

Summary

Single-phase buck-boost transformer. Steps down 291V to 277V at 43.8 amps continuous output. 12.13 kVA capacity. NEMA 3R enclosed, cETLus listed, wall mount.

Product Description

This unit corrects a 291V 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 291V 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-291V-277V-44A — NEMA 3R Encapsulated, cETLus Listed

Specifications

Phase	Single Phase (1-PH), AC	Transformer Type	Buck/Boost
Capacity	12.13 kVA	Configuration	Encapsulated Autotransformer
Primary Voltage	291V	Primary Termination	Lead Wires & Terminal Lugs
Primary Amperage	41.70A	Secondary Termination	Lead Wires & Terminal Lugs
Secondary Voltage	277V	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: Top, Side, and Bottom (Underside).

Top View: The plate is 5.43" wide and 10.08" long. It features three mounting holes at the top, each 1.12" from the centerline and 1.23" from the top edge. The total width of the mounting area is 2.95". A ground hole is located 1.18" from the right edge and 1.63" from the bottom edge. The bottom edge has a 1.95" wide section with a 0.86" wide cutout.

Side View: The plate is 6.14" high. It shows a (1) 3/4" NPT Knockout Per Side, located 1.97" from the front edge and 1.57" from the bottom edge. The knockout has a diameter of 0.39" and a 0.08" gap. The side view also shows a 4.25" wide section and a 12.21" long section.

Bottom (Underside) View: The plate is 5.43" wide and 4.45" high. It features four 3/4" NPT knockouts, labeled (4) 3/4" NPT. The knockouts are arranged in two rows, with a 1.1" gap between the top two and a 3.23" gap between the bottom two. The bottom edge has a 2.52" wide section with a 0.95" wide cutout.

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