

Summary

Three-phase delta buck-boost transformer. Steps down 496V to 451V at 3.84 amps continuous output. 3 kVA capacity. NEMA 3R enclosed, cETLus listed, wall mount.

Product Description

This unit corrects a 496V three phase building supply to 451V delta at the point of use, permanently, without modifying the building's electrical service. Designed for equipment rated 451V that is installed on a 496V system experiencing overvoltage from the utility.

Configured as an open delta autotransformer, the unit handles only the difference between input and output and not the full load. This is why a 3.84-amp buck-boost transformer is significantly smaller and lighter than a 3.84-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-496D-451D-3KVA — NEMA 3R Encapsulated, cETLus Listed

Specifications

Phase	Three Phase Delta (3-PH), AC	Transformer Type	Buck/Boost
Capacity	3 kVA	Configuration	Encapsulated Autotransformer
Primary Voltage	496V	Primary Termination	Lead Wires & Terminal Lugs
Primary Amperage	3.49A	Secondary Termination	Lead Wires & Terminal Lugs
Secondary Voltage	451V	Termination Access	(6) ½" NPT Hubs
Secondary Amperage	3.84A	Winding Material	Aluminum
Maximum Primary OCP	15A	Enclosure Material	Steel
Frequency	50/60 Hz	Finish Color	ANSI 70 Light Grey
Insulation	180°C	Weight	22 lbs
Temperature Rise	115°C	Dimensions	nan"-W x nan"-D x nan"-H

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 open delta installation — (2) enclosures required.



Connection Guide

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

DIAGRAM G2

HIGH VOLTAGE





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The image shows two identical grey metal autotransformers from Sanzo Sales. Each unit is a rectangular box with a hanging tab at the top and a circular access point at the bottom. The label on the front of each unit provides the following information:

SANZO SALES
TX-BB-480D-440D-3.44A

Power	Single Phase	Configuration	Autotransformer
Input Voltage	480V	Max BCP	480V
Output Voltage	440V	Transformer	440V/480V
Maximum Input	1.12 kVA	Max Input	1.12 kVA
Max Output Power	3.44 kVA	Max Output	3.44 kVA

Endorsement Type: 480D-440D-3.44A for Input or Output Use
 Compliance to UL 516 - Conformance to UL 516, 517, 518
 Serial # 19-03-0106-110229 Lot # 410229

Autotransformer

CONFIRMED TO UL 516, 517, 518 & 519
 COMPLIANCE TO CAN/CSA C22.2 NO. 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