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**MT-PDT-VPM-FPE-R7-3P-D-45KVA-E-P-D-CS-1Z-ZZ-Z-N4X**

# 45 KVA Vacuum Pressure Impregnated Transformer, 480V Delta Primary, 240V Delta Secondary, ANN, Class R, VPI, Fully Potted/Marine Rated

**Product ID: 331345**

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**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-VPM-FPE-R7-3P-D-45KVA-E-P-D-CS-1Z-ZZ-Z-N4X Vacuum Pressure Impregnated Transformer**

**Transformer Type:** Vacuum Pressure Impregnated (VPI) Transformer, Marine Duty Rated
**Transformer Configuration:** Dry Type, Ventilated, Fully Potted
**Phase:** Three Phase
**Capacity:** 45 KVA
**Vector Group:** -
**Primary Voltage:** 480V AC
**Primary Voltage Class:** 1.2 kV Class
**Primary Phasor:** Delta
**Primary BIL:** 30 KV
**Secondary Voltage:** 240V AC
**Secondary Voltage Class:** 1.2 kV Class
**Secondary Phasor:** Delta
**Secondary BIL:** 30 KV
**Frequency:** 60 Hz
**Temperature Rise:** 80°C
**Cooling:** ANN

**Forced Air (Fans):** None

**Insulation Class:** Class R
**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):** 1.0-4.5% Typical
**Primary Connection Type:** Terminal Lugs, Accommodate with 3#2/0+1#6G - 1 1/2"C
**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 Grounding Provisions:** N/A
**Secondary Connection Type:** Terminal Lugs, Accommodate with (4) 600MCM+1#1/0G - 3 1/2"C

**Secondary Overcurrent Protection (OCP):** N/A

**Secondary Grounding Provisions:** Lugs
**Metering Current Transformer (CT):** N/A
**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):** DOE 2016, IEEE, ANSI
**K-Factor Rating (Harmonic Mitigation):** K-1 (Standard)
**Temperature Sensors in Coil:** Included
**Temperature Gauge:** Included

**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 C57.12.59
Complies with ANSI / IEEE C57.12.70
Meets/Exceeds DOE 2016 Efficiency Ratings
Meets/Exceeds CSA Efficiency Ratings
Meets or Exceeds NEMA ST-20 Standards
NEMA 4X Indoor/Outdoor Enclosure
Seismic Qualified for Earthquake Loads
RoHS Certified
Marine Duty Rated
**CE Certified**

**Efficiency %:** 99.00%
*Based on transformer operating at 50% of nameplate base kVA.*

**Load Losses at 145°C Reference Temp.**
**No Load Loss (in watts):** -
**Full Load Loss(in watts):** -
**Total Load Loss (in watts):** -
**Note:** *Losses offered are typical only, not guaranteed*

**Factory Tests**

Efficiency at 25, 50, 75 and 100 percent load
Percent regulation at 80 and 100 percent power factor
No load and full loss in watts
Impedance based on reference temperature

Sound level in db of transformer in enclosure

Average temperature rise based on 40 degrees C ambient temperature.

**Seismic Bracing:** Included
**Weather Shield:** N/A
**Space Heaters:** N/A
**Winding Material:** Copper
**Ambient Temperature Rating:** 40°C
**Sound Level:** 50 dBA
**Elevation (Altitude) Rating:** 3300ft (1000 meters) Above Sea Level
**Core Material:** Non-aging Silicon Steel
**Enclosure Material:** Stainless Steel
**Enclosure Rating:** NEMA 4X
**System Form Factor:** N/A
**Paint Type:** Epoxy Paint
**Finish:** ANSI 61 Light Grey
**Mount:** Pad Mount / Floor Mount
**Dimensions:** 68"-W x 39"-D x 50"-H
**Weight:** 663 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-PDT-VPM-FPE-R7-3P-D-45KVA-E-P-D-CS-1Z-ZZ-Z-N4X Vacuum Pressure Impregnated Transformer from Larson Electronics converts three-phase 480V Delta to three-phase 240V Delta. This power distribution unit provides operators the ability to safely tap into and distribute 45 KVA AC power from a variety of sources, such as direct grid power. The entire system is secured to a skid mount platform.**

