

### Summary

Three-phase delta buck-boost transformer. Steps down 240V to 220V at 31.49 amps continuous output. 12 kVA capacity. NEMA 3R enclosed, cETLus listed, wall mount.

### Product Description

This unit corrects a 240V three phase building supply to 220V delta at the point of use, permanently, without modifying the building's electrical service. Designed for equipment rated 220V that is installed on a 240V 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 31.49-amp buck-boost transformer is significantly smaller and lighter than a 31.49-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-240D-220D-12KVA — NEMA 3R Encapsulated, cETLus Listed

### Specifications

|                     |                              |                       |                              |
|---------------------|------------------------------|-----------------------|------------------------------|
| Phase               | Three Phase Delta (3-PH), AC | Transformer Type      | Buck/Boost                   |
| Capacity            | 12 kVA                       | Configuration         | Encapsulated Autotransformer |
| Primary Voltage     | 240V                         | Primary Termination   | Lead Wires & Terminal Lugs   |
| Primary Amperage    | 28.87A                       | Secondary Termination | Lead Wires & Terminal Lugs   |
| Secondary Voltage   | 220V                         | Termination Access    | (6) ¾" NPT Hubs              |
| Secondary Amperage  | 31.49A                       | Winding Material      | Aluminum                     |
| Maximum Primary OCP | 40A                          | Enclosure Material    | Steel                        |
| Frequency           | 50/60 Hz                     | Finish Color          | ANSI 70 Light Grey           |
| Insulation          | 180°C                        | Weight                | 44 lbs                       |
| Temperature Rise    | 115°C                        | Dimensions            | 10.25"-W x 4.75"-D x 9.25"-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.



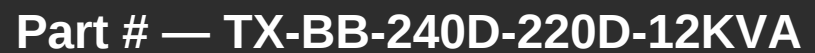
## Connection Guide

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





sales@sanzosales.com

The image shows two identical Sanzo Sales autotransformers. Each unit is a large, grey, rectangular metal enclosure with a lifting eye at the top. The label on the left unit reads:

**SANZO SALES**  
**TX-BB-208D-240D-23.4A**

|                     |              |                |                 |
|---------------------|--------------|----------------|-----------------|
| Phase:              | Single Phase | Configuration: | Autotransformer |
| Input Voltage:      | 208V         | Max. VA:       | 45A             |
| Output Voltage:     | 240V         | Temperature:   | 40°C            |
| Minimum Input:      | 110V         | Insulation:    | 100°C           |
| Max Input Voltage:  | 240V         | Termination:   | 100°C           |
| Max Output Voltage: | 240V         | Warranty:      | 100°C           |

End User: 100V 208V 240V for Input or Output Use  
 Conforms to UL 508 Conforms to IEC 60076-1  
 Size 4 1/2 x 11 x 11 1/2 in. 100V 208V

**Autotransformer**

ETL  
 LISTED  
 100V 208V 240V for Input or Output Use  
 Conforms to UL 508 Conforms to IEC 60076-1

The label on the right unit reads:

**SANZO SALES**  
**TX-BB-208D-240D-23.4A**

|                     |              |                |                 |
|---------------------|--------------|----------------|-----------------|
| Phase:              | Single Phase | Configuration: | Autotransformer |
| Input Voltage:      | 208V         | Max. VA:       | 45A             |
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| Minimum Input:      | 110V         | Insulation:    | 100°C           |
| Max Input Voltage:  | 240V         | Termination:   | 100°C           |
| Max Output Voltage: | 240V         | Warranty:      | 100°C           |

End User: 100V 208V 240V for Input or Output Use  
 Conforms to UL 508 Conforms to IEC 60076-1  
 Size 4 1/2 x 11 x 11 1/2 in. 100V 208V

**Autotransformer**

ETL  
 LISTED  
 100V 208V 240V for Input or Output Use  
 Conforms to UL 508 Conforms to IEC 60076-1

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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*