

# Replacing Safety Switch Fuses with Terminal Blocks in Three Phase Inverters

This document describes how to replace the DC fuses in the Safety Switch with DC terminal blocks.

The supplied DC terminal blocks support cables with 2-8 AWG cross section.

## Kit Contents

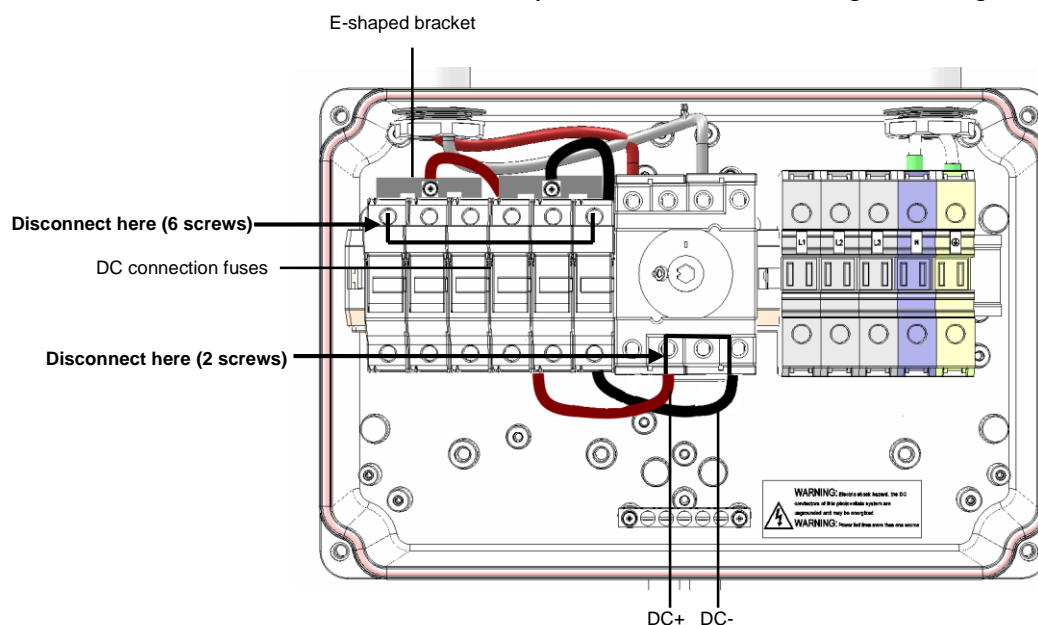
The kit is supplied with replacement parts for 5 inverters:

- Five (5) pairs of terminal blocks (labeled DC+ and DC-)
- Five (5) pairs of red and black cables
- Ten (10) terminal block end stops

## Procedure

Perform this procedure before connecting the strings to the Safety Switch [Chapter 4: Connecting the AC and the Strings to the Safety Switch in the *SolarEdge Installation Guide*].

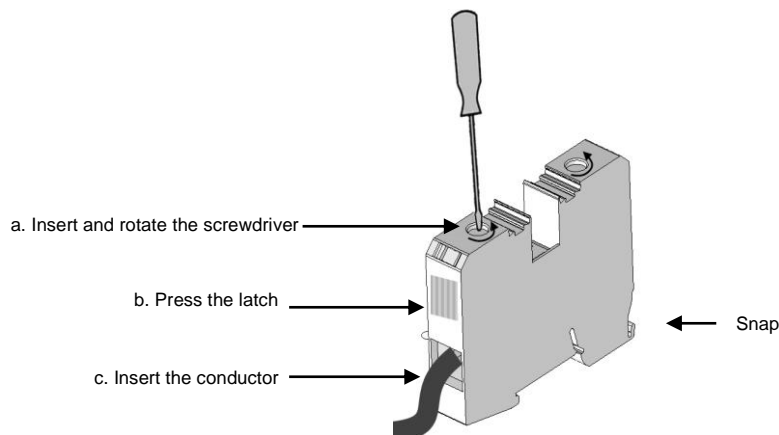
1. Make sure the inverter ON/OFF switch is OFF.
2. Turn the Safety Switch and the AC switch on the main circuit board to OFF.
3. Loosen the four Allen screws on the front cover of the Safety Switch, and open the cover.
4. Use a standard Phillips head screwdriver open the 8 screws illustrated below (see Figure 1) in order to disconnect the following cables and brackets:
  - The two DC connections from the bottom of the switch terminal (2 screws).
  - The two E-shaped conjoining brackets from the top fuse holders (6 screws).
5. Remove the cables with the brackets from the Safety Switch and discard according to local regulations.



