

SolarEdge TerraMax™ Inverter AC terminal block replacement - Support kit manual

This manual describes the procedure for replacing the SolarEdge TerraMax Inverter AC Terminal Block.

Revision history

- Version 1.1, March 2024 – Name changed to TerraMax
- Version 1.0, December 2023 – Initial release.

Kit contents

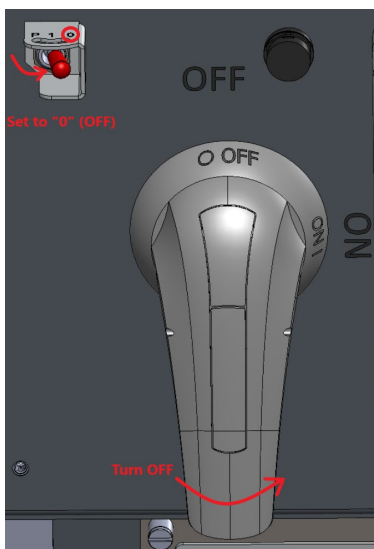
- SolarEdge TerraMax Inverter AC Terminal Block replacement kit PN FLD-3PH-SM-ACTB.

Required tools

- Torque screwdriver
- 5mm hex bit
- 4mm hex 30cm extension screwdriver bit
- 19mm A/F socket torque wrench
- Voltmeter

Before you begin

1. Set the P/1/0 switch to "0" (OFF).
2. Turn the DC ON/OFF Switch to the OFF position.



3. To lock the DC Switch, pull the white tab out away from the blue handle and insert a padlock through one of the holes.
4. Lock the padlock.



DC ON/OFF switch safety padlock

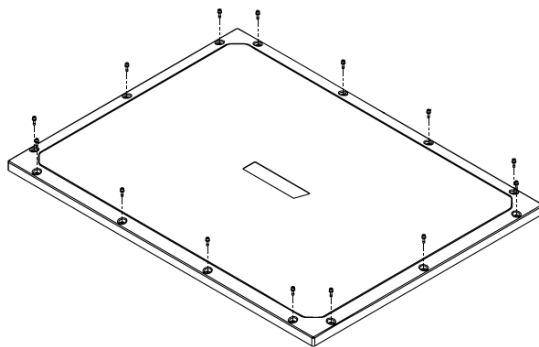
5. Disconnect AC power to the inverter by turning OFF the circuit breaker in the power distribution panel.
6. Wait at least five minutes for the DC Voltage inside the inverter to drop to a safe level.
7. As an additional safety precaution, lock the power distribution panel.

Remove the cover

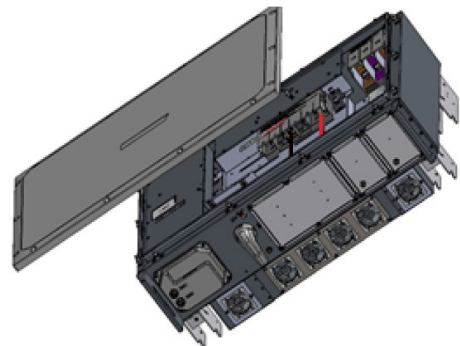
To remove the inverter cover, use a screwdriver with a 5mm hex bit to release the screws holding the cover in place.

NOTE

The inverter cover assembly is too big for one person to handle safely. SolarEdge recommends that two people remove and handle the cover assembly.



Inverter Cover Assembly

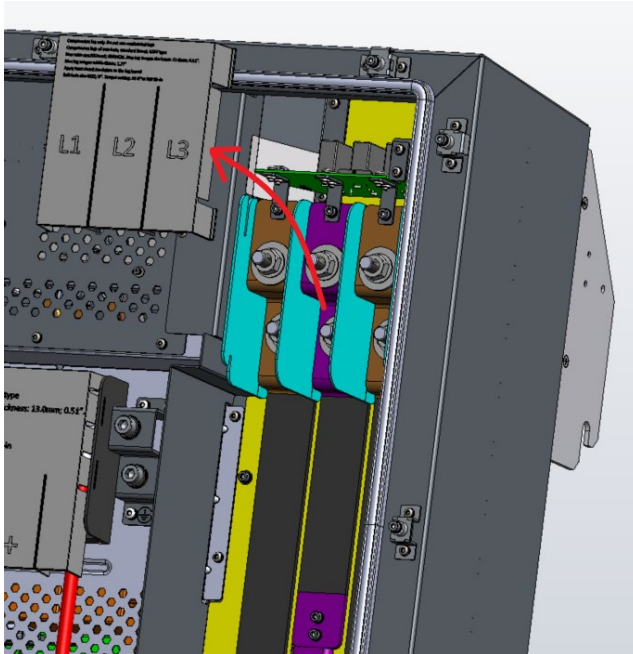


WARNING!

