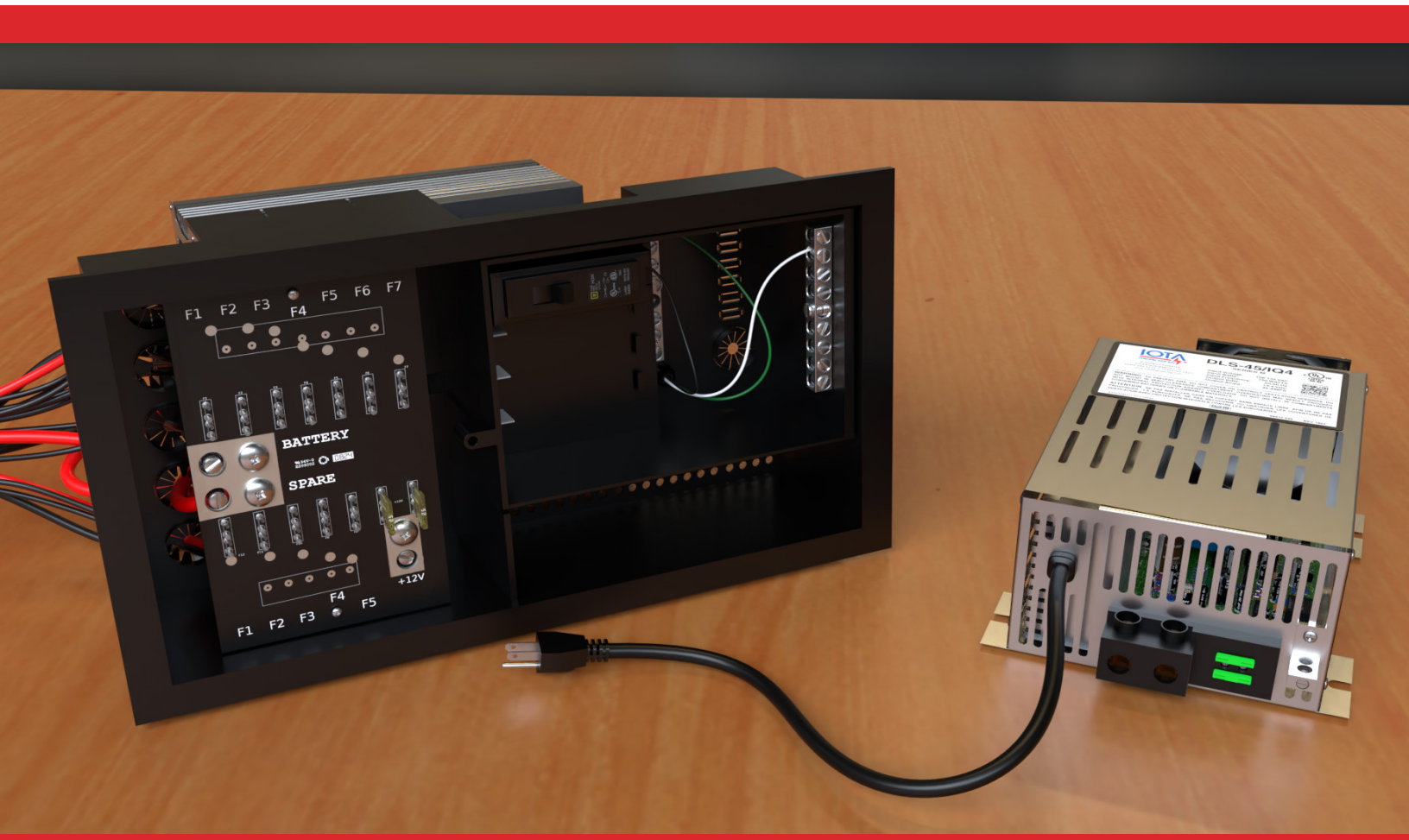




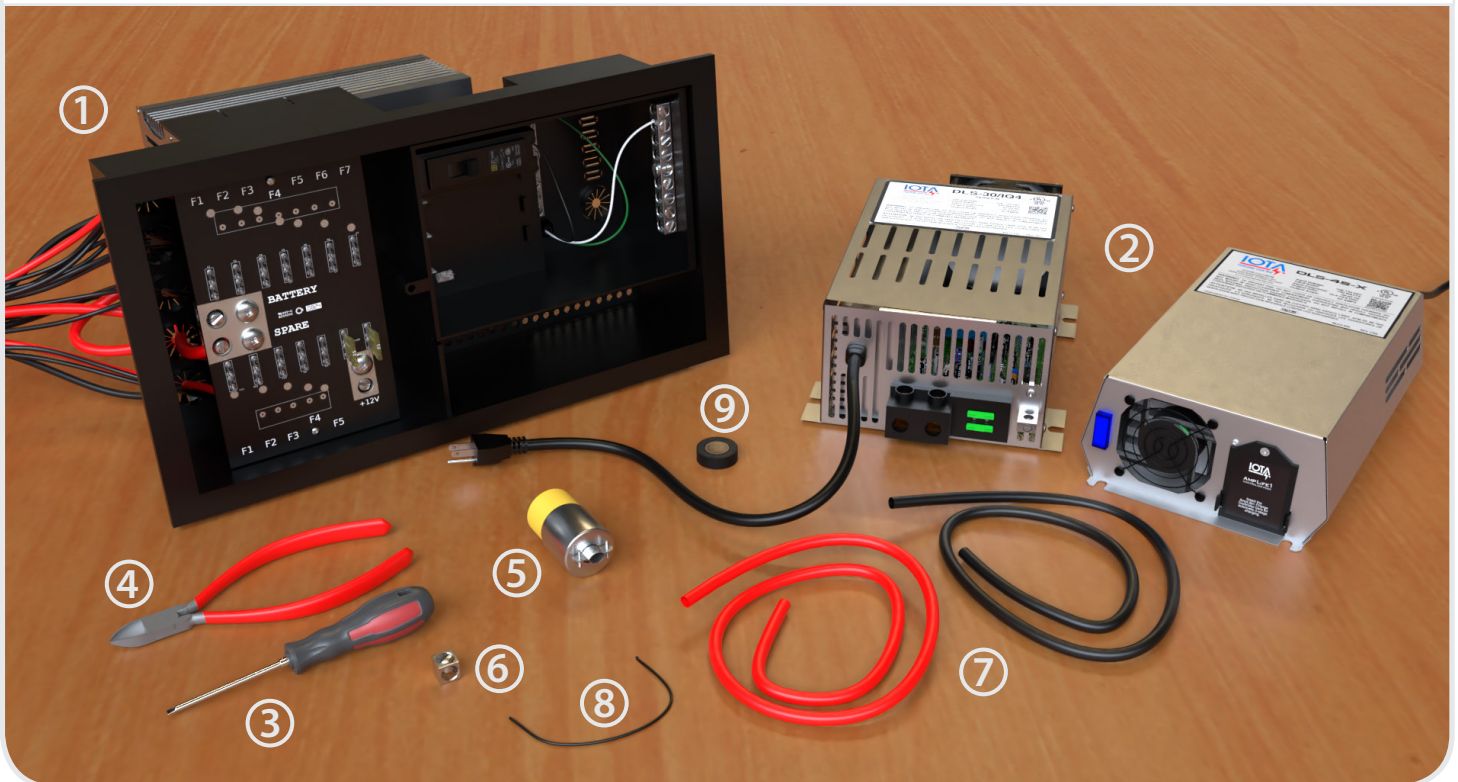
» Replacing an IOTA Load Center (ILC) 3045 Charger
with an IOTA DLS or DLS-X



Step by step instructions to installing a new DLS or DLS-X unit to an IOTA ILC Load Center.

