



## PSX-240 Enclosed Autotransformer Installation Manual



## SAVE THESE INSTRUCTIONS!

This manual contains important instructions for the OutBack **PSX-240** Autotransformer.

**All of the AC wiring to the circuit breakers terminals is to be torqued according to the torque specs in the Mechanical Installation section of this manual.** Wiring to these terminals must meet requirements of the National Electric Code (NEC). The terminals will accept up to 10AWG. Use copper conductors only with insulation rated for 75° C. See the AC WIRING CONNECTIONS section of this manual for more information.

- 1 For equipment grounding hook up, see the system configuration sections in this manual. This product is intended to be installed as part of a permanently grounded electrical system per the NEC.
- 2 Installation must be performed by a licensed installer familiar with local and national wiring codes.

- 3 The equipment ground on the PSX-240 is marked with this symbol:



## GENERAL PRECAUTIONS

1. Before using the PSX-240, read all instructions and cautionary markings on (1) the PSX-240 and (2) all appropriate sections of this installation and operation manual.
2. The PSX-240 is approved for indoor mounting only in any position.
3. Do not disassemble the PSX-240. Refer servicing to a qualified service center when service or repair is required. Incorrect re-assembly may result in a risk of electric shock or fire. To reduce risk of electric shock, disconnect all wiring before attempting any maintenance or cleaning. Turning off the PSX-240 may not reduce this risk.
4. No terminals or lugs are required for hook-up of the AC wiring. AC wiring must be copper wire and rated for 75°C or higher.

## ADDITIONAL NOTICES

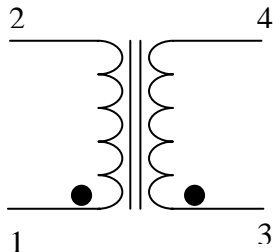
1. For instructions on mounting, see the Mechanical Installation section of this manual.
2. All installations must comply with local and national electrical codes and standards.
3. All installations must comply with local and national codes for structural installation.

## Introduction

Congratulations on your purchase of the PSX-240 autotransformer. Please take time to read this basic instruction sheet covering common applications.

## Basic Description

The PSX-240 is an autotransformer containing, in it's raw form, two sets of windings in a 1:1 ratio.

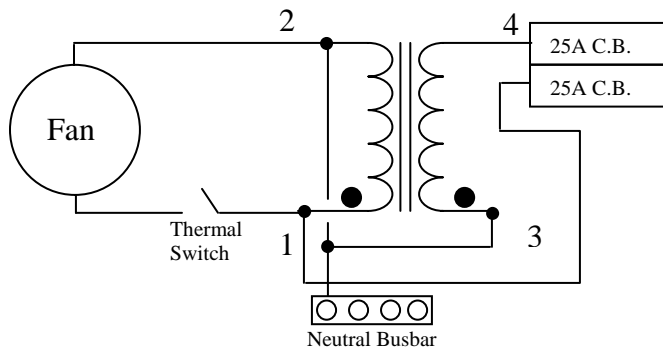


*Figure 1*

● ( , denotes start of winding)

Two 25 Amp AC breakers provide the input/output connection points for the unit.

Below is the schematic for the internal wiring of the PSX-240



## Configuration

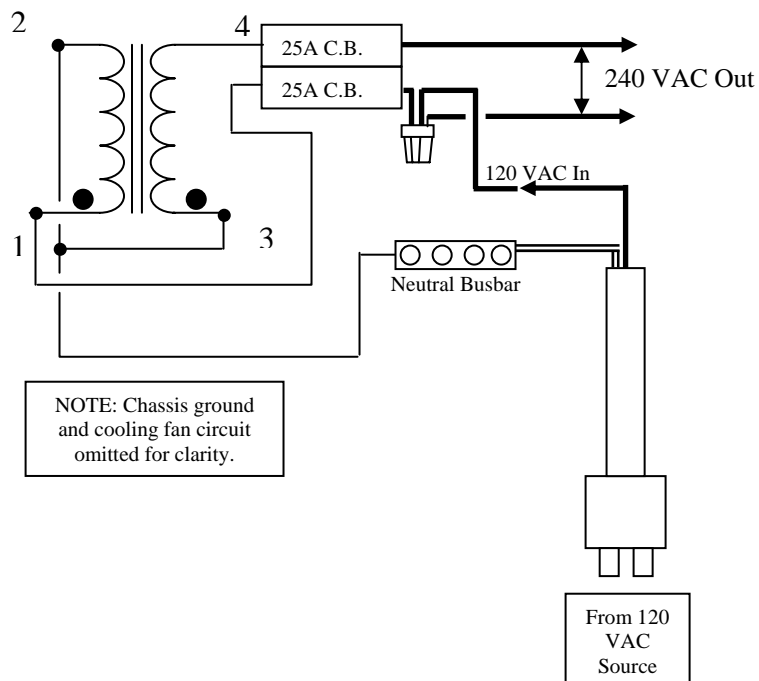
Two basic configurations exist for the PSX-240 with the factory wiring arrangement.

