

Summary

Three-phase wye buck-boost transformer. Steps down 409V to 380V at 50 amps continuous output. 32.91 kVA capacity. NEMA 3R enclosed, cETLus listed, wall mount.

Product Description

This unit corrects a 409V three phase building supply to 380V wye at the point of use, permanently, without modifying the building's electrical service. Designed for equipment rated 380V that is installed on a 409V system experiencing overvoltage 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 50-amp buck-boost transformer is significantly smaller and lighter than a 50-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-409Y-380Y.220-50A — NEMA 3R Encapsulated, cETLus Listed

Specifications

Phase	Three Phase Wye (3-PH), AC	Transformer Type	Buck/Boost
Capacity	32.91 kVA	Configuration	Encapsulated Autotransformer
Primary Voltage	409V	Primary Termination	Lead Wires & Terminal Lugs
Primary Amperage	46.50A	Secondary Termination	Lead Wires & Terminal Lugs
Secondary Voltage	380V	Termination Access	(6) 3/4" NPT Hubs
Secondary Amperage	50A	Winding Material	Aluminum
Maximum Primary OCP	60A	Enclosure Material	Steel
Frequency	50/60 Hz	Finish Color	ANSI 70 Light Grey
Insulation	180°C	Weight	66 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 Sanzo Sales autotransformers, model TX-BB-208Y-240Y-40A, arranged side-by-side. Each unit is a light gray, rectangular metal enclosure with a hinged top cover. The front of each unit features a white label with technical specifications and a logo. The label includes the Sanzo Sales logo, the model number, and a table of electrical ratings. The units are designed for industrial or commercial use, providing a 208V primary and 240V secondary output with a 40A capacity.

Label Information:

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

Rating	Single Phase	Configuration	Approximate
Input Voltage	208V	WYE	40A
Output Voltage	240V	DELTA	40A
Rated Power	9.6 KVA	100%	100%
Max Input Range	20.8V	100%	100%
Max Output Range	24.0V	100%	100%

Autotransformer

ETL
 LISTED
 CONFORMS TO UL 516-100-100-1
 LISTED TO CAN/CSA 286-1

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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