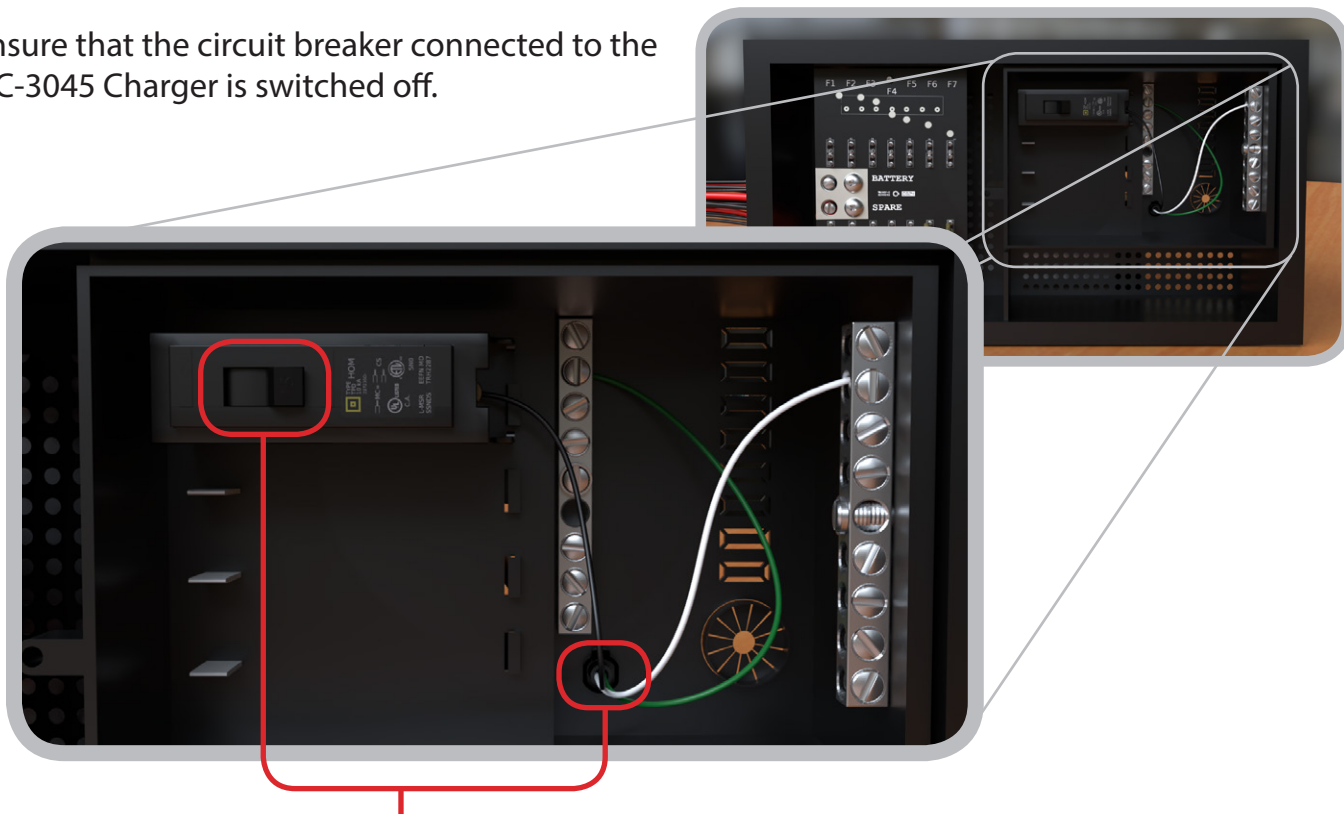
Items Needed

- 1) IOTA ILC Load Center with 3045 Charger
- 2) IOTA DLS-45 or DLS-45-X (Replacement Charger)
- 3) Flathead and Phillips Screwdriver
- 4) Large Gauge Wire Cutter
- 5) Replacement Extension Cord Receptacle
- 6) Wire Connector (Rated for up to 45 Amps)
- 7) Replacement Wire (Gauge Determined by Desired Mounting Distance - See Step 3.2)
- 8) Small Length of #14 AWG Wire
- 9) Electrical Tape



Step 1 - Disconnecting the Circuit Breaker

Ensure that the circuit breaker connected to the ILC-3045 Charger is switched off.



