

Summary

Single-phase buck-boost transformer. Steps down 473V to 450V at 43.8 amps continuous output. 19.71 kVA capacity. NEMA 3R enclosed, cETLus listed, wall mount.

Product Description

This unit corrects a 473V building supply to 450V at the point of use, permanently, without modifying the building's electrical service. Designed for equipment rated 450V that is installed on a 473V 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 43.8-amp buck-boost transformer is significantly smaller and lighter than a 43.8-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-473V-450V-44A — NEMA 3R Encapsulated, cETLus Listed

Specifications

Phase	Single Phase (1-PH), AC	Transformer Type	Buck/Boost
Capacity	19.71 kVA	Configuration	Encapsulated Autotransformer
Primary Voltage	473V	Primary Termination	Lead Wires & Terminal Lugs
Primary Amperage	41.70A	Secondary Termination	Lead Wires & Terminal Lugs
Secondary Voltage	450V	Termination Access	(6) ¾" NPT Hubs
Secondary Amperage	43.8A	Winding Material	Aluminum
Maximum Primary OCP	60A	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 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.



Technical drawing of the Bottom (Underside) Plate, showing three views: Front View, Side View, and Top View.

Front View Dimensions:

- Overall Width: 5.43"
- Overall Height: 10.08"
- Top Mounting Holes: 3 holes, each with a diameter of 0.2".
- Ground Hole: 1 hole, diameter 0.2".
- Top Mounting Holes Spacing: 1.12" between holes, 1.23" from the left edge.
- Ground Hole Position: 1.18" from the right edge, 0.08" from the bottom edge.
- Bottom Mounting Holes: 2 holes, each with a diameter of 0.2".
- Bottom Mounting Holes Spacing: 1.95" between holes, 0.86" from the left edge.
- Bottom Mounting Holes Position: 1.63" from the right edge.

Side View Dimensions:

- Overall Height: 6.14"
- Overall Width: 12.21"
- Top Mounting Holes: 3 holes, each with a diameter of 0.2".
- Ground Hole: 1 hole, diameter 0.2".
- Top Mounting Holes Spacing: 1.12" between holes, 1.23" from the left edge.
- Ground Hole Position: 1.18" from the right edge, 0.08" from the bottom edge.
- Bottom Mounting Holes: 2 holes, each with a diameter of 0.2".
- Bottom Mounting Holes Spacing: 1.95" between holes, 0.86" from the left edge.
- Bottom Mounting Holes Position: 1.63" from the right edge.

Top View Dimensions:

- Overall Width: 5.43"
- Overall Height: 4.45"
- Top Mounting Holes: 2 holes, each with a diameter of 0.2".
- Ground Hole: 1 hole, diameter 0.2".
- Top Mounting Holes Spacing: 1.12" between holes, 1.23" from the left edge.
- Ground Hole Position: 1.18" from the right edge, 0.08" from the bottom edge.
- Bottom Mounting Holes: 2 holes, each with a diameter of 0.2".
- Bottom Mounting Holes Spacing: 1.95" between holes, 0.86" from the left edge.
- Bottom Mounting Holes Position: 1.63" from the right edge.

Notes:

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

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