



Summary

Single-phase buck-boost transformer. Steps down 128V to 120V at 312.5 amps continuous output. 37.5 kVA capacity. NEMA 3R enclosed, cETLus listed, wall mount.

Product Description

This unit corrects a 128V building supply to 120V at the point of use, permanently, without modifying the building's electrical service. Designed for equipment rated 120V that is installed on a 128V 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 312.5-amp buck-boost transformer is significantly smaller and lighter than a 312.5-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-128V-120V-37.5KVA — NEMA 3R Encapsulated, cETLus Listed

Specifications

|                     |                         |                       |                              |
|---------------------|-------------------------|-----------------------|------------------------------|
| Phase               | Single Phase (1-PH), AC | Transformer Type      | Buck/Boost                   |
| Capacity            | 37.5 kVA                | Configuration         | Encapsulated Autotransformer |
| Primary Voltage     | 128V                    | Primary Termination   | Lead Wires & Terminal Lugs   |
| Primary Amperage    | 292.97A                 | Secondary Termination | Lead Wires & Terminal Lugs   |
| Secondary Voltage   | 120V                    | Termination Access    | (6) ¾" NPT Hubs              |
| Secondary Amperage  | 312.5A                  | Winding Material      | Aluminum                     |
| Maximum Primary OCP | 400A                    | 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:**

- Overall width: 6.58"
- Overall height: 12.21"
- Top flange width: 2.95"
- Top flange height: 1.26"
- Knockout spacing (center-to-center): 1.14"
- Ground hole:  $\varnothing 0.2"$
- Ground hole location: 1.18" from the right edge, 1.95" from the bottom edge.
- Bottom flange width: 7.68"
- Bottom flange height: 0.96"

**Side View:**

- Overall height: 14.36"
- Overall width: 6.38"
- Knockout diameter: (1) 3/4" NPT Knockout Per Side
- Knockout location: 1.67" from the top edge, 1.57" from the side edge.
- Knockout spacing (center-to-center): 0.08"
- Knockout diameter: 0.89"
- Knockout location: 1.38" from the bottom edge, 0.79" from the side edge.
- Knockout diameter: M3

**Top View:**

- Overall width: 7.68"
- Overall height: 6.38"
- Knockout spacing (center-to-center): 1.16"
- Knockout diameter: (4) 3/4" NPT Knockouts
- Knockout location: 0.95" from the top edge, 4.41" from the bottom edge.

## 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*