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MT-PDT-VPI-R7-1P-SMQ-100KVA-SLZ-A6-DZ-CC-2A-ZZ-T-N4X-M1

100 KVA Vacuum Pressure Impregnated Transformer, 13.2kV Primary, 240/120V Center-Tap Secondary, AA Cooling, Class H, 316 Stainless Steel, NEMA 4X

Product ID: 333046

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



Image: MT-PDT-VPI-R7-1P-SMQ-100KVA-SLZ-A6-DZ-CC-2A-ZZ-T-N4X-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-PDT-VPI-R7-1P-SMQ-100KVA-SLZ-A6-DZ-CC-2A-ZZ-T-N4X-M1 Vacuum Pressure Impregnated Transformer

Transformer Type: Vacuum Pressure Impregnated (VPI) Transformer
Transformer Configuration: Dry Type, Ventilated
Phase: Three Phase
Capacity: 100 KVA
Vector Group: Dyn1
Primary Voltage: 13,200V AC
Primary Voltage Class: 15 kV Class
Primary Phasor: Line-to-Neutral (13200Y/7620 System)
Primary BIL: 95 KV
Secondary Voltage: 240/120V AC
Secondary Voltage Class: 600 V Class
Secondary Phasor: Center-Tap
Secondary BIL: 30 KV
Frequency: 60 Hz
Temperature Rise: 80°C

Cooling Class: AA (Air Natural)

Forced Air (Fans): Not Included
Insulation Class: Class H

Ratings

NRTL Listed for United States and Canada
Complies with ANSI / IEEE C57.12.00
Complies with ANSI / IEEE C57.12.01
Complies with ANSI / IEEE C57 12.35
Complies with ANSI / IEEE C57.12.70
Complies with ANSI / IEEE C57.12.59
Meets or Exceeds NEMA ST-20 Standards
Meets/Exceeds DOE 2016 Efficiency Ratings
Meets/Exceeds CSA Efficiency Ratings
Seismic Qualified for Earthquake Loads
NEMA 4X Indoor/Outdoor Steel Enclosure
Stainless Steel Machine-engraved nameplate
RoHS Certified
CE Certified
Efficiency %: 99.00%
Based on transformer operating at 50% of nameplate base kVA.

Load Losses at 145°C Reference Temp.

Tap Changer: 5-Position Tap changer
Tap Qty: (2) FCAN Above, (2) FCBN Below
Tap %: 2.5%
Tap Changer Switch Location: HV Compartment
Impedance (at 120°C): ≥ 4.0% ±10%
Primary Connection Type: HV Bushing Terminals, Enclosed Terminal Compartment
Primary Surge Arrestors: Included, Distribution Class; metal-oxide-varistor type
Primary Surge Arrestor Voltage Rating: 9 kV
Primary Surge Arrestor MCOV Rating: 7.65 kV
Primary Overcurrent Protection (OCP): Primary Fuses
Primary Overcurrent Protection Method: Current Limiting Fuse Protection
Primary Grounding Provisions: Ground Lug Provided
Secondary Connection Type: Copper Terminal Lugs
Secondary Surge Arrestors: N/A
Secondary Surge Arrestor Voltage Rating: N/A
Secondary Surge Arrestor MCOV Rating: N/A
Secondary Over Current Protection (OCP): N/A
Secondary Grounding Provisions: Neutral Ground Lug
Grounding Pads: Stainless Steel Ground Connection Pads
Metering Current Transformer (CT): N/A
Control Network: Support serial MS/TP and Ethernet IP communications, and able to communicate directly via RS-485 serial networks and Ethernet 10Base-T networks as native device
Metering Panel: N/A
Auxiliary Control Panel: N/A
Load Break Switch: N/A
Load Break Switch Qty: N/A
Load Break Switch Location: N/A
Efficiency Standard(s): Comply with 10 CFR 431, Subpart K.
K-Factor Rating (Harmonic Mitigation): K-1 (Standard)
Temperature Sensors in Coil: Included
Temperature Gauge: Included, with alarm contact
Seismic Bracing: Included
Weather Shield: N/A
Space Heaters: Strip Heater Included
Winding Material: Copper
Ambient Temperature Rating: 40°C
Sound Level: 55 dBA, Complies with NEMA TR-1
Elevation (Altitude) Rating: 3300ft (1000 meters) Above Sea Level
Enclosure Material: 316 Stainless Steel
Enclosure Rating: NEMA 4X Weatherproof, Ventilated
Handling: Provisions for jacking, lifting, and towing
Paint Type: Epoxy Paint
Finish: ANSI 61 Grey
Mount: Pad Mount / Floor Mount
Dimensions: Approx. 44"L x 36"W x 48"H
Weight: Approx. 1,350 lbs
*Please note that numbers are approximate and subject to change