**Figure 1: Three-phase inverter Safety Switch with DC fuses**

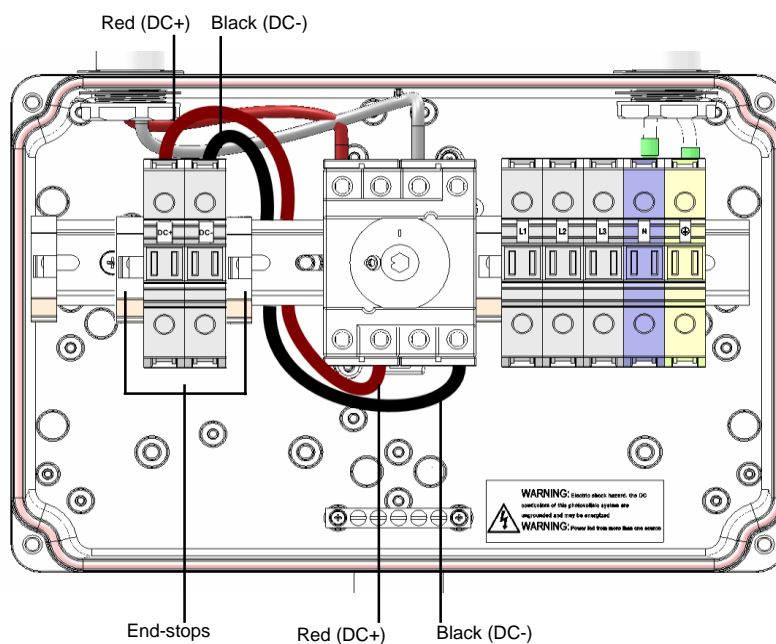
6. Carefully remove the terminal blocks with fuses from the DIN-rail on the DC side of the switch: Push the fuses downwards and pull the terminal block from the bottom up.

7. Connect 2 of the supplied cables (1 red, 1 black) to the bottom terminals of the switch. Apply torque of 18 lb\*in (2 N\*m):
  - Red to the DC+ terminal (second from the left)
  - Black to the DC- terminal (rightmost)
8. Insert the cables underneath the DIN-rail and pull from the other side of the rail. The DC- (black) should be on the right.
9. Use a 3/16" (5mm) straight flat-blade screwdriver (or the designated tool from the manufacturer) to connect the other ends of the cables to 2 of the supplied DC terminal blocks: red to DC+ and black to DC-, as follows (see Figure 2):
  - a. Insert the screwdriver into the top opening *located far from the snap* and rotate it counter-clockwise to activate the clamp mechanism.
  - b. Press the side latch to hold the clamp in the open position.
  - c. Insert the wire fully into the side opening.
  - d. Slightly rotate the screwdriver counter-clockwise to release the latch.
  - e. Remove the screwdriver – the wire is safely clamped.



**Figure 2: Connecting cables to the DC terminal blocks**

10. Carefully install the terminal blocks with the connected cables on the DIN-rail: DC+ to the left, DC- to the right. Make sure the snap is at the lower side of the DIN-rail.
11. Install one end-stop on either side of the terminal blocks.



**Figure 3: Three-phase inverter Safety Switch with DC terminal blocks**

12. Check that the cables are located and connected in the correct positions to ensure proper functionality.
13. Close the Safety Switch cover: Attach the switch cover and secure it by tightening the four screws with a torque of 0.9 ft.\*lb / 1.2 N\*m.
14. Proceed with installation steps as described in the *SolarEdge Installation Guide*.