

DC Fuse Replacement Guidelines for Three Phase Commercial Inverter and Three Phase Inverter with Synergy Technology

Version History

- Version 2, March 2023 – includes typo correction
- Version 1, February 2023 – first issue

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Introduction

This document provides guidelines for replacement of DC fuses in the following SolarEdge inverters:

- [SolarEdge Three Phase Commercial Inverter](#)
- [SolarEdge Three Phase Inverter with Synergy Technology](#)

The rating of the DC fuses should be selected in accordance with the operating current of the Power Optimizers connected to the inverter.

Required Tools

- Phillips screwdriver
- Fuse extraction tool
- 4 mm hex wrench

Fuse Replacement Procedure - Three Phase Commercial Inverter

The fuses in the Three Phase Commercial Inverter are located in the DC Safety Unit.

→ To replace the fuses in the Three Phase Commercial Inverter:

1. Turn the ON/OFF/P switch at the bottom of the inverter to OFF. Wait 5 minutes for the capacitors to discharge.
2. Turn the safety switch on the cover of the DC Safety Unit to OFF.
3. Disconnect the AC to the inverter by turning OFF the circuit breakers on the distribution panel.
4. Using the hex wrench, unscrew the screws in the cover of the DC Safety Unit, and carefully pull out the cover horizontally before lowering it.

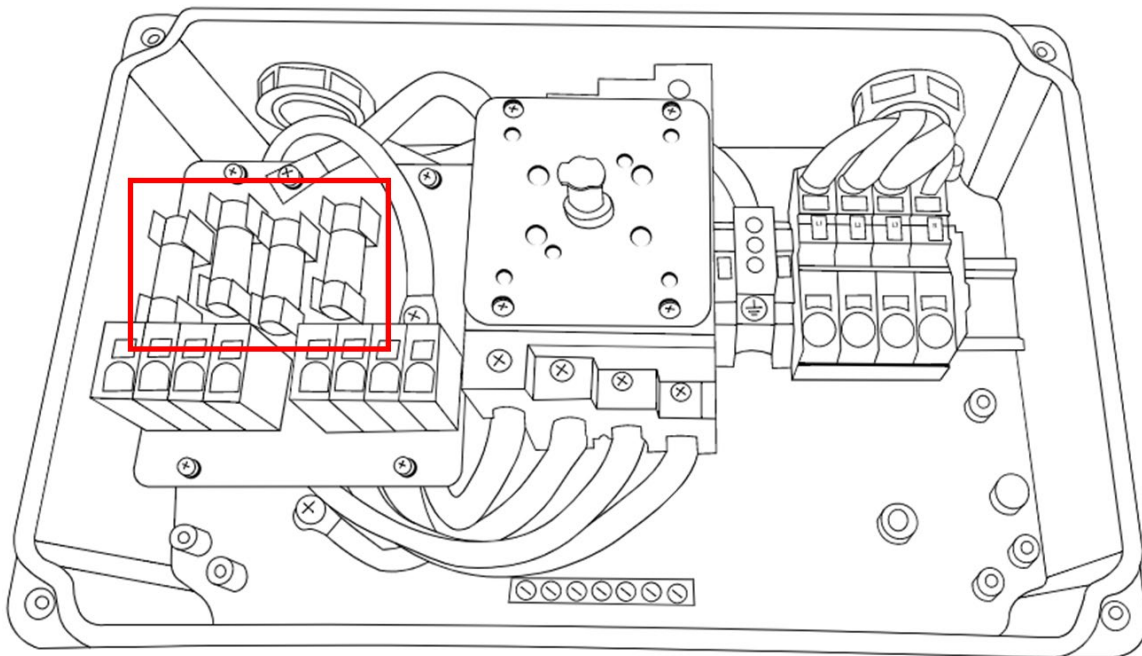


CAUTION!

When removing the cover, make sure not to damage the internal components. SolarEdge will not be held responsible for any components damaged as a result of incautious cover removal.

5. Use a Fluke or similar multi-meter device to ensure that AC and DC powering have been disconnected.

The fuses are located in the upper-left corner of the DC Safety Unit, as illustrated in the drawing below.



6. Remove the fuse using a fuse extraction tool, such as the tool shown in the figure below.

**CAUTION!**

Make sure to remove the fuses with the specialized fuse extraction tool. Use of any other kind of tool may damage the equipment and void the unit's warranty.



