SolarEdge TerraMax™ Inverter DC terminal block screw replacement - Support kit manual

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

Revision History

- Version 1.2, July 2024 – Updated name of DC switch and required tools
- Version 1.1, March 2024 – Name changed to TerraMax
- Version 1.0, January 2024 – Initial release

Kit Contents

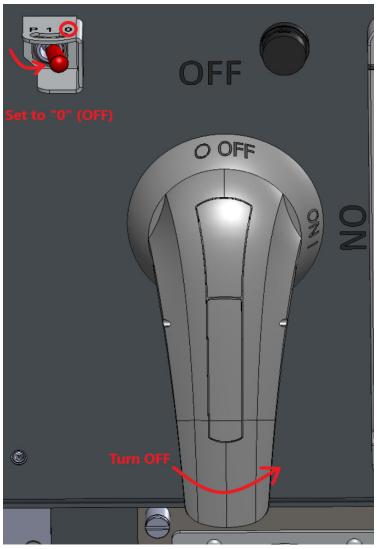
- SolarEdge TerraMax Inverter DC Terminal Block screw replacement kit
  PN: FLD-3PH-OR-DCTB

Required Tools

- Torque screwdriver (1.2N·m, 2.4·Nm, 3.9N·m, 4.7N·m) with hex bit extension
- Torque wrench (18N·m, 35N·m)
- 4mm hex bit
- 17mm deep socket
- 18mm deep socket
- Torx T20 bit
- Voltmeter

Before you begin

1. Set the P/1/0 switch to “0” (OFF).
2. Turn the DC Disconnect (DCD) switch to the OFF position.



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

DCD switch safety padlock

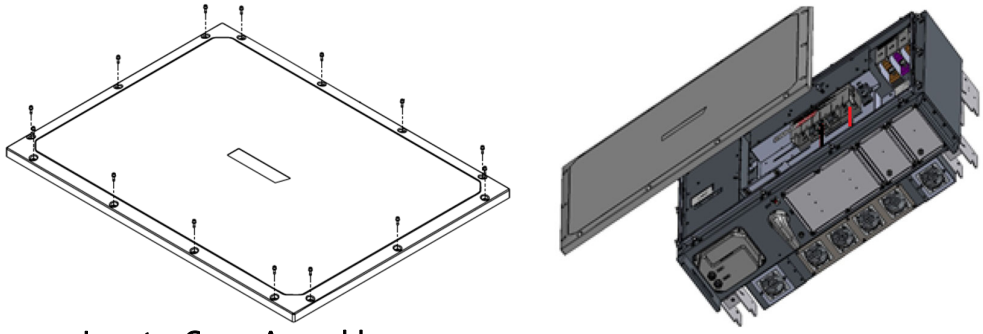
5. Disconnect AC power to the inverter by turning OFF the circuit breaker in the power distribution panel.
6. Wait at least five minutes for the DC Voltage inside the inverter to drop to a safe level.
7. As an additional safety precaution, lock the power distribution panel.

Remove the cover

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.

To remove the inverter cover, use a screwdriver with a 4mm hex bit to release the screws holding the cover in place.



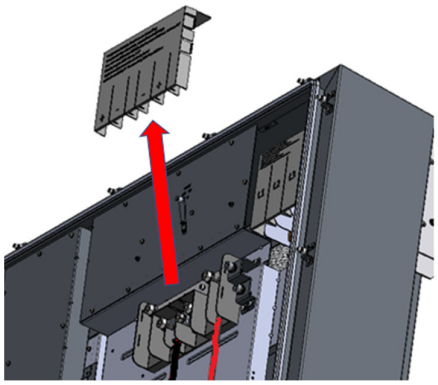
Inverter Cover Assembly

WARNING!

