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### Introduction

The CSW-TS15 is a 15-amp AC transfer switch that is designed to automatically switch the AC load connections between Utility power (or generator) and the AC output of Magnum's CSW1012 inverter.



**WARNINGS:** Failure to follow these instructions can result in death or serious injury.

- All wiring should be performed by a certified technician or electrician in compliance with all applicable electrical safety wiring regulations.
- The transfer switch is rated for indoor use only. Keep the unit away from moist or damp areas. Never expose the unit to snow, water, etc.,.
- Do not use the transfer switch in the vicinity of flammable fumes or gases (such as propane tanks or large engines).
- Do not disassemble the transfer switch. There are no user-serviceable parts inside.
- Before installing or using, read this entire manual and adhere to all cautionary markings located on the inverter and on the batteries.

### Installing the CSW-TS15 Transfer Switch



**CAUTION:** Incorrect connection of the AC input source to the AC output may result in equipment damage or a fire hazard.

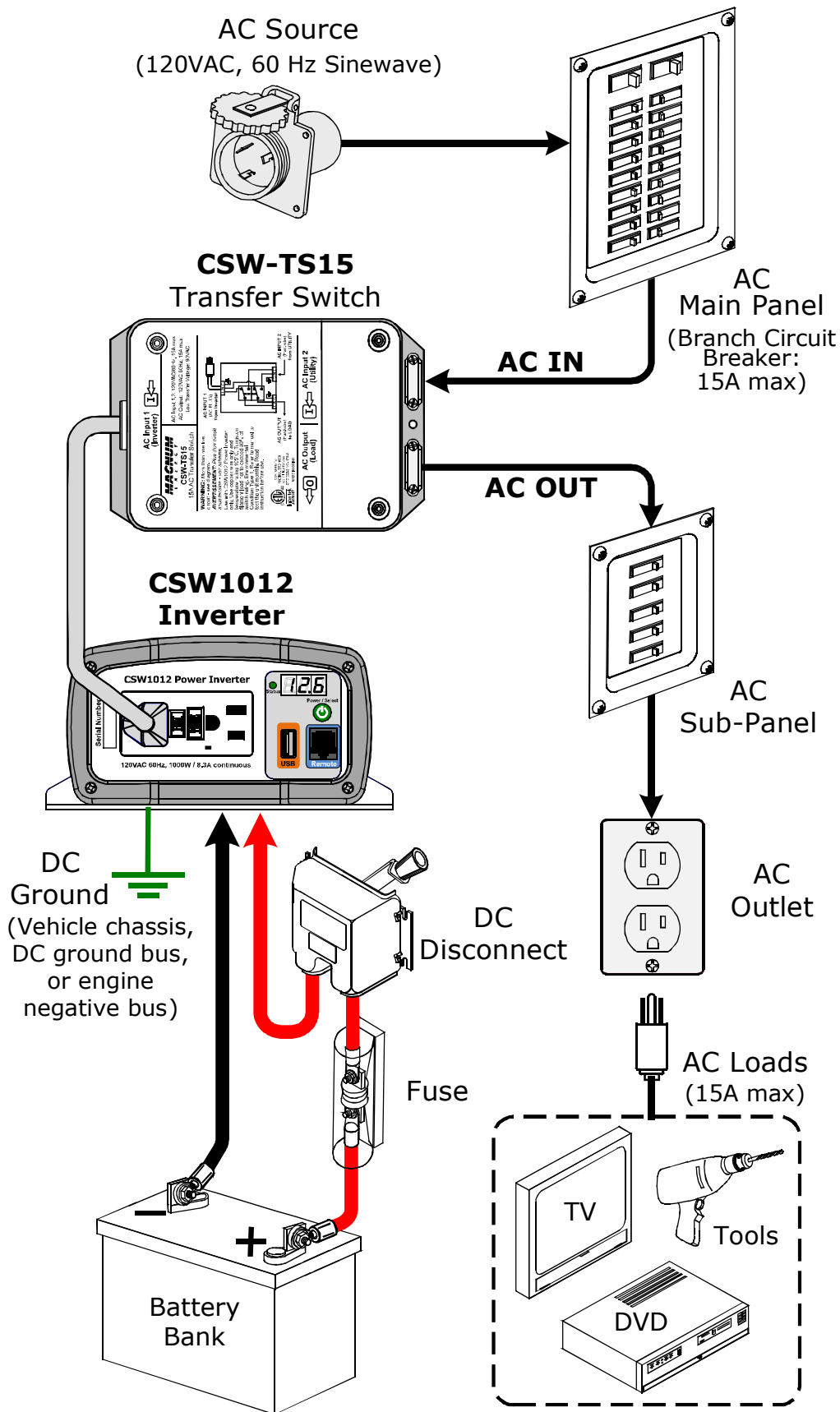


