

# Three-phase inverters - replace fused or non-fused input boards with single input terminal blocks - Support Kit (DCD-3PH-1TBI) - North America

## Revision history

- Version 4.1, December 2023 – Added equipment grounding conductor and terminal block assembly.
- Version 4.0 - Added diagram from inverter installation manual that shows wiring without single input kit.
- Version 3.0, September 2022 - Added equipment grounding conductor from AC ground block to DC ground bus bar.

## Introduction

This document describes the procedure for replacing the four-string DC fused input board or the three-string non-fused input board with single input terminal blocks.



### **IMPORTANT NOTE:**

Perform this procedure before connecting strings to the Inverter.

The supplied DC terminal blocks support cables having 2 AWG to 8 AWG cross section.

## Kit contents

The kit is supplied with replacement parts for 5 inverters, and include the following:

- Five (5) pairs of terminal blocks (labeled DC+ and DC-)
- Five (5) pairs of red and black cables
- Five (5) GND-marked DIN rails
- Ten (10) terminal block end stops
- Yellow/green cable kit

## Required tools

- Standard Phillips screwdriver
- 5mm Allen wrench
- 3/16" (5mm) flat screwdriver

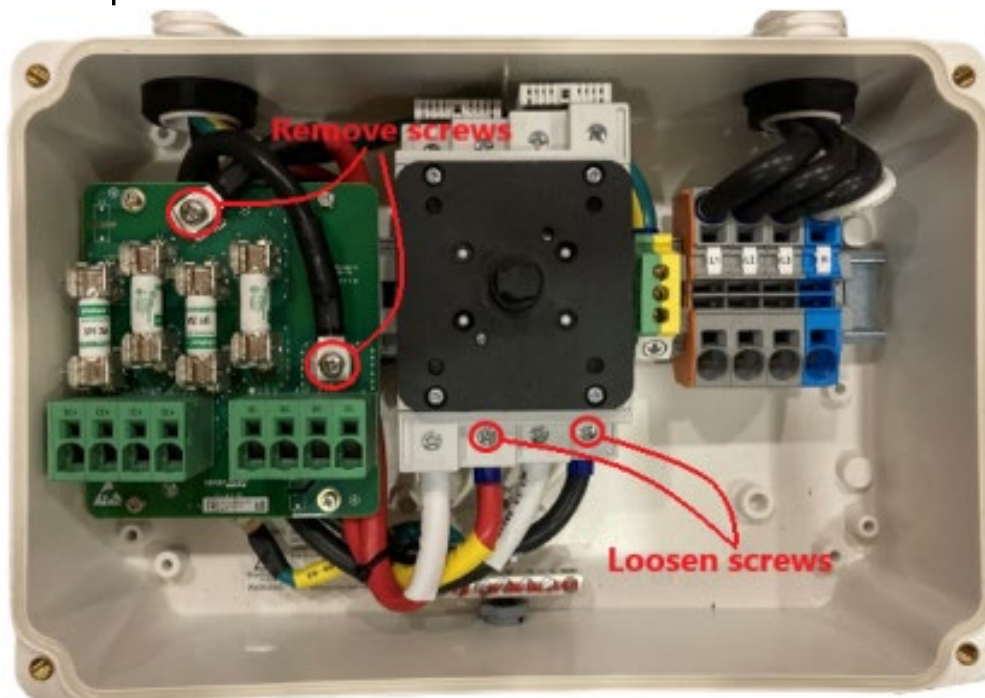
## Before you begin

1. Ensure that the P/1/0 switch on the inverter is set to "0" (OFF).
2. Turn the DCD Safety Switch OFF.
3. Turn OFF the AC circuit breaker at the main distribution board.

