

# Ecopoint

## Single Phase Charger

### Quick Start Installation Guide

- Step 1 – Unpack charger and mount in place
- Step 2 – Confirm that charger input AC voltage setting matches available AC input service. **If not, proceed with steps 3, 4, & 5.**
- Step 3 – Set main transformer for correct input AC voltage
- Step 4 – Set auxiliary transformer for correct input AC voltage
- Step 5 – Resize input AC fuse for correct input AC voltage
- Step 6 Connect Input AC Service to Charger
- Step 7 – Confirm steps 3 through 5

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# Step 1 – Unpack & Mount

- Always remove charger from wooden shipping pallet
- Confirm that the charger is located above a non flammable surface, such as concrete or steel.
- Confirm that the charger has adequate ventilation. 12” clearance on all sides is required.
- If the charger is mounted to a shelf or rack, always securely bolt the charger to the mounting surface using ¼” or larger diameter hardware.

## Step 2 – Verify AC Service

- Confirm that the charger input voltage setting matches your input AC service.
- Check the Tag on the upper right hand charger side panel. (see below)
- If the available service and charger voltage setting match, no further action is required.
- If they don't match, proceed to step 3.



# Step 3a - AC Input Connections

- When changing 1 phase input voltage connections, both **main transformer** and **auxiliary transformer** connections must be correctly adjusted.
- There is one connection that may need changed on the **main transformer**. Depending on the power rating of the charger, some chargers will have 1 wire, while larger chargers will have 2 wires for the main connection
- 1 wire on all **auxiliary transformers**
- Re-Size **Input Fuses** for new input voltage

# Step 3b – 1 Phase input Connections for Main Transformer

- Move each of the wire(s) from the original voltage terminal to the new terminal, **eg. from 240V to 480V**
- When there are 2 wires, be sure to have both wires connected to the same voltage terminal
- **ATTENTION:** Incorrect connection can damage the charger



# Step 4 – Auxiliary Transformer Connections

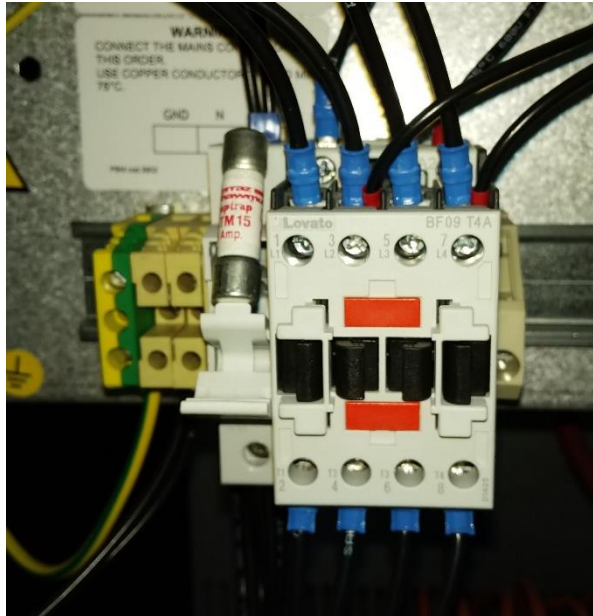
- Must be changed whenever changing **Main Transformer**
- Move wire to the terminal that matches the input voltage and main transformer connection





# Step 5 - Resize Fuse

- Use the table on the front door to choose the correct fuse size for your specific charger model, replace the original fuses.



**MAINS CONNECTION 1Ph (208 / 240 / 480 VAC)**

1Ph - 208 VAC MAINS SUPPLY

1Ph - 240 VAC MAINS SUPPLY

1Ph - 480 VAC MAINS SUPPLY

**DC FUSE RATINGS (on Battery side) :**

Mfg : Ferraz Shawmut Inc. Series: CNN		Fuse Rating
Charger Output Rating, Adc		
50		75 Vdc, 80 A
60		75 Vdc, 100 A
80, 90		75 Vdc, 125 A
100		75 Vdc, 150 A
120		75 Vdc, 175 A
140		75 Vdc, 225 A
160		75 Vdc, 250 A
180		75 Vdc, 275 A

**AC FUSE RATINGS (on Mains side) :**

(1) AC Fuse: UL Listed, with current rating noted.  
 (2) AC Fuse: Ferraz-Shawmut, Cat. No. 6.900 CP GRC 22.58 with current rating noted.  
 (3) AC Fuse: Ferraz-Shawmut, Cat. No. 6.900 CP GRC 14.51 or Cooper Bussmann, Cat. No FWP-xxA14, with current rating noted.

