

### Summary

Single-phase buck-boost transformer. Steps up 85V to 110V at 109.09 amps continuous output. 12 kVA capacity. NEMA 3R enclosed, cETLus listed, wall mount.

### Product Description

This unit corrects a 85V 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 85V system.

Wired as an autotransformer, the unit handles only the difference between input and output and not the full load. This is why a 109.09-amp buck-boost transformer is significantly smaller and lighter than a 109.09-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-85V-110V-12KVA — NEMA 3R Encapsulated, cETLus Listed

### Specifications

|                     |                         |                       |                              |
|---------------------|-------------------------|-----------------------|------------------------------|
| Phase               | Single Phase (1-PH), AC | Transformer Type      | Buck/Boost                   |
| Capacity            | 12 kVA                  | Configuration         | Encapsulated Autotransformer |
| Primary Voltage     | 85V                     | Primary Termination   | Lead Wires & Terminal Lugs   |
| Primary Amperage    | 141.18A                 | Secondary Termination | Lead Wires & Terminal Lugs   |
| Secondary Voltage   | 110V                    | Termination Access    | (6) ¾" NPT Hubs              |
| Secondary Amperage  | 109.09A                 | Winding Material      | Aluminum                     |
| Maximum Primary OCP | 200A                    | Enclosure Material    | Steel                        |
| Frequency           | 50/60 Hz                | Finish Color          | ANSI 70 Light Grey           |
| Insulation          | 180°C                   | Weight                | 60 lbs                       |
| Temperature Rise    | 115°C                   | Dimensions            | 7.68"-W x 6.38"-D x 12.2"-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.

## Dimensions



## Connection Guide

1. Connect **X4** and **X2** together
2. Connect High Voltage **L1** to **X4** and **X3**
3. Connect **X2** and **X1** together
4. Connect Low Voltage **L1** to **X1**, **X2**, **H4**, **H3**
5. Connect High & Low Voltage **L2** to **H1** and **H2**

### DIAGRAM A2





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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*