

Summary

Single-phase buck-boost transformer. Steps down 208V to 189V at 68.8 amps continuous output. 13 kVA capacity. NEMA 3R enclosed, cETLus listed, wall mount.

Product Description

This unit corrects a 208V building supply to 189V at the point of use, permanently, without modifying the building's electrical service. Designed for equipment rated 189V that is installed on a 208V 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 68.8-amp buck-boost transformer is significantly smaller and lighter than a 68.8-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-189V-69A — NEMA 3R Encapsulated, cETLus Listed

Specifications

Phase	Single Phase (1-PH), AC	Transformer Type	Buck/Boost
Capacity	13 kVA	Configuration	Encapsulated Autotransformer
Primary Voltage	208V	Primary Termination	Lead Wires & Terminal Lugs
Primary Amperage	62.50A	Secondary Termination	Lead Wires & Terminal Lugs
Secondary Voltage	189V	Termination Access	(6) ¾" NPT Hubs
Secondary Amperage	68.8A	Winding Material	Aluminum
Maximum Primary OCP	80A	Enclosure Material	Steel
Frequency	50/60 Hz	Finish Color	ANSI 70 Light Grey
Insulation	180°C	Weight	34 lbs
Temperature Rise	115°C	Dimensions	5.43 x 4.49 x 10.87

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: 5.43" (width) x 10.87" (length).
- Three mounting holes with a diameter of $\varnothing 0.2"$ are located along the top edge, with a center-to-center spacing of 2.95".
- The distance from the top edge to the center of the first hole is 1.23".
- The distance between the first and second holes is 1.12", and between the second and third holes is 1.12".
- A ground hole with a diameter of $\varnothing 0.2"$ is located at the bottom center, with a distance of 1.18" from the right edge and 1.63" from the bottom edge.
- The distance from the bottom edge to the center of the ground hole is 0.08".
- The distance from the left edge to the center of the ground hole is 1.95".
- The distance from the left edge to the center of the first hole is 0.86".

Front View:

- Overall dimensions: 10.87" (width) x 6.93" (height).
- A (1) 3/4" NPT Knockout Per Side is located on the right side, with a distance of 1.97" from the right edge.
- The distance from the bottom edge to the center of the knockout is 1.57".
- The distance from the left edge to the center of the knockout is 4.49".
- The distance from the bottom edge to the center of the knockout is 0.39".
- The distance from the left edge to the center of the knockout is 2.32".
- The distance from the bottom edge to the center of the knockout is 0.08".
- The distance from the left edge to the center of the knockout is 0.08".

Bottom View:

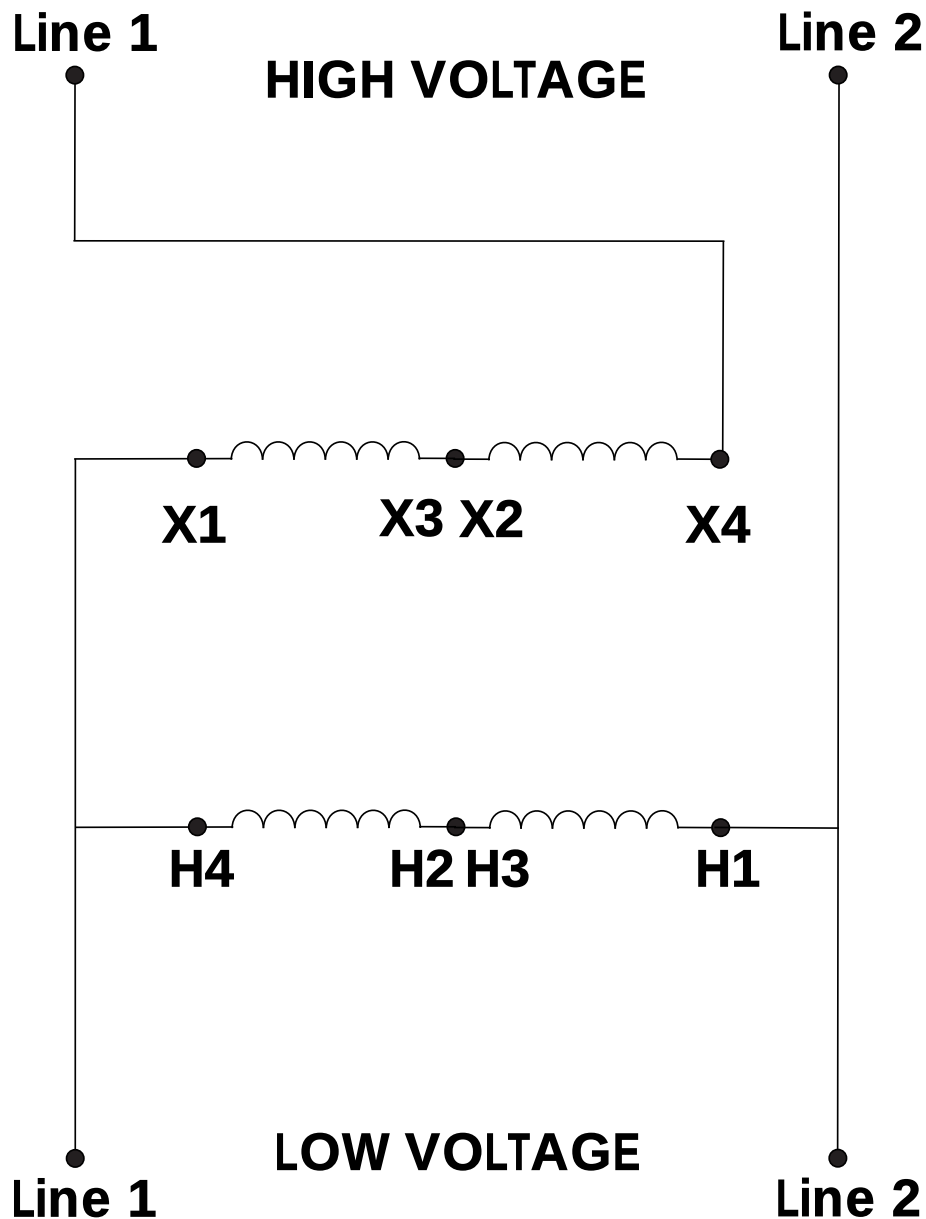
- Overall dimensions: 5.43" (width) x 4.45" (height).
- Four 3/4" NPT knockouts are arranged in a 2x2 pattern.
- The distance between the first and second knockouts is 1.1".
- The distance between the second and third knockouts is 3.23".
- The distance from the left edge to the center of the first knockout is 2.52".
- The distance from the left edge to the center of the second knockout is 0.95".
- The distance from the bottom edge to the center of the first knockout is 0.95".
- The distance from the bottom edge to the center of the second knockout is 0.95".

(4) 3/4" NPT Knockouts
Bottom (Underside) Plate

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