

Summary

Three-phase wye buck-boost transformer. Steps up 480V to 504V at 41.7 amps continuous output. 36.4 kVA capacity. NEMA 3R enclosed, cETLus listed, wall mount.

Product Description

This unit corrects a 480V three phase building supply to 504V wye at the point of use, permanently, without modifying the building's electrical service. Designed for equipment rated 504V that is installed on a 480V 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 41.7-amp buck-boost transformer is significantly smaller and lighter than a 41.7-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-480Y-504Y.291-42A — NEMA 3R Encapsulated, cETLus Listed

Specifications

Phase	Three Phase Wye (3-PH), AC	Transformer Type	Buck/Boost
Capacity	36.4 kVA	Configuration	Encapsulated Autotransformer
Primary Voltage	480V	Primary Termination	Lead Wires & Terminal Lugs
Primary Amperage	43.80A	Secondary Termination	Lead Wires & Terminal Lugs
Secondary Voltage	504V	Termination Access	(6) 3/4" NPT Hubs
Secondary Amperage	41.7A	Winding Material	Aluminum
Maximum Primary OCP	60A	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.

Dimensions

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



Connection Guide

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

DIAGRAM K2

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 is partially visible and contains the following information:

SANZO SALES
TX-BB-208Y-240Y-40A

Phase	Single Phase	Configuration	Apparent Power
Rated Voltage	208Y	40A	8.6kVA
Rated Voltage	240Y	40A	9.6kVA
Rated Voltage	277Y	40A	10.6kVA
Rated Voltage	480Y	40A	19.2kVA

Each unit also features a terminal block on top with three screw terminals and a mounting bracket on the side.

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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