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

www.LarsonElectronics.com
Email: sales@LarsonElectronics.com
Fax: 903.765.7664

MPD-MT-BBT-208V-230V-20A-2X2FT-L6.20P-6.20C

1-Phase Buck/Boost Step-Up Prewired Transformer - 208V Primary - 230V Secondary - 20 Amps - 50/60Hz - 20A L6-20P & 20A 6-20C Cord Caps

Product ID: 313452



Image: MPD-MT-BBT-208V-230V-20A-2X2FT-L6.20P-6.20C

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-208V-230V-20A-2X2FT-L6.20P-6.20C Buck and Boost Step-Up Transformer

Transformer Type: Buck/Boost Step-Up Autotransformer
Phase: Single Phase
Frequency: 50/60 Hz
Input Voltage: 208 V
Primary Amps: 21.99 A @ 208 V
Primary Configuration: Two Winding
kVA: 4.58
Output Voltage: 230 V
Secondary Amps: 20 A @ 230 V
Voltage Difference: 90%
Winding Material: Aluminum
Wiring: Prewired with (2) 2' 12/3 SOOW Whips (One on each side) w/ Cord Caps
Winding Material: 20A NEMA L6-20P Twist Lock Plug on Primary Side (Connects to L6-30R Receptacles); 20A NEMA 6-20C Straight Blade Connector
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

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

Enclosure Material: Steel
Finish: ANSI 61 Grey Finish
Mounting: Wall Mount Via Mounting Tabs
Dimensions: 9.30"H x 5.06"W x 4.56"D
Weight: 15 lb

Special Orders - Special Requirements
Contact us for special requirements
Toll Free: 1-800-369-6671
Intl: 1-903-270-1187
E-mail: sales@larsonelectronics.com

The MPD-MT-BBT-208V-230V-20A-2X2FT-L6.20P-6.20C 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 MPD-MT-BBT-208V-230V-20A-2X2FT-L6.20P-6.20C 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-208V-230V-20A-2X2FT-L6.20P-6.20C is a prewired transformer for customer installation and is equipped with 2' of 12/3 SOOW cable on each side connected to the transformer with a 20 amp NEMA L6-20P twist lock plug (connects to L6-20R receptacles) and the secondary side whip is equipped with a 20 amp NEMA 6-20C straight blade connector.

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

Transformer Features: The MPD-MT-BBT-208V-230V-20A-2X2FT-L6.20P-6.20C buck and boost transformer is a single phase unit with a 4.58 kVA rating and a primary voltage of 208 V using a maximum of 21.99 amps on the primary side. This step-up transformer has a secondary voltage of 230 V and provides up to 20 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-208V-230V-20A-2X2FT-L6.20P-6.20C features a 180°C insulation with a 115°C temperature rise.

Construction: The aluminum winding in the MPD-MT-BBT-208V-230V-20A-2X2FT-L6.20P-6.20C 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-208V-230V-20A-2X2FT-L6.20P-6.20C 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.

Benefits: The MPD-MT-BBT-208V-230V-20A-2X2FT-L6.20P-6.20C 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.

Wiring/Installation: The MPD-MT-BBT-208V-230V-20A-2X2FT-L6.20P-6.20C is equipped with 2' 12/3 SOOW whips on both the primary and secondary sides. The primary side whip is equipped with a 30 amp NEMA L6-30P twist lock plug and the secondary side whip is equipped with a 20 amp NEMA 6-20C straight blade connector. 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 single phase step-up transformer. For three phase transformers, click on the following links:

Three Phase Delta Buck/Boost Transformers

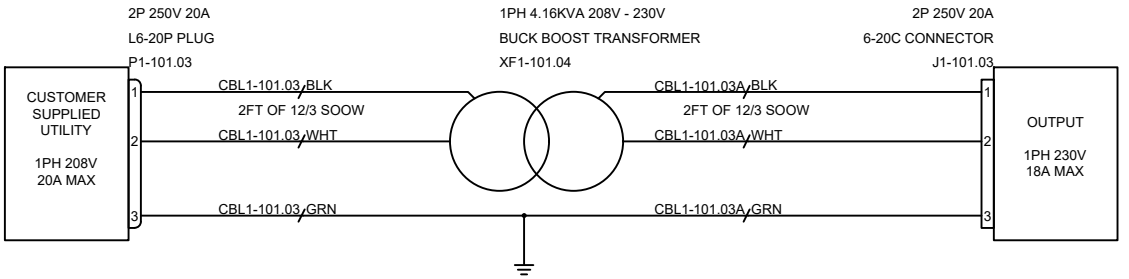
Three Phase Wye Buck/Boost Transformers

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.

REV	DESCRIPTION	DATE
A	PRODUCTION RELEASE	12-15-2025

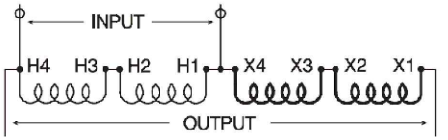
MPD-MT-BBT-208V-230V-20A-2X2FT-L6.20P-6.20C

LARSON ELECTRONICS®



PLEASE USE "FIGURE H" FOR INTERNAL CONNECTION OF BUCK-BOOST TRANSFORMER

Figure H



TAGS	QTY	CATALOG	DESCRIPTION
P1-101.03	1	UNV00011428	250V 20A L6-20P LOCKING PLUG
J1-101.03	1	UNV00007170	20A 250V AC 2P 3W GROUNDING CONNECTOR, NEMA 6-20C
CBL1-101.03 CBL1-101.03A	2	UNV00002908	12/3 SOOW CABLE
XF1-101.04	1	UNV00008989	BBT 1PH XFMR, 0.50 KVA Capacity, 120/240V Pri, 12/24V Sec, Resin Potted, Painted Steel, N3R

LARSON ELECTRONICS
9419 E US HWY 175,
KEMP, TX 75143

TITLE: MPD-MT-BBT-208V-230V-20A-2X2FT -L6.20P-6.20C

DRAWN BY	DATE	REV
J.Maldonado	12-15-2025	A
CHECKED BY	SHEET #	DRAWING #
	1 OF 1	101

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

www.LarsonElectronics.com
Email: sales@LarsonElectronics.com
Fax: 903.765.7664



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

www.LarsonElectronics.com
Email: sales@LarsonElectronics.com
Fax: 903.765.7664



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

www.LarsonElectronics.com
Email: sales@LarsonElectronics.com
Fax: 903.765.7664



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

www.LarsonElectronics.com
Email: sales@LarsonElectronics.com
Fax: 903.765.7664



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

www.LarsonElectronics.com
Email: sales@LarsonElectronics.com
Fax: 903.765.7664

Frequently Asked Questions (FAQ)

There are no Faqs