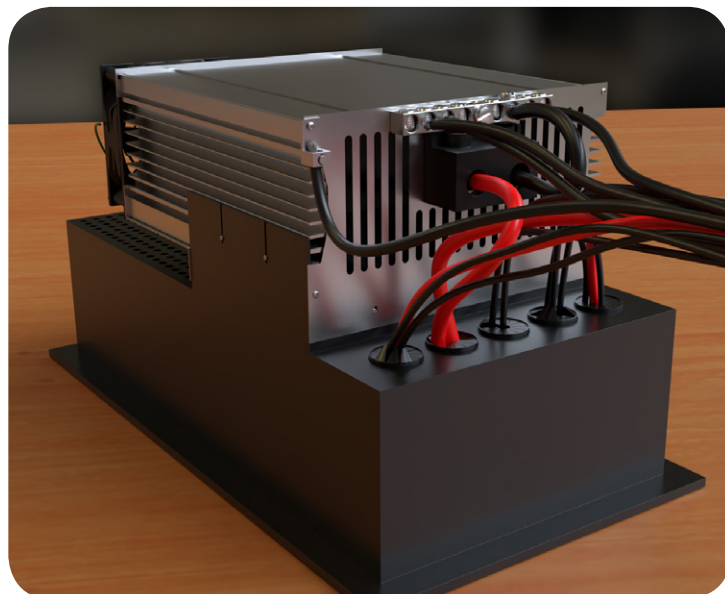
If you are not sure which circuit breaker, follow the cord connection where it comes through the panel

Step 2 - Removing the ILC-3045 Charger

The ILC-3045 Charger is attached to the rear of the IOTA Load Center.

It may be necessary to remove the entire Load Center from its enclosure to access the unit.

NOTE: The exact wiring of your installation may differ than what is shown in the example.



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Step 2 Continued - Removing the ILC-3045 Charger

1 - Remove the screw attaching the bus bar to the ILC-3045 Charger.



2 - Then remove the bus bar from the Charger housing. It is not necessary to remove any of the wires connected to the bus bar.

NOTE: The exact wiring of your installation may differ than what is shown in the example.



3 - Disconnect the ground wire from the chassis bonding lug.



4 - Then reconnect the ground wire to the bus bar removed in the previous step.

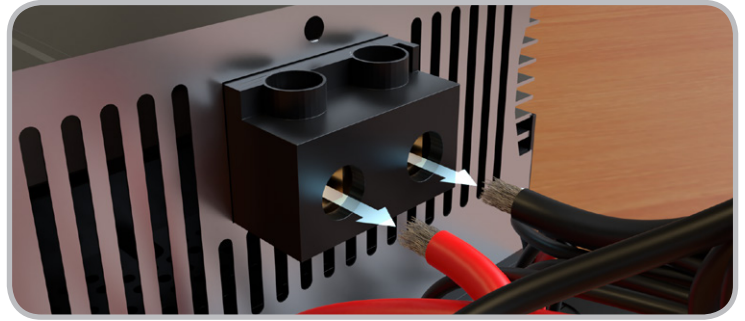


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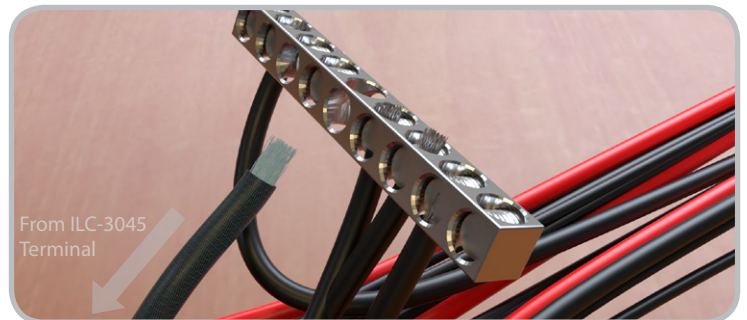
Step 2 Continued - Removing the ILC-3045 Charger

- 5 Remove the Positive (Red) and Negative (Black) wires from the Charger Terminal.

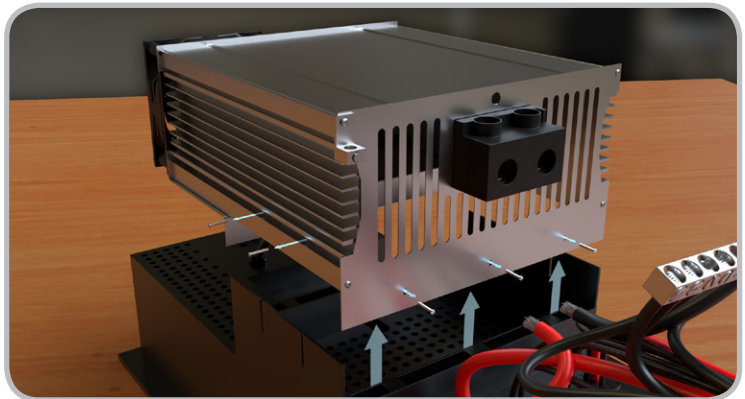
Be sure to mark the Positive (Red) wire, as you will use it again in step 3.3.



