Larson Electronics LLC
9419 E US HWY 175, Kemp, TX 75143
Phone: 800.369.6671

www.LarsonElectronics.com
Email: sales@LarsonElectronics.com
Fax: 903.498.3364

**MPD-MT-BBT-208D-240D-3P-46.88A-2X5FT-BCE**

# 3 Phase Buck & Boost Prewired Transformer - 208V Primary - 240V Secondary - 46.88 Amps - 50/60Hz - (2) 5' 6/4 Whips w/ Blunt Cut Ends

**Product ID: 274892**




**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.**

**MPD-MT-BBT-208D-240D-3P-46.88A-2X5FT-BCE Buck and Boost Step-Up Prewired Transformer**

**Transformer Type:** Prewired Buck/Boost Step-Up Autotransformer
**Phase:** Three Phase
**Frequency:** 50/60 Hz
**Input Voltage:** 208 V Delta
**Primary Amps:** 53.19 A @ 208 V Delta
**Primary Configuration:** Delta
**kVA:** 19.16
**Output Voltage:** 240 V Delta
**Secondary Amps:** 46.88 A @ 240 V Delta
**Voltage Difference:** 86%
**Winding Material:** Aluminum
**Wiring:** Prewired with (2) 5' 6/4 SOOW Whips (One on Each Side) w/ Blunt Cut Ends
**Knockouts:** Side and Rear
**Primary Termination:** Front Access Copper Tabs or Lead Wires
**Secondary Termination:** Front Access Copper Tabs or Lead Wires
**Cooling:** Air / Dry Type
**Insulation:** 180°C
**Temperature Rise:** 115°C
**Sound Level:** 36 dB
**Enclosure Rating:** NEMA 3R
**Encapsulation:** Silica Sand & Resin Compounds
**Enclosure Material:** Steel
**Finish:** ANSI 61 Grey Finish
**Mounting:** Wall Mount Via Mounting Tabs
**Dimensions:** 11.75"H x 14.12"W x 6.25"D
**Weight:** 72 lb

**Ratings**

Listed for United States and Canada
NEMA 3R Indoor/Outdoor Enclosure
Meets or Exceeds NEMA ST-20 Standards
Buck and Boost Step-Up Transformer

**Special Orders - Requirements**

Contact us for special requirements
**Toll Free:** 1-800-369-6671
**Intl:** 1-214-616-6180

**The MPD-MT-BBT-208D-240D-3P-46.88A-2X5FT-BCE Three Phase Step-Up Buck and Boost Prewired Transformer from Larson Electronics is powerful, reliable, and designed with the environment in mind. Suitable for both indoor and outdoor applications, the MPD-MT-BBT-208D-240D-3P-46.88A-2X5FT-BCE provides increased reliability, higher efficiency, protection against critical equipment failures and an extra level of protection by isolating the power source from the connected device. The lower operating costs, lower heat emissions and lower cost of ownership make this transformer ideal for a wide range of applications and businesses. The MPD-MT-BBT-208D-240D-3P-46.88A-2X5FT-BCE is a prewired transformer for customer installation and is equipped with 5` of 6/4 SOOW cable with blunt cut ends on each side connected to the transformer.**

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

**Transformer Features:** The MPD-MT-BBT-208D-240D-3P-46.88A-2X5FT-BCE buck and boost transformer is a three phase unit with a 19.16 kVA rating and a primary voltage of 208 V Delta using a maximum of 53.19 amps on the primary side. This step-up transformer has a secondary voltage of 240 V Delta and provides up to 46.88 amps available on the secondary side. Featuring robust construction, this unit`s cores are manufactured with non-aging, cold-rolled silicon steel laminations using state of the art technology.

This unit boasts a low cost of ownership and is highly energy efficient. Lower heat emissions mean less cooling is needed as well. The NEMA 3R painted steel enclosure makes the unit suitable for both indoor and outdoor applications, and this step-up transformer can be wall mounted. The MPD-MT-BBT-208D-240D-3P-46.88A-2X5FT-BCE features a 180°C insulation with a 115°C temperature rise.

**Construction:** The aluminum winding in the MPD-MT-BBT-208D-240D-3P-46.88A-2X5FT-BCE are formed from high quality aluminum wire help to improve performance. The close tolerances used during manufacturing also eliminates burrs which hinder performance. Each core is specially coated to prevent the ingress of moisture and are electrically balanced to minimize axial forces during short circuit situations. Buck and boost transformers are designed to maximize the performance and life of electrical equipment. The MPD-MT-BBT-208D-240D-3P-46.88A-2X5FT-BCE is encapsulated in silica sand and resin, and cased in a NEMA 3R steel enclosure. NEMA 4, NEMA 4X, and NEMA 12 enclosures are available upon request.




Click Image to Enlarge

**Benefits:** The MPD-MT-BBT-208D-240D-3P-46.88A-2X5FT-BCE buck/boost step-up transformer offers many benefits to the consumer. Buck/boost transformers pass the majority of the load voltage directly through the transformer, only transforming a small percentage of the load. Due to this technology, a smaller and quieter step-up transformer is manufacturered and uses less materials. This provides owners with significant energy savings as well as offering environmental benefits.

Higher efficiency not only extends the life of the transformer, but also turn into

cost savings for owners in the form of lower energy bills and decreased cost of ownership. Installation and maintenance costs are reduced due to the smaller form factor, and less overall space requirements are decreased. In addition, these step-up transformers operate quieter than a standard autotransformer of the same capacity.
**Mounting:** Integrated wall mounting brackets make installation fast and easy. Because of the smaller overall footprint, heavy machinery is rarely needed for mounting and installation.
**Wiring/Installation:** The MPD-MT-BBT-208D-240D-3P-46.88A-2X5FT-BCE is equipped with 5` 6/4 SOOW whips on both the primary and secondary sides. Both sides are terminated in blunt cut ends. This transformer makes installation simple. Operators connect them to the corresponding current. For example, the 208 V whip gets connected to 208 V current.
**Applications:** Air conditioners, lighting systems, heating elements, motor applications and other applications that that require the ability to power loads that differ from the available line voltage.
**Limitations:** While there are many benefits to a buck/boost transformer, there are some limitations to consider. This transformer will only transformer voltage, it will not convert phases, it will not create even legs between line 1 and line 2 (L1 and L2 WILL be UNEVEN), has no circuit isolation, and does not create a neutral for applications where a neutral is not already present. If any of these limitations apply to you, you will need a standard transformer. Please see below link for our standard line of industrial transformers or our line of phase converters.
**Note on Voltage Generation:** Buck/boost transformers, like this unit, do NOT generate even legs of voltage on the secondary side. The generate voltage legs will always be unbalanced. This is acceptable for some situations, but other situations call for even legs on the secondary side. This simply cannot be achieved with a buck/boost transformer.

If your specific situation requires even legs of voltage on the secondary side, you will have to consider either a split phase buck/boost transformer or a standard industrial transformer. Larson Electronics has a wide range of both available for purchase:

Split Phase Buck/Boost Transformers

Standard Industrial Transformers
**Note on Phases:** This buck/boost transformer is a three phase step-up transformer. For single phase transformers or for three phase Wye transformers, click on the following links:

Single Phase Delta Buck/Boost Transformers

Three Phase Wye Buck/Boost Transformers
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.

# THREE-PHASE BUCK & BOOST TRANSFORMERS INSTRUCTION MANUAL

This manual applies to all three-phase buck & boost transformers sold by Larson Electronics. ***Please refer to the connection diagram on pages 4-6 for properly connecting the transformer.***

**Warning:** Do not attempt installation until you are familiar with all warnings, precautions, and procedures outlined within this instruction sheet. We strongly encourage only a licensed electrician install, operate and maintain this product.

## Precautions:

- Do not handle this transformer without proper equipment and experienced personnel.
- Fully inspect the transformer before installation.
- Use appropriate electrical terminals with flexible connectors.
- Connections should be in accordance with nameplate drawings or attached wiring diagrams.
- Disconnect all live power before installing and maintaining the transformer.
- Do not change any connections while the transformer is energized.
- Secure all ground connections before energizing the transformer.

After receiving the transformer, immediately inspect each unit for damage that could have resulted from transit. Check to ensure the specs on the transformer match the shipping documents. A claim should be filed with the carrier if any shipping damage is noted. These details with all relevant information should also be forwarded to Larson Electronics.

Use appropriate measures and experienced personnel for transporting the transformer relative to its size. Never attempt to lift the transformer without proper equipment. Lifting tabs are included on larger transformers to help ease transportation.

All MT-BBT Buck-Boost transformers are NEMA 3R rated, suitable for both indoor and outdoor installations. Follow appropriate electrical codes for cable installation and use suitable hardware for outdoor installations, such as water tight couplings at each knockout.

The transformer must be installed in an upright position on surfaces capable of supporting its weight. If installed outdoors, orient the unit vertically with the wiring compartment down to prevent the ingress of moisture.

## Mounting the Transformer (refer to page 7)

1. Choose a non-combustible surface for installing the transformer. This location must allow air flow around the transformer for cooling purposes.
2. Pre-drill the top two mounting holes on your mounting surface. (refer to mounting table on page 7)
3. With assistance, lift the transformer over the pre-drilled mounting holes and install the top two mounting bolts. Use appropriate equipment and lifting tabs for large transformers.
4. Level the unit and find the lower mounting hole(s) within the wiring compartment.
5. Drill out and install the lower mounting bolt(s) into the mounting surface.
6. In order to provide NEMA 3R protection, the unit must be mounted vertically with the mounting tabs facing up.

## Ventilation

Transformers are required to maintain free air flow around the unit for cooling purposes. The location should maintain an average ambient temperature of 86°F (30°C) and should not exceed 104°F (40°C) at any time. Proper ventilation is essential for transformers to meet their kVA capability. General purpose transformers should be located at least 2 inches for 10kVA and 4 inches for units over 10kVA from the surface to maintain adequate air circulation.

