

### Summary

Single-phase buck-boost transformer. Steps up 440V to 462V at 31.2 amps continuous output. 14.41 kVA capacity. NEMA 3R enclosed, cETLus listed, wall mount.

### Product Description

This unit corrects a 440V building supply to 462V at the point of use, permanently, without modifying the building's electrical service. Designed for equipment rated 462V that is installed on a 440V system.

Wired as an autotransformer, the unit handles only the difference between input and output and not the full load. This is why a 31.2-amp buck-boost transformer is significantly smaller and lighter than a 31.2-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-440V-462V-31A — NEMA 3R Encapsulated, cETLus Listed

### Specifications

|                     |                         |                       |                              |
|---------------------|-------------------------|-----------------------|------------------------------|
| Phase               | Single Phase (1-PH), AC | Transformer Type      | Buck/Boost                   |
| Capacity            | 14.41 kVA               | Configuration         | Encapsulated Autotransformer |
| Primary Voltage     | 440V                    | Primary Termination   | Lead Wires & Terminal Lugs   |
| Primary Amperage    | 32.80A                  | Secondary Termination | Lead Wires & Terminal Lugs   |
| Secondary Voltage   | 462V                    | Termination Access    | (6) ¾" NPT Hubs              |
| Secondary Amperage  | 31.2A                   | Winding Material      | Aluminum                     |
| Maximum Primary OCP | 40A                     | Enclosure Material    | Steel                        |
| Frequency           | 50/60 Hz                | Finish Color          | ANSI 70 Light Grey           |
| Insulation          | 180°C                   | Weight                | 22 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:**

- Overall Width: 5.43"
- Overall Height: 10.08"
- Top Section Width: 2.95"
- Top Section Height: 1.23"
- Top Section Hole Spacing: 1.12" (between holes)
- Ground Hole:  $\varnothing 0.2"$
- Ground Hole Position: 1.18" from right edge, 0.08" from bottom edge
- Bottom Section Width: 1.95"
- Bottom Section Height: 0.86"
- Bottom Section Position: 1.63" from right edge

**Side View:**

- Overall Width: 6.14"
- Overall Height: 12.21"
- Top Section Width: 4.25"
- Top Section Height: 1.97"
- Top Section Hole: (1) 3/4" NPT Knockout Per Side
- Top Section Position: 1.57" from right edge
- Bottom Section Width: 4.49"
- Bottom Section Height: 0.39"
- Bottom Section Position: 0.08" from right edge

**Top View:**

- Overall Width: 5.43"
- Overall Height: 4.45"
- Top Section Width: 3.23"
- Top Section Height: 1.1"
- Top Section Hole: (4) 3/4" NPT
- Bottom Section Width: 2.52"
- Bottom Section Height: 0.95"

(4) 3/4" NPT Knockouts  
Bottom (Underside) Plate

## 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*