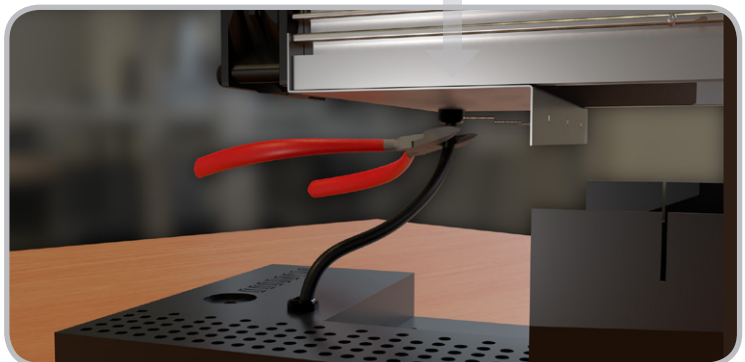
- 6 Disconnect the Negative (Black) wire from the bus bar. This wire can be disposed of; it is no longer needed.



- 7 Remove the 10 screws that hold the Charger to the Load Center. The Charger can now be lifted from the Load Center housing.



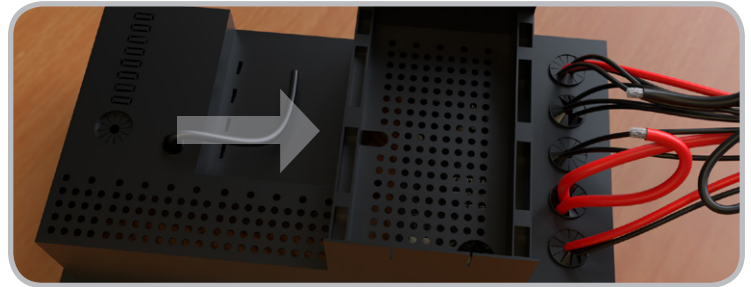
- 8 Lastly, cut the Charger power cord close to where it exits the converter housing. Try to preserve as much length exiting the Load Center as possible.



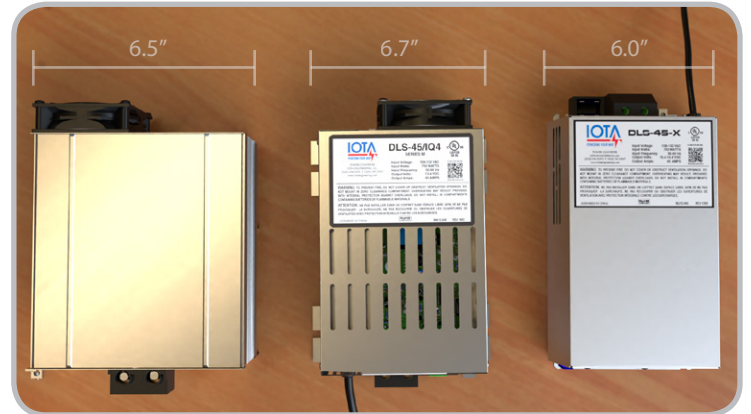
**The ILC-3045 Charger has now been removed from the Load Center.
Properly dispose of or recycle the Charger.**

Step 3 - Installing the Replacement Charger

Note that the back of the Load Center is still protected once the ILC-3045 Charger has been removed.

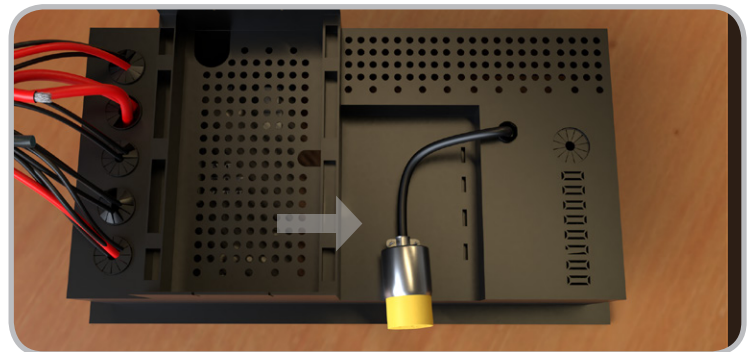


Also note that the physical sizes of the ILC-3045 Charger and the replacement DLS-45 or DLS-45-X are slightly different.



