

Summary

Three-phase wye buck-boost transformer. Steps up 109V to 120V at 90 amps continuous output. 32.4 kVA capacity. NEMA 3R enclosed, cETLus listed, wall mount.

Product Description

This unit corrects a 109V three phase building supply to 120V wye at the point of use, permanently, without modifying the building's electrical service. Designed for equipment rated 120V that is installed on a 109V system experiencing undervoltage from the utility.

Configured as a wye autotransformer, the unit handles only the difference between input and output and not the full load. This is why a 90-amp buck-boost transformer is significantly smaller and lighter than a 90-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-189Y-208Y.120-90A — NEMA 3R Encapsulated, cETLus Listed

Specifications

Phase	Three Phase Wye (3-PH), AC	Transformer Type	Buck/Boost
Capacity	32.4 kVA	Configuration	Encapsulated Autotransformer
Primary Voltage	109V	Primary Termination	Lead Wires & Terminal Lugs
Primary Amperage	99.10A	Secondary Termination	Lead Wires & Terminal Lugs
Secondary Voltage	120V	Termination Access	(6) 3/4" NPT Hubs
Secondary Amperage	90A	Winding Material	Aluminum
Maximum Primary OCP	125A	Enclosure Material	Steel
Frequency	50/60 Hz	Finish Color	ANSI 70 Light Grey
Insulation	180°C	Weight	102 lbs
Temperature Rise	115°C	Dimensions	5.43 x 4.49 x 10.87

Ratings & Certifications

- Listed for United States
- NEMA 3R Indoor/Outdoor Enclosure
- Built to UL-5085 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

Three-phase wye installation — (3) enclosures required.



Connection Guide

1. Connect **X2** and **X3** together for each transformer
2. Connect High Voltage **PHASE A** to **X4** on transformer 1
3. Connect High Voltage **PHASE B** to **X4** on transformer 2
4. Connect High Voltage **PHASE C** to **X4** on transformer 3
5. Connect Low Voltage **PHASE A** to **X1**, **H4**, **H3** on transformer 1
6. Connect Low Voltage **PHASE B** to **X1**, **H4**, **H3** on transformer 2
7. Connect Low Voltage **PHASE C** to **X1**, **H4**, **H3** on transformer 3
8. Connect **NEUTRAL** to **H1** and **H2**
9. Bridge **H1** connections between ALL transformers

DIAGRAM I2

HIGH VOLTAGE





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The image shows three identical grey metal autotransformers standing side-by-side. Each unit has a top-mounted terminal box with three screw terminals. The front panel features a white label with technical specifications and safety information. The labels are oriented vertically on the front face of each unit. The units appear to be made of heavy-duty steel or aluminum, typical for industrial electrical equipment. The background is plain white, highlighting the units.

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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