

Summary

Three-phase wye buck-boost transformer. Steps up 109V to 120V at 83.38 amps continuous output. 30 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 83.38-amp buck-boost transformer is significantly smaller and lighter than a 83.38-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.120-83A — NEMA 3R Encapsulated, cETLus Listed

Specifications

Phase	Three Phase Wye (3-PH), AC	Transformer Type	Buck/Boost
Capacity	30 kVA	Configuration	Encapsulated Autotransformer
Primary Voltage	109V	Primary Termination	Lead Wires & Terminal Lugs
Primary Amperage	91.70A	Secondary Termination	Lead Wires & Terminal Lugs
Secondary Voltage	120V	Termination Access	(6) 3/4" NPT Hubs
Secondary Amperage	83.38A	Winding Material	Aluminum
Maximum Primary OCP	125A	Enclosure Material	Steel
Frequency	50/60 Hz	Finish Color	ANSI 70 Light Grey
Insulation	180°C	Weight	81 lbs
Temperature Rise	115°C	Dimensions	5.43 x 4.49 x 10.08

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.



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 label on its front face. The label for the unit on the left reads: **SANZO SALES**, **TX-BB-208Y-240Y-40A**. It includes a table of specifications:

Phase	Single Phase	Configuration	Apparent Power
Input Voltage	208Y	WYE	40KVA
Output Voltage	240Y	WYE	40KVA
Rated Current	100A	WYE	100A
Max Input Range	208V	WYE	100A
Max Output Range	240V	WYE	100A

 It also features a **CE** mark and the text **Autotransformer**. The middle and right units have identical labels, with the middle unit's label also showing a **CE** mark and the text **Autotransformer**. Each unit has three mounting holes at the top and two at the bottom.

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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