



Summary

Single-phase buck-boost transformer. Steps down 120V to 110V at 22.73 amps continuous output. 2.5 kVA capacity. NEMA 3R enclosed, cETLus listed, wall mount.

Product Description

This unit corrects a 120V building supply to 110V at the point of use, permanently, without modifying the building's electrical service. Designed for equipment rated 110V that is installed on a 120V 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 22.73-amp buck-boost transformer is significantly smaller and lighter than a 22.73-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-120V-110V-2.5KVA — NEMA 3R Encapsulated, cETLus Listed

Specifications

Phase	Single Phase (1-PH), AC	Transformer Type	Buck/Boost
Capacity	2.5 kVA	Configuration	Encapsulated Autotransformer
Primary Voltage	120V	Primary Termination	Lead Wires & Terminal Lugs
Primary Amperage	20.83A	Secondary Termination	Lead Wires & Terminal Lugs
Secondary Voltage	110V	Termination Access	(6) ½" NPT Hubs
Secondary Amperage	22.73A	Winding Material	Aluminum
Maximum Primary OCP	25A	Enclosure Material	Steel
Frequency	50/60 Hz	Finish Color	ANSI 70 Light Grey
Insulation	180°C	Weight	12 lbs
Temperature Rise	115°C	Dimensions	4.65"-W x 3.86"-D x 8.07"-H

Ratings & Certifications

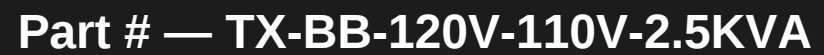
- Listed for United States
 - NEMA 3R Indoor/Outdoor Enclosure
 - Built to UL-50 Standards
 - CE Certified
- Listed for Canada
 - Epoxy Resin Encapsulated
 - RoHS Compliant



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 Dimensions:

- Overall Width: 4.77"
- Overall Height: 8.07"
- Top Section Width: 3.15"
- Top Section Height: 0.82"
- Top Section Spacing: 1.97"
- Left Section Height: 4.13"
- Ground Hole Diameter: $\varnothing 0.2"$
- Ground Hole Position: 3.01" from left edge, 1.18" from bottom edge
- Bottom Section Width: 4.65"
- Bottom Section Height: 0.86"
- Bottom Section Spacing: 1.95"
- Bottom Section Mounting Hole Diameter: $\varnothing 0.08"$
- Bottom Section Mounting Hole Position: 1.63" from right edge

Front View Dimensions:

- Overall Height: 9.78"
- Overall Width: 4.13"
- Top Section Height: 4.25"
- Top Section Mounting Hole Diameter: M3
- Top Section Mounting Hole Position: 0.39" from right edge
- Top Section Mounting Hole Spacing: 0.08"
- Top Section Mounting Hole Diameter: $\varnothing 0.08"$
- Top Section Mounting Hole Position: 2.05" from right edge
- Top Section Mounting Hole Spacing: 1.57"
- Top Section Mounting Hole Diameter: (1) 1/2" NPT Knockout Per Side
- Top Section Mounting Hole Position: 1.89" from right edge
- Bottom Section Height: 3.86"
- Bottom Section Mounting Hole Diameter: M3
- Bottom Section Mounting Hole Position: 0.39" from right edge
- Bottom Section Mounting Hole Spacing: 0.08"
- Bottom Section Mounting Hole Diameter: $\varnothing 0.08"$
- Bottom Section Mounting Hole Position: 2.05" from right edge
- Bottom Section Mounting Hole Spacing: 1.57"
- Bottom Section Mounting Hole Diameter: (1) 1/2" NPT Knockout Per Side
- Bottom Section Mounting Hole Position: 1.89" from right edge

Bottom View Dimensions:

- Overall Width: 4.65"
- Overall Height: 3.86"
- Left Section Width: 1.16"
- Left Section Height: 2.09"
- Right Section Width: 2.32"
- Right Section Height: 0.98"
- Right Section Mounting Hole Diameter: (4) 1/2" NPT

Labels:

- Ground hole
- (1) 1/2" NPT Knockout Per Side
- M3
- (4) 1/2" NPT

Bottom (Underside) Plate

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