7. Insert the replacement fuse by gently pressing on it until the fuse snaps into the socket.
8. Close the DC Safety Unit cover and fasten the hex screws with the hex wrench.
9. Re-connect the AC to the inverter by turning ON the circuit breakers on the distribution panel.
10. Turn the safety switch on the cover of the DC Safety Unit to ON.
11. Turn the ON/OFF/P switch on the cover of the inverter to ON.

Fuse Replacement Procedure - Three Phase Inverter with Synergy Technology

The fuses in the Three Phase Inverter with Synergy Technology are located in the Synergy Manager.

→ To replace the fuses in the Three Phase Inverter with Synergy Technology:

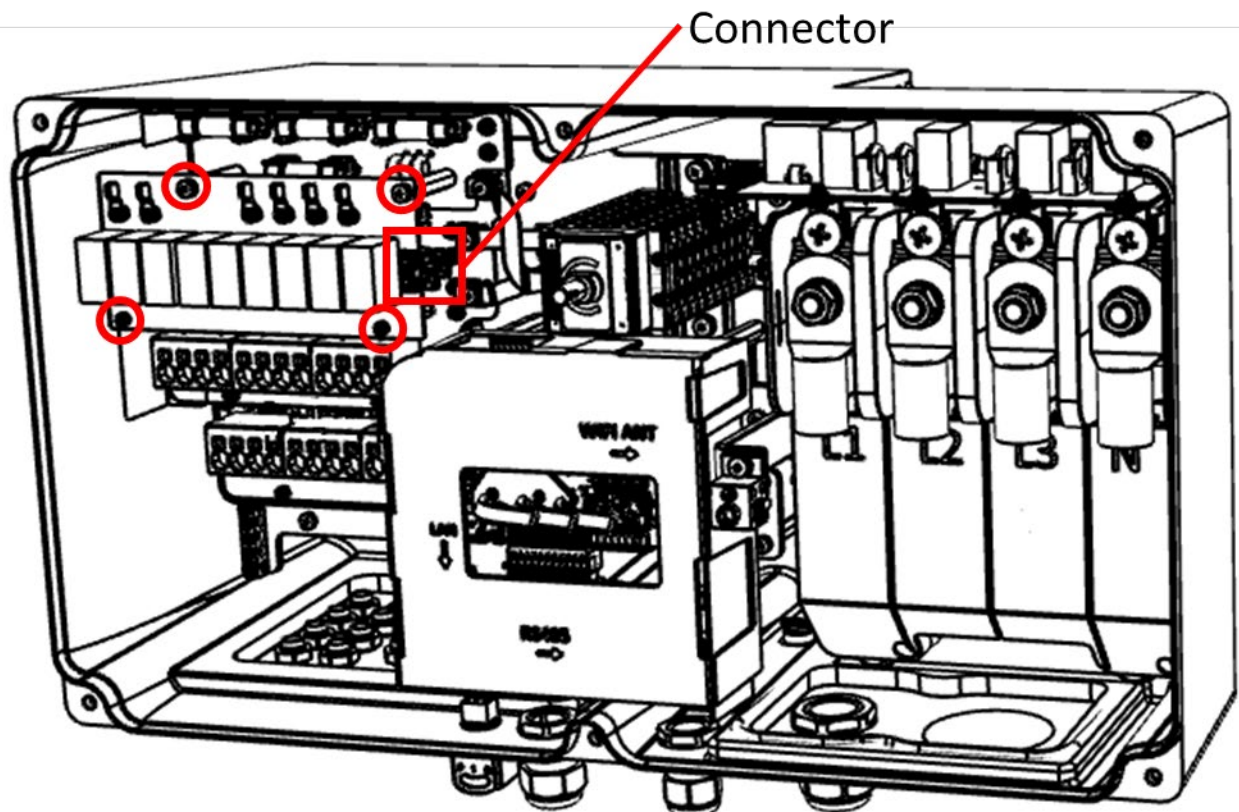
1. Turn the ON/OFF/P switch at the bottom of the inverter to OFF. Wait 5 minutes for the capacitors to discharge.
2. Turn the safety switch on the cover of the Synergy Manager to OFF.
3. Disconnect the AC to the Synergy Manager by turning OFF the circuit breakers on the distribution panel.
4. Using the hex wrench, unscrew the six screws in the cover of the Synergy Manager, and carefully pull out the cover horizontally before lowering it.



