Replacement of ON/OFF/P Switch in Three Phase Inverters with Synergy Technology

This guide explains how to replace the ON/OFF/P Switch in the Three Phase Inverter with Synergy Technology.

Revision History

Version 1.0 (September. 2021)

Kit Contents

- ON/OFF/P switch with cables
- Switch nut
- Gasket
- Switch nut socket

Required Tools

- 4 mm Allen torque wrench
- Socket torque wrench
- Phillips screwdriver
- 3 mm flat screwdriver

Removing the Synergy Manager Cover

→ To remove the Synergy Manager cover

1. Switch the ON/OFF/P switch of the Synergy Manager to OFF and wait 5 minutes for the internal capacitors to discharge.

   WARNING!

   The Synergy Manager cover should be opened only after switching the inverter ON/OFF/P switch located at the bottom of the Synergy Manager to OFF. This disables the DC Voltage inside the inverter. Wait five minutes before opening the cover. Otherwise, there is a risk of electric shock from energy stored in the capacitors.

   AVERTISSEMENT!

   Ne pas ouvrir le couvercle de l'onduleur avant d'avoir coupé l'interrupteur situé en dessous de l'onduleur. Cela supprime les tensions CC et CA de l'onduleur. Attendre cinq minutes avant d'ouvrir le couvercle. Sinon, il y a un risque de choc électrique provenant de l'énergie stockée dans le condensateur

2. Turn-off the DC Disconnect Switch on the front cover of the Synergy Manager (only applicable for models with a DC Disconnect Switch).
3. Disconnect AC to the inverter by turning-off the inverter circuit breakers on the distribution panel.
4. Remove the six Allen screws on the front cover of the Synergy Manager and remove the cover.

   CAUTION!

   When removing the front 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.

Removing the Communication Board and Board Enclosure

→ To remove the communication board and board enclosure:

1. Remove the cover of the communication board enclosure (only applicable for some models).

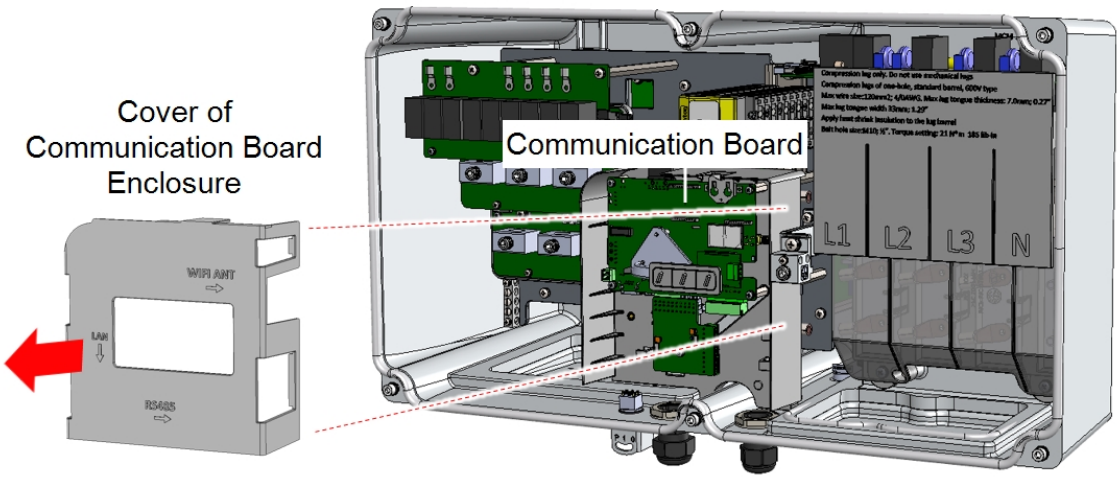

Figure 1: Removing the cover of the communication board enclosure

2. Disconnect and remove all cables connected to the communication board.

NOTE

It is recommended to take a picture of the communication board before disconnecting cables. Taking a picture, will help you reconnect the cables correctly after reinstalling the board.

