

### Summary

Single-phase buck-boost transformer. Steps up 90V to 115V at 70 amps continuous output. 8.05 kVA capacity. NEMA 3R enclosed, cETLus listed, wall mount.

### Product Description

This unit corrects a 90V building supply to 115V at the point of use, permanently, without modifying the building's electrical service. Designed for equipment rated 115V that is installed on a 90V system.

Wired as an autotransformer, the unit handles only the difference between input and output and not the full load. This is why a 70-amp buck-boost transformer is significantly smaller and lighter than a 70-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-90V-115V-70A — NEMA 3R Encapsulated, cETLus Listed

### Specifications

|                     |                         |                       |                              |
|---------------------|-------------------------|-----------------------|------------------------------|
| Phase               | Single Phase (1-PH), AC | Transformer Type      | Buck/Boost                   |
| Capacity            | 8.05 kVA                | Configuration         | Encapsulated Autotransformer |
| Primary Voltage     | 90V                     | Primary Termination   | Lead Wires & Terminal Lugs   |
| Primary Amperage    | 89.40A                  | Secondary Termination | Lead Wires & Terminal Lugs   |
| Secondary Voltage   | 115V                    | Termination Access    | (6) ¾" NPT Hubs              |
| Secondary Amperage  | 70A                     | Winding Material      | Aluminum                     |
| Maximum Primary OCP | 125A                    | Enclosure Material    | Steel                        |
| Frequency           | 50/60 Hz                | Finish Color          | ANSI 70 Light Grey           |
| Insulation          | 180°C                   | Weight                | 52 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.



Technical drawing of the Bottom (Underside) Plate, showing three views: Front View, Side View, and Top View.

**Front View Dimensions:**

- Overall Width: 12.21"
- Overall Height: 8.27"
- Top Flange Width: 6.58"
- Top Flange Height: 1.26"
- Distance between hole centerlines (top row): 2.95"
- Distance from flange edge to hole centerline (top row): 1.14"
- Distance from flange edge to hole centerline (bottom row): 1.14"
- Main Body Width: 7.68"
- Main Body Height: 1.18"
- Ground Hole Diameter:  $\varnothing 0.2"$
- Ground Hole Position: 1.18" from right edge
- Bottom Flange Width: 1.95"
- Bottom Flange Height: 0.86"

**Side View Dimensions:**

- Overall Width: 6.38"
- Overall Height: 14.36"
- Top Flange Width: 6.38"
- Top Flange Height: 1.26"
- Main Body Width: 6.38"
- Main Body Height: 12.21"
- Bottom Flange Width: 6.38"
- Bottom Flange Height: 1.18"
- Knockout Position: (1) 3/4" NPT Knockout Per Side, 1.67" from top edge, 1.57" from bottom edge
- Knockout Diameter: 0.79"
- Knockout Spacing: 4.6"
- Knockout Position: 0.08" from right edge
- Knockout Position: 0.89" from right edge
- Knockout Position: 1.38" from right edge
- Knockout Position: M3

**Top View Dimensions:**

- Overall Width: 7.68"
- Overall Height: 6.38"
- Distance between knockout centerlines (horizontal): 5.35"
- Distance between knockout centerlines (vertical): 4.41"
- Distance from edge to knockout centerline (horizontal): 1.16"
- Distance from edge to knockout centerline (vertical): 0.95"
- Knockout Position: (4) 3/4" NPT Knockouts

**Bottom (Underside) Plate**

## Connection Guide

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

### DIAGRAM B2





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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*