Model	Fuse Rating, A			Model	Fuse Rating, A			Model	Fuse Rating, A		
	208	240	480		208	240	480		208	240	480
12V 80A	10 (1)	8 (1)	6 (1)	36V 50A	15 (1)	15 (1)	8 (1)	48V 80A	50 (3)(2)	40 (3)(2)	20 (3)(2)
12V 90A	10 (1)	10 (1)	6 (1)	36V 60A	20 (1)	15 (1)	8 (1)	48V 100A	63 (2)	50 (2)	25 (2)
12V 100A	12 (1)	10 (1)	6 (1)	36V 80A	25 (1)	25 (1)	12 (1)	48V 120A	63 (2)	63 (2)	32 (2)
12V 120A	15 (1)	12 (1)	6 (1)	36V 100A	50 (3)(2)	40 (3)(2)	20 (3)(2)	72V 80A	63 (2)	63 (2)	32 (2)
24V 60A	12 (1)	12 (1)	6 (1)	36V 120A	50 (3)(2)	50 (3)(2)	25 (3)(2)	72V 100A	80 (2)	80 (2)	40 (2)
24V 80A	20 (1)	15 (1)	6 (1)	36V 140A	63 (2)	50 (2)	25 (2)	72V 120A	100 (2)	80 (2)	50 (2)
24V 100A	20 (1)	20 (1)	10 (1)	36V 160A	63 (2)	63 (2)	32 (2)	80V 60A	63 (2)	63 (2)	25 (2)
24V 120A	25 (1)	25 (1)	12 (1)	36V 180A	80 (2)	63 (2)	32 (2)	80V 80A	80 (2)	63 (2)	32 (2)
24V 140A	40 (3)(2)	32 (3)(2)	20 (3)(2)	48V 50A	20 (1)	20 (1)	10 (1)	80V 100A	100 (2)	80 (2)	50 (2)
24V 160A	50 (3)(2)	40 (3)(2)	20 (3)(2)	48V 60A	25 (1)	25 (1)	12 (1)				

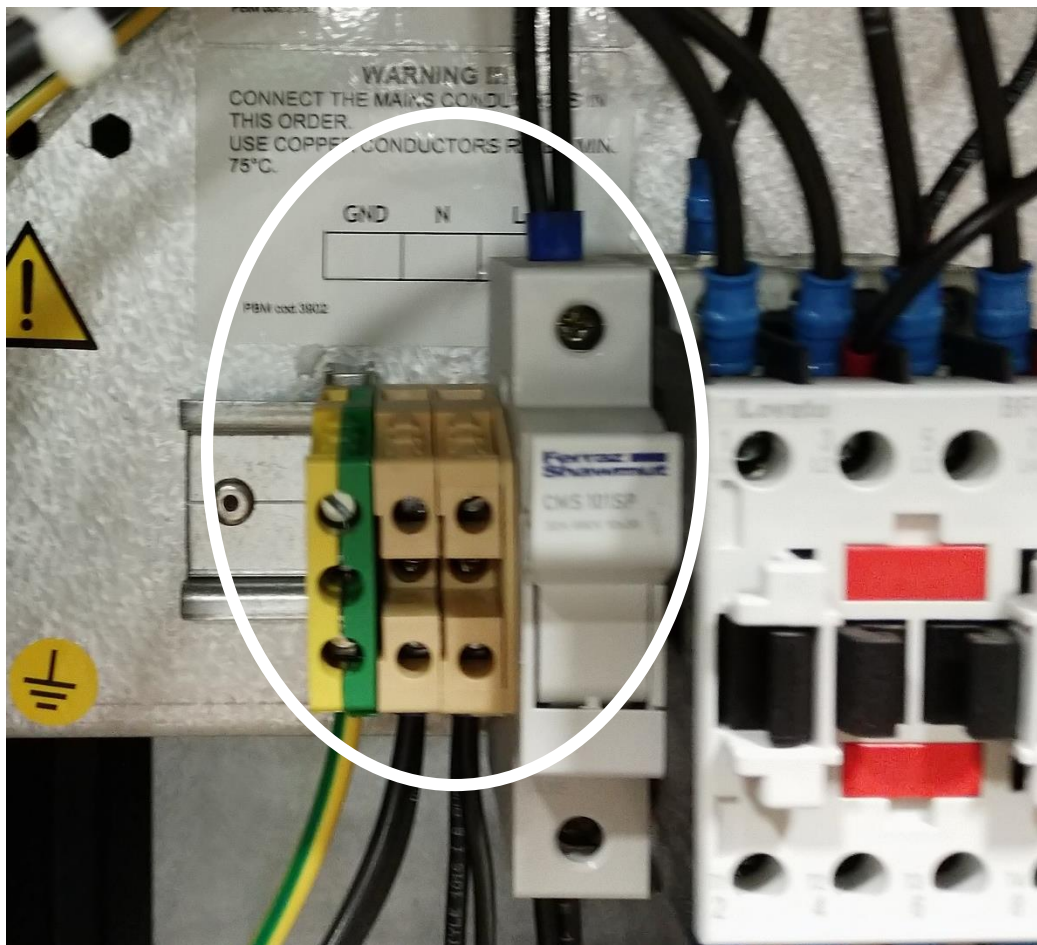
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- Voltage Change Over is Complete



## Step 6 – Connect Input AC Service

- Connect your AC input Service to the top of the input terminal block (see below)
- Note that on when the AC service is provided with L1, L2 and GND, L2 should connect to the N terminal
- Select your input wiring, branch circuit protection and switching as required by all national (NEC) and local electrical codes



# Step 7 - Confirm

If you performed an AC Voltage Changeover, you should have completed 3 basic steps:

1. Relocate wires on **main transformer** (STEP 3)
2. Relocate 1 wire on **auxiliary transformer** (STEP 4)
3. Install correct **AC fuse** (STEP 5)

Failure to complete any one of these three steps can result in charger damage!

Thank you for choosing

***Ecopoint Chargers from Ecotec***

*Phone - 937.606.2793*

*[www.ecotecbatcharger.com](http://www.ecotecbatcharger.com)*

