

Summary

Single-phase buck-boost transformer. Steps up 208V to 221V at 54.3 amps continuous output. 12 kVA capacity. NEMA 3R enclosed, cETLus listed, wall mount.

Product Description

This unit corrects a 208V building supply to 221V at the point of use, permanently, without modifying the building's electrical service. Designed for equipment rated 221V that is installed on a 208V system.

Wired as an autotransformer, the unit handles only the difference between input and output and not the full load. This is why a 54.3-amp buck-boost transformer is significantly smaller and lighter than a 54.3-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-208V-221V-12KVA — NEMA 3R Encapsulated, cETLus Listed

Specifications

Phase	Single Phase (1-PH), AC	Transformer Type	Buck/Boost
Capacity	12 kVA	Configuration	Encapsulated Autotransformer
Primary Voltage	208V	Primary Termination	Lead Wires & Terminal Lugs
Primary Amperage	57.69A	Secondary Termination	Lead Wires & Terminal Lugs
Secondary Voltage	221V	Termination Access	(6) ¾" NPT Hubs
Secondary Amperage	54.3A	Winding Material	Aluminum
Maximum Primary OCP	80A	Enclosure Material	Steel
Frequency	50/60 Hz	Finish Color	ANSI 70 Light Grey
Insulation	180°C	Weight	22 lbs
Temperature Rise	115°C	Dimensions	5.43"-W x 4.49"-D x 10.08"-H

Ratings & Certifications

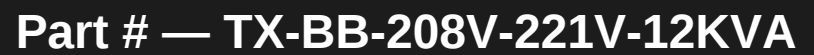
- Listed for United States
- NEMA 3R Indoor/Outdoor Enclosure
- Built to UL-50 Standards
- CE Certified
- Listed for Canada
- Epoxy Resin Encapsulated
- RoHS Compliant



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, Side, and Bottom (Underside).

Top View: The plate is 5.43" wide and 10.08" long. It features three mounting holes at the top, each 1.12" from the centerline and 1.23" from the top edge. The total width of the mounting area is 2.95". A ground hole is located 1.18" from the right edge and 1.63" from the bottom edge. The bottom edge has a 1.95" wide section with a 0.86" wide cutout.

Side View: The plate is 6.14" high. It shows a (1) 3/4" NPT Knockout Per Side, located 1.97" from the front edge and 1.57" from the bottom edge. The distance from the front edge to the knockout is 10.08", and the total length is 12.21". The knockout is 4.25" from the right edge. The bottom edge has a 4.49" wide section with a 0.39" wide cutout and a 0.08" wide gap.

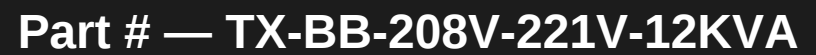
Bottom (Underside) View: The plate is 5.43" wide and 4.45" high. It features four 3/4" NPT knockouts, arranged in two rows of two. The distance between the two rows is 3.23", and the distance from the left edge to the first row is 1.1". The distance from the bottom edge to the first row is 2.52", and the distance from the bottom edge to the second row is 0.95".

Connection Guide

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

DIAGRAM D2





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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