Before doing any maintenance work on the inverter, test for safe AC and DC voltages.

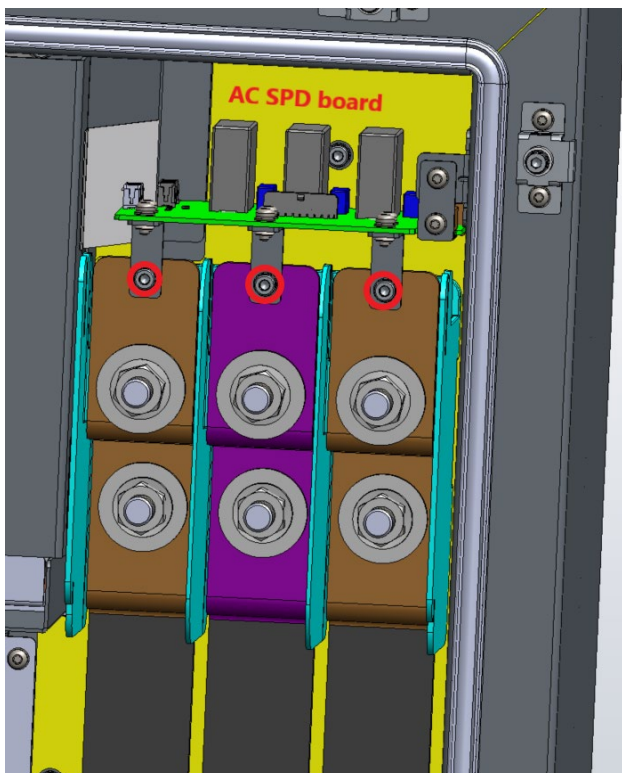
Remove the damaged AC terminal block

1. Locate the AC terminal block cover.
2. Release the two locking tabs.
3. Remove the AC terminal block cover.

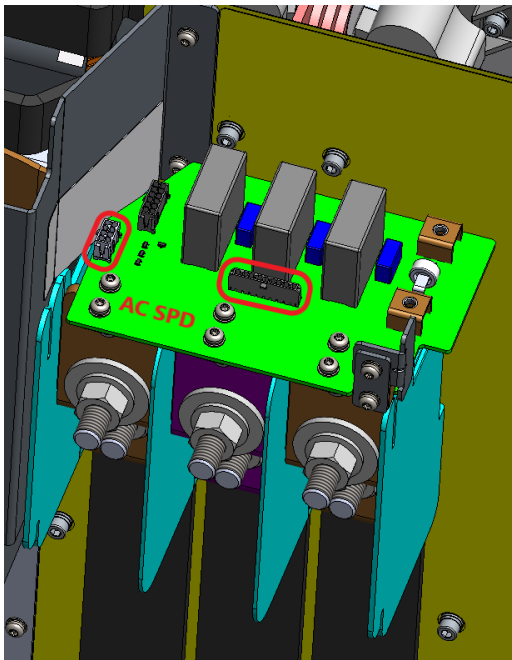


Remove the AC Terminal blockcover

1. Using a screwdriver with a 4mm hex bit, remove the screws holding the three small brackets that attach the AC SPD board to the AC busbars.



2. Disconnect the AC sense connector and the NTC connector from the SPD.



3. Remove the AC SPD board.

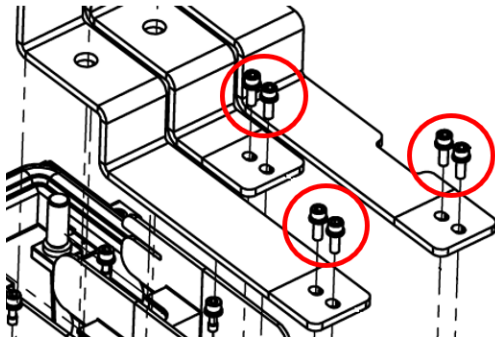
**CAUTION!**

Make sure that no screws, nuts, or washers fall into the inverter. Take special care when removing the screws on the bottom row of the busbars. They can easily fall into the inverter.