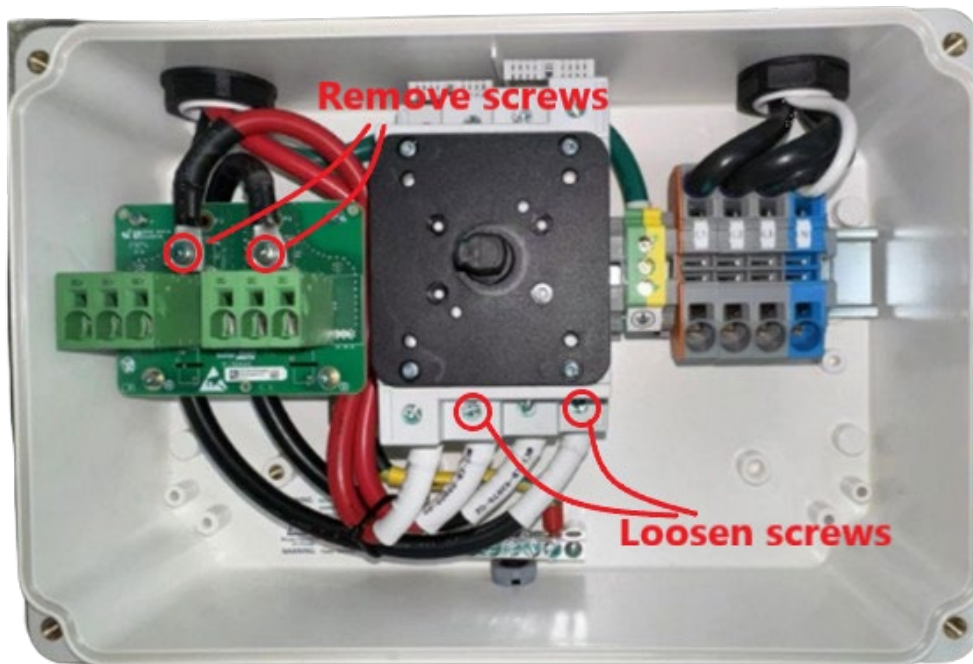
## Procedure

1. Using a 5mm Allen wrench, loosen the four screws on the front cover of the DCD Safety Switch and remove the cover.
2. Using a standard Phillips screwdriver, remove the two screws securing the DC+ and DC- cables on the input board.
3. Using a standard Phillips screwdriver, loosen the two screws securing the same DC+ and DC- cables at the Safety Switch.
4. Remove the DC cables and discard according to local regulations.

