

1-Phase Buck/Boost Step-Down Transformer - 240V Primary - 220V Secondary - 22.94 Amps - 50/60Hz

Part #: MT-BBT-240V-220V-22.94A



The MT-BBT-240V-220V-22.94A 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 240 volts to 220 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-240V-220V-22.94A 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-240V-220V-22.94A buck and boost transformer is a single phase unit with a 5 kVA rating and a primary voltage of 240 V AC using a maximum of 20.83 amps on the primary side. This step-down transformer has a secondary voltage of 220 V and provides up to 22.94 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-240V-220V-22.94A is designed to decrease voltage from an input voltage of 240 volts to an output voltage of 220 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 22.94 amps at 220 volts to be powered from 240 V 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-240V-220V-22.94A features a 130°C insulation with a 80°C temperature rise.

Construction: The aluminum winding in the MT-BBT-240V-220V-22.94A are formed from high quality aluminum 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-240V-220V-22.94A 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-240V-220V-22.94A 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 eight lead wires. The MT-BBT-240V-220V-22.94A is shipped with the necessary wire nuts 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-240V-220V-22.94A Buck and Boost Step-Down Transformer

Transformer Type: Buck/Boost step-down Autotransformer

Transformer Configuration: Buck (decrease)

Phase: Single Phase

Frequency: 50/60 Hz

Input Voltage: 240 V AC

Primary Amps: 20.83 A @ 240 V

Primary Configuration: Two winding

kVA: 5

Output Voltage: 220 V AC

Secondary Amps: 22.94 A @ 220 V

Voltage Difference: 20 V

Voltage % Difference: 92%

Secondary Configuration: Two winding

Winding Material: Aluminum

Knockouts: Side and rear

Wiring Termination: Front access (8) Lead Wires

Cooling: Air / Dry Type

Insulation: 130°C

Temperature Rise: 80°C

Sound Level: 36 dB

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-Down Transformer

Enclosure Rating: NEMA 3R

Encapsulation: Silica sand, resin compounds

Enclosure Material: Steel

Finish: ANSI 61 Grey / UL50

Mounting: Wall mount via mounting tabs

Dimensions: 9.30"H x 5.06"W x 4.56"D

Weight: 15 lb

Wiring: Use Wiring Diagram A, includes wire nuts

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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Part #: [MT-BBT-240V-220V-22.94A \(223929\)](#)









Links (Click on the below items to view):

- [WiringDiagram](#)
- [Hi-Res Image 1](#)
- [Hi-Res Image 2](#)
- [Hi-Res Image 3](#)
- [Hi-Res Image 4](#)
- [Hi-Res Image 5](#)
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