**CAUTION:** All AC wiring should be copper with a minimum temperature rating of 105°C and sized to #12 AWG (3.3 mm<sup>2</sup>) minimum. Torque wiring connections to 16-18 lbf-in (1.8-2.0 N-m).

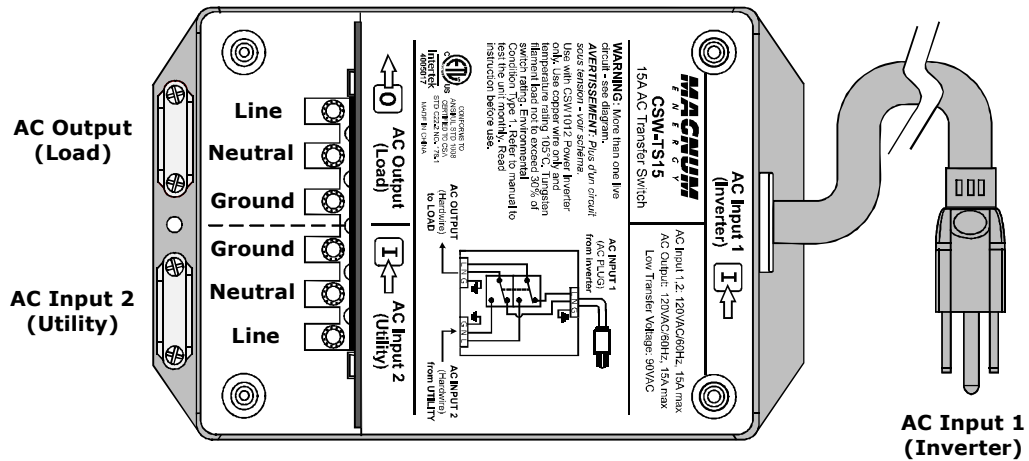
Use the following steps to assist in wiring the CSW-TS15. Before beginning, refer to Figure 1 to view a basic installation diagram; and to Figure 2 for information on wiring to the terminal block in the CSW-TS15.

1. Ensure all power sources are disconnected or turned off prior to beginning the installation process.
2. Remove the two screws that attach the wiring compartment cover to the transfer switch unit. Remove the cover.
3. Connect AC Input wires (line, neutral, ground) to the AC Input 2 (Utility) terminals, and then route these wires through the strain relief to a 15A branch circuit on the main AC source panel - powered by utility power (or generator).
4. Connect AC Output wires (line, neutral, ground) to the AC Output (Load) terminals, and then route these wires through the strain relief to a branch circuit sub-panel that is connected to the inverter loads.
5. Tighten both strain reliefs and re-attach the wiring compartment cover.
6. Plug the transfer switch's AC Input 1 (Inverter) cord into the GFCI outlet on the CSW1012 inverter.
7. Test the transfer switch to ensure it is installed and working correctly - refer to the Functional Test.

