

Summary

Single-phase buck-boost transformer. Steps up 208V to 220V at 21.88 amps continuous output. 4.81 kVA capacity. NEMA 3R enclosed, cETLus listed, wall mount.

Product Description

This unit corrects a 208V building supply to 220V at the point of use, permanently, without modifying the building's electrical service. Designed for equipment rated 220V 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 21.88-amp buck-boost transformer is significantly smaller and lighter than a 21.88-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-220V-22A — NEMA 3R Encapsulated, cETLus Listed

Specifications

Phase	Single Phase (1-PH), AC	Transformer Type	Buck/Boost
Capacity	4.81 kVA	Configuration	Encapsulated Autotransformer
Primary Voltage	208V	Primary Termination	Lead Wires & Terminal Lugs
Primary Amperage	23.13A	Secondary Termination	Lead Wires & Terminal Lugs
Secondary Voltage	220V	Termination Access	(6) ½" NPT Hubs
Secondary Amperage	21.88A	Winding Material	Aluminum
Maximum Primary OCP	30A	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).
- Dimensions for knockouts: 3.15" (width), 1.97" (width), 0.82" (height), 3.01" (width), 1.18" (width), 0.08" (height), 1.63" (width), 1.95" (width), 0.86" (height).

Front View:

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

Bottom View:

- Overall dimensions: 4.65" (width) x 3.86" (height) and 2.09" (width) x 0.98" (height).
- Four 1/2" NPT knockouts (top-left, top-right, bottom-left, bottom-right).
- Dimensions for knockouts: 1.16" (width), 2.32" (width), 2.09" (width), 0.98" (height).

Connection Guide

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

DIAGRAM C2





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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