### Fused input board

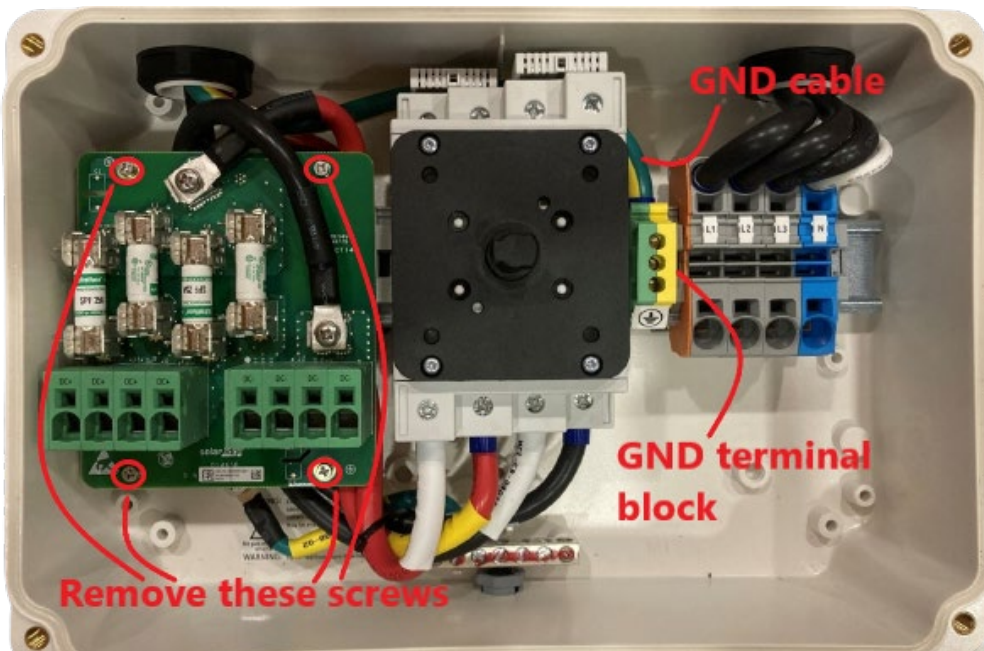


### Non-fused input board



5. Using a standard Phillips screwdriver, remove the four screws holding the input board in place and remove the board.

### Fused input board

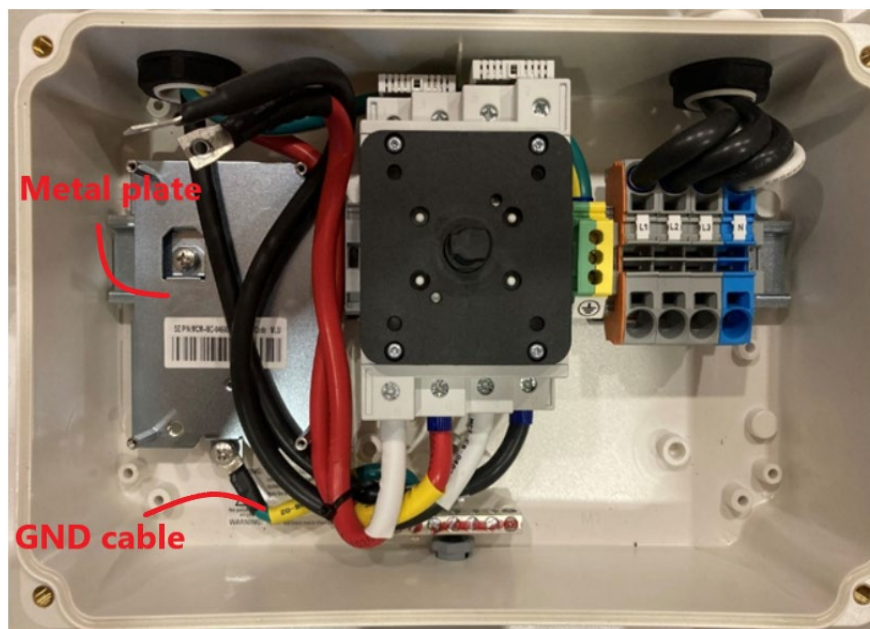


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## Non-fused input board

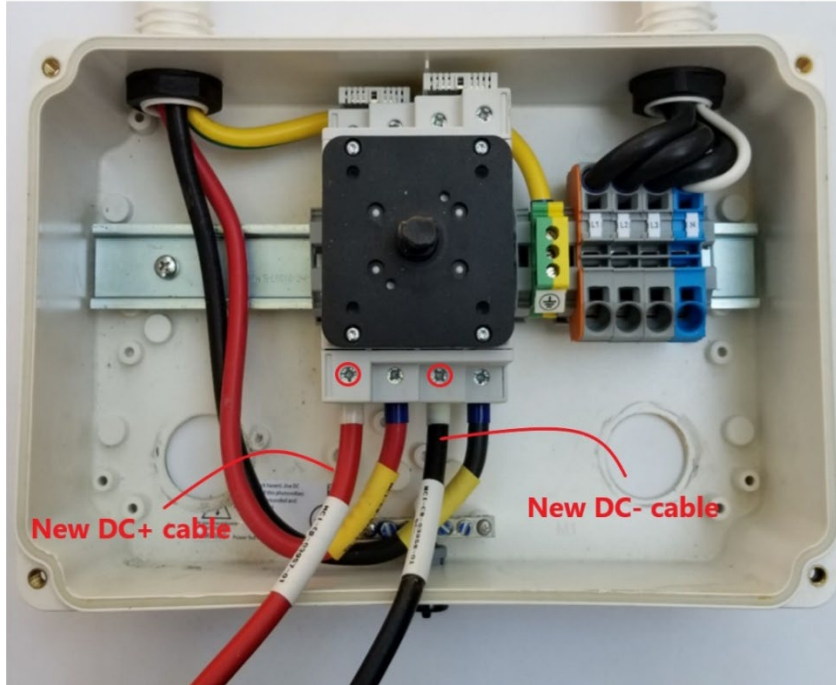


6. Remove the ground cable from the ground terminal block and from the metal plate and discard the ground cable according to local regulations.



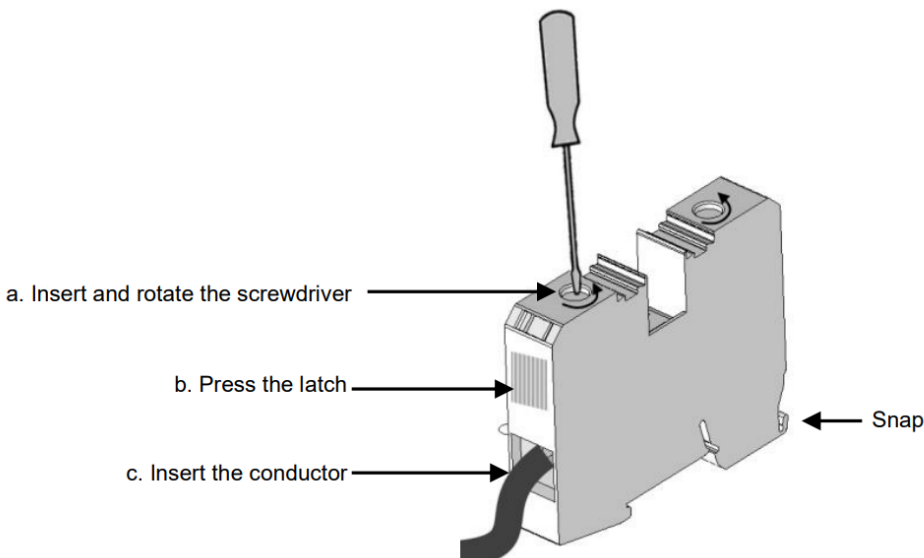
7. Remove the screw holding the metal plate to the DIN rail. Retain the screw.

8. Remove the metal plate and reinstall the retained screw.
9. Connect a red cable (DC+) to the bottom left terminal of the switch. Apply a torque of 18lbf·in (2N·m).
10. Connect a black cable (DC-) to the bottom second-from-right terminal of the switch. Apply a torque of 18lbf·in (2N·m).



