

Summary

Single-phase buck-boost transformer. Steps down 250V to 221V at 22.62 amps continuous output. 5 kVA capacity. NEMA 3R enclosed, cETLus listed, wall mount.

Product Description

This unit corrects a 250V 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 250V 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 22.62-amp buck-boost transformer is significantly smaller and lighter than a 22.62-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-250V-221V-5KVA — NEMA 3R Encapsulated, cETLus Listed

Specifications

Phase	Single Phase (1-PH), AC	Transformer Type	Buck/Boost
Capacity	5 kVA	Configuration	Encapsulated Autotransformer
Primary Voltage	250V	Primary Termination	Lead Wires & Terminal Lugs
Primary Amperage	20.00A	Secondary Termination	Lead Wires & Terminal Lugs
Secondary Voltage	221V	Termination Access	(6) 3/4" NPT Hubs
Secondary Amperage	22.62A	Winding Material	Aluminum
Maximum Primary OCP	25A	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 x 4.49 x 10.08

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.



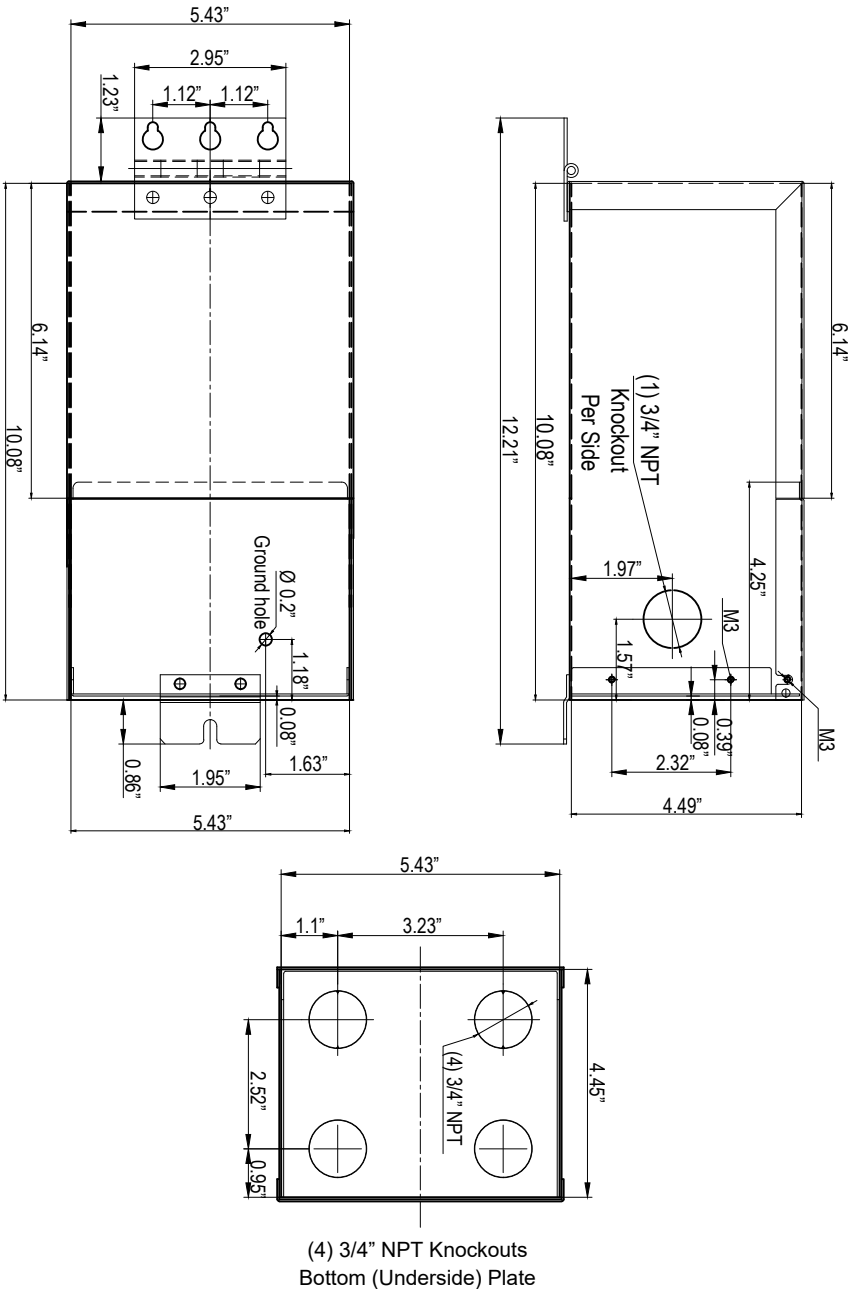
Part # — TX-BB-250V-221V-5KVA

Buck-Boost Transformer Specification Sheet

Available at XFMR Direct

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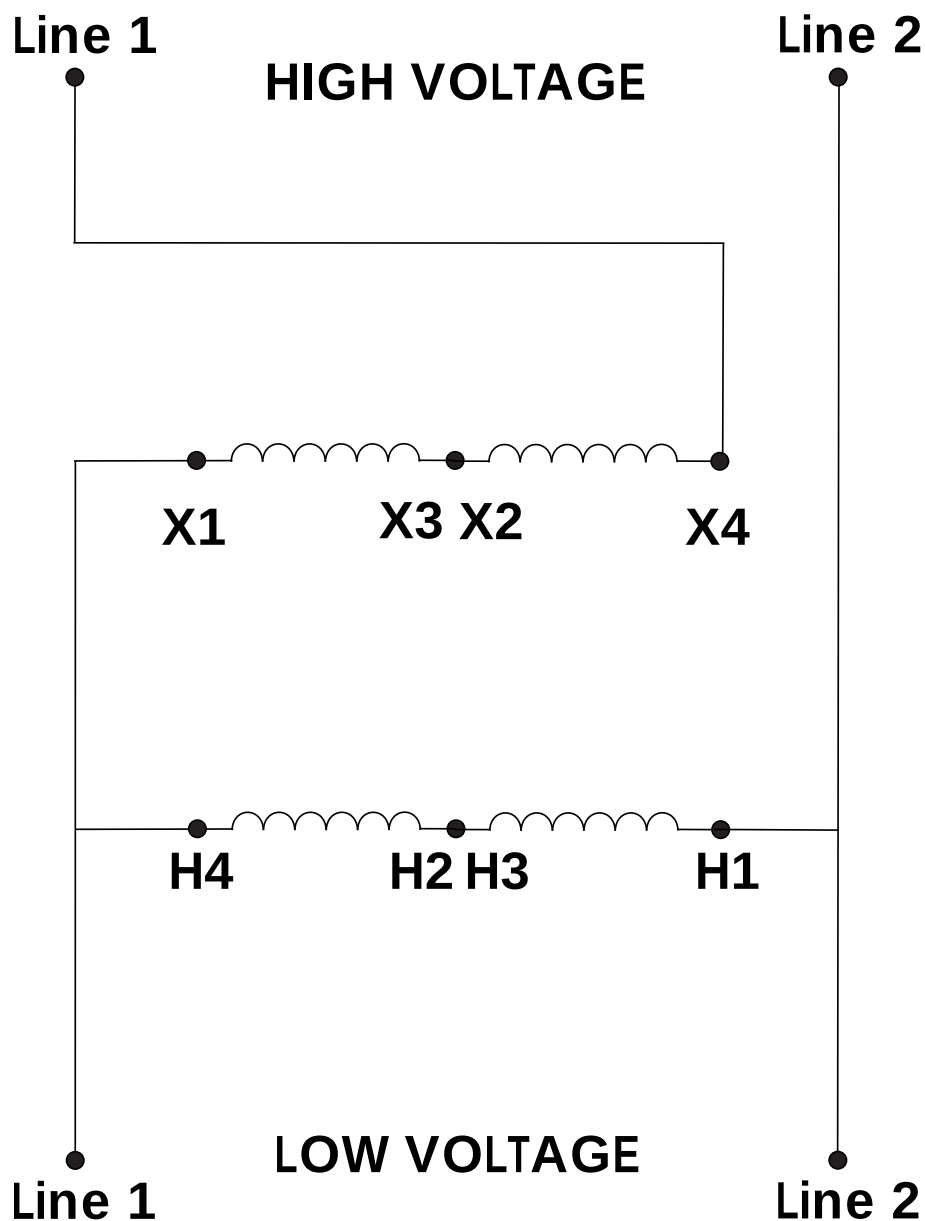
Dimensions



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) $\frac{3}{4}$ " NPT



Side View



Rear View — Surface Mount Bracket



Wiring Compartment — Terminal Leads



Interior — Epoxy Resin Encapsulated Core