## Accessibility

Due to NEC standards, it is required for transformers to be accessible for inspection and located accordingly. Exposed passage ways where people could be exposed to live parts during inspection should be avoided.

## Sound Levels

By nature, transformers emit sound frequencies due to their electrically energized components. Care should be exercised when selecting a location to avoid sensitive areas such as in schools, hospitals, and office facilities. The sound levels produced by these transformers are required to meet NEMA standards. The sound level can vary from 40 to 60 DB. Acoustically absorbing materials could be considered for surrounding walls and ceilings.

## Wire Connections

1. Loosen the cover screw on the front to open the wiring compartment.
2. Ensure terminals are clean. Use the included lugs and bolts for terminal wiring where applicable. Use wire nuts or similar for all other electrical connections.
3. Make the required electrical connections per the wire diagram on page 4-6. This includes input and output connections, as well as ground(s).
4. If any unused wire leads remain, insulate with wire nuts and electrical tape.
5. Inspect all connections and close the wiring compartment. Secure the cover screw.

Proper cable size is selected based on the line current rating of the transformers primary and secondary sides. Pre-punched knockouts are provided to help facilitate cable entry.

## Ground

Grounding should be done in accordance with national electrical code standards. Securely grounding the transformer should be done as a safety precaution.

For safe and proper operation of the transformer, we recommend the following items be checked for completeness:

- ☐ Insulation resistance: enclosure to primary, enclosure to secondary and primary to secondary should be greater than 10k ohms.
- ☐ Output voltage: measure and verify that the transformer outputs the correct voltage in accordance with nameplate specifications. Voltage may vary depending on actual power available at your facility.
- ☐ Phase connections: refer to the nameplate diagram to ensure correct phase connections.
- ☐ When windings are connected in parallel (in the case of dual voltage primaries), the primary taps for all coils must be connected to the identical percentage tap positions to avoid the shorting of turns. For tap positions, refer to the transformer nameplate.

- Grounding: check to ensure the enclosure is grounded with the appropriately sized conductor.
- Connections: check all electrical connections for proper clearance and tightness.
- Care must be taken to ensure the load on a delta secondary with a 120V center tap does not exceed the normal current rating of the winding. The center tap is designed for a maximum of 5% of the kVA listed on the nameplate.
- The total load among all phases should be balanced for optimum performance of the transformers windings. Any three-phase of single-phase load may be connected but the kVA loaded on each phase must not exceed 1/3 of the nameplate kVA.

## Operation

For relatively normal clean installations, MT-BBT transformers will operate satisfactory under normal loads. Fully loaded transformers may be warm to the touch. Normal loading standards permit the enclosure to be 149°F (65°C) over ambient temperatures. MT-BBT transformers are designed to operate continuously at their full kVA rating.

**ANSI C57.96 provides guidance for loading transformers under different conditions including:**

- ➔ Varying ambient temperatures that are different from the ambient temperatures required for transformer operation.
- ➔ Short time overload as it relates to time and temperature and the corresponding loss of life of the transformer.
- ➔ Overload that results in the reduction of transformer life expectancy.

**If the transformer is experiencing increased temperatures, the following load characteristics should be considered immediately:**

- ➔ Rigorous motor starting loads or other impact type loading for which a specific transformer for that application is required.
- ➔ Over-excitation of the unit due to excess supply line voltage or current.
- ➔ Ambient temperatures above standard.
- ➔ Overload beyond ANSI C57.96 guidelines.
- ➔ Harmonic distortions of the supply line voltage and currents.

## Maintenance:

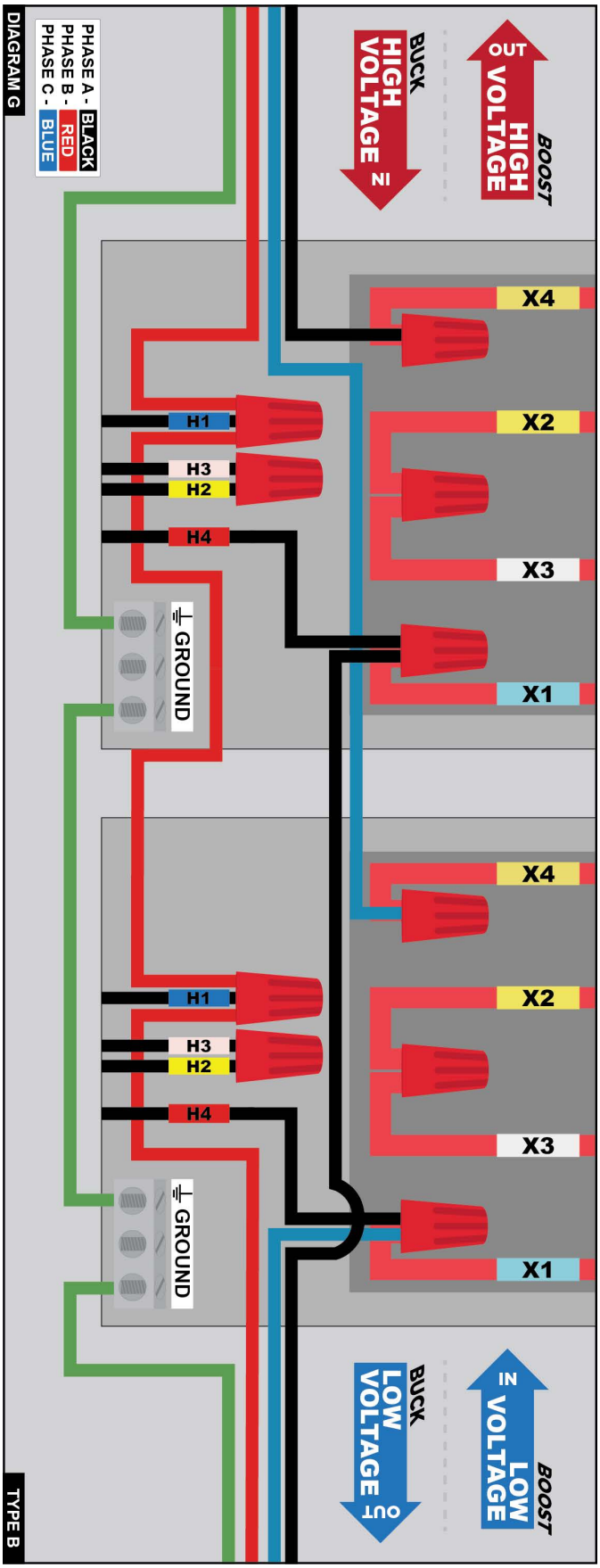
Under normal operating conditions, MT-BBT transformers do not require maintenance. However, periodic care and inspection is good practice, particularly in extreme environmental conditions.

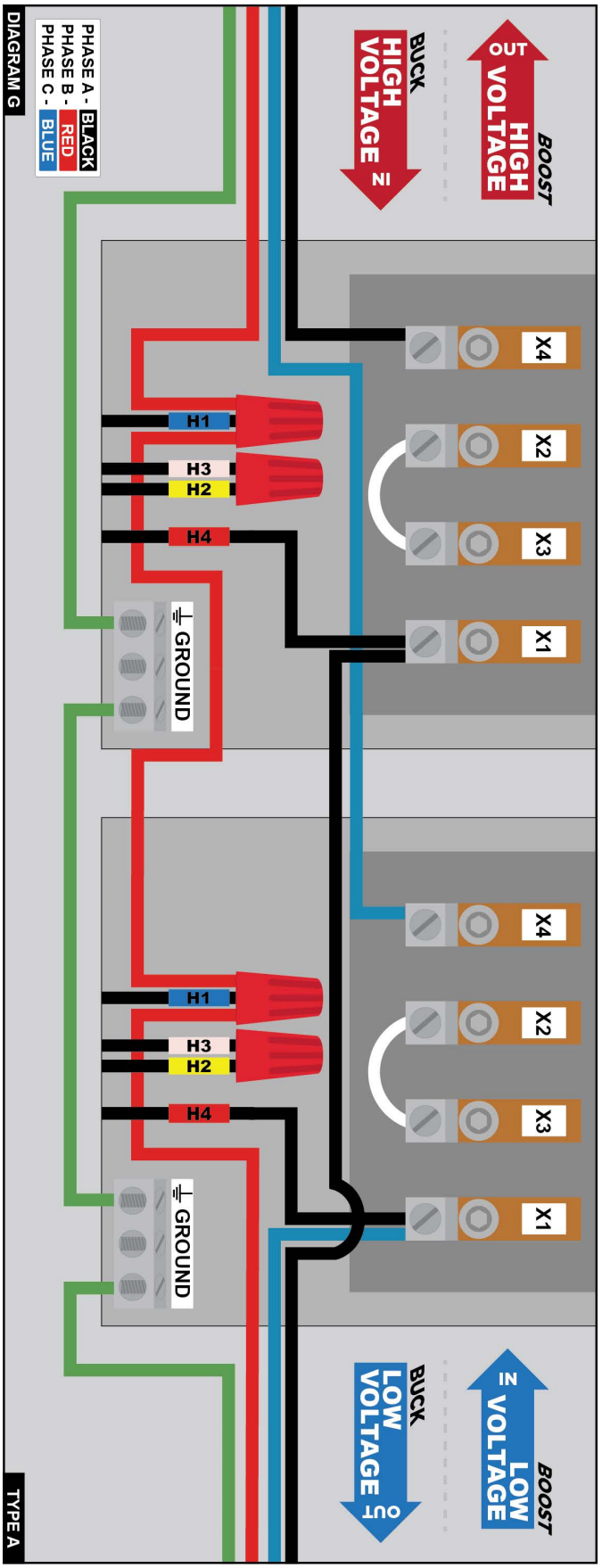
External inspection and removal of dust and dirt may be carried out while the transformer is in operation. However, access covers must not be open while energized.

