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## MT-PSTH-R7-3P-DNF-1MVA-YE-HNS-LNS-A6-BM-CS-1ZZ-M2

# 1 MVA Hermetically Sealed Substation Transformer - 4160V Delta Primary, 480Y/277 Wye-N Secondary - ONAN - Grey - NEMA 4X - Stainless Steel

**Product ID: 342581**



Image: MT-PSTH-R7-3P-DNF-1MVA-YE-HNS-LNS-A6-BM-CS-1ZZ-M2

**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-R7-3P-DNF-1MVA-YE-HNS-LNS-A6-BM-CZ-1ZZ-M2 Substation Transformer**

**Transformer Type:** Substation Power Transformer, Hermetically Sealed Type
**Transformer Configuration:** Liquid Filled Pad Mounted
**Phase:** Three Phase

**Transformer Feed Type:** Radial Feed

**Capacity:** 1 MVA (1,000 KVA)

**Primary Voltage:** 4160V
**Primary Voltage Class:** 5 kV
**Primary BIL:** 60 kV

**Primary Phasor:** Delta

**Secondary Voltage:** 480Y/277
**Secondary Voltage Class:** 1.2 kV
**Secondary BIL:** 30 kV

**Secondary Phasor:** Grounded Wye

**Short Circuit Rating:** 30 kA

**Vector Group:** Dyn1
**Frequency:** 60 Hz
**Temperature Rise:** 65°C
**Forced Air (Fans):** N/A

**Radiator:** Included, Removable Cold Rolled Steel

**HV Tap Changer:** 5-Position De-Energized Tap Changer, Manual

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

**HV Tap %:** 2.5% Taps

**Ratings**

Listed for United States and Canada
Outdoor

**HV Rating:** 5 kV

**LV Tap Changer:** N/A

**LV Tap Qty:** N/A

**LV Tap %:** N/A

**LV Rating:** N/A

**Impedance (Typical):** 6.0-7.0%

**Primary Connection Type:** Live Front

**Primary Termination Arrangement:** Side Mounted Porcelain Bushings

**Primary Connection:** Cable

**Primary Connection Qty:** (3) Primary Connections

**Primary Size:** 3C #2/0 - TECK 90 NEMA 4-HOLE PAD

**Primary Entry:** Bottom

**Primary Bushing Rating:** 5 kV Class, 60 kV BIL

**Primary Neutral Connection:** N/A

**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

**Primary Current Transformer:** Included, (3) Per Each Phase, C400 Accuracy Class, 200:5A MR

**Primary Neutral Current Transformer:** Included, (1) 2.5L100 Accuracy Class, 200:5A MR

**Primary Grounding Provisions:** Included

**Secondary Connection Type:** Live Front

**Secondary Termination Arrangement:** Side Mounted Porcelain Bushings

**Secondary Connections:** Cable Connection

**Secondary Connection Qty:** (4)

**Secondary Size:** 3- 1C #500MCM - TECK 90 NEMA 4-HOLE PAD

**Secondary Entry:** Bottom

**Secondary Connection Supports:** N/A

**Secondary Over Current Protection (OCP):** N/A

**Secondary Current Transformer:** Included, (3) Per Each Phase, C400 Accuracy Class, 1600:5A MR

**Secondary Neutral Current Transformer:** Included, (1) C400 Accuracy Class, 800:5A MR

**Secondary Neutral Connection:** N/A

**Secondary Surge Arrestors:** N/A

**Secondary Surge Arrestor Voltage Rating:** N/A

**Secondary Surge Arrestor MCOV Rating:** N/A

**Secondary Grounding Provisions:** (1) NEMA Ground Bar attached to tank via (2) Welded Ground Bungs

**Core Grounding Connection:** In a weather proof box outside of tank

**Insulation Fluid:** Mineral Oil Insulating Fluid - Non-PCB Fluid

**Fluid Capacity:** TBD

**Cooling Class:** ONAN

**Liquid Preservation System:** Included, Sealed Tank Per IEEE C57.12.10

**Liquid Level Gauge:** Included, Magnetic Type, w/ Contacts

**Liquid Temperature Gauge:** Included, Analog Type, w/ Contacts

**Winding Temperature Gauge:** Included, Analog Type, w/ Contacts

**Pressure/Vacuum Bleeder & Purge Valve:** Included, Analog Type
**Fault Pressure Device:** N/A
**Pressure Relief Valve:** Included, w/ Contacts
**Cut-Off Switch:** Included
**Fill Valve:** Included
**Drain Valve w/ Sampler Port:** Included
**Rapid Rise Relay:** Included
**Load Break Switch:** N/A
**Winding Material:** Copper
**No Load Loss:** TBD
**Full Load Loss:** TBD
**Service Location:** Outdoor
**Ambient Temperature Rating:** 50ºC
**Sound Level:** < 78 dBA
**Core Material:** Grain Oriented Steel
**Tank Material:** 304 Stainless Steel
**Cabinet Material:** 304 Stainless Steel
**Base Platform Material:** 304 Stainless Steel
**Portability:** Lifting lugs, provisions for jacking under base, w/ base construction suitable for using rollers or skidding
**Environment:** Trace amounts of H2S, SO2 and coke dust, corrosive environment
**Cabinet Rating:** NEMA 4X Weatherproof, w/ N2 Blanket
**Paint Type:** Munsell™ 5BG 7.0/0.4 Light Grey (ANSI #70)
**Mounting:** Pad Mounted
**Conduit Opening:** TBD
**Dimensions:** TBD
**Weight:** TBD

**Special Orders - Special Requirements**
Contact us for special requirements
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**The MT-PSTH-R7-3P-DNF-1MVA-YE-HNS-LNS-A6-BM-CS-1ZZ-M2 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 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 4160V Delta and a secondary voltage of three-phase 480Y/277 Wye-N. This system is rated for 1 MVA (1,000 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 for voltage.

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-PSTH-R7-3P-DNF-1MVA-YE-HNS-LNS-A6-BM-CS-1ZZ-M2 doesn't 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. At 65°C temperature rise, the transformer offers 1 MVA (1,000 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-R7-3P-DNF-1MVA-YE-HNS-LNS-A6-BM-CS-1ZZ-M2 features mineral oil fluid (ONAN). We offer transformers with biodegradable or FR-3 fluids, if needed.

**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 is a rapid rise relay 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 doesn't come with surge arresters on the primary side. Surge arresters are 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 is not equipped with load breaker switches.

**Valves:** The MT-PSTH-R7-3P-DNF-1MVA-YE-HNS-LNS-A6-BM-CS-1ZZ-M2 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 substation transformer should be installed on supporting structures, such as the roof of the transformer main tank.

**Benefits:** The MT-PSTH-R7-3P-DNF-1MVA-YE-HNS-LNS-A6-BM-CS-1ZZ-M2 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