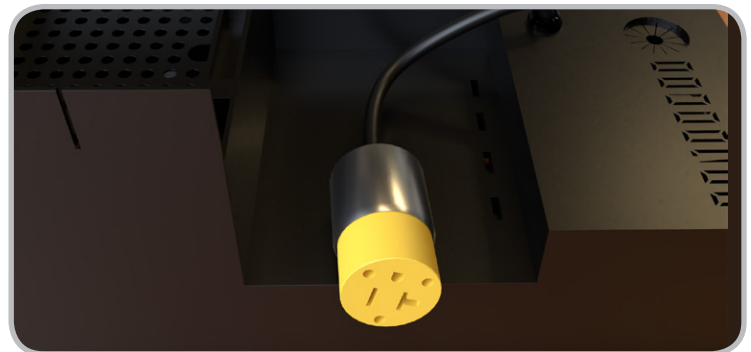
If you would like to mount the DLS or DLS-X in the place of the old charger, you will need a home-made bracket not provided by IOTA.

- 1 - Install a replacement extension cord receptacle to the power wire exiting the Load Center that was cut previously.



This receptacle will provide additional safety when connecting your replacement DLS or DLS-X Charger / Converter.

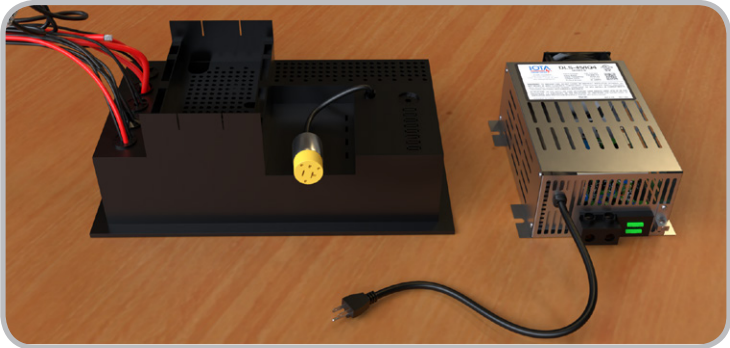
NOTE: replacement extension cord receptacles are not provided by IOTA and will need to be purchased separately.



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Step 3 Continued - Installing the Replacement Charger

2 - To remote mount your DLS or DLS-X replacement charger, find a suitable location from the Load Center within reach of the AC cord.

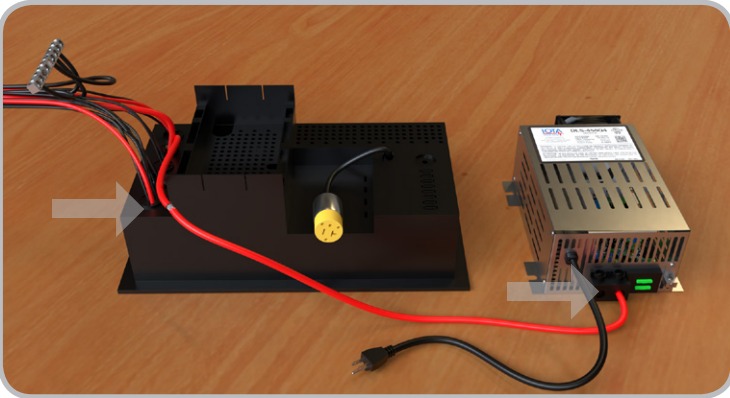


Note that the distance between the replacement charger and the Load Center will determine which wire gauge you will need to use when reconnecting the charger to the load center.

Remote Mounting Distance	1 ft (0.3 m)	1.5 ft (0.45 m)	3 ft (0.91 m)	4.5 ft (1.37 m)	7.5 ft (2.29 m)	12 ft (2.29 m)	19 ft (5.79 m)	30 ft (9.14 m)	48 ft (14.63 m)
Wire Gauge Needed	#14	#12	#10	#8	#6	#4	#2	#0	#000

It is important to use the correct wire gauge to ensure proper voltage to the batteries.