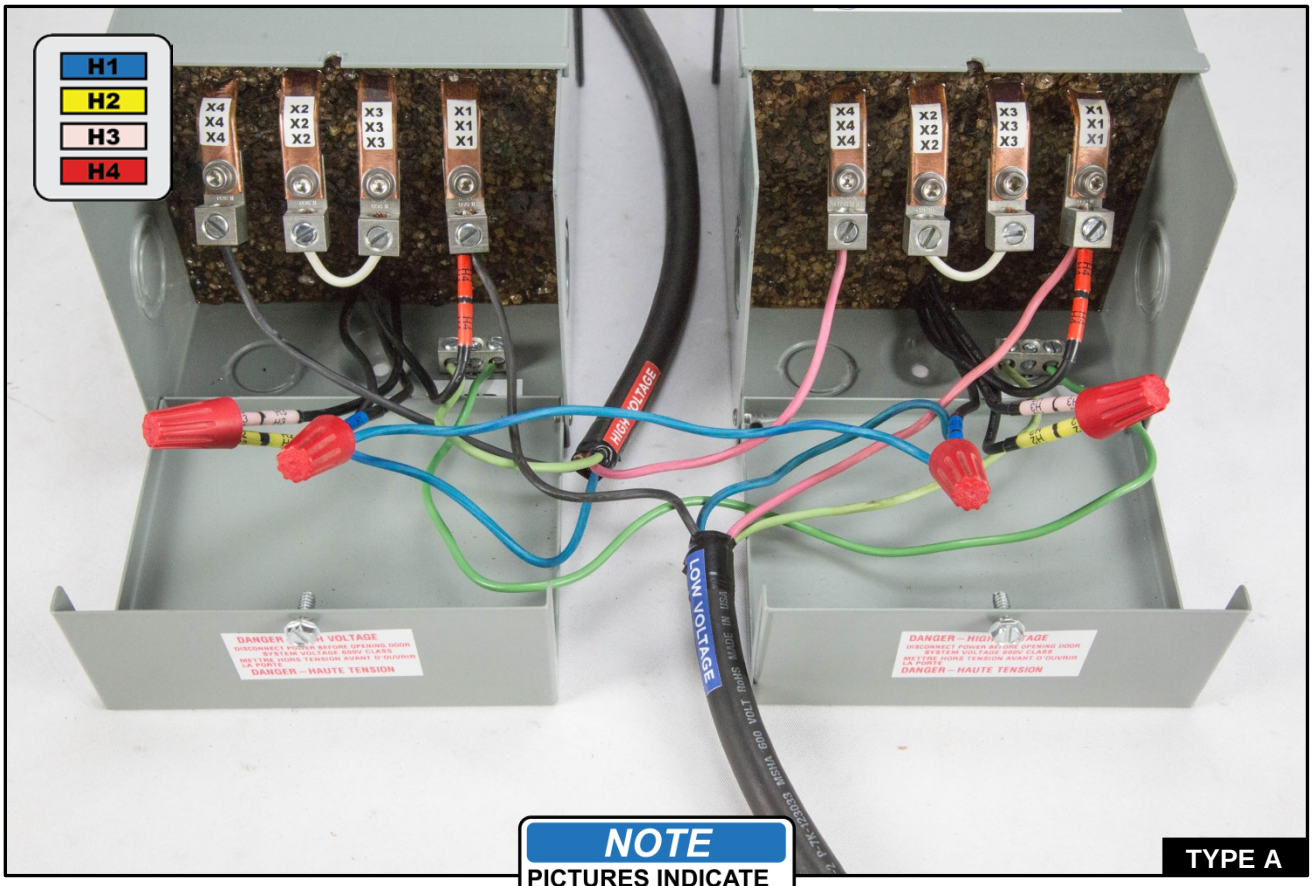
The accumulation of dust and dirt will affect cooling of the transformer causing a potential fire hazard. Ice or snow will not adversely affect the operation of the transformer.

**Warning:** Do not perform internal maintenance without first de-energizing the transformer! The transformer must be isolated and the terminals grounded. Check all ground connections to ensure a low impedance connection.

## Connection Diagram (Refer to the diagrams below for connecting the transformer. Choose the type that resembles your transformer.)

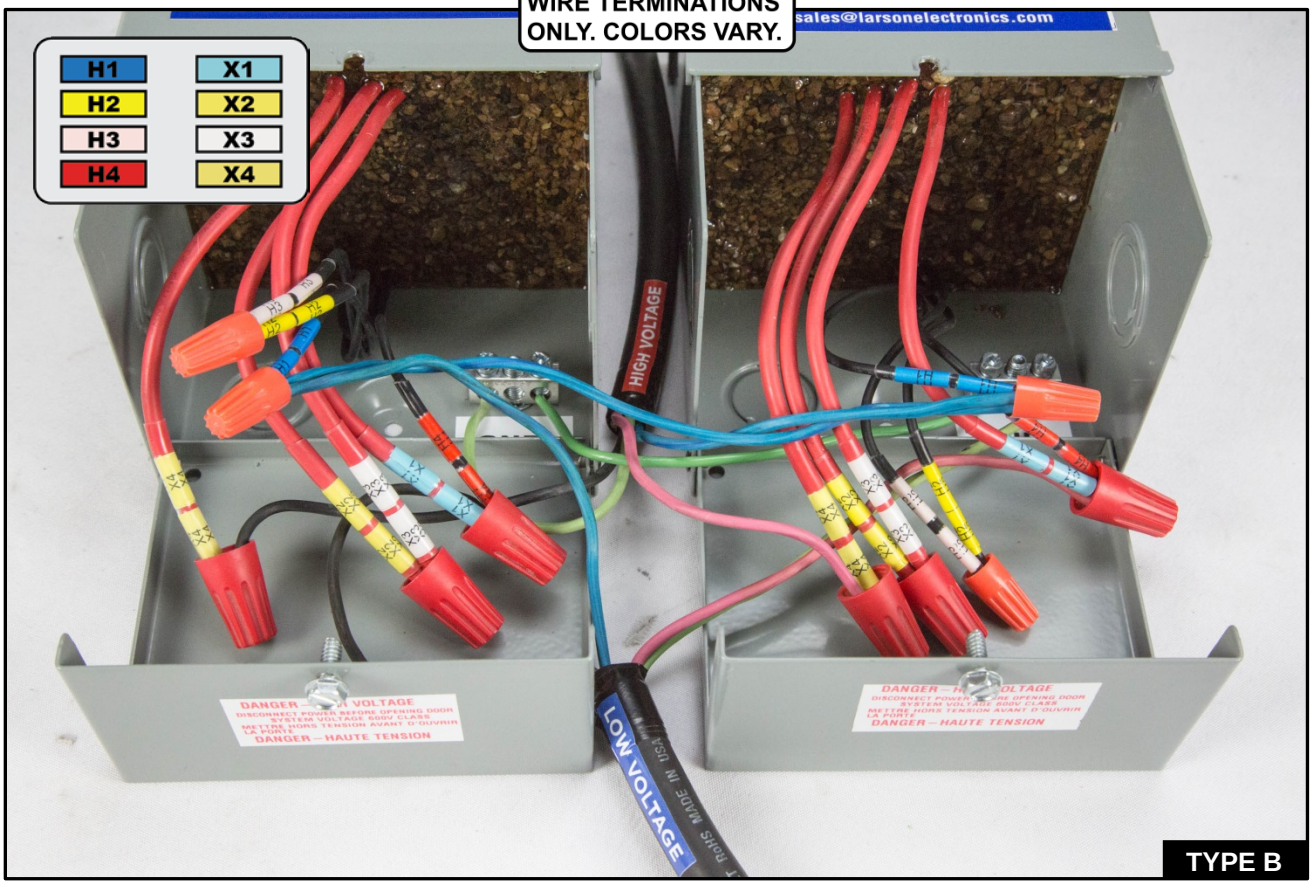





TYPE A

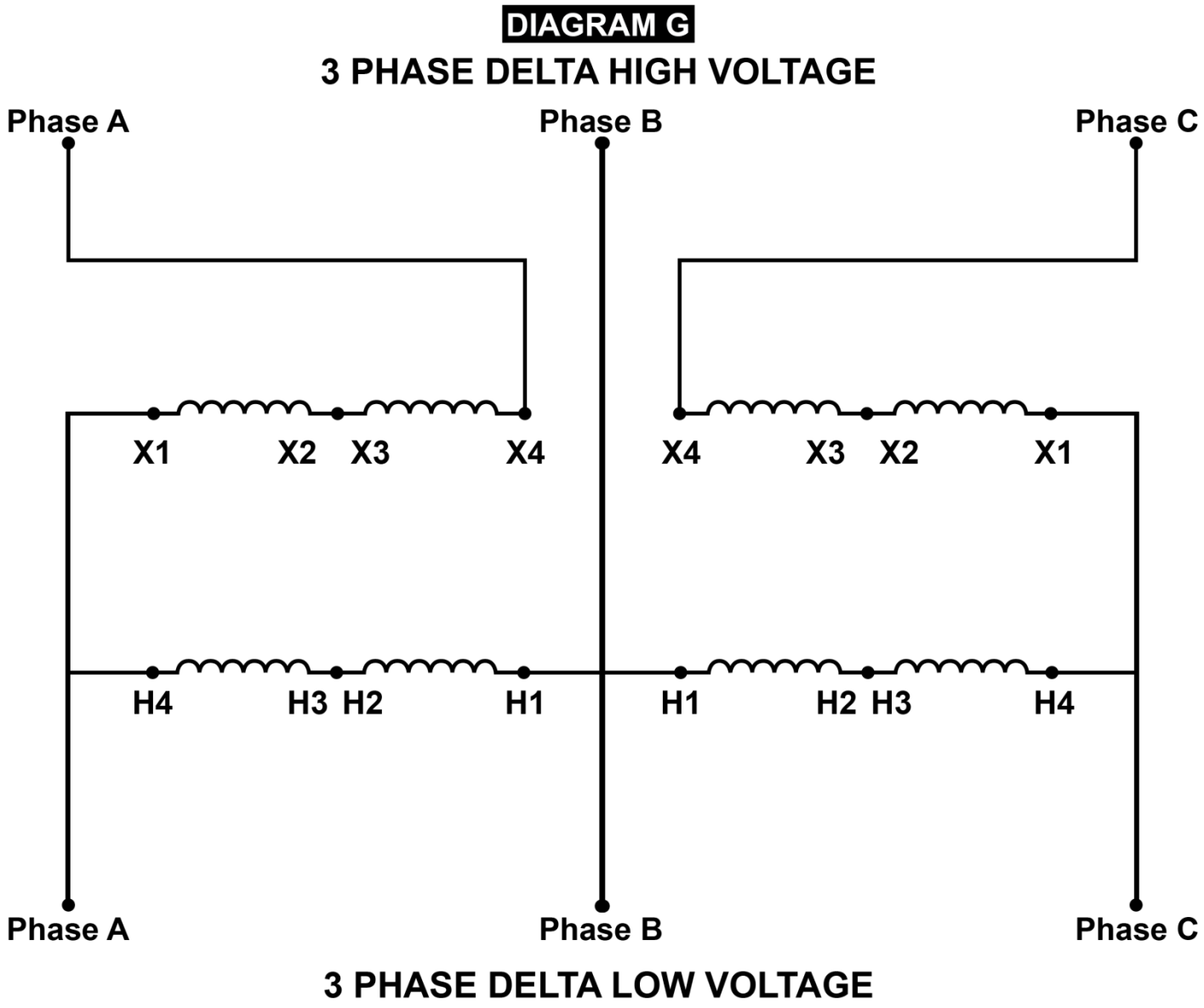
**NOTE**
PICTURES INDICATE WIRE TERMINATIONS ONLY. COLORS VARY.




