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## MPD-MT-BBT-208D-230D-3P-125A-6.20FT-BCE

# 3 Phase Delta Buck/Boost Step-Up Prewired Transformer - 208V Primary - 230V Secondary - 125 Amps - 50/60Hz

**Product ID: 280201**




**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-230D-3P-125A-6.20FT-BCE Buck and Boost Step-Up Transformer**

**Transformer Type:** Buck/Boost Step-Up Autotransformer
**Phase:** Three Phase
**Frequency:** 50/60 Hz
**Input Voltage:** 208 V Delta
**Primary Amps:** 137.62 A @ 208 V Delta
**Primary Configuration:** Delta
**kVA:** 49.58
**Output Voltage:** 230 V Delta
**Secondary Amps:** 125 A @ 230 V Delta
**Voltage Difference:** 90%
**Winding Material:** Aluminum
**Wiring:** Prewired with (1) 6' 2/4 Type W Whip on Primary & (1) 20' 2/4 Type W Whip on Secondary 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:** 17.25"-H x 20.00"-W x 7.75"-D
**Weight:** 190 lb

**Ratings**

NRTL 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
**E-mail:** sales@larsonelectronics.com

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**The MPD-MT-BBT-208D-230D-3P-125A-6.20FT-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-230D-3P-125A-6.20FT-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-230D-3P-125A-6.20FT-BCE is a prewired transformer for customer installation and is equipped with 6` of 2/4 Type W cable with a blunt cut end connected to the transformer on the primary side and 20` of 2/4 Type W cable with a blunt cut end connected to the transformer on the secondary side.**

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

**Transformer Features:** The MPD-MT-BBT-208D-230D-3P-125A-6.20FT-BCE buck and boost transformer is a three phase unit with a 49.58 kVA rating and a primary voltage of 208 V Delta using a maximum of 137.62 amps on the primary side. This step-up transformer has a secondary voltage of 230 V Delta and provides up to 125 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-230D-3P-125A-6.20FT-BCE features a 180°C insulation with a 115°C temperature rise.

**Construction:** The aluminum winding in the MPD-MT-BBT-208D-230D-3P-125A-6.20FT-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-230D-3P-125A-6.20FT-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-230D-3P-125A-6.20FT-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 requiorments 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-230D-3P-125A-6.20FT-BCE is equipped with a 6` 2/4 Type W whip with a blunt cut end on the primary and a 20` 2/4 Type W whip with a blunt cut end on the secondary side. 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:

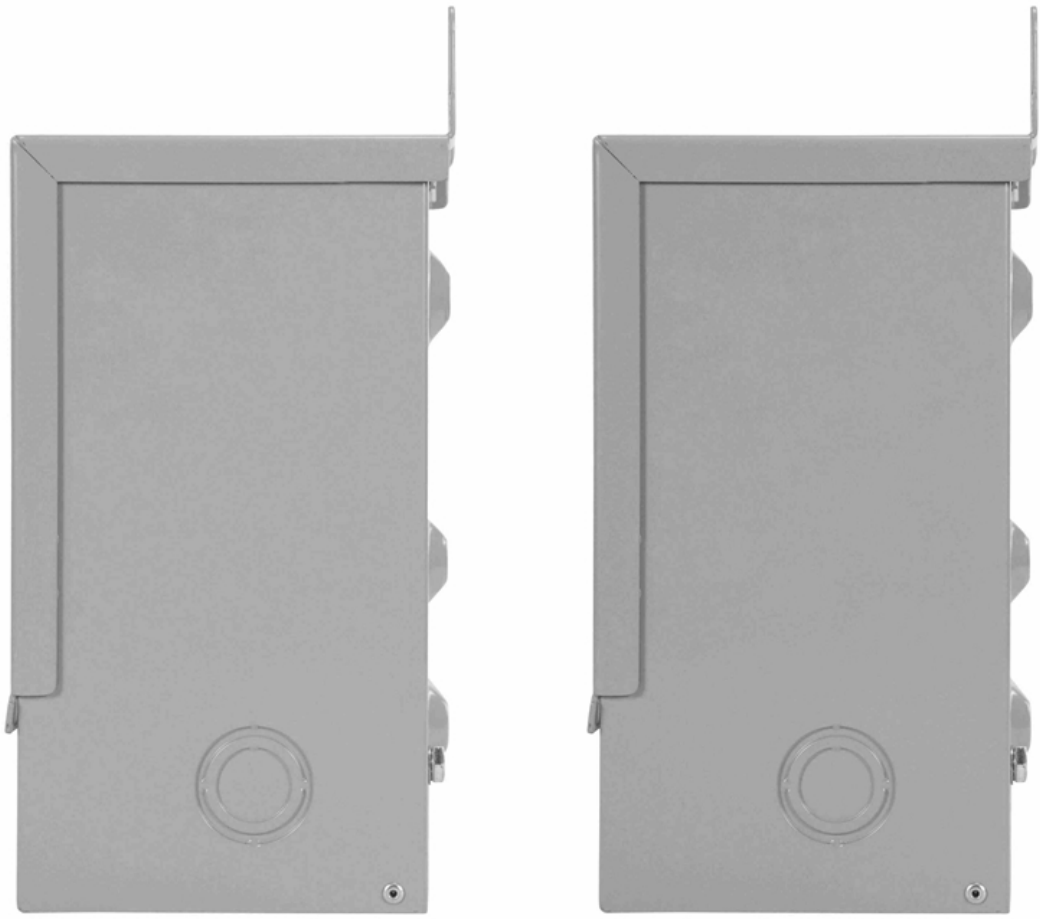
Single Phase Delta Buck/Boost Transformers