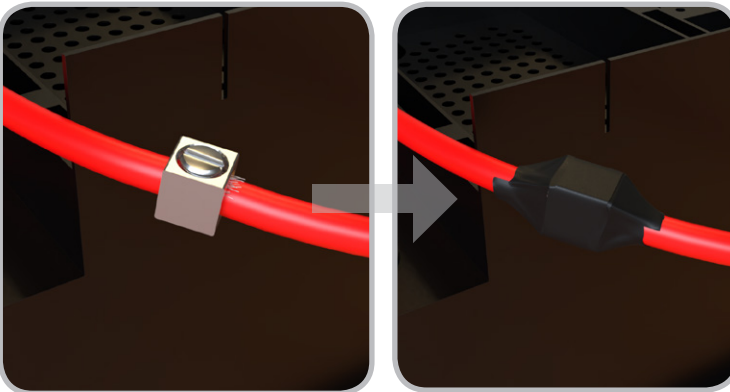
3 - Connect a new Positive wire to the replacement DLS or DLS-X terminal. Extend the wire to the old Positive wire exiting the Load Center (from step 2.5).



4 - Connect the two Positive wires together. Use a connector that is sufficient to handle 45 Amps of current.

NOTE: connector is not provided by IOTA and must be acquired separately.

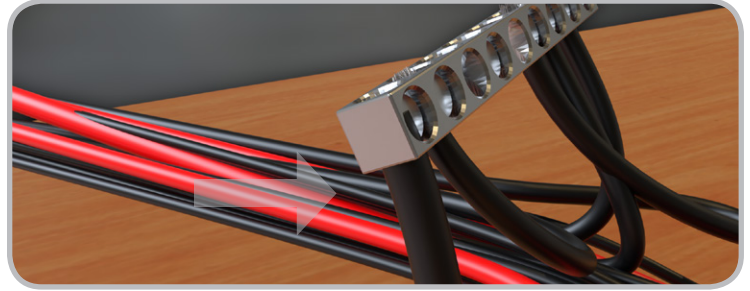
Ensure proper insulation of the lug once connected.



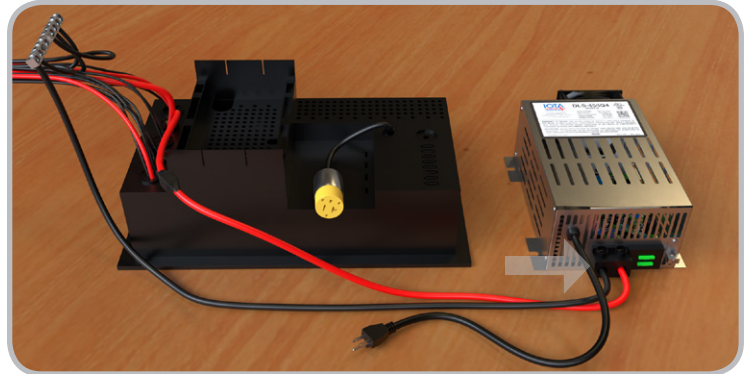
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Step 3 Continued - Installing the Replacement Charger

- 5 - Attach a new Negative wire to the bus bar for the replacement converter.

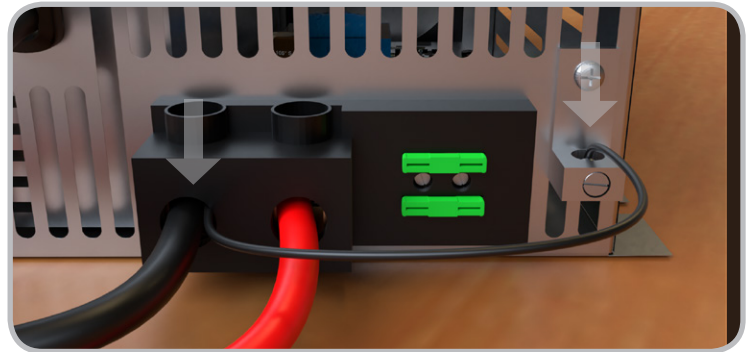


Then extend the new Negative wire to the replacement converter, and connect it to the Negative input of the terminal.