TYPE B

## Wiring Diagram

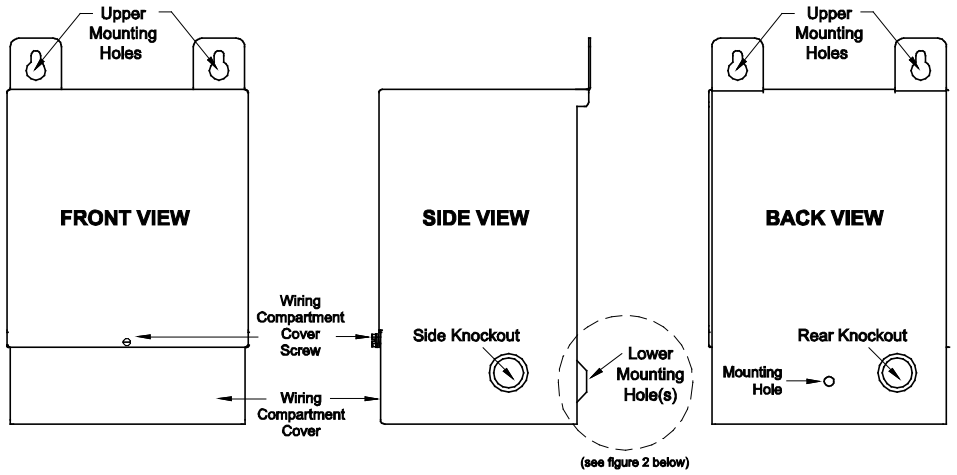
***WARNING:*** *DO NOT SERVICE WHILE ENERGIZED!* ***Tip: Use a voltmeter to check voltage!***




## Connection Guide

1. Connect **X2** and **X3** together for both transformers
2. Connect **H2** and **H3** together for both transformers
3. Connect High Voltage **PHASE A** to **X4** on transformer 1
4. Connect High Voltage **PHASE C** to **X4** on transformer 2
5. Connect Low Voltage **PHASE A** to **H4** and **X1** on transformer 1
6. Connect Low Voltage **PHASE C** to **H4** and **X1** on transformer 2
7. Connect High & Low Voltage **PHASE B** to **H1**
8. Bridge **H1** connections between both transformers

## STANDARD MODELS:




## MODELS WITH LIFTING TABS:

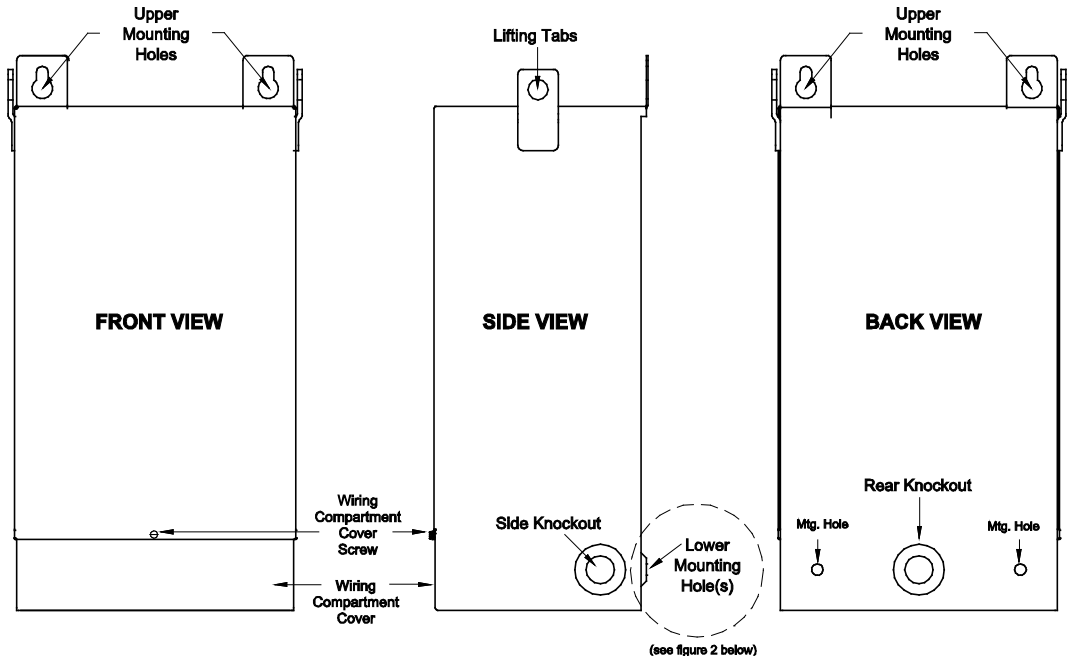
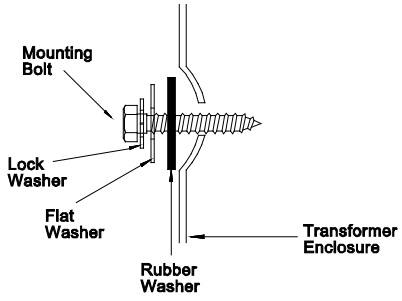



**FIGURE 2: Lower wiring compartment mounting hole(s), mounting hardware installation assembly diagram.**



# Certification

Manufacturer: Larson Electronics LLC
Address: 9419 US-HWY 175
Kemp, Texas 75143

**Declare the following equipment conforms to the standard(s) as listed:**

Model: MT-BBT Series
Description: Buck/Boost Transformers

The MT-BBT series of buck/boost transformers are comprised of a NEC (National Electrical Code, United States) and CEC (Canadian Electrical Code, Canada) Listed transformers from various manufacturers, including Amce Electric, Control Transformer Inc., Dogan Electric MFG CO., Eaglerise Electric & Electronics Co LTD, Federal Pacific, Hammond MFG Co LTD, and Jefferson Electric Inc. These transformers are manufactured to Larson Electronics LLC specifications including specified windings, winding materials, taps, mounting, and housing designs. Larson Electronics LLC MT-BBT series may include customized mounting external accessories, prewired transformers, and cord caps. This assembly is built to NEC and CEC standards.

Signed for and on behalf of: Larson Electronics, LLC
Place of issue: Kemp, TX

Signature: James Thomas

Name: James Thomas
Position: Operations Manager



LARSON ELECTRONICS LLC • 9419 E US HWY 175 • KEMP, TX 75143
p: 1-800-369-6671 • intl: 903-498-3363 • f: 903-498-3364 • sales@larsonelectronics.com

# Material Safety Data Sheet

To Whom It May Concern,

Larson Electronics LLC MT Series industrial line of transformers are considered "ARTICLES" under 29 CFR 1910-1200, the OSHA Hazard Communication Standard, and do not require a Material Safety Data Sheet (MSDS).

Articles are specifically exempt from the regulations of this standard. OSHA defines an article as follows:

1910-1200(c) – Article means a manufactured item other than a fluid or particle:

i. Which is formed to a specific shape or design during manufacture;
ii. Which has end use function(s) dependent in whole or in part upon its shape or design during end use; and
iii. Which under normal conditions does not release more than very small quantities.

Regards,

Ray Smith
Larson Electronics, LLC.