1. 120VAC to 240VAC step up transformer
2. 240VAC to 120VAC step down/balancing transformer

### Step Up Transformer Configuration

In the step up transformer configuration, Hot leg L1 is connected to one of the 25A breakers on the PSX-240.

240VAC power is available across the two 25A breakers.



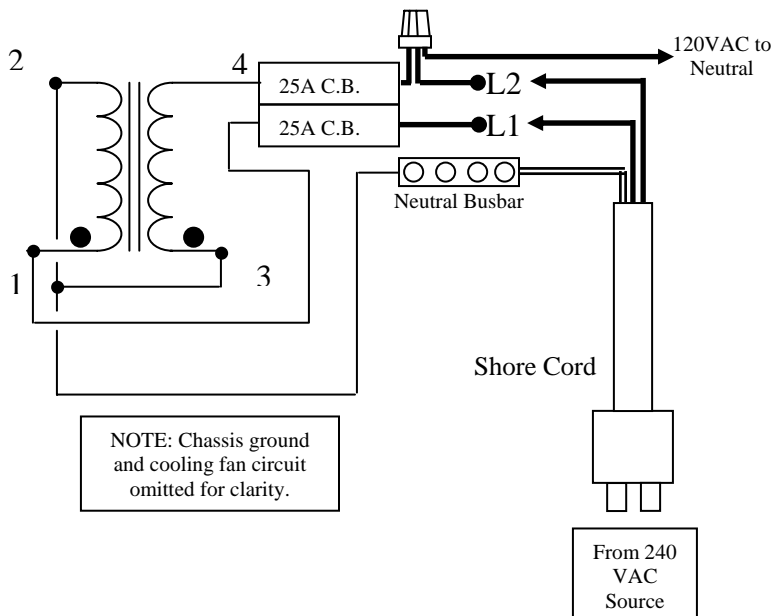
# Outback Power PSX-240 User's Guide

## Step Down/Balancing Configuration

The step down configuration for the PSX-240 is essentially the opposite of the step up configuration.

L1 and L2 (240VAC) power is applied to the 25A breakers of the PSX-240. 120VAC is then available from either L1 or L2 to system neutral.

This configuration inherently provides balancing for the 240VAC source.



## Mechanical Installation of the PSX-240

**NOTICE!** Please read and understand the **IMPORTANT SAFETY INSTRUCTIONS** section at the front of this manual for before proceeding.

The PSX240 may be installed on a vertical or horizontal surface utilizing the four mounting holes on the back of the unit with #10x2" screws.

### AC Wiring Torque Specs

Torque specs for the 25A breakers are printed on the side of the breaker housing. The correct torque for the breakers is:

20 in-lbs
-----------

The torque for the screws in the neutral bus bar varies depending on the hole in which the wiring is installed. The larger of the two hole sizes in the neutral bar is the MAIN HOLE, the smaller holes are the TAP HOLES.

Main Holes	Tap Holes
1/0 to 14 AWG – 50 in-lbs	#6-#14AWG- 40 in-lbs

## Outback Power PSX-240 User's Guide

# **WARRANTY**

## OutBack Power Systems

### **Two Year Limited Warranty**

OutBack Power Systems Inc. warrants that the products it manufactures will be free from defects in materials and workmanship for a period of two (2) years subject to the conditions set forth below.

