

Summary

Three-phase wye buck-boost transformer. Steps up 109V to 120V at 12.5 amps continuous output. 4.5 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 12.5-amp buck-boost transformer is significantly smaller and lighter than a 12.5-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-189Y-208Y.120-13A — NEMA 3R Encapsulated, cETLus Listed

Specifications

Phase	Three Phase Wye (3-PH), AC	Transformer Type	Buck/Boost
Capacity	4.5 kVA	Configuration	Encapsulated Autotransformer
Primary Voltage	109V	Primary Termination	Lead Wires & Terminal Lugs
Primary Amperage	13.80A	Secondary Termination	Lead Wires & Terminal Lugs
Secondary Voltage	120V	Termination Access	(6) 1/2" NPT Hubs
Secondary Amperage	12.5A	Winding Material	Aluminum
Maximum Primary OCP	20A	Enclosure Material	Steel
Frequency	50/60 Hz	Finish Color	ANSI 70 Light Grey
Insulation	180°C	Weight	27 lbs
Temperature Rise	115°C	Dimensions	4.65 x 3.86 x 8.07

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





TX-BB-189Y-208Y.120-13A — NEMA 3R Encapsulated, cETLus Listed



Base Knockouts — (4) ¾" NPT



Side View



Rear View — Surface Mount Bracket



Wiring Compartment — Terminal Leads



Interior — Epoxy Resin Encapsulated Core