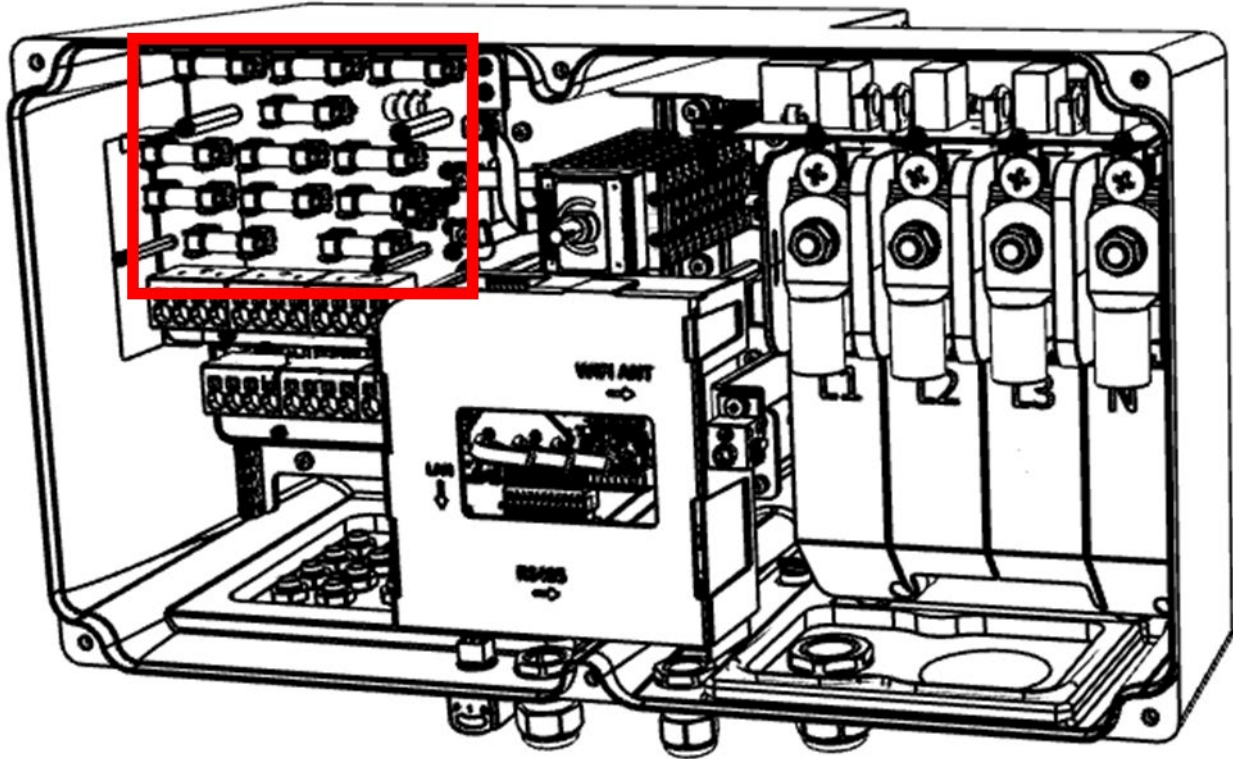
CAUTION!

When removing the cover, make sure not to damage the internal components. SolarEdge will not be held responsible for any components damaged as a result of incautious cover removal.

5. Use a Fluke or similar multi-meter device to ensure that AC and DC powering have been disconnected.
6. Using the figure below as a reference:
 - Disconnect the connector on the right-hand side of the surge protection device (SPD) board.
 - Unscrew and remove the 4 screws on the SPD board using the Phillips screwdriver.



7. Move the SPD board aside to expose the fuses, as shown in the figure below.



8. Remove the fuse using a fuse extraction tool, such as the tool shown in the figure below.



CAUTION!

Make sure to remove the fuses with the specialized fuse extraction tool. Use of any other kind of tool may damage the equipment and void the unit's warranty.



9. Insert the replacement fuse by gently pressing on it until the fuse snaps into the socket.

10. Re-assemble the SPD board:

- Insert the 4 screws on the board using the Phillips screwdriver. Recommended torque: 2.6 N*m



CAUTION!

Make sure to tighten the 2 upper screws properly, failure to do so may cause the SPD to malfunction.

- Connect the connector on the right-hand side of the board.

11. Close the Synergy Manager cover and fasten the hex screws with the hex wrench.
12. Re-connect the AC to the Synergy Manager by turning ON the circuit breakers on the distribution panel.
13. Turn the safety switch on the cover of the Synergy Manager to ON.
14. Turn the ON/OFF/P switch at the bottom of the inverter to ON.