible IP54 rated weatherproof junction box with glands for single core cables from HV and LV connection is available.

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-ETX-R7-3P-DTP-630KVA-YQ-HT-LS-A5-BX-CZ-1ZZ-M1 does not have fans for forced air cooling. This non-sealed system features breathers for cooling when operating temperatures increase.

Temperature Rise: This unit features 65°C temperature rise for reduced heat waste, increased reliability and longer life. The transformer meets standard ANSI/IEEE 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-ETX-R7-3P-DTP-630KVA-YQ-HT-LS-A5-BX-CZ-1ZZ-M1 features Midel oil fluid (KNAN). We offer transformers with mineral oil 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.

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 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 does not come with surge arresters on the primary side. 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 does not have a load breaker switch.

Valves: The MT-PSTC-ETX-R7-3P-DTP-630KVA-YQ-HT-LS-A5-BX-CZ-1ZZ-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 should be installed on supporting structures, such as the roof of the transformer main tank.

Benefits: The MT-PSTC-ETX-R7-3P-DTP-630KVA-YQ-HT-LS-A5-BX-CZ-1ZZ-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: 305647

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/305647.PDF)
- **HigResPic1**(https://www.larsonelectronics.com//images/product/HigResPic1/305647.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)