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UL Product iQ™

# XPTQ.E79947 - Transformers, General Purpose

## Transformers, General Purpose

See General Information for Transformers, General Purpose

**ACME ELECTRIC, A DIVISION OF HUBBELL INCORPORATED (DELAWARE)** E79947
N56 W13385 Silver Spring Dr
Menomonee Falls, WI 53051 USA

Trademark and/or Tradename: Acme Electric®

**Air cooled reactors**, Model(s) Series LWE with prefixes

**General purpose transformers, "Series or style SE"**, Model(s) 47564, 47565

**General purpose transformers, "Series or style SE or SR"**, Model(s) TLVS, TS

**General purpose transformers, indoor or protected cover use, "SE"**, Model(s) Series or style SE

**General purpose transformers, indoor or protected cover use**, Model(s) Series or style SE

**General purpose transformers, indoor use only**, Model(s) Series or style EB, T-60620

**General purpose transformers, indoor, protected cover or outdoor use, "SR"**, Model(s) Series or style SR

**General purpose transformers, indoor, protected cover or outdoor use**, Model(s) Series or style ER, Series or style SR

**Industrial control transformers**, Model(s) AE, CE, FS, TA, TB

Last Updated on 2019-05-08

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UL Product iQ™

# XPTQ.E506261 - Transformers, General Purpose

## Transformers, General Purpose

See General Information for Transformers, General Purpose

**CONTROL TRANSFORMER INC** E506261
3701 Warren Meadville Rd
Cortland, OH 44410-9464 USA

Model(s) PWR-2637

Last Updated on 2019-03-05

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UL Product iQ™

# XQNX.E495103 - Power and General-purpose Transformers, Dry Type

## Power and General-purpose Transformers, Dry Type

See General Information for Power and General-purpose Transformers, Dry Type

**CONTROL TRANSFORMER INC** E495103
3701 Warren Meadville Rd
Cortland, OH 44410-9464 USA

**Dry Type Ventilated Autotransformer**, E12884.

Last Updated on 2017-09-14

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UL Product iQ™

# XPTQ.E3210 - Transformers, General Purpose

## Transformers, General Purpose

See General Information for Transformers, General Purpose

**DONGAN ELECTRIC MFG CO** E3210
34760 Garfield Rd
Fraser, MI 48026 USA

**Dry type, auto transformers**, Model(s) 415 Series With additional nomenclature to define specific features as allowed by UL file.

**Dry type, auto transformers**, Model(s) 515 Series With additional nomenclature to define specific features as allowed by UL file.

**General purpose autotransformers**, Model(s) 34 Series@

**General purpose transformers, "Series 75"**, Model(s) ESA-XXXXX.XXX and R

**General purpose transformers, "Series 75"**, Model(s) Series 75 followed by suffix numbers to indicate ratings

**General purpose transformers, "Series 75"**, Model(s) Series CI3 followed by suffix numbers to indicate ratings

**General purpose transformers, "Series 75"**, Model(s) Series PI3 followed by suffix numbers to indicate ratings

**General purpose transformers, "Series 75"**, Model(s) Series WI3 followed by suffix numbers to indicate ratings

**General purpose transformers**, Model(s) NSC-XX-TY-Y1Y2

**General purpose transformers rated 10 KVA or less**, Model(s) 413 Series With additional nomenclature to define specific features as allowed by UL file.

**General purpose transformers rated 10 KVA or less**, Model(s) 416 Series With additional nomenclature to define specific features as allowed by UL file.

**General purpose transformers rated 10 KVA or less**, Model(s) 513 Series With additional nomenclature to define specific features as allowed by UL file.

**General purpose transformers rated 10 KVA or less**, Model(s) 516 Series With additional nomenclature to define specific features as allowed by UL file.

**General purpose transformers, indoor use only**, Model(s) 35 Series@, 80 and 95 Series@

**Industrial control transformers**, Model(s) 50-0025-XXX thru 50-5000-XXX

**Industrial control transformers**, Model(s) 53 , with 05, 07, 10, 15, 20, 25, 30, 35, 37, 50, 75, 100, 150, 200, 300 or 500.

**Industrial control transformers**, Model(s) 53A , with 05, 07, 10, 15, 20, 25, 30, 35, 37, 50, 75, 100, 150, 200, 300 or 500.

**Industrial control transformers**, Model(s) 54 , with 05, 07, 10, 15, 20, 25, 30, 35, 37, 50, 75, 100, 150, 200, 300 or 500.

**Industrial control transformers**, Model(s) 56 , with 05, 07, 10, 15, 20, 25, 30, 35, 37, 50, 75, 100, 150, 200, 300 or 500.

**Industrial control transformers**, Model(s) 56A , with 05, 07, 10, 15, 20, 25, 30, 35, 37, 50, 75, 100, 150, 200, 300 or 500.

**Industrial control transformers**, Model(s) AC or HC , followed by four digits, followed by 1, 2, 3, 4 or 6, followed by 1, 2, 3, 4, 5, 6, 7, 8 or 9, with or without SH.

**Industrial control transformers**, Model(s) AC-XXXX Y1Y2, BC-XXXX-Y1Y2, ES-XXXXX-XXX, IC-0010-XXX-YYYY thru IC-1000-XXX-YYYY

**Industrial control transformers**, Model(s) NSC , followed by 21 thru 35, followed by A, B, or H, followed by 1, 2, 4 or 6, followed by four digits.

**Industrial control transformers**, Model(s) Y1Y2

**Insulating transformers, indoor use only, "35 Series"**, Model(s) 35-05

**Insulating transformers, indoor use only, "35 Series"**, Model(s) 35-05, 35-10, 35-15, 35-20, 35-25, 35-35, 35-50 or 35-75, followed by -3, -9, -16, -18, -58, -126, -132, -250, -303, -309, -342, -419, -FB6, -KSPEC, -LM, -LY, -M, -S or -Y.

**Insulating transformers, indoor use only, "35 Series"**, Model(s) 35-10, 35-15, 35-25, 35-50, 35-75, 35-XXXX+

**Insulating transformers, indoor use only**, Model(s) 1345, 1452, 2481, 33 Series@, 36-05 , followed by A, C, KA, KC, KN, KS, N, S., 36-10 , followed by A, C, KA, KC, KN, KS, N, S., 36-100 , followed by A, C, KA, KC, KN, KS, N, S., 36-100-7, 36-25 , followed by A, C, KA, KC, KN, KS, N, S., 36-25-7, 36-50 , followed by A, C, KA, KC, KN, KS, N, S., 36-50-7, 36-75 , followed by A, C, KA, KC, KN, KS, N, S., 5646-47, PCA

**Isolation power transformers for indoor or outdoor use**, Model(s) 161-10*, 161-7*, 163-3*, 163-6*, 163-9*, 180-100*, 180-150*, 180-200*, 180-300*, 180-50*, 180-500*, 180-75*, 35-05, 35-10, 35-15, 35-25, 35-50, 35-75, 35-XXXX+, 45-XXXX, 712XX-XXXX, 80-XXXX+, 85-XXXX, AP-XXXX, ES-XXXXX-XXX, FP-XXXX

**Isolation power transformers for indoor or outdoor use, max rated 10 KVA**, Model(s) 61-XXXX+, 63-XXXX+

**Isolation power transformers for indoor or outdoor use, max rated 45 KVA**, Model(s) 704-XXXX, 74X-XXXX, 76-XXXX

**Power transformers, "45 Series"**, Model(s) CI1 with suffix letters and numbers., ESA-XXXXXX.XXX with suffix letters and numbers., PI1 with suffix letters and numbers., R with suffix letters and numbers., WI1 with suffix letters and numbers.

**Reactors**, Model(s) R Series@

**Transformers rated over 10 KVA**, Model(s) 411 Series With additional nomenclature to define specific features as allowed by UL file.

**Transformers rated over 10 KVA**, Model(s) 511 Series With additional nomenclature to define specific features as allowed by UL file.

**"IC"**, Model(s) IC-XXXX-XXX-YYYY IC-SERIES Example: IC - XXXX - XXX - YYYY I II III IV I - IC " Industrial control transformer with class 105°C (A) Insulation II - VA Rating 50-1000 VA III - 000-999 to indicate variations in voltage ratings & taps available. IV - Encapsulated option

* - May be followed by 1 thru 999.

+ - With X's replaced by numerals and/or LM, LY, M or Y.

@ - May be followed by suffix numbers or letters to indicate ratings and voltage combinations.

X - Where X is 0-9.

Y - Where Y is any alphanumeric characters.

Last Updated on 2020-08-31

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UL Product iQ™

# XQNX.E78234 - Power and General-purpose Transformers, Dry Type

## Power and General-purpose Transformers, Dry Type

See General Information for Power and General-purpose Transformers, Dry Type

**DONGAN ELECTRIC MFG CO** E78234
34760 Garfield Rd
Fraser, MI 48026 USA

**Transformers**, Reactors Series 41, 42, 43, 44, 61, 63, 64, 71, 72, 73, 74, 81, 83, 84, ES, ESA, R, SD.

**Transformers**, rated 15 kva through 1000 kva, Cat. Nos. 421 Series (a), 423 Series (a), 424 Series (a), 431 Series (a), 433 Series (a), 434 Series (a), 521 Series (a), 523 Series (a), 524 Series (a), 531 Series (a), 533 Series (a), 534 Series (a), 425 Series (a), 435 Series (a), 525 Series (a), 535 Series (a)

(a) - With additional nomenclature to define specific features as allowed by UL file

Last Updated on 2018-02-23

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UL Product iQ™

# XQNX.E478366 - Power and General-purpose Transformers, Dry Type

## Power and General-purpose Transformers, Dry Type

See General Information for Power and General-purpose Transformers, Dry Type

**EAGLERISE ELECTRIC & ELECTRONIC (CHINA) CO LTD** E478366
A3 GUICHENG SCIENCE & TECHNOLOGY PARK
JIANPING RD
NANHAI DISTRICT
FOSHAN, GUANGDONG 528200 CHINA

**Transformer**, Model HEPXXXabYYttte, where P can be 1 or 3, XXX can be 015, 025, 030, 045, 075, 100, 112, 150, 167, 225, 300, 500 or 750, a and b can be A to H, J to N, P to U or X, YY can be CU or blank, ttt can be 115 or blank, e shall be blank.