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

**Transformer Features:** With a transformer rating of 45 KVA, the industrial dry type transformer features a primary voltage of three-phase 480V AC Delta and a secondary voltage of three-phase 240V AC Delta. 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 changes for voltage. The system has copper windings for high strength and electrical conductivity. This VPI transformer features minimized air gaps and voids in the insulation, leading to increased durability and thermal stability.

The MT-PDT-VPM-FPE-R7-3P-D-45KVA-E-P-D-CS-1Z-ZZ-Z-N4X does not include fans or mounting provisions for fans.

**Transformer Efficiency:** The Class R transformer meets standard efficiency requirements. 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.

**Temperature Sensor:** The MT-PDT-VPM-FPE-R7-3P-D-45KVA-E-P-D-CS-1Z-ZZ-Z-N4X is equipped with temperature sensors inside the system for controls and monitoring. A monitoring service is not included with the transformer.

**Temperature Gauge:** This transformer comes with a temperature gauge.

**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 does not include surge arresters. 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 surge arresters that have mounting provisions for customer-provided surge arresters.

**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 does not include a weather shield. We can add a weather shield for protection in outdoor areas, humid environments and rodents at an additional cost.

**Space Heaters:** This system does not include a space heater. We can add a space heater for preventing condensation during extended shutdown at an additional cost.

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

**Mount:** The power distribution unit is mounted on a skid plate base that allows this transformer to easily be moved from one location to another using a forklift. The skid platform is designed for serious use and is ruggedly constructed to withstand demanding conditions and heavy duty industrial applications. The industrial grade skid platform can be modified to meet the needs of job-site requirements.

**Benefits:** The MT-PDT-VPM-FPE-R7-3P-D-45KVA-E-P-D-CS-1Z-ZZ-Z-N4X 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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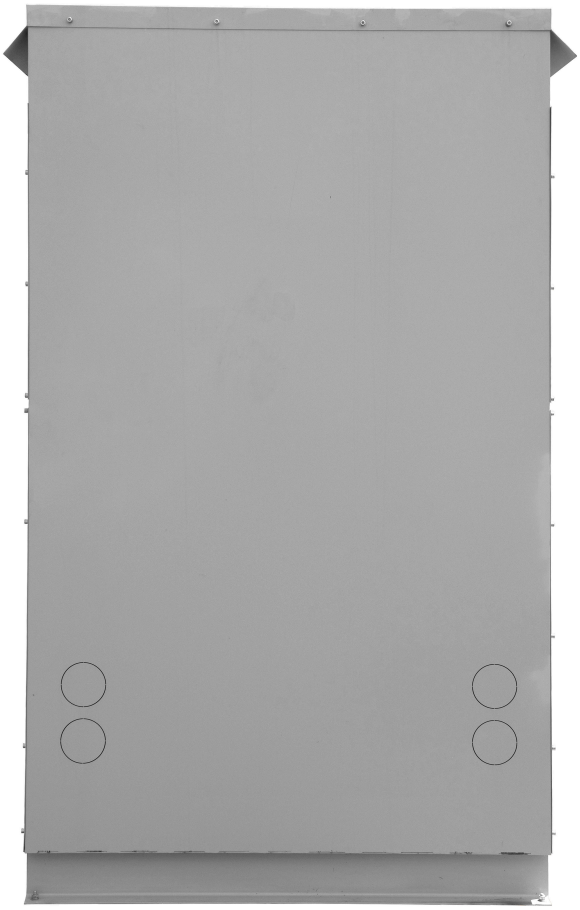
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# Frequently Asked Questions (FAQ)

There are no Faqs