The limited warranty is extended to the original user and is transferable. The limited warranty term begins on the date of invoice to the original user of the product. The limited warranty does not apply to any product or part thereof damaged by a) alteration or disassembly, b) accident or abuse, c) corrosion, d) lightning, e) reverse polarity, f) repair or service provided by an unauthorized repair facility, g) operation or installation contrary to instructions pertaining to the product.

OutBack Power Systems' liability for any defective product or any part thereof shall be limited to the repair or replacement of the product, at OutBack Power Systems' discretion. OutBack Power Systems does not warrant or guarantee the workmanship performed by any person or firm installing its products.

THIS LIMITED WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS, AND YOU MAY ALSO HAVE OTHER RIGHTS THAT VARY FROM STATE TO STATE (OR JURISDICTION TO JURISDICTION). OUTBACK POWER SYSTEMS' RESPONSIBILITY FOR MALFUNCTIONS AND DEFECTS IN HARDWARE IS LIMITED TO REPAIR AND REPLACEMENT AS SET FORTH IN THIS LIMITED WARRANTY STATEMENT. ALL EXPRESS AND IMPLIED WARRANTIES FOR THE PRODUCT, INCLUDING BUT NOT LIMITED TO ANY IMPLIED WARRANTIES OF AND CONDITIONS OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE LIMITED IN DURATION TO THE LIMITED WARRANTY PERIOD SET FORTH ABOVE AND NO WARRANTIES, WHETHER EXPRESS OR IMPLIED, WILL APPLY AFTER SUCH PERIOD. SOME STATES (OR JURISDICTIONS) DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, SO THE ABOVE LIMITATION MAY NOT APPLY TO YOU.

OUTBACK POWER SYSTEMS DOES NOT ACCEPT LIABILITY BEYOND THE REMEDIES SET FORTH IN THIS LIMITED WARRANTY STATEMENT OR LIABILITY FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES, INCLUDING WITHOUT LIMITATION ANY LIABILITY FOR PRODUCTS NOT BEING AVAILABLE FOR USE. SOME STATES (OR JURISDICTIONS) DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE EXCLUSION OR LIMITATION MAY NOT APPLY TO YOU.

During the two year period beginning on the invoice date, OutBack Power Systems will repair or replace products covered under this limited warranty that are returned to OutBack Power Systems' facility or to an OutBack Power Systems authorized repair facility, or that are repaired on site by an OutBack Power Systems authorized repair technician. To request limited warranty service, you must contact OutBack Power Systems at 360-435-6030 within the limited warranty period. If limited warranty service is required, OutBack Power Systems will issue a Return Material Authorization (RMA) Number. Mark the outside of the package with the RMA number and include a copy of the purchase invoice in the package. You must ship the products back to OutBack Power Systems in their original or equivalent packaging, prepay shipping charges, and insure the shipment or accept the risk of loss or damage during shipment. OutBack Power Systems will ship the repaired or replacement products to you freight prepaid if you use an address in the continental United States, where applicable. Shipments to other locations will be made freight collect.

INTENTIONALLY LEFT BLANK



**REGISTRATION**

---

Your purchase of an OutBack Power Systems product is an important investment. Registering your products will help us maintain the standard of excellence you expect from us in terms of performance, quality and reliability.

Please take a moment to register and provide us with some important information.

Name: \_\_\_\_\_

Address: \_\_\_\_\_

City, State, Zip Code, Country: \_\_\_\_\_

Telephone Number: \_\_\_\_\_

E-Mail: \_\_\_\_\_

Sold by: \_\_\_\_\_

Installer: \_\_\_\_\_

Purchase Date: \_\_\_\_\_

Model Number: \_\_\_\_\_

Serial Number: \_\_\_\_\_

Circle all that apply:

Off-Grid Installation      Residential Installation

North America Location      Utility Connected Installation

Commercial Installation      Other \_\_\_\_\_

Mail to: Attn: Warranty Registration  
Outback Power Systems  
19009 62<sup>nd</sup> Ave. NE  
Arlington, WA 98223