



Summary

Single-phase buck-boost transformer. Steps down 235V to 220V at 20 amps continuous output. 4.4 kVA capacity. NEMA 3R enclosed, cETLus listed, wall mount.

Product Description

This unit corrects a 235V 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 235V 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 20-amp buck-boost transformer is significantly smaller and lighter than a 20-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-235V-220V-20A — NEMA 3R Encapsulated, cETLus Listed

Specifications

Phase	Single Phase (1-PH), AC	Transformer Type	Buck/Boost
Capacity	4.4 kVA	Configuration	Encapsulated Autotransformer
Primary Voltage	235V	Primary Termination	Lead Wires & Terminal Lugs
Primary Amperage	18.70A	Secondary Termination	Lead Wires & Terminal Lugs
Secondary Voltage	220V	Termination Access	(6) ½" NPT Hubs
Secondary Amperage	20A	Winding Material	Aluminum
Maximum Primary OCP	25A	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 x 3.86 x 9.25

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: Dimensions are 4.77" (width) and 4.65" (height). It features a central ground hole (Ø 0.2") and four 1/2" NPT knockout holes. Key dimensions include 0.82", 3.15", 1.97", 5.32", 9.25", 3.01", 1.18", 0.08", 1.63", 0.86", 1.95", and 4.65".

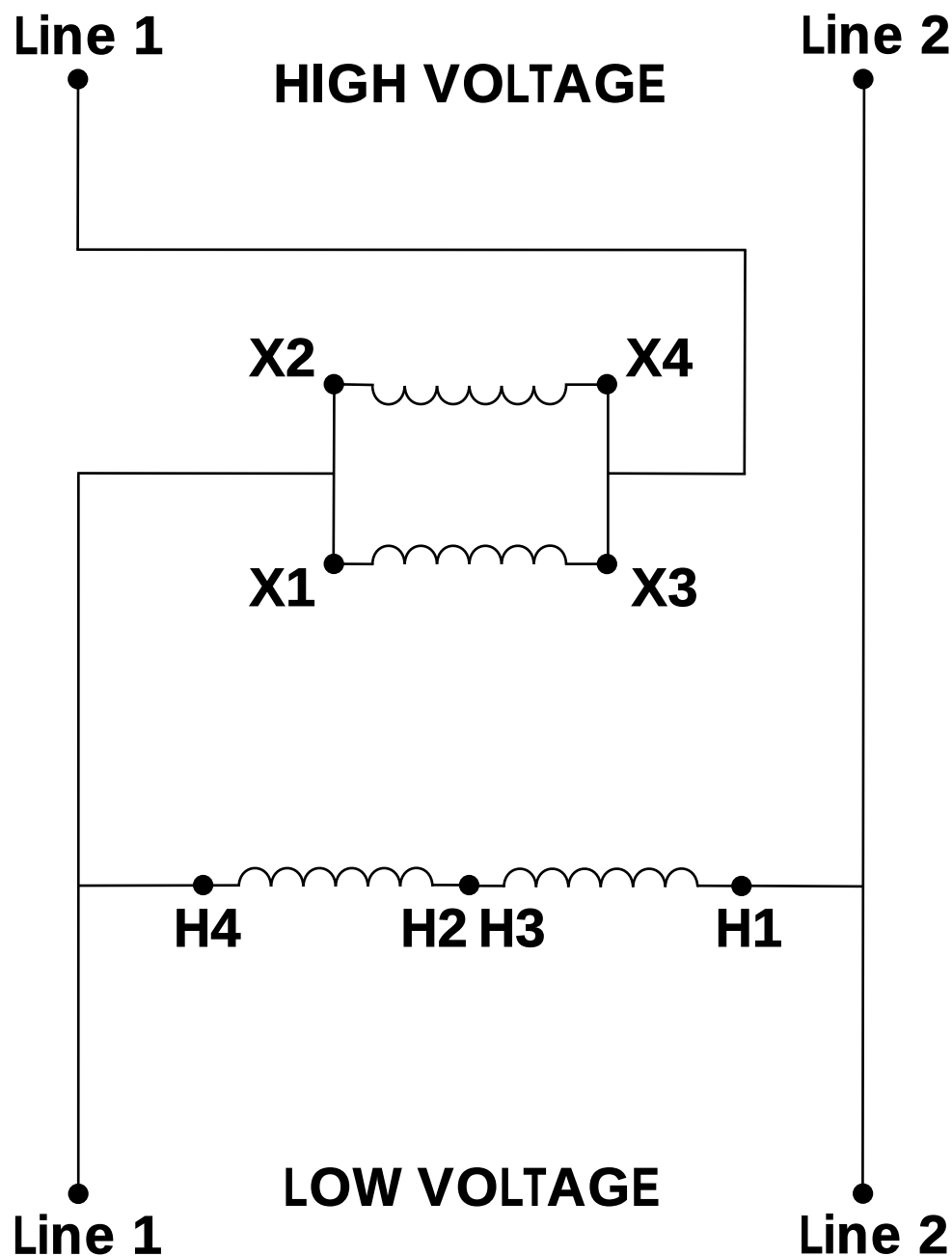
Front View: Dimensions are 5.32" (width) and 9.25" (height). It shows a (1) 1/2" NPT knockout hole per side and an M3 screw. Key dimensions include 10.97", 9.25", 1.89", 4.17", 1.57", 0.39", 0.08", 2.05", 3.86", and 3.94".

Bottom View: Dimensions are 4.65" (width) and 3.86" (height). It shows four 1/2" NPT knockout holes and an M3 screw. Key dimensions include 1.16", 2.32", 2.09", and 0.98".

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