

Summary

Single-phase buck-boost transformer. Steps down 110V to 100V at 30 amps continuous output. 3 kVA capacity. NEMA 3R enclosed, cETLus listed, wall mount.

Product Description

This unit corrects a 110V building supply to 100V at the point of use, permanently, without modifying the building's electrical service. Designed for equipment rated 100V that is installed on a 110V system experiencing overvoltage.

Wired as an autotransformer, the unit handles only the difference between input and output and not the full load. This is why a 30-amp buck-boost transformer is significantly smaller and lighter than a 30-amp isolation transformer. The encapsulated core construction eliminates audible hum and provides stable thermal performance under continuous duty.

Features a removable wiring compartment door, removable knockout plate, and six NPT knockouts for flexible conduit entry. Surface mounting bracket for easy wall mount installations.



TX-BB-110V-100V-30A — NEMA 3R Encapsulated, cETLus Listed

Specifications

Phase	Single Phase (1-PH), AC	Transformer Type	Buck/Boost
Capacity	3 kVA	Configuration	Encapsulated Autotransformer
Primary Voltage	110V	Primary Termination	Lead Wires & Terminal Lugs
Primary Amperage	27.30A	Secondary Termination	Lead Wires & Terminal Lugs
Secondary Voltage	100V	Termination Access	(6) ½" NPT Hubs
Secondary Amperage	30A	Winding Material	Aluminum
Maximum Primary OCP	40A	Enclosure Material	Steel
Frequency	50/60 Hz	Finish Color	ANSI 70 Light Grey
Insulation	180°C	Weight	14 lbs
Temperature Rise	115°C	Dimensions	4.65"-W x 3.86"-D x 9.25"-H

Ratings & Certifications

- Listed for United States
- NEMA 3R Indoor/Outdoor Enclosure
- Built to UL-50 Standards
- CE Certified
- Listed for Canada
- Epoxy Resin Encapsulated
- RoHS Compliant



Common Applications

- HVAC & Minisplit
- Loads CNC Machines
- Pump Stations
- Packaging Machines
- Commercial Kitchen Equipment
- Motor Loads
- EV Chargers
- Server Racks & IT Equipment
- Refrigeration & Walk-in
- Coolers Fans & Blowers
- Conveyor Systems
- Overhead Doors

Important: Buck-boost transformers applied as autotransformers do not provide circuit isolation and do not create a neutral. Contact us if your application requires isolation or neutral creation.



Technical drawing of the Bottom (Underside) Plate, showing three views: Top, Front, and Bottom.

Top View:

- Overall dimensions: 4.77" (width) x 5.32" (height) and 4.65" (width) x 9.25" (height).
- Central ground hole: Ø 0.2".
- Two 1/2" NPT knockouts (top and bottom) with dimensions: 3.15" (width), 1.97" (width), 0.82" (height), and 3.01" (width).
- Other dimensions: 1.18", 0.08", 1.63", 1.95", 0.86", and 4.65".

Front View:

- Overall dimensions: 10.97" (width) x 3.86" (height) and 9.25" (width) x 3.94" (height).
- (1) 1/2" NPT Knockout Per Side.
- M3 screws.
- Other dimensions: 1.89", 4.17", 1.57", 0.39", 0.08", 2.05", and 3.86".

Bottom View:

- Overall dimensions: 4.65" (width) x 3.86" (height) and 2.09" (width) x 0.98" (height).
- Four 1/2" NPT knockouts.
- Other dimensions: 1.16", 2.32", and 0.98".

Connection Guide

1. Connect **X4** and **X2** together
2. Connect High Voltage **L1** to **X4** and **X3**
3. Connect **X2** and **X1** together
4. Connect Low Voltage **L1** to **X1**, **X2**, **H4**, **H3**
5. Connect High & Low Voltage **L2** to **H1** and **H2**

DIAGRAM A2





Part # — TX-BB-110V-100V-30A

Buck-Boost Transformer Specification Sheet

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Base Knockouts — (4) ¾" NPT



Side View



Rear View — Surface Mount Bracket



Wiring Compartment — Terminal Leads



Interior — Epoxy Resin Encapsulated Core