## CSW-TS15 Owner's Guide



**Figure 1, Basic Installation Diagram**



**Figure 2, CSW-TS15 Transfer Switch (with wiring cover removed)**

## Testing the CSW-TS15 Transfer Switch

To test your CSW-TS15 transfer switch:

1. Turn the AC source (utility power or generator) and the CSW1012 inverter ON. Verify that 120VAC is available at the AC output.
2. Turn off the AC source by switching the 15A branch circuit breaker OFF. Verify that 120VAC remains at the AC output.
3. Turn OFF the CSW1012 inverter. Verify that there is no AC voltage at the AC output.
4. If all steps above are successful, the transfer switch is functioning properly. If any of the above steps are unsuccessful, repeat the installation steps from page 1.

## CSW-TS15 Specifications

AC Input 1 (Inverter)	Pure Sinewave 120VAC/60Hz (15A max)
AC Input 2 (Utility)	120VAC/60Hz (15A max)
AC Output (Load)	120VAC/60Hz (15A max)
Low Transfer Voltage	90VAC
Transfer Time	80mSec
Environmental Condition	TYPE 1 (indoor only)
Load Current	≤15 Amps continuous; Tungsten filament load not to exceed 30% of switch rating (4.5 AAC)
Compliance	UL STD 1008/CSA STD C22.2 No.178-1, FCC Class B
Unit Dimensions	6.6 x 4.3 x 1.8 (inches) / 168 x 110 x 46 (mm)
Ship Dimensions	9.6 x 7.3 x 2.4 (inches) / 243 x 186 x 62 (mm)
Unit Weight	1.8 lbs (0.8kg)
Ship Weight	2.2 lbs (1.0kg)

*Note: Specifications are subject to change without notice.*

## CSW-TS15 Owner's Guide

### Limited Warranty

Magnum Energy, Inc., warrants the CSW-TS15 Transfer Switch to be free from defects in material and workmanship that result in product failure during normal usage, according to the following terms and conditions:

1. The limited warranty for this product extends for a maximum of 12 months from the product's original date of purchase.
2. The limited warranty extends to the original purchaser of the product and is not assignable or transferable to any subsequent purchaser.
3. During the limited warranty period, Magnum will repair or replace at our option any defective parts, or any parts that will not properly operate for their intended use, with factory new or remanufactured replacement items if such repair or replacement is needed because of product malfunction or failure during normal usage. The limited warranty does not cover defects in appearance, or cosmetic, decorative, structural or non-operative parts. Magnum's limit of liability under this warranty shall be the actual cash value of the product at the time the original purchaser returns the product for repair, determined by the price paid by the original purchaser. Magnum shall not be liable for any other losses or damages.
4. Upon request from Magnum, the original purchaser must prove the product's original date of purchase by a dated bill of sale, itemized receipt.
5. The original purchaser shall return the product prepaid to Magnum. After the completion of service under this limited warranty, Magnum will return the product prepaid to the original purchaser via a Magnum selected non-expedited surface freight within the contiguous United States and Canada; this excludes Alaska and Hawaii.
6. If Magnum repairs or replaces a product, its warranty continues for the remaining portion of the original warranty period or 90 days from the date of the return shipment to the original purchaser, whichever is greater. All replaced products and parts removed from repaired products become the property of Magnum.
7. This limited warranty is voided if:
  - the product has been modified without authorization.
  - the serial number has been altered or removed.
  - the product has been damaged from abuse, neglect, accident, high voltage or corrosion.
  - the product was not installed/operated according to instructions.

### How to Receive Warranty Service

If your product requires warranty service, contact Magnum at:

- Telephone: 425-353-8833, or
- Email: [warranty@magnumenergy.com](mailto:warranty@magnumenergy.com)

If returning your product directly to Magnum, you must:

1. Return the unit in the original, or equivalent, shipping container.
2. Receive a Return Materials Authorization (RMA) number from Magnum prior to the return of the product for service.

3. Place RMA numbers clearly on the shipping container or the packing slip.

When sending your product for service, please ensure it is properly packaged.

**Damage due to inadequate packaging is not covered under warranty.**

We recommend sending the product by traceable and insured service.

**BEFORE RETURNING ANY UNIT TO MAGNUM,  
A RETURN MATERIAL AUTHORIZATION (RMA) NUMBER IS REQUIRED.**