Last Updated on 2019-02-12

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UL Product iQ™

# XPTQ.E121540 - Transformers, General Purpose

## Transformers, General Purpose

See General Information for Transformers, General Purpose

**FEDERAL PACIFIC TRANSFORMER CO** E121540
601 OLD AIRPORT RD
BRISTOL, VA 24203-8200 USA

**Enclosed: indoor or protected cover use**, Model(s) SE

**Industrial control transformers**, Model(s) S09X.500FC-A1

**Transformers, indoor or outdoor**, Model(s) FB, may include FH in the type number

Last Updated on 2017-07-21

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UL Product iQ™

# XQNX.E37783 - Power and General-purpose Transformers, Dry Type

## Power and General-purpose Transformers, Dry Type

See General Information for Power and General-purpose Transformers, Dry Type

**FEDERAL PACIFIC TRANSFORMER CO** E37783
601 OLD AIRPORT RD
BRISTOL, VA 24203-8200 USA

Trademark and/or Tradename: "E37783"

**Insulating transformers, dry type, indoor/weatherproof.** Type FH, 600 v, ac max; single/three phase, Models 16B, 36B, 36D, 36F; three phase, Models 36C , 36E.

Serial Nos. 51854, 51536, 53997.

**Power Transformers, rated over 10 Kva, dry type, potted indoor and weatherproof enclosures.** Single phase, Type FB.

Three phase, Type FB.

**Transformer, dry type, indoor/outdoor.** Model 36K, rated 9 to 1000 Kva.

Serial No. 51679.

**Transformer, dry type, indoor.** Cat. No. B, F or H followed by 1 or 3, followed by four numbers (up to 1000), followed by 1, 2, 3, 4 or 9, followed by 1, 2, 3, 4 or 8, followed by 00, 04, 22, 24, 55 or 99.

**Transformer, dry-type, enclosed.** Type TENV, rated 15-225 Kva.

**Kits.** for modifying indoor only transformers to outdoor use.

Cat. Nos. 60100 thru 60105, 60110 thru 60116.

Last Updated on 2004-04-03

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UL Product iQ™

# XPTQ.E207860 - Transformers, General Purpose

## Transformers, General Purpose

See General Information for Transformers, General Purpose

**HAMMOND MFG CO LTD** E207860
52 RANKIN PL
WATERLOO, ON N2J 3Z5 CANADA

**Transformers**, Model(s) 3AH, HT, MH, MT, PH, PT

**Transformers, fuse kits**, Model(s) PFK

Last Updated on 2013-09-16

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UL Product iQ™

# XQNX.E112313 - Power and General-purpose Transformers, Dry Type

## Power and General-purpose Transformers, Dry Type

See General Information for Power and General-purpose Transformers, Dry Type

**HAMMOND POWER SOLUTIONS INC** E112313
595 Southgate Dr
Guelph, ON N1G 3W6 CANADA

**Power transformers**, dry type, indoor and outdoor; 10 kva thru 250 kva, single phase, rated 120v, ac thru 600v, ac primary and secondary.

**Power transformers**, dry type, indoor and outdoor; 9 kva thru 1000 kva, 3 phase, rated 120v, ac, thru 600v, ac primary and secondary.

**Transformers**, Types F, FN, K, KN.

Last Updated on 2002-07-08

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UL Product iQ™

# XPTQ.E50394 - Transformers, General Purpose

## Transformers, General Purpose

See General Information for Transformers, General Purpose

**HAMMOND POWER SOLUTIONS INC** E50394
595 Southgate Dr
Guelph, ON N1G 3W6 CANADA

**Transformers**, Model(s) 3AH, 52, 88-250, E, HT, HT, MH, MT, NE-0306-21, NE-0306-22, NE-0306-23, NE-0306-24, NE-0306-25, NE-0306-26, NE-0307-21, NE-0307-22, NE-0307-23, NE-0307-24, NE-0307-25, NE-0307-26, NE-2624-21, NE-2624-22, NE-2624-23, NE-2624-24, NE-2624-25, NE-2624-26, NE-2635-21, NE-2635-22, NE-2635-23, NE-2635-24, NE-2635-25, NE-2635-26, PH, PT

**Transformers, single phase**, Model(s) Q

**Transformers, three phase**, Model(s) QT

Last Updated on 2017-09-12

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UL Product iQ™

# XPTQ.E4466 - Transformers, General Purpose

## Transformers, General Purpose

See General Information for Transformers, General Purpose

**JEFFERSON ELECTRIC INC** E4466
9650 S FRANKLIN DR
FRANKLIN, WI 53132-8847 USA

**Dry type, auto transformers**, Model(s) 415 followed by a four (4) place number/letter, followed by a three (3) place number/letter.

**Dry type, auto transformers**, Model(s) 515 followed by a four (4) place number/letter, followed by a three (3) place number/letter.

**General purpose isolation drive transformers rated 7.5 KVA or less**, Model(s) 213 , , followed by 0018, 0019 or 0020, followed by 0, 3, 7 or 8, folowed by 0 or 5, followed by 1, 2, 3, 4, 5, 6 or 9.

**General purpose isolation drive transformers rated 7.5 KVA or less**, Model(s) 313 , , followed by 0018, 0019 or 0020, followed by 0, 3, 7 or 8, folowed by 0 or 5, followed by 1, 2, 3, 4, 5, 6 or 9.

**General purpose transformers rated 10 KVA or less**, Model(s) 211 , followed by 000 thru 015, followed by 1, 4, 6, 7 or 8, followed by 000, 001, 002, 055, 080, 085, 100, 120, 208, 255, 277, 300, 355, 600 thru 999, 800, 855, 880 or 885.

**General purpose transformers rated 10 KVA or less**, Model(s) 211-001-487, 211-001-488, 211-001-573

**General purpose transformers rated 10 KVA or less**, Model(s) 213, , followed by -10, -12 or -14, followed by 2, 4, 7, 8 or 9, followed by 000, 001, 002, 055, 080, 085, 120, 125, 600 thru 999, 800, 855, 880 or 885.

**General purpose transformers rated 10 KVA or less**, Model(s) 216 , followed by 11, 12, 14, 15 or 16, followed by 00, 01, 11, 21, 31, 41, 51, 61, 71, 81 or 91, followed by 000, 055 or 600 thru 999.

**General purpose transformers rated 10 KVA or less**, Model(s) 311 , followed by 000 thru 015, followed by 1, 4, 6, 7 or 8, followed by 000, 001, 002, 055, 080, 085, 100, 120, 208, 255, 277, 300, 355, 600 thru 999, 800, 855, 880 or 885.

**General purpose transformers rated 10 KVA or less**, Model(s) 313, , followed by -10, -12 or -14, followed by 2, 4, 7, 8 or 9, followed by 000, 001, 002, 055, 080, 085, 120, 125, 600 thru 999, 800, 855, 880 or 885.

**General purpose transformers rated 10 KVA or less**, Model(s) 413 followed by a four (4) place number/letter, followed by a three (3) place number/letter.

**General purpose transformers rated 10 KVA or less**, Model(s) 416 followed by a four (4) place number/letter, followed by a three (3) place number/letter.

**General purpose transformers rated 10 KVA or less**, Model(s) 513 followed by a four (4) place number/letter, followed by a three (3) place number/letter.

**General purpose transformers rated 10 KVA or less**, Model(s) 516 followed by a four (4) place number/letter, followed by a three (3) place number/letter.

**Industrial control transformer, 50 VA thru 5000 VA rating**, Model(s) 631 Series , followed by 11 through 26, followed by 00 through 14, or 99, followed by 000, 001, 10x, 20x, 30x, or 70x

**Industrial control transformers**, Model(s) Series 631-A[@], Series 631-B[@], Series 631-C[@]

**Industrial control type**, Model(s) 636-001-1111, 636-001-1121, 636-001-1131, 636-001-1141, 636-001-1142-600, 636-001-1151, 636-001-1161, 636-001-1171, 636-001-1181, 636-001-1191, 636-001-1201, 636-001-1211, 636-001-2411, 636-001-2421, 636-001-2431, 636-001-2441, 636-001-2451, 636-001-2461, 636-001-2471, 636-001-2481, 636-001-2491, 636-001-2501, 636-001-2511, 636-001-2521, 636-001-264, 637-003-495, 637-003-778, 637-1003-399, 637-1003-400, 637-1003-401, 637-1003-520, 637-1003-521, 637-1003-522, 637-201 (f), 637-206 (f), 637-208 (f), 637-209 (f), 637-211 (f), 637-216 (f), 637-218 (f), 637-219 (f),

637-221 (f), 637-221-028, 637-226 (f), 637-228 (f), 637-229 (f), 637-231 (f), 637-231-011, 637-236 (f), 637-238 (f), 637-239 (f), 637-261 (f), 637-26600, 637-268 (f), 637-269 (f), 637-271 (f), 637-276 (f), 637-278 (f), 637-279 (f), 637-281 (f), 637-286 (f), 637-288 (f), 637-289 (f), 637-291 (f), 637-296 (f), 637-298 (f), 637-299 (f), 637-361 (f), 637-366 (f), 637-369 (f), 637-371 (f), 637-376 (f), 637-379 (f), 637-381 (f), 637-386 (f), 637-389 (f), 637-391 (f), 637-396 (f), 637-399 (f), 637-401 (f), 637-406 (f), 637-409 (f), 637-411 (f), 637-421 (f), 637-431 (f), 637-441 (f), 637-451 (f), 637-461 (f), 637-466 (f), 637-469 (f), 637-471 (f), 637-476 (f), 637-479 (f), 637-481 (f) (h), 637-486 (f), 637-489 (f), 637-491 (f), 637-496 (f), 637-499 (f), 637-531 (f), 637-536 (f), 637-539 (f), 637-551 (f), 637-556 (f), 637-559 (f), 637-561 (f), 637-566 (f), 637-569 (f), 637-571 (f), 637-576 (f), 637-579 (f), 637-581 (f), 637-586 (f), 637-589 (f), 637-591 (f), 637-596 (f), 637-599 (f), 637-601 (f), 637-606 (f), 637-608 (f), 637-609 (f), 637-611 (f), 637-616 (f), 637-618 (f), 637-619 (f), 637-621 (f), 637-626 (f), 637-628 (f), 637-629 (f), 637-631 (f), 637-636 (f), 637-638 (f), 637-639 (f), 637-701 (f), 637-706 (f), 637-708 (f), 637-709 (f), 637-711 (f), 637-716 (f), 637-718 (f), 637-719 (f), 637-721 (f), 637-726 (f), 637-729 (f), 637-731 (f), 637-736 (f), 637-738 (f), 637-739 (f), 637-741 (f), 637-746 (f), 637-748 (f), 637-749 (f), 637-807 (f)

**Transformers designed to supply current to circuits or devices requiring limited amounts of power**, Model(s) 231-101 , with or without suffix -030 or -035., 231-111 , with or without suffix -030 or -035., 31-141 , with or without suffix -030 or -035.