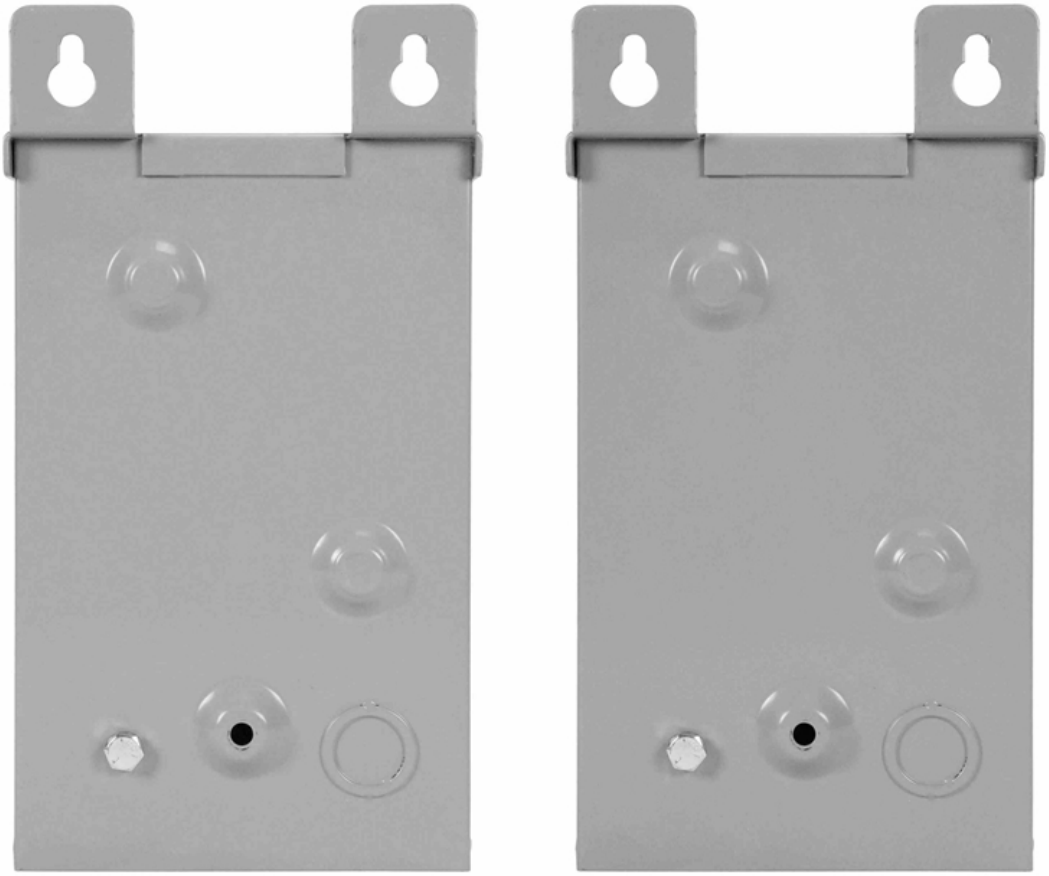
Three Phase Wye Buck/Boost Transformers
Larson Electronics is a manufacturer and as such can build stationary and portable transformer systems to your specifications. Although we carry several models of power distribution transformer systems, we can deliver custom ordered units almost as quickly as our 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.


LARSON ELECTRONICS
DRY TYPE ISOLATION/BUCK- BOOST TRANSFORMER
HV/HT
BIL
-
TERM
H1 H3 H2 H4
Volts
Current
% Rated Voltage
Connection Each Phase
LV/BT
BIL
X4 X2 X3 X1
MT-BBT
Cooling: ANC
Frequency: 50/60Hz
Encl. Type: 3R
Winding: Copper
This transformer can be wired as both an isolation transformer and buck-boost transformer. Refer to wiring instructions for details.
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DANGER – HIGH VOLTAGE
DISCONNECT POWER BEFORE OPENING DOOR
SYSTEM VOLTAGE 600V CLASS
METTRE HORS TENSION AVANT D'OUVRIR LA PORTE
DANGER – HAUTE TENSION


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# Frequently Asked Questions (FAQ)