

Summary

Single-phase buck-boost transformer. Steps up 196V to 208V at 50 amps continuous output. 10.4 kVA capacity. NEMA 3R enclosed, cETLus listed, wall mount.

Product Description

This unit corrects a 196V building supply to 208V at the point of use, permanently, without modifying the building's electrical service. Designed for equipment rated 208V that is installed on a 196V system.

Wired as an autotransformer, the unit handles only the difference between input and output and not the full load. This is why a 50-amp buck-boost transformer is significantly smaller and lighter than a 50-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-196V-208V-50A — NEMA 3R Encapsulated, cETLus Listed

Specifications

Phase	Single Phase (1-PH), AC	Transformer Type	Buck/Boost
Capacity	10.4 kVA	Configuration	Encapsulated Autotransformer
Primary Voltage	196V	Primary Termination	Lead Wires & Terminal Lugs
Primary Amperage	53.10A	Secondary Termination	Lead Wires & Terminal Lugs
Secondary Voltage	208V	Termination Access	(6) ¾" NPT Hubs
Secondary Amperage	50A	Winding Material	Aluminum
Maximum Primary OCP	70A	Enclosure Material	Steel
Frequency	50/60 Hz	Finish Color	ANSI 70 Light Grey
Insulation	180°C	Weight	27 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: Front View, Side View, and Top View.

Front View:

- Overall Width: 5.43"
- Overall Height: 10.08"
- Top Section Width: 2.95"
- Top Section Height: 1.23"
- Top Section Hole Spacing: 1.12" (between holes)
- Ground Hole: $\varnothing 0.2"$
- Ground Hole Position: 1.18" from right edge, 0.08" from bottom edge
- Bottom Section Width: 1.95"
- Bottom Section Height: 0.86"
- Bottom Section Hole Spacing: 1.63"

Side View:

- Overall Width: 6.14"
- Overall Height: 12.21"
- Top Section Width: 4.25"
- Top Section Height: 1.97"
- Ground Hole: $\varnothing 0.2"$
- Ground Hole Position: 1.57" from right edge, 0.08" from bottom edge
- Bottom Section Width: 2.32"
- Bottom Section Height: 0.39"
- Bottom Section Hole Spacing: 0.08"

Top View:

- Overall Width: 5.43"
- Overall Height: 4.45"
- Top Section Width: 1.1"
- Top Section Height: 3.23"
- Ground Hole: $\varnothing 0.2"$
- Ground Hole Position: 1.18" from right edge, 0.08" from bottom edge
- Bottom Section Width: 1.95"
- Bottom Section Height: 0.86"
- Bottom Section Hole Spacing: 1.63"

Notes:

- (1) 3/4" NPT Knockout Per Side
- (4) 3/4" NPT

Bottom (Underside) Plate

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