**Transformers rated over 10 KVA**, Model(s) 211 , followed by 16 or 18, followed by 1, 4, 6, 7 or 8, followed by 000, 055, 080, 085, 100, 120, 208, 255, 277, 300, 355, 600 thru 999.

**Transformers rated over 10 KVA**, Model(s) 213 , followed by 16, followed by 2, 4, 7, 8 or 9, followed by 000, 055, 080, 085, 120, 125, 600 thru 999.

**Transformers rated over 10 KVA**, Model(s) 411 followed by a four (4) place number/letter, followed by a three (3) place number/letter.

**Transformers rated over 10 KVA**, Model(s) 511 followed by a four (4) place number/letter, followed by a three (3) place number/letter.

[@] - followed by a four (4) place number/letter, followed by a three (3) place number/letter. Each unit

Last Updated on 2019-10-25

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UL Product iQ™

# XQNX.E78376 - Power and General-purpose Transformers, Dry Type

## Power and General-purpose Transformers, Dry Type

See General Information for Power and General-purpose Transformers, Dry Type

**JEFFERSON ELECTRIC INC** E78376
9650 S FRANKLIN DR
FRANKLIN, WI 53132-8847 USA

**Transformers** rated over 10 kva, Cat. Nos. 221, 223, followed by suffixes.

**Transformers** rated over 10 kva, for nonsinusoided load use, Cat. No. 217, followed by 318, 320, 322, 323, 324 or 327, followed by 5 or 7, followed by 0, 1, 7 or 8, followed by 0, 5 or 8, followed by 0 through 7; Cat. No. 224, followed by 316, 319 through 323, 325, 326, 329, 331 or 334, followed by 1 through 5 or 9, followed by 0, 1, 7 or 8, followed by 0, 5 or 8, followed by 0 through 7.

**Transformers** rated 15 kva through 1000 kva, Cat. Nos. 423-, 424, 431, 433, 434, 523, 524, 531, 533 and 534 followed by a 4 digit number/letter, followed by a 3 digit number/letter, rated 25 kva through 667 kva; Cat. Nos. 421, 521 followed by a 3 digit number followed by 0 one digit number, followed by a 3 digit number. Cat. Nos. 425, 435, 525 and 535 followed by a four (4) place number/letter, followed by a three (3) place number/letter.

Last Updated on 2010-08-05

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UL Product iQ™

# XPTQ7.E79947 - Transformers, General Purpose Certified for Canada

## Transformers, General Purpose Certified for Canada

See General Information for Transformers, General Purpose Certified for Canada

**ACME ELECTRIC, A DIVISION OF HUBBELL INCORPORATED (DELAWARE)** E79947
N56 W13385 Silver Spring Dr
Menomonee Falls, WI 53051 USA
**Air cooled reactors**, Model(s) Series LWE with prefixes

**General purpose transformers, indoor or protected cover use, "SE"**, Model(s) Series or style SE

**General purpose transformers, indoor use only**, Model(s) Series or style EB

**General purpose transformers, indoor, protected cover or outdoor use, "SR"**, Model(s) Series or style SR

**Industrial control transformers**, Model(s) AE, CE, FS, TA, TB

Trademark and/or Tradename: Acme Electric®

Last Updated on 2019-05-08

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UL Product iQ™

# XPTQ7.E506261 - Transformers, General Purpose Certified for Canada

## Transformers, General Purpose Certified for Canada

See General Information for Transformers, General Purpose Certified for Canada

**CONTROL TRANSFORMER INC** E506261
3701 Warren Meadville Rd
Cortland, OH 44410-9464 USA
Model(s) PWR-2637

Last Updated on 2019-03-05

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UL Product iQ™

# XQNX7.E495103 - Power and General-purpose Transformers, Dry Type Certified for Canada

## Power and General-purpose Transformers, Dry Type Certified for Canada

See General Information for Power and General-purpose Transformers, Dry Type Certified for Canada

**CONTROL TRANSFORMER INC** E495103
3701 Warren Meadville Rd
Cortland, OH 44410-9464 USA
**Dry Type Ventilated Autotransformer**, E12884.

Last Updated on 2017-09-14

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UL Product iQ™

# XPTQ7.E3210 - Transformers, General Purpose Certified for Canada

## Transformers, General Purpose Certified for Canada

See General Information for Transformers, General Purpose Certified for Canada

**DONGAN ELECTRIC MFG CO** E3210
34760 Garfield Rd
Fraser, MI 48026 USA

**Dry type, auto transformers**, Model(s) 415 Series With additional nomenclature to define specific features as allowed by UL file.

**Dry type, auto transformers**, Model(s) 515 Series With additional nomenclature to define specific features as allowed by UL file.

**General purpose autotransformers**, Model(s) 34 Series@

**General purpose transformers, "Series 75"**, Model(s) ESA-XXXXX.XXX and R

**General purpose transformers, "Series 75"**, Model(s) Series 75 followed by suffix numbers to indicate ratings

**General purpose transformers, "Series 75"**, Model(s) Series CI3 followed by suffix numbers to indicate ratings

**General purpose transformers, "Series 75"**, Model(s) Series PI3 followed by suffix numbers to indicate ratings

**General purpose transformers, "Series 75"**, Model(s) Series WI3 followed by suffix numbers to indicate ratings

**General purpose transformers**, Model(s) NSC-XX-TY-Y1Y2

**General purpose transformers rated 10 KVA or less**, Model(s) 413 Series With additional nomenclature to define specific features as allowed by UL file.

**General purpose transformers rated 10 KVA or less**, Model(s) 416 Series With additional nomenclature to define specific features as allowed by UL file.

**General purpose transformers rated 10 KVA or less**, Model(s) 513 Series With additional nomenclature to define specific features as allowed by UL file.

**General purpose transformers rated 10 KVA or less**, Model(s) 516 Series With additional nomenclature to define specific features as allowed by UL file.

**General purpose transformers, indoor use only**, Model(s) 35 Series@, 80 and 95 Series@

**Industrial control transformers**, Model(s) 50-0025-XXX thru 50-5000-XXX

**Industrial control transformers**, Model(s) AC or HC , followed by four digits, followed by 1, 2, 3, 4 or 6, followed by 1, 2, 3, 4, 5, 6, 7, 8 or 9, with or without SH.

**Industrial control transformers**, Model(s) AC-XXXX Y1Y2, BC-XXXX-Y1Y2, ES-XXXXX-XXX, IC-0010-XXX-YYYY thru IC-1000-XXX-YYYY

**Industrial control transformers**, Model(s) NSC , followed by 21 thru 35, followed by A, B, or H, followed by 1, 2, 4 or 6, followed by four digits.

**Industrial control transformers**, Model(s) Y1Y2

**Insulating transformers, indoor use only, "35 Series"**, Model(s) 35-05

**Insulating transformers, indoor use only, "35 Series"**, Model(s) 35-05, 35-10, 35-15, 35-20, 35-25, 35-35, 35-50 or 35-75, followed by -3, -9, -16, -18, -58, -126, -132, -250, -303, -309, -342, -419, -FB6, -KSPEC, -LM, -LY, -M, -S or -Y.

**Insulating transformers, indoor use only, "35 Series"**, Model(s) 35-10, 35-15, 35-25, 35-50, 35-75, 35-XXXX+

**Insulating transformers, indoor use only**, Model(s) 33 Series@, 36-05 , followed by A, C, KA, KC, KN, KS, N, S., 36-10 , followed by A,

C, KA, KC, KN, KS, N, S., 36-100 , followed by A, C, KA, KC, KN, KS, N, S., 36-25 , followed by A, C, KA, KC, KN, KS, N, S., 36-50 , followed by A, C, KA, KC, KN, KS, N, S., 36-75 , followed by A, C, KA, KC, KN, KS, N, S.

**Isolation power transformers for indoor or outdoor use**, Model(s) 35-05, 35-10, 35-15, 35-25, 35-50, 35-75, 35-XXXX+, 45-XXXX, 712XX-XXXX, 85-XXXX, AP-XXXX, ES-XXXXX-XXX, FP-XXXX

**Isolation power transformers for indoor or outdoor use, max rated 45 KVA**, Model(s) 704-XXXX, 74X-XXXX, 76-XXXX

**Power transformers, "45 Series"**, Model(s) CI1 with suffix letters and numbers., ESA-XXXXXX.XXX with suffix letters and numbers., PI1 with suffix letters and numbers., R with suffix letters and numbers., WI1 with suffix letters and numbers.

**Reactors**, Model(s) R Series@

**Transformers rated over 10 KVA**, Model(s) 411 Series With additional nomenclature to define specific features as allowed by UL file.

**Transformers rated over 10 KVA**, Model(s) 511 Series With additional nomenclature to define specific features as allowed by UL file.

**"IC"**, Model(s) IC-XXXX-XXX-YYYY IC-SERIES Example: IC - XXXX - XXX - YYYY I II III IV I - IC " Industrial control transformer with class 105°C (A) Insulation II - VA Rating 50-1000 VA III - 000-999 to indicate variations in voltage ratings & taps available. IV - Encapsulated option

+ - With X's replaced by numerals and/or LM, LY, M or Y.

