

Summary

Three-phase delta buck-boost transformer. Steps down 500V to 460V at 6.28 amps continuous output. 5 kVA capacity. NEMA 3R enclosed, cETLus listed, wall mount.

Product Description

This unit corrects a 500V three phase building supply to 460V delta at the point of use, permanently, without modifying the building's electrical service. Designed for equipment rated 460V that is installed on a 500V 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 6.28-amp buck-boost transformer is significantly smaller and lighter than a 6.28-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-500D-460D-5KVA — NEMA 3R Encapsulated, cETLus Listed

Specifications

Phase	Three Phase Delta (3-PH), AC	Transformer Type	Buck/Boost
Capacity	5 kVA	Configuration	Encapsulated Autotransformer
Primary Voltage	500V	Primary Termination	Lead Wires & Terminal Lugs
Primary Amperage	5.77A	Secondary Termination	Lead Wires & Terminal Lugs
Secondary Voltage	460V	Termination Access	(6) ½" NPT Hubs
Secondary Amperage	6.28A	Winding Material	Aluminum
Maximum Primary OCP	15A	Enclosure Material	Steel
Frequency	50/60 Hz	Finish Color	ANSI 70 Light Grey
Insulation	180°C	Weight	28 lbs
Temperature Rise	115°C	Dimensions	9.25"-W x 5.75"-D x 7.25"-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



LOW VOLTAGE



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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