- 6 - To ground the unit, install a short length of smaller gauge wire to the chassis lug on the replacement DLS or DLS-X converter.

Insert the other end into the Negative input terminal alongside the Negative wire.



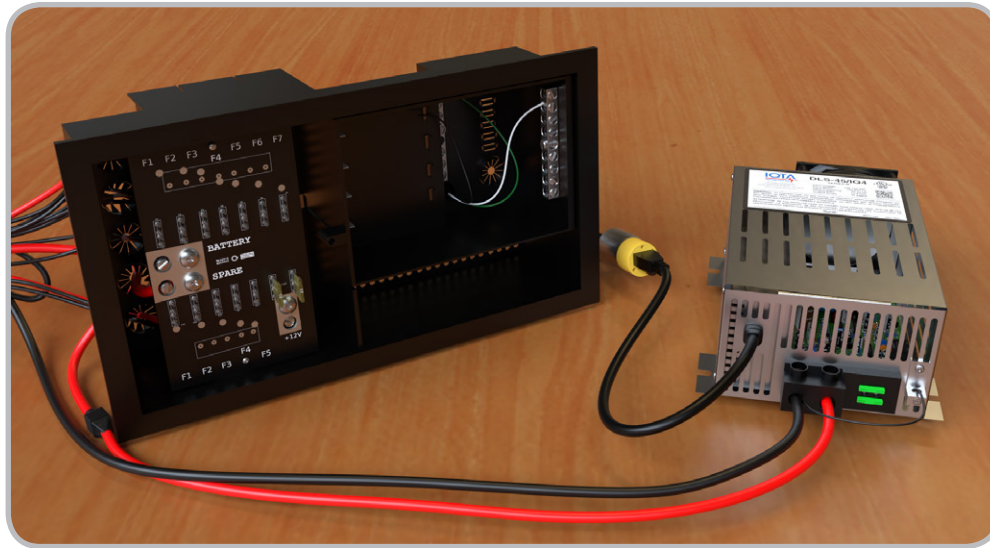
- 6 - The replacement DLS or DLS-X Converter can now be plugged into the receptacle installed on the Load Center



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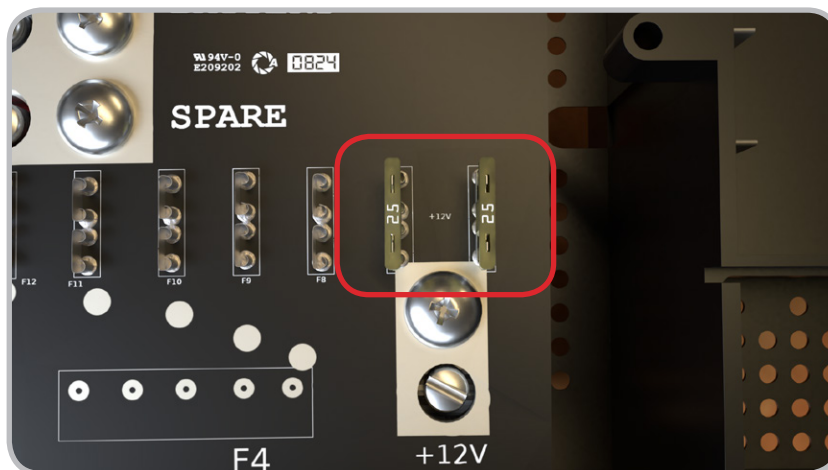
Step 3 Continued - Installing the Replacement Charger

The DLS or DLS-X converter is now installed!



The Load Center can now be re-installed within its enclosure, and the DLS or DLS-X can be securely mounted in a location that suits your installation.

Once the Load Center has been re-installed, IOTA recommends replacing the two 30 Amp fuses on the Load Center with 25 Amp fuses.



In the case of an event that causes these fuses to blow, these will blow before the fuses on the DLS or DLS-X converter. This will reduce the possibility of having to access the converter mounted in a difficult to reach location.

For more information about the IOTA DLS or DLS-X Charger / Converters, visit us online at www.iotaengineering.com, or call our Customer Service Team at (800) 866-4682



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