



Summary

Single-phase buck-boost transformer. Steps down 277V to 230V at 8.7 amps continuous output. 2 kVA capacity. NEMA 3R enclosed, cETLus listed, wall mount.

Product Description

This unit corrects a 277V building supply to 230V at the point of use, permanently, without modifying the building's electrical service. Designed for equipment rated 230V 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 8.7-amp buck-boost transformer is significantly smaller and lighter than a 8.7-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-230V-2KVA — NEMA 3R Encapsulated, cETLus Listed

Specifications

|                     |                         |                       |                              |
|---------------------|-------------------------|-----------------------|------------------------------|
| Phase               | Single Phase (1-PH), AC | Transformer Type      | Buck/Boost                   |
| Capacity            | 2 kVA                   | Configuration         | Encapsulated Autotransformer |
| Primary Voltage     | 277V                    | Primary Termination   | Lead Wires & Terminal Lugs   |
| Primary Amperage    | 7.22A                   | Secondary Termination | Lead Wires & Terminal Lugs   |
| Secondary Voltage   | 230V                    | Termination Access    | (6) ½" NPT Hubs              |
| Secondary Amperage  | 8.7A                    | Winding Material      | Aluminum                     |
| Maximum Primary OCP | 15A                     | Enclosure Material    | Steel                        |
| Frequency           | 50/60 Hz                | Finish Color          | ANSI 70 Light Grey           |
| Insulation          | 180°C                   | Weight                | 17 lbs                       |
| Temperature Rise    | 115°C                   | Dimensions            | 4.65"-W x 3.86"-D x 9.25"-H  |

Ratings & Certifications

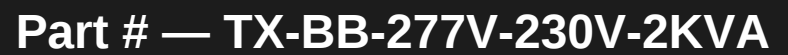
- Listed for United States
- NEMA 3R Indoor/Outdoor Enclosure
- Built to UL-50 Standards
- CE Certified
- Listed for Canada
- Epoxy Resin Encapsulated
- RoHS Compliant



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).
- Mounting holes: Two holes with a center-to-center distance of 3.15". The distance from the center of the holes to the nearest edge is 1.97".
- Ground hole: Located 3.01" from the left edge and 1.18" from the bottom edge. The hole diameter is  $\varnothing 0.2$ ".
- Other dimensions: 0.82" (distance from top edge to mounting holes), 1.63" (distance from bottom edge to mounting holes), 1.95" (distance from left edge to mounting holes), 0.08" (distance from bottom edge to mounting holes), 0.86" (distance from bottom edge to mounting holes).

**Front View:**

- Overall dimensions: 5.32" (height) x 4.65" (width).
- Mounting holes: Two holes with a center-to-center distance of 3.15". The distance from the center of the holes to the nearest edge is 1.97".
- Ground hole: Located 3.01" from the left edge and 1.18" from the bottom edge. The hole diameter is  $\varnothing 0.2$ ".
- Other dimensions: 0.82" (distance from top edge to mounting holes), 1.63" (distance from bottom edge to mounting holes), 1.95" (distance from left edge to mounting holes), 0.08" (distance from bottom edge to mounting holes), 0.86" (distance from bottom edge to mounting holes).

**Bottom View:**

- Overall dimensions: 4.65" (width) x 3.86" (height).
- Mounting holes: Four holes with a center-to-center distance of 2.32". The distance from the center of the holes to the nearest edge is 1.16".
- Ground hole: Located 3.01" from the left edge and 1.18" from the bottom edge. The hole diameter is  $\varnothing 0.2$ ".
- Other dimensions: 0.82" (distance from top edge to mounting holes), 1.63" (distance from bottom edge to mounting holes), 1.95" (distance from left edge to mounting holes), 0.08" (distance from bottom edge to mounting holes), 0.86" (distance from bottom edge to mounting holes).

## 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*