

### Summary

Single-phase buck-boost transformer. Steps down 250V to 208V at 12.02 amps continuous output. 2.5 kVA capacity. NEMA 3R enclosed, cETLus listed, wall mount.

### Product Description

This unit corrects a 250V building supply to 208V at the point of use, permanently, without modifying the building's electrical service. Designed for equipment rated 208V that is installed on a 250V 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 12.02-amp buck-boost transformer is significantly smaller and lighter than a 12.02-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-250V-208V-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     | 250V                    | Primary Termination   | Lead Wires & Terminal Lugs   |
| Primary Amperage    | 10.00A                  | Secondary Termination | Lead Wires & Terminal Lugs   |
| Secondary Voltage   | 208V                    | Termination Access    | (6) ¾" NPT Hubs              |
| Secondary Amperage  | 12.02A                  | Winding Material      | Aluminum                     |
| Maximum Primary OCP | 15A                     | 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"-W x 4.49"-D x 10.08"-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, 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.

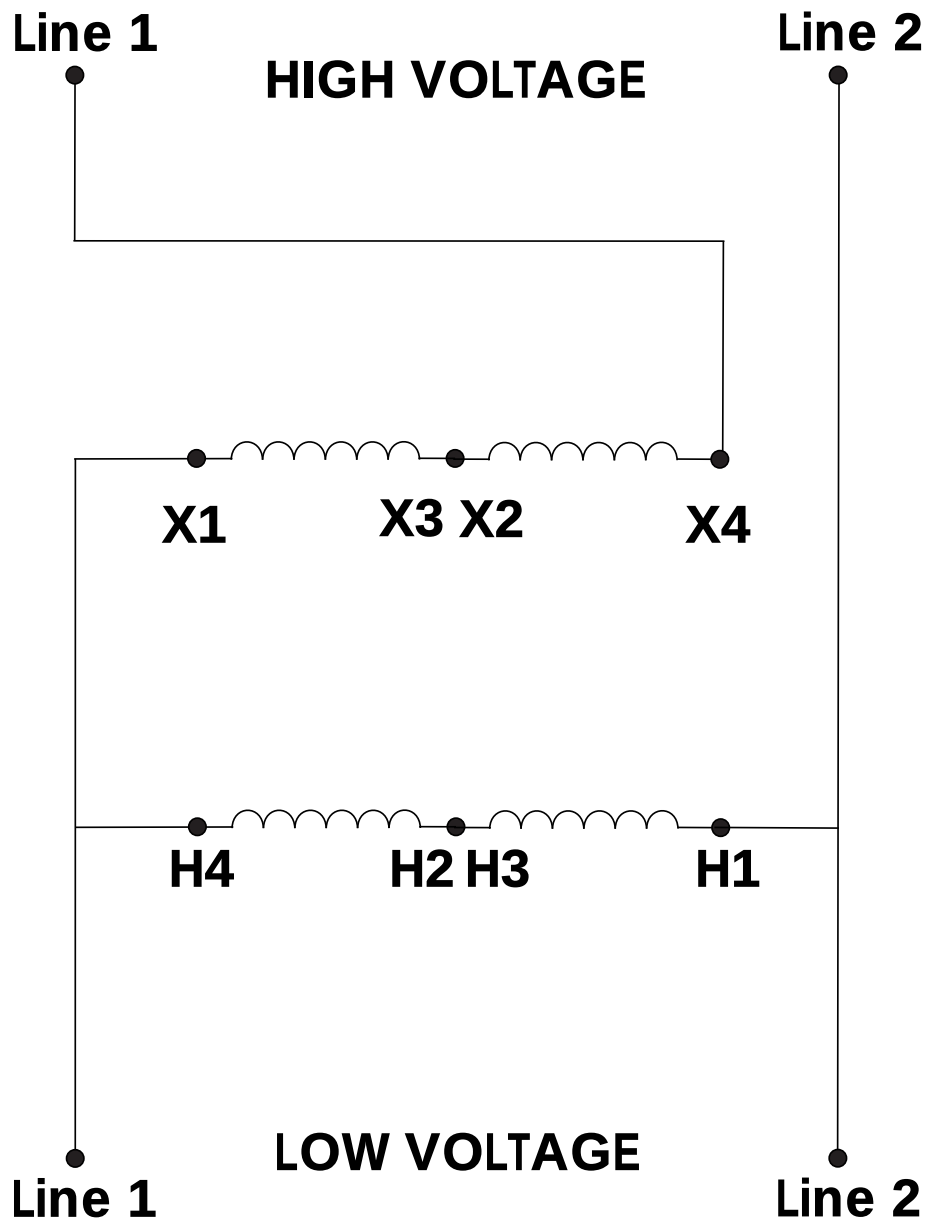
**Side View:** The plate is 6.14" high. It shows a (1) 3/4" NPT Knockout Per Side, located 1.97" from the front edge and 1.57" from the bottom edge. The distance from the front edge to the knockout is 10.08". The distance from the knockout to the back edge is 12.21". The knockout is 4.25" from the right edge. The bottom edge is 4.49" wide. The knockout is 0.39" from the bottom edge and 0.08" from the right edge. The knockout is M3.

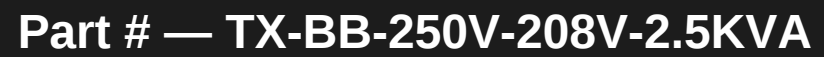
**Bottom (Underside) View:** The plate is 5.43" wide and 4.45" high. It features four 3/4" NPT knockouts, labeled (4) 3/4" NPT. The knockouts are arranged in two rows of two. The distance between the two rows is 1.1". The distance from the left edge to the first knockout in the top row is 3.23". The distance from the bottom edge to the first knockout in the bottom row is 2.52". The distance from the right edge to the first knockout in the top row is 0.95".

## 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*