

Summary

Single-phase buck-boost transformer. Steps up 230V to 277V at 52.1 amps continuous output. 14.43 kVA capacity. NEMA 3R enclosed, cETLus listed, wall mount.

Product Description

This unit corrects a 230V building supply to 277V at the point of use, permanently, without modifying the building's electrical service. Designed for equipment rated 277V that is installed on a 230V system.

Wired as an autotransformer, the unit handles only the difference between input and output and not the full load. This is why a 52.1-amp buck-boost transformer is significantly smaller and lighter than a 52.1-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-230V-277V-52A — NEMA 3R Encapsulated, cETLus Listed

Specifications

Phase	Single Phase (1-PH), AC	Transformer Type	Buck/Boost
Capacity	14.43 kVA	Configuration	Encapsulated Autotransformer
Primary Voltage	230V	Primary Termination	Lead Wires & Terminal Lugs
Primary Amperage	62.70A	Secondary Termination	Lead Wires & Terminal Lugs
Secondary Voltage	277V	Termination Access	(6) ¾" NPT Hubs
Secondary Amperage	52.1A	Winding Material	Aluminum
Maximum Primary OCP	80A	Enclosure Material	Steel
Frequency	50/60 Hz	Finish Color	ANSI 70 Light Grey
Insulation	180°C	Weight	60 lbs
Temperature Rise	115°C	Dimensions	7.68"-W x 6.38"-D x 12.2"-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 Dimensions:

- Overall Width: 12.21"
- Overall Height: 8.27"
- Top Flange Width: 6.58"
- Top Flange Height: 1.26"
- Knockout Diameter: $\varnothing 0.2"$
- Knockout Spacing: 1.14" (between centers)
- Knockout Diameter: 2.95" (between centers)
- Knockout Diameter: 1.14" (between centers)
- Ground Hole: $\varnothing 0.2"$
- Ground Hole Spacing: 1.18"
- Ground Hole Diameter: 1.95"
- Ground Hole Spacing: 0.86"
- Ground Hole Diameter: 7.68"

Side View Dimensions:

- Overall Height: 14.36"
- Overall Width: 6.38"
- Top Flange Width: 4.25"
- Top Flange Height: 1.38"
- Knockout Diameter: $\varnothing 0.2"$
- Knockout Spacing: 1.14" (between centers)
- Knockout Diameter: 2.95" (between centers)
- Knockout Diameter: 1.14" (between centers)
- Ground Hole: $\varnothing 0.2"$
- Ground Hole Spacing: 1.18"
- Ground Hole Diameter: 1.95"
- Ground Hole Spacing: 0.86"
- Ground Hole Diameter: 7.68"

Top View Dimensions:

- Overall Width: 7.68"
- Overall Height: 6.38"
- Knockout Diameter: $\varnothing 0.2"$
- Knockout Spacing: 1.14" (between centers)
- Knockout Diameter: 2.95" (between centers)
- Knockout Diameter: 1.14" (between centers)
- Ground Hole: $\varnothing 0.2"$
- Ground Hole Spacing: 1.18"
- Ground Hole Diameter: 1.95"
- Ground Hole Spacing: 0.86"
- Ground Hole Diameter: 7.68"

Notes:

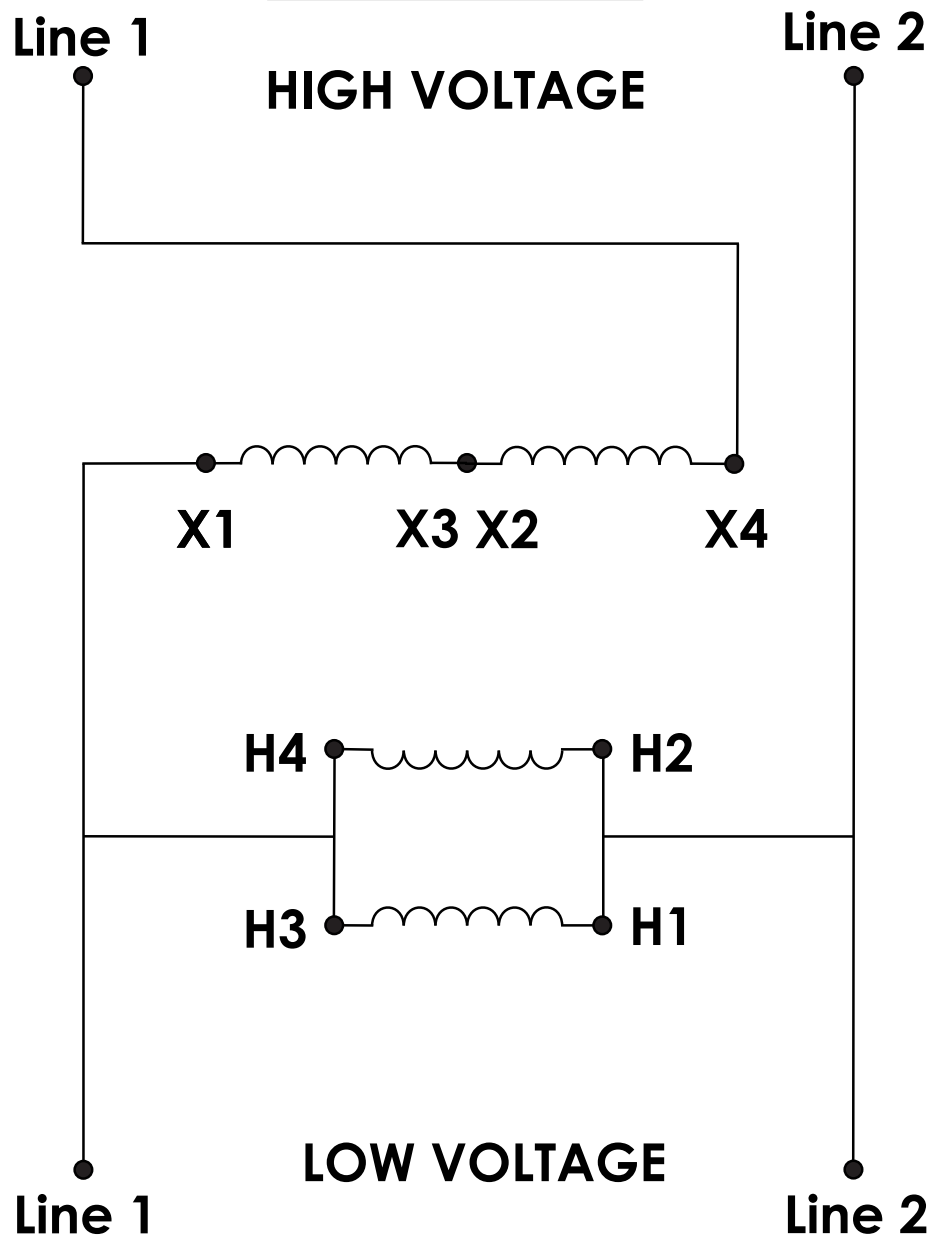
- (1) 3/4" NPT Knockout Per Side
- (4) 3/4" NPT Knockouts

Bottom (Underside) Plate

Connection Guide

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

DIAGRAM B2





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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