No Load Loss (in watts): +/- 300W
Full Load Loss (in watts): +/- 1,600W
Total Load Loss (in watts): +/- 1,900W

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

Factory Tests

Turns ratio, polarity, and phase relation on rated voltage connection
Transformer no-load losses and excitation current at 100 percent of ratings. This test may be based on a statistical sample
Applied voltage and induced voltage
Partial discharge
Impedance voltage and load loss at rated current and rated frequency on rated voltage connection and at tap extremes
Temperature rise at minimum and maximum ratings
Impulse test
Insulation power factor
Insulation resistance
Audible sound level
Short-circuit capability
Operation of devices
Control (auxiliary) and consumption loss data values

Special Orders - Special Requirements

Contact us for special requirements
Toll Free: 1-800-369-6671
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E-mail: sales@larsonelectronics.com

The MT-PDT-VPI-R7-1P-SMQ-100KVA-SLZ-A6-DZ-CC-2A-ZZ-T-N4X-M1 Vacuum Pressure Impregnated Transformer from Larson Electronics converts single-phase 13.2kV electrical power to 240/120V center-tap output. This power distribution unit provides

operators the ability to safely step down and distribute 100 KVA AC power from medium-voltage utility sources, such as overhead or underground distribution lines. The entire system is housed in a weatherproof enclosure designed for pad-mounted installations.

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

Transformer Features: With a transformer rating of 100 KVA [Air Natural Cooled], the industrial dry-type transformer features a primary voltage of single-phase 13.2kV AC and a secondary voltage of single-phase 240/120V center-tap. This transformer is equipped with a 5-position tap changer with five +/-2.5% taps (two FCAN above and two FCBN below) to allow small adjustments in voltage. The system has copper windings for high strength, durability and excellent electrical conductivity. This VPI transformer features minimized air gaps and voids in the insulation, providing improved mechanical strength, moisture resistance and enhanced thermal stability.

The MT-PDT-VPI-R7-1P-SMQ-100KVA-SLZ-A6-DZ-CC-2A-ZZ-T-N4X-M1 uses natural air cooling (AA) and does not require forced-air fans.

Transformer Efficiency: The Class H insulated transformer meets standard efficiency requirements and is designed for long service life in demanding environments. High efficiency makes this unit suitable for electrical distribution systems, industrial facilities, commercial sites, utility infrastructure and outdoor installations.

Temperature Sensor: The MT-PDT-VPI-R7-1P-SMQ-100KVA-SLZ-A6-DZ-CC-2A-ZZ-T-N4X-M1 is equipped with temperature sensors inside the system for monitoring winding temperature and operational conditions. A monitoring service is not included with the transformer.

Temperature Gauge: This transformer includes a temperature gauge for local monitoring.

Load Break Switch: This VPI transformer does not include a load break switch. We can add a load break switch at an additional cost.

Surge Arresters: This transformer includes surge arresters on the primary side. Designed for over-voltage and transient protection, the components help prevent damage caused by lightning strikes, switching surges or other voltage disturbances.

Control Transformer: This VPI transformer does not include a control transformer. We can add a control transformer for operating equipment at an additional cost.

Seismic Bracing: This system does not include seismic bracing. We can add seismic bracing for added protection in areas prone to earthquakes at an additional cost.

Weather Shield: This transformer is designed for outdoor environments and is protected by a weather-resistant enclosure.

Space Heaters: This system includes a strip heater installed inside the enclosure to prevent moisture buildup and condensation during extended shutdown periods or in humid

environments. The heater helps protect internal components and insulation from moisture-related damage, improving reliability and extending the service life of the transformer.

Enclosure Design: This VPI transformer is protected by a 316 stainless steel housing. The enclosure carries a NEMA 4X rating for protection from exposure to moisture, rain, dust and debris.

Mount: The transformer is designed for pad-mounted installation on a concrete pad or foundation. The base structure includes provisions for lifting and positioning during installation.

Benefits: The MT-PDT-VPI-R7-1P-SMQ-100KVA-SLZ-A6-DZ-CC-2A-ZZ-T-N4X-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, public locations 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

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Export Control Classification Number (ECCN): EAR99

Links (Click on the below items to view):

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- **HigResPic2**(https://www.larsonelectronics.com/images/product/HigResPic2/333046.JPG)
- **HigResPic3**(https://www.larsonelectronics.com/images/product/HigResPic3/333046.JPG)
- **HigResPic4**(https://www.larsonelectronics.com/images/product/HigResPic4/333046.JPG)
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