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

Remove the damaged DC terminal block screws

1. Locate the DC terminal cover and remove it.

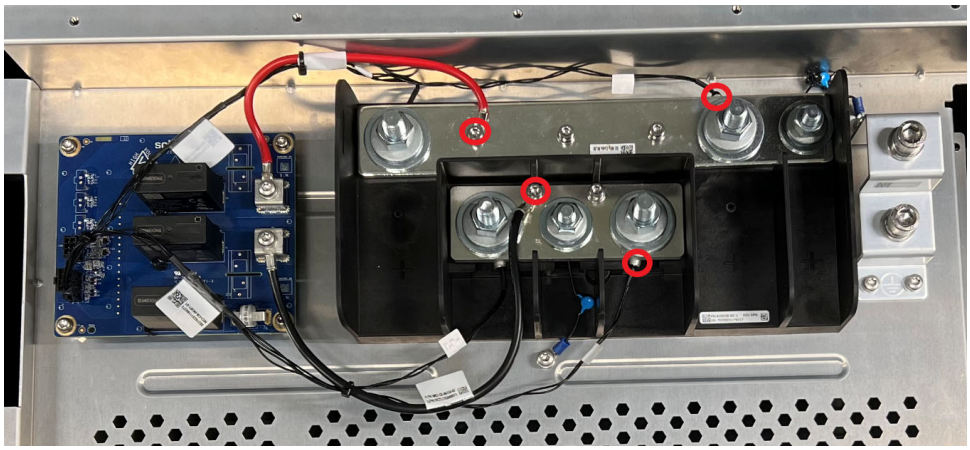


Removing the DC terminal cover

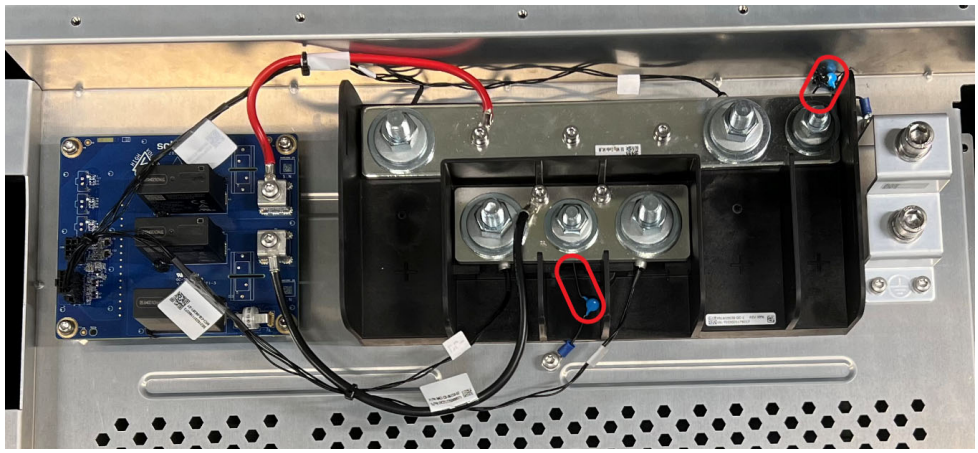
NOTE

Before disconnecting any cables, make a note of their exact connection points so that they can be connected back in their correct places.

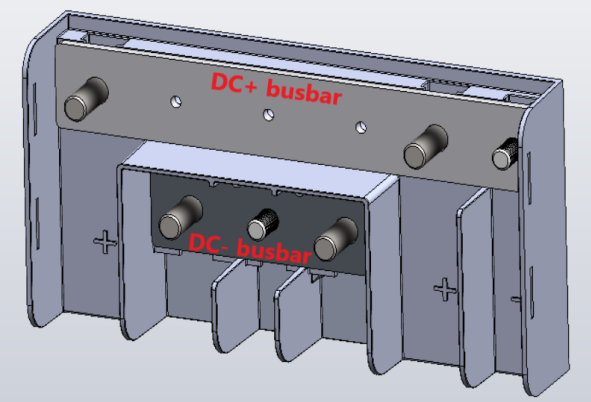
2. Disconnect the cables connected to the DC SPD board.



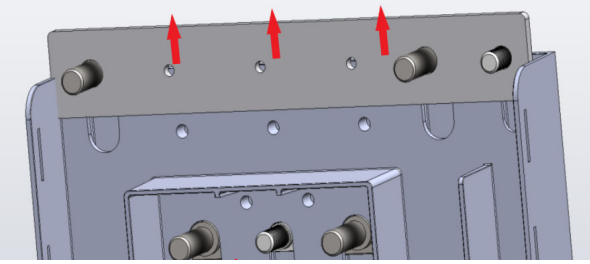
3. Disconnect one leg of each capacitor connected to the busbars.



4. Using 17mm and 18mm deep sockets and a wrench, remove the nuts and washers holding the DC+ and DC- cables and busbars in place.



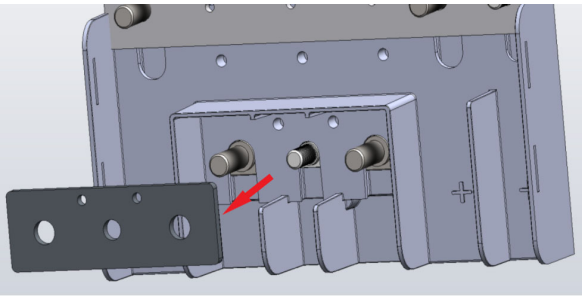
5. To change the DC+ busbar screws, slide the busbar, together with its screws, upwards out of the DC terminal block.



6. To change the DC- busbar screws, pull the DC- busbar away from the terminal block and slide the screws downwards and out from the DC Terminal block.

IMPORTANT NOTE

Be careful not to allow any of these screws to fall into the inverter or onto the floor.



7. Remove the damaged screws and discard them.

IMPORTANT NOTE

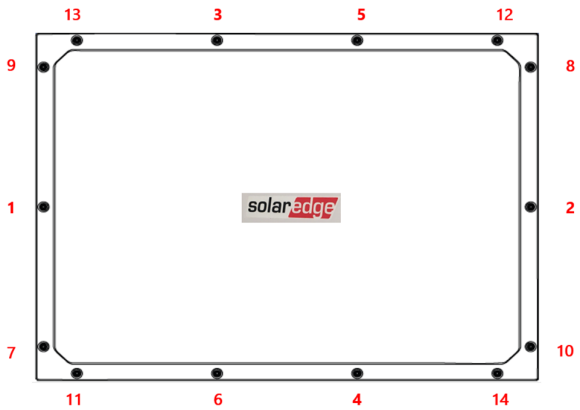
Always remove all screws, bolts, nuts and washers very carefully. Avoid dropping any of these items into the inverter.

Install the replacement DC terminal block screws

1. Place the new screws into position.
2. Slide the busbars into their positions.
3. Reconnect all the cables.
4. Reconnect the capacitors.
5. Replace all the nuts and washers.
6. Using a 17mm deep socket and a wrench, tighten the M10 nuts to a torque of 18N·m (159lbf·in).
7. Using a 18mm deep socket and a wrench, tighten the M12 nuts to a torque of 35N·m (310lbf·in).
8. Using a Torx T20 bit and a torque wrench, tighten the SPD small cable attachment screws to a torque of 2.4N·m (12.2lbf·in).
9. Place the DC terminal block cover in position. The molded text must face upwards.
10. Push the cover down till the locking tabs engage and lock with the slots provided in the DC Terminal Block.

Reattach the cover assembly

1. Place the cover assembly in position and, using a torque wrench with a 4mm 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 DCD switch ON.
3. Set the P/1/0 switch to “1” (ON).