

**1 Phase Buck & Boost Step-Up Transformer - 208V Primary - 236V Secondary at 156 Amps - 50/60Hz**

Part #: MT-BBT-208V-236V-156A



The MT-BBT-208V-236V-156A single phase step-up Buck and Boost Transformer from Larson Electronics is powerful, reliable, and designed with the environment in mind. Suitable for both indoor and outdoor applications, the MT-BBT-208V-236V-156A 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.

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

**Transformer Features:** The MT-BBT-208V-236V-156A buck and boost transformer is a single phase unit with a 36.8 KVA rating and a primary voltage of 208 AC using a maximum of 177 amps on the primary side. This step-up transformer has a secondary voltage of 236 and provides up to 156 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 either floor or wall mounted. The MT-BBT-208V-236V-156A features a 180°C insulation with a 115°C temperature rise.

**Construction:** The copper winding in the MT-BBT-208V-236V-156A are formed from high quality magnetic copper 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 MT-BBT-208V-236V-156A 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.



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**Benefits:** The MT-BBT-208V-236V-156A 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 manufactured 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.

**Installation:** Installation is simple. Connect the primary leads and secondary leads to the step-up transformer per the provided wiring diagram. Knockout hubs on either side and the bottom of the transformer allow for easy line-in and line-out wiring. The front access cover provides convenient .

**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, 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:

Larson Electronics Industrial Transformers

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

Three 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.

#### **Specifications / Additional Information**

##### **MT-BBT-208V-236V-156A Buck and Boost Step-Up Transformer**

**Transformer Type:** Buck/Boost step-up Autotransformer

**Phase:** Single Phase

**Frequency:** 50/60 Hz

**Input Voltage:** 208 AC

**Primary Amps:** 177A @ 208

**Primary Configuration:** Two winding

**kVA:** 36.8

**Output Voltage:** 236

**Secondary Amps:** 156A @ 236

**Voltage Difference:** 88%

**Primary Configuration:** Two winding

**Winding Material:** Copper

**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 / UL50

**Mounting:** Wall mount via mounting tabs

**Dimensions:** 10"H x 7.75"W x 17.25"D

**Weight:** 105 lbs

##### **Ratings**

UL listed for United States

CSA certified for 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:** 1-903-498-3363

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

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Part #: MT-BBT-208V-236V-156A (147749)











Links (Click on the below items to view):

- [SpecSheet Spanish](#)
- [Manual](#)
- [Hi-Res Image 1](#)
- [Hi-Res Image 2](#)
- [Hi-Res Image 3](#)
- [Hi-Res Image 4](#)
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