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MT-PSTH-R4-3P-YK-1.6MVA-DVE-HT-LT-A5-BMP-CZ-2ZZ-M1

1.6 MVA Hermetically Sealed Substation Transformer - 400Y/231 Wye-N Primary, 6300V Delta Secondary - ONAN, Grey

Product ID: 339712

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



Image: MT-PSTH-R4-3P-YK-1.6MVA-DVE-HT-LT-A5-BMP-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-R4-3P-YK-1.6MVA-DVE-HT-LT-A5-BMP-CZ-2ZZ-M1 Conservator Transformer

Transformer Type: Substation Power Transformer, Hermetically Sealed Type
Transformer Configuration: Liquid Filled Substation
Transformer Feed Type: Radial Feed
Operation: Step Up (Not Approved For Step-Down)
Phase: Three Phase
Capacity: 1.6 MVA (1,600 KVA)
Vector Group: Dyn5
Primary Voltage: 400Y/231
Primary Voltage Switch: N/A
Primary Voltage Class: 1.2 kV Class
Primary Phasor: Wye-N
Primary BIL: 30 KV
Secondary Voltage: 6300V
Secondary Voltage Class: 8.7 kV Class
Secondary Phasor: Delta
Secondary BIL: 75 kV
Frequency: 50 Hz
Temperature Rise: 65°C
Insulation Rating: Class H
Cooling Class: ONAN; Self-Cooled

Ratings

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

Efficiency @ 25% Load: 99.36%
No Load Loss: TBD
Full Load Loss: TBD
Note: *Losses offered are typical only, not guaranteed*

Forced Air (Fans): None

Provisions For Forced Air (Fans): Included

Radiators: Included

Tap Changer: 5-position Tap Changer

Tap Qty: (2) FCAN Above Taps, (2) FCBN Below Taps

Tap %: 2.5%

Tap Changer Switch Rating: 8.7 KV, 600 A

Tap Changer Switch Location: High Voltage (HV) Front Compartment

Impedance (Typical): 12.5%

Primary Connection Type: Dead Front

Primary Termination Arrangement: Top Mounted, Inline

Primary Termination: Ceramic Bushings

Primary Connection Qty: (4)

Primary Bushing Rating: 1.2 kV

Primary Neutral Connection: Included

Primary Surge Arrestors: N/A

Primary Surge Arrestor Voltage Rating: N/A

Primary Surge Arrestor MCOV Rating: N/A

Primary Overcurrent Protection (OCP): N/A

Primary Overcurrent Protection Method: N/A

Primary Overcurrent Protection Holder: N/A

Primary Grounding Provisions: N/A

Secondary Connection Type: Live Front

Secondary Termination Arrangement: Top Mounted, Inline

Secondary Connections: Ceramic Bushings

Secondary Connection Qty: (3)

Secondary Connection Supports: N/A

Secondary Overcurrent Protection (OCP): N/A

Secondary Neutral Connection: N/A

Secondary Surge Arrestors: Included, (3) High Elbow surge arresters

Secondary Surge Arrestor Voltage Rating: 6 kV

Secondary Surge Arrestor MCOV Rating: 5.1 kV

Grounding Provisions: (1) Grounding lug, accepts #2 copper

Metering Current Transformer (CT): N/A

Metering Panel: Provision for DGA Analyzer and Double Test terminals

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, Non-PCB Fluid

Fluid (Oil) Capacity*: TBD

Fluid (Oil) Weight*: TBD

Liquid Level Indicator: Analog Dial Gauge

Temperature Indicator: Analog Dial Gauge - Measuring Oil and Coil Temperature, with (2) Contacts

Pressure/Vacuum Indicator: Analog Dial Gauge

Pressure Relief Device: Included, Automatic Action

Fault Indicator: N/A
Gas Sampler Valve: N/A
Fill Valve: Included, w/ Shut-Off Valve
Fill Valve Location: Front Compartment
Drain Valve: Included w/ Sampler
Drain Valve Location: Front Compartment
Winding Material: Copper
Ambient Temperature Rating: 45°C
Ambient Operating Temperature Range: -20 to +45°C
Design Wind Speed: 100 mph
Seismic Zone: UBC Zone 2 B, soil profile - So
Sound Level: 61 dBA
Elevation (Altitude): 4600ft (1400 meters) Above Sea Level
Core Material: Grain Oriented Silicon Steel
Tank Material: Coated Steel
Cabinet Material: Coated Steel
Base Platform Material: Coated Steel
Nameplate Material: Stainless Steel
Portability: N/A
Housing Type: Terminal Box w/ Doors and 316 Stainless Steel cable glands, HV Compartment Right, LV Compartment Housing Type Left
Enclosure Rating: NEMA 3X
Seismic Rating: N/A
Paint Type: Weatherproof and UV Resistant Epoxy Coating and Paint Type Undercoating
Finish Color: Grey
Mounting: Supporting Structures
Conduit Opening: N/A
Tank Cover Access Handhole: N/A
Dimensions*: 83"-W x 53"-D x 89"-H
Dry Weight (w/o Oil)*: TBD
Total Weight (Liquid Filled)*: 9,480 lbs
*Please note that numbers are approximate and subject to change

Special Orders - Special Requirements
Contact us for special requirements
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The MT-PSTH-R4-3P-YK-1.6MVA-DVE-HT-LT-A5-BMP-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 400Y/231 Wye-N and a secondary voltage of three-phase 6300V Delta. This system is rated for 1.6 MVA (1,600 KVA). 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 in 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 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-R4-3P-YK-1.6MVA-DVE-HT-LT-A5-BMP-CZ-2ZZ-M1 does not have fans for forced air cooling, but has provisions 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 1.6 MVA (1,600 KVA). 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-R4-3P-YK-1.6MVA-DVE-HT-LT-A5-BMP-CZ-2ZZ-M1 features mineral oil fluid (ONAN). 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 aren't any 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 comes with surge arresters on the secondary side.

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

Valves: The MT-PSTH-R4-3P-YK-1.6MVA-DVE-HT-LT-A5-BMP-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 conservator substation should be installed on supporting structures, such as the roof of the transformer main tank.

Benefits: The MT-PSTH-R4-3P-YK-1.6MVA-DVE-HT-LT-A5-BMP-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

Warranty: 24 Months.

Export Control Classification Number (ECCN): EAR99

Links (Click on the below items to view):

- **HigResPic1**(https://www.larsonelectronics.com/images/product/HigResPic1/339712.JPG)
- **Video1**(https://www.youtube.com/watch?v=4-JEyYeYcn8)
- **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)