

1-Phase Buck/Boost Step-Down Transformer - 110V Primary - 100V Secondary at 137 Amps - 50/60Hz

Part #: MT-BBT-110V-100V-137A



The MT-BBT-110V-100V-137A single phase step-down Buck and Boost Transformer from Larson Electronics is powerful, reliable, and designed with the environment in mind. This transformer is designed to decrease 110 volts to 100 volts, and is needed when the line-voltage is higher than the required voltage for equipment. Suitable for both indoor and outdoor applications, the MT-BBT-110V-100V-137A 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-110V-100V-137A buck and boost transformer is a single phase unit with a 13.7 KVA rating and a primary voltage of 110V AC using a maximum of 125 amps on the primary side. This step-down transformer has a secondary voltage of 100V and provides up to 137 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.

The MT-BBT-110V-100V-137A is designed to decrease voltage from an input voltage of 110 volts to an output voltage of 100 volts. The decrease of voltage is necessary when the on-site line-voltage is consistently higher than the voltage required by the equipment being operated or installed, preserving the lifespan of the equipment and guarantees correct operation without risking damage due to incorrect voltage. This step-down transformer will allow equipment that draws up to 137 at 100 to be powered from 110 power sources. Situations for this type of transformer may include higher voltage from your electrical provider or within the existing establishment, or operating equipment that requires a higher voltage than is provided at the existing establishment.

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. This step-down transformer can be either floor or wall mounted. The MT-BBT-110V-100V-137A features a 180°C insulation with a 115°C temperature rise.

Construction: The copper winding in the MT-BBT-110V-100V-137A are formed from high quality magnetic copper wire helps to improve performance. The close tolerances used during manufacturing also eliminate 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-110V-100V-137A 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-110V-100V-137A buck/boost step-down 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-down transformer is manufactured and uses less material. This provides owners with significant energy savings as well as offering environmental benefits.

Higher efficiency extends the life of the transformer and turn into cost savings for owners in the form of lower energy bills and a decrease cost of ownership when compared to large autotransformers. Installation and maintenance costs are reduced due to the smaller form factor, and less overall space requirements are decreased. In addition, these step-down 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-down transformer per the provided wiring diagram. Knockout hubs on both side and the bottom of the transformer allow for easy line-in and line-out wiring. The front access cover provides convenient access to the four lead wires and four copper lugs. The MT-BBT-110V-100V-137A is shipped with the necessary wire nuts and lug terminals for wiring this step-down transformer in-line between line voltage and equipment.

Applications: Air conditioners, lighting systems, heating elements, motor applications and other applications 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 or our line of phase converters.

Note on Phases: This buck/boost transformer is a single phase step-down 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-110V-100V-137A Buck and Boost Step-Down Transformer Ratings

Transformer Type: Buck/Boost step-down Autotransformer	UL listed for United States
Transformer Configuration: Buck (decrease)	CSA certified for Canada
Phase: Single Phase	NEMA 3R Indoor/Outdoor Enclosure
Frequency: 50/60 Hz	Meets or Exceeds NEMA ST-20 Standards
Input Voltage: 110V AC	Buck and Boost Step-Down Transformer
Primary Amps: 125A @ 110V	
Primary Configuration: Two winding	
kVA: 13.7	
Output Voltage: 100V AC	
Secondary Amps: 137A @ 100V	
Voltage Difference: 10V	
Voltage % Difference: 91%	
Secondary Configuration: Two winding	
Winding Material: Copper	
Knockouts: Side and rear	
Wiring Termination: Front access (4) Lead Wires and (4) Copper Lugs	
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: 11.75"H x 7"W x 36"D

Weight: 6.5 lbs

Wiring: Use Wiring Diagram A, includes wire nuts and lug terminals

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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- [Manual](#)
- [Hi-Res Image 1](#)
- [Hi-Res Image 2](#)
- [Hi-Res Image 3](#)
- [Hi-Res Image 4](#)
- [Hi-Res Image 5](#)
- [Hi-Res Image 6](#)
- [Hi-Res Image 7](#)
- [Hi-Res Image 8](#)