@ - May be followed by suffix numbers or letters to indicate ratings and voltage combinations.

X - Where X is 0-9.

Y - Where Y is any alphanumeric characters.

Last Updated on 2020-08-31

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UL Product iQ™

# XQNX7.E78234 - Power and General-purpose Transformers, Dry Type Certified for Canada

## Power and General-purpose Transformers, Dry Type Certified for Canada

See General Information for Power and General-purpose Transformers, Dry Type Certified for Canada

**DONGAN ELECTRIC MFG CO** E78234
34760 Garfield Rd
Fraser, MI 48026 USA
**Transformers**, Reactors Series 41, 42, 61, 81, 43, 44, 63, 64, 71, 72, 73, 74, 83, 84, ES, ESA, SD and R.

**Dry type enclosed power transformers**, 421 Series (a), 423 Series (a), 424 Series (a), 431 Series (a), 433 Series (a), 434 Series (a), 521 Series (a), 523 Series (a), 524 Series (a), 531 Series (a), 533 Series (a), 534 Series (a), 425 Series (a), 435 Series (a), 525 Series (a), 535 Series (a).

(a) - With additional nomenclature to define specific features as allowed by UL file

Last Updated on 2018-02-23

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UL Product iQ™

# XQNX7.E478366 - Power and General-purpose Transformers, Dry Type Certified for Canada

## Power and General-purpose Transformers, Dry Type Certified for Canada

See General Information for Power and General-purpose Transformers, Dry Type Certified for Canada

**EAGLERISE ELECTRIC & ELECTRONIC (CHINA) CO LTD** E478366
A3 GUICHENG SCIENCE & TECHNOLOGY PARK
JIANPING RD
NANHAI DISTRICT
FOSHAN, GUANGDONG 528200 CHINA

**Transformer**, Model HEPXXXabYYttte, where P can be 1 or 3, XXX can be 015, 025, 030, 045, 075, 100, 112, 150, 167, 225, 300, 500 or 750, a and b can be A to H, J to N, P to U or X, YY can be CU or blank, ttt can be 115 or blank, e shall be blank.

Last Updated on 2019-02-12

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UL Product iQ™

# XPTQ7.E121540 - Transformers, General Purpose Certified for Canada

## Transformers, General Purpose Certified for Canada

See General Information for Transformers, General Purpose Certified for Canada

**FEDERAL PACIFIC TRANSFORMER CO** E121540
601 OLD AIRPORT RD
BRISTOL, VA 24203-8200 USA
**Industrial control transformers**, Model(s) S09X.500FC-A1

**Transformers, indoor or outdoor**, Model(s) FB, may include FH in the type number

Last Updated on 2017-07-21

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UL Product iQ™

# XQNX7.E37783 - Power and General-purpose Transformers, Dry Type Certified for Canada

## Power and General-purpose Transformers, Dry Type Certified for Canada

See General Information for Power and General-purpose Transformers, Dry Type Certified for Canada

**FEDERAL PACIFIC TRANSFORMER CO** E37783
601 OLD AIRPORT RD
BRISTOL, VA 24203-8200 USA

**Insulating transformers, dry type, indoor/weatherproof.** Type FH, 600 v, ac max; single/three phase, Models 16B, 36B, 36D, 36F; three phase, Models 36C, 36E.

Serial Nos. 51854, 51536, 53997.

**Power transformers, rated over 10 Kva, dry type, potted, indoor and weatherproof enclosures.**

Three phase, Type FB.

**Transformer, dry type, indoor/outdoor.** Model 36K, rated 9 to 1000 Kva.

Serial No. 51679.

**Transformer, dry-type, enclosed.** Type TENV, rated 15-225 Kva.

**Kits.** for modifying indoor only transformers to outdoor use.

Cat. Nos. 60100 thru 60105, 60110 thru 60116.

Trademark and/or Tradename: "E37783"

Last Updated on 2004-04-03

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UL Product iQ™

# XPTQ7.E50394 - Transformers, General Purpose Certified for Canada

## Transformers, General Purpose Certified for Canada

See General Information for Transformers, General Purpose Certified for Canada

**HAMMOND POWER SOLUTIONS INC** E50394
595 Southgate Dr
Guelph, ON N1G 3W6 CANADA
**Transformers**, Model(s) 3AH, HT, HT, MH, MT, PH, PT

Last Updated on 2017-09-12

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# XPTQ7.E4466 - Transformers, General Purpose Certified for Canada

## Transformers, General Purpose Certified for Canada

See General Information for Transformers, General Purpose Certified for Canada

**JEFFERSON ELECTRIC INC** E4466
9650 S FRANKLIN DR
FRANKLIN, WI 53132-8847 USA

**Dry type, auto transformers**, Model(s) 415 followed by a four (4) place number/letter, followed by a three (3) place number/letter.

**Dry type, auto transformers**, Model(s) 515 followed by a four (4) place number/letter, followed by a three (3) place number/letter.

**General purpose transformers rated 10 KVA or less**, Model(s) 413 followed by a four (4) place number/letter, followed by a three (3) place number/letter.

**General purpose transformers rated 10 KVA or less**, Model(s) 416 followed by a four (4) place number/letter, followed by a three (3) place number/letter.

**General purpose transformers rated 10 KVA or less**, Model(s) 513 followed by a four (4) place number/letter, followed by a three (3) place number/letter.

**General purpose transformers rated 10 KVA or less**, Model(s) 516 followed by a four (4) place number/letter, followed by a three (3) place number/letter.

**Industrial control transformer, 50 VA thru 5000 VA rating**, Model(s) 631 Series , followed by 11 through 26, followed by 00 through 14, or 99, followed by 000, 001, 10x, 20x, 30x, or 70x

**Industrial control transformers**, Model(s) Series 631-A[@], Series 631-B[@], Series 631-C[@]

**Transformers rated over 10 KVA**, Model(s) 411 followed by a four (4) place number/letter, followed by a three (3) place number/letter.

**Transformers rated over 10 KVA**, Model(s) 511 followed by a four (4) place number/letter, followed by a three (3) place number/letter.

[@] - followed by a four (4) place number/letter, followed by a three (3) place number/letter. Each unit

Last Updated on 2019-10-25

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# Certification

Manufacturer: Larson Electronics LLC
Address: 9419 US-HWY 175
Kemp, Texas 75143

**Declare the following equipment conforms to the standard(s) as listed:**

Model: MT Series
Description: Transformers

**Evaluated Listings:**

**CE:** DIRECTIVE 2014/35/EU - LOW VOLTAGE DIRECTIVE
**CE:** DIRECTIVE 2014/30/EU - EMC DIRECTIVE
**CE:** Regulation (EC) No 1907/2006 - REACH REGULATION
**CE:** DIRECTIVE 2015/863/EU - ROHS DIRECTIVE

The MT series complies with the essential protection requirements of the European Parliament of the Council Directive for Low Voltage Directive, EMC Directive, REACH Regulation, and RoHS Directive. This certification applies to all specimens manufactured in accordance to the manufacture's drawings.

Signed for and on behalf of: Larson Electronics, LLC
Place of issue: Kemp, TX

Signature: James Thomas

Name: James Thomas
Position: Operations Manager


LARSON ELECTRONICS LLC • 9419 E US HWY 175 • KEMP, TX 75143
p: 1-800-369-6671 • intl: 903-498-3363 • f: 903-498-3364 • sales@larsonelectronics.com

# Certification

Manufacturer: Larson Electronics LLC
Address: 9419 US-HWY 175
Kemp, Texas 75143

**Declare the following equipment conforms to the standard(s) as listed:**

Model: MT Series
Description: Transformers

**Evaluated Listings:**

**CE:** Regulation (EC) No 1907/2006 - REACH REGULATION
**CE:** DIRECTIVE 2015/863/EU - ROHS DIRECTIVE

This is to certify that products offered by Larson Electronics LLC comply with the Reduction of Hazardous Substances (RoHS) directives. Directive 2002/95/EC became effective on 1 July 2006. It restricts the use of six substances in the manufacture of electrical and electronic equipment. This directive was revised in June 2011 and is now referred to as directive 2011/65/EU. Directive 2015/863/EU amending Annex II to Directive 2011/65/EU announced plans to add four substances from 22 July 2019.

We hereby certify that the equipment specified above conforms to the Directive(s) by containing less of the restricted substances than the stated limits.

Signed for and on behalf of: Larson Electronics, LLC
Place of issue: Kemp, TX

Signature: James Thomas

Name: James Thomas
Position: Operations Manager



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# Certification

Manufacturer: Larson Electronics LLC
Address: 9419 US-HWY 175
Kemp, Texas 75143

**Declare the following equipment conforms to the standard(s) as listed:**

Model: MT Series
Description: Transformers

**Evaluated Listings:**

**CE:** Regulation (EC) No 1907/2006 - REACH REGULATION

This letter establishes the opinion of Larson Electronics LLC regarding the status, under the current European Union (“EU”) Regulations on Registration, Evaluation, Authorization, and Restriction of Chemical Substances (“REACH”).

REACH does not apply to manufactured products which are referred to as “completed articles”. Substances (chemicals) are subject to REACH registration, NOT products.

In addition, Articles are exempt from the REACH requirements if (a) the Article does not contain a substance of very high concern or candidate substance in an amount exceeding 0.1% weight by weight, and (b) if substances present in the Article in excess of 1 ton per year per importer are not expected nor intended to be released.

Based on communication with our raw material suppliers, we conclude that to the best of our knowledge our products requiring REACH compliance do not contain any of the currently listed SVHC in concentrations of 0.1% or above.

Accordingly, we foresee no registration or pre-registration requirement for the products we supply.

Signed for and on behalf of: Larson Electronics, LLC
Place of issue: Kemp, TX

Signature: James Thomas

Name: James Thomas
Position: Operations Manager



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# Frequently Asked Questions (FAQ)