



Summary

Single-phase buck-boost transformer. Steps down 277V to 250V at 12 amps continuous output. 3 kVA capacity. NEMA 3R enclosed, cETLus listed, wall mount.

Product Description

This unit corrects a 277V building supply to 250V at the point of use, permanently, without modifying the building's electrical service. Designed for equipment rated 250V that is installed on a 277V 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 12-amp buck-boost transformer is significantly smaller and lighter than a 12-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-277V-250V-3KVA — NEMA 3R Encapsulated, cETLus Listed

Specifications

Phase	Single Phase (1-PH), AC	Transformer Type	Buck/Boost
Capacity	3 kVA	Configuration	Encapsulated Autotransformer
Primary Voltage	277V	Primary Termination	Lead Wires & Terminal Lugs
Primary Amperage	10.83A	Secondary Termination	Lead Wires & Terminal Lugs
Secondary Voltage	250V	Termination Access	(6) ½" NPT Hubs
Secondary Amperage	12A	Winding Material	Aluminum
Maximum Primary OCP	15A	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"-W x 3.86"-D x 9.25"-H

Ratings & Certifications

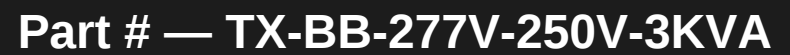
- Listed for United States
- NEMA 3R Indoor/Outdoor Enclosure
- Built to UL-50 Standards
- CE Certified
- Listed for Canada
- Epoxy Resin Encapsulated
- RoHS Compliant



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: Top, Front, and Bottom.

Top View:

- Overall dimensions: 4.77" (width) x 5.32" (height) and 4.65" (width) x 9.25" (height).
- Two circular holes with a diameter of $\varnothing 0.2$ are located near the top edge, with a center-to-center distance of 1.97" and a distance of 0.82" from the top edge.
- A ground hole is located near the bottom edge, with a diameter of $\varnothing 0.2$ and a distance of 3.01" from the left edge.
- Other dimensions include 1.18", 0.08", 1.63", 1.95", and 0.86".

Front View:

- Overall dimensions: 10.97" (width) x 3.94" (height) and 9.25" (width) x 3.86" (height).
- A (1) 1/2" NPT Knockout Per Side is located near the top edge, with a diameter of 1.57" and a distance of 1.89" from the left edge.
- A ground hole is located near the bottom edge, with a diameter of $\varnothing 0.2$ and a distance of 4.17" from the left edge.
- Other dimensions include 0.39", 0.08", 2.05", and 3.86".

Bottom View:

- Overall dimensions: 4.65" (width) x 3.86" (height) and 2.09" (width) x 0.98" (height).
- Four circular holes with a diameter of $\varnothing 0.2$ are located near the top edge, with a center-to-center distance of 2.32" and a distance of 1.16" from the top edge.
- A ground hole is located near the bottom edge, with a diameter of $\varnothing 0.2$ and a distance of 0.98" from the bottom edge.

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) ¾" NPT



Side View



Rear View — Surface Mount Bracket



Wiring Compartment — Terminal Leads



Interior — Epoxy Resin Encapsulated Core