11. Using a 3/16" (5mm) flat screwdriver (or the designated tool from the manufacturer), connect the other ends of the cables to two of the supplied DC terminal blocks.

### Connect cables to the terminal blocks



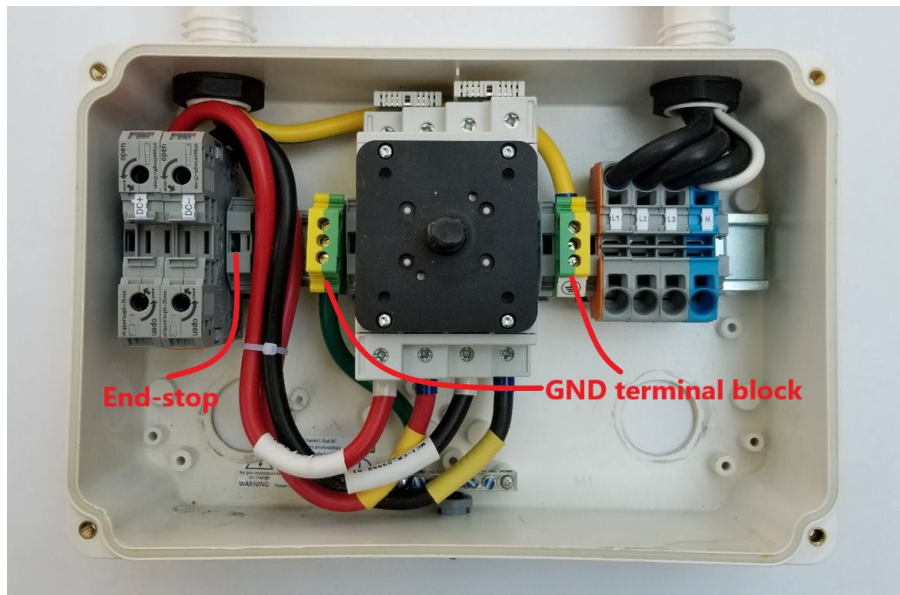
1. Insert the screwdriver into the top opening opposite the “snap” and rotate the screw counterclockwise to open the clamp mechanism.
2. Press the latch to keep the clamp in the open position.
3. Insert the wire fully into the opening.
4. Rotate the screw clockwise to release the latch.

## Install the terminal blocks

1. Carefully install the terminal blocks with their connected cables onto the DIN-rail.
2. Fit the DC+ terminal block to the left of the DC- terminal block. Ensure that the “snap” is at the bottom.
3. Install two end-stops, one on either side of the terminal blocks.

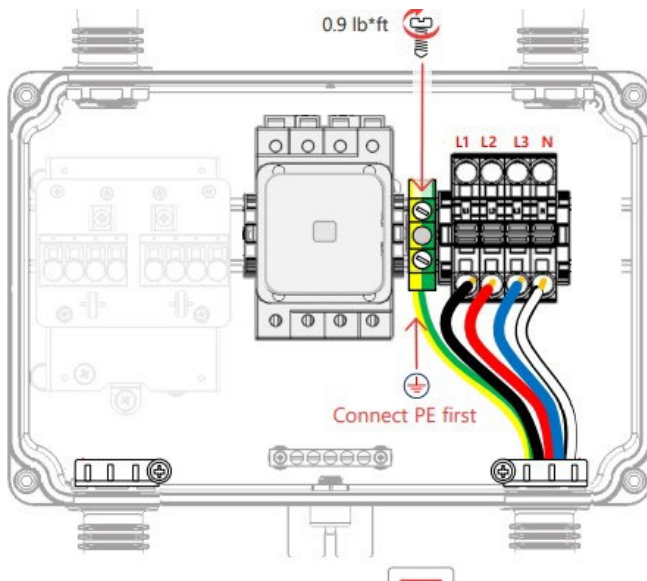
## Install the 6-gauge equipment grounding conductor assembly

1. Attach the green and yellow terminal block to the DIN rail to the left of the DC disconnect switch.
2. Tighten the center screw to secure the terminal block to the DIN rail. Apply a torque of 18lbf-in (2N·m).
3. Insert the opposite end of the 6-gauge green conductor into the multi-position ground bus located at the bottom of the enclosure. Apply a torque of 18lbf-in (2N·m).



## Maintain proper equipment grounding circuit connections

1. Connect the PE conductor from the AC output circuit to the green and yellow terminal block to the right of the DC disconnect switch.
2. Check that the cables are located and connected in the correct positions to ensure proper functionality.



## Complete the procedure

1. Attach the DCD unit cover and secure it by tightening the four screws to a torque of 0.9lb-ft (1.2N·m).
2. Proceed with further installation steps as required and as described in the [SolarEdge Installation Guide](#).