4. Using a 19mm A/F socket wrench, remove the six (6) nuts and washers holding the AC cables to the busbars.

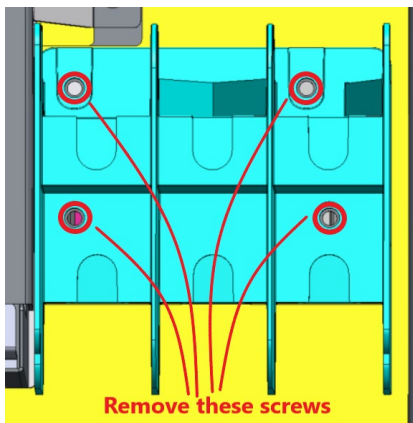


- Using a screwdriver with a 4mm hex bit, remove the six (6) screws holding the three AC aluminum busbars in place and remove the busbars. **Be careful NOT to let any screws fall into the inverter.**



Removing the aluminum busbars

- Using a 4mm hex bit, remove the screws holding the AC Terminal Block in place, and remove the AC Terminal Block.



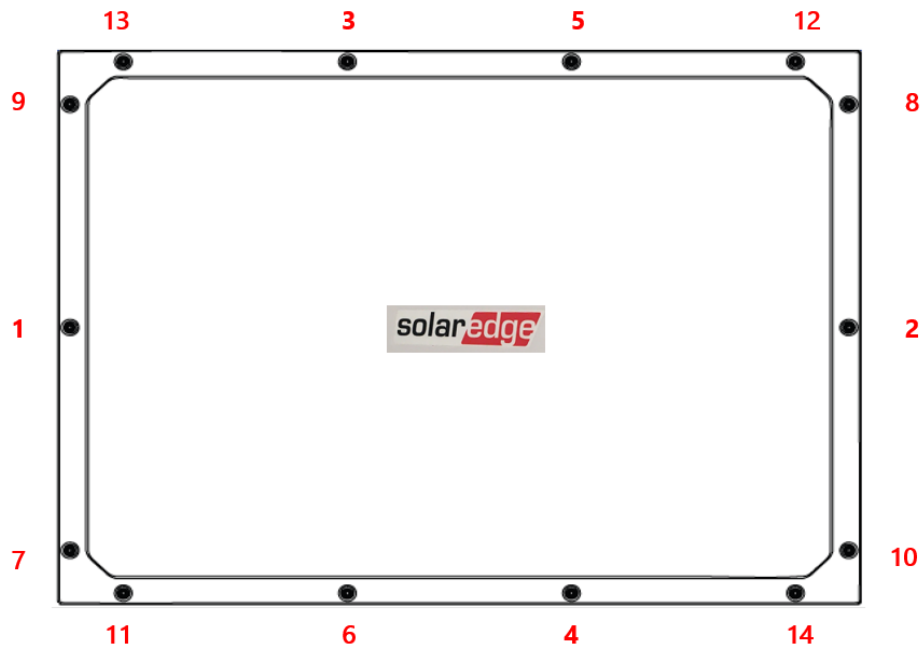
Remove the AC Terminal Block

Install the replacement AC terminal block

- Place the new AC Terminal Block in position in the correct orientation.
- Insert the screws and, using a 4mm hex bit, tighten the screws to a torque of 4.7N·m (41.6 lbf·in).
- Place the three AC aluminum busbars into position.
- Insert the six screws and, using a 4mm hex bit, tighten the screws to a torque of 4.7N·m (41.6 lbf·in).
- Replace the AC cables and the M12 nuts and washers and, using a 19mm A/F socket wrench, tighten the nuts to a torque of 35N·m (310lbf·in).
- Reconnect the AC sense connector and the NTC connector to the SPD board.
- Using the three 4mm screws, reinstall the AC SPD board.
- Place the AC terminal cover into position in the correct orientation.
- Press the cover down making sure that the locking tabs engage.
- Reattach the internal top cover, making sure that the OPERATION SWITCH is in the ON position.

Reattach the cover assembly

1. Place the cover assembly in position and, using a torque wrench with a 5mm hex bit, tighten the screws to a torque of 3.9N·m (34.5lbf·in).
2. Tighten the screws in the following sequence:



Screw tightening sequence

Turn on the power

1. Unlock the power distribution panel and turn ON the AC circuit breaker/s.
2. Remove the padlock and turn the DC Switch ON.
3. Set the P/1/0 switch to "1" (ON).