3. Release the five screws securing the communication board to the standoffs and remove the board.

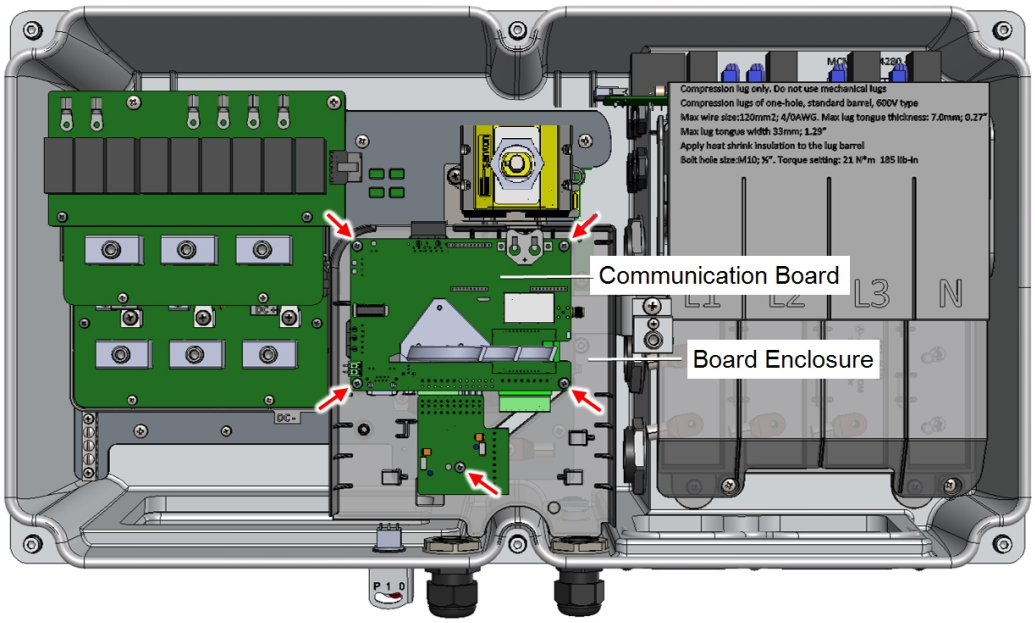

Figure 2: Removing the Communication Board and Board Enclosure

4. Remove the five communication board standoffs and release the board enclosure.

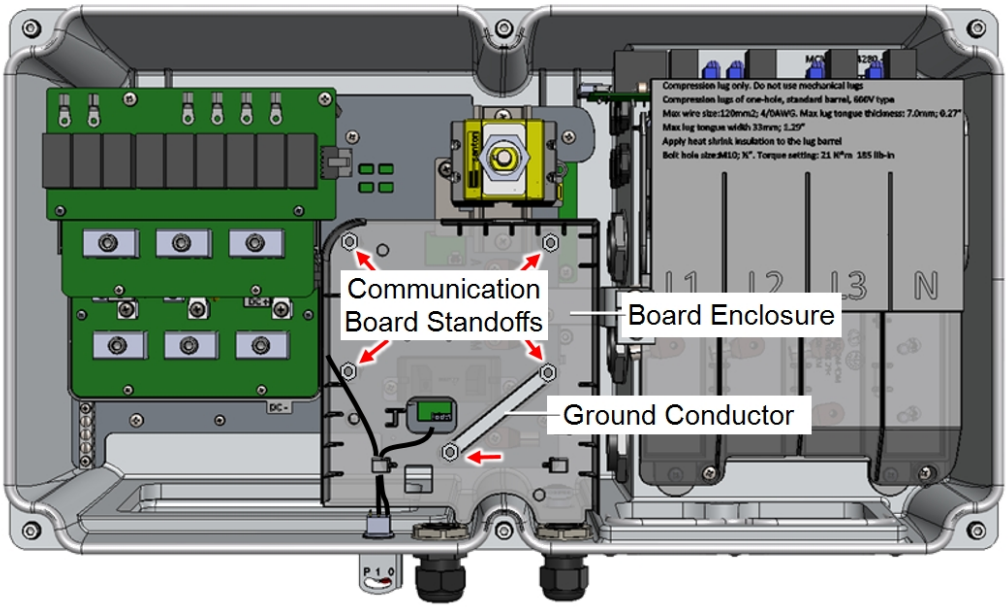

Figure 3: Communication Board Standoffs

Removing the ON/OFF/P Switch

→ To remove the ON/OFF/P switch:

1. Unplug the ON/OFF/P switch cables.

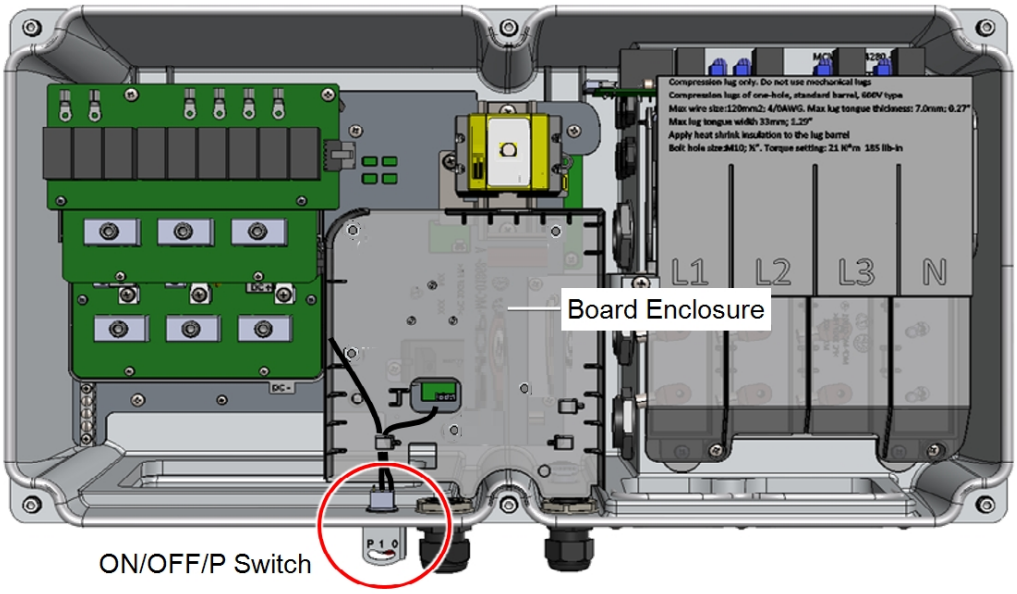

Figure 4: ON/OFF/P Switch

2. Release the nut of the switch and remove the switch, switch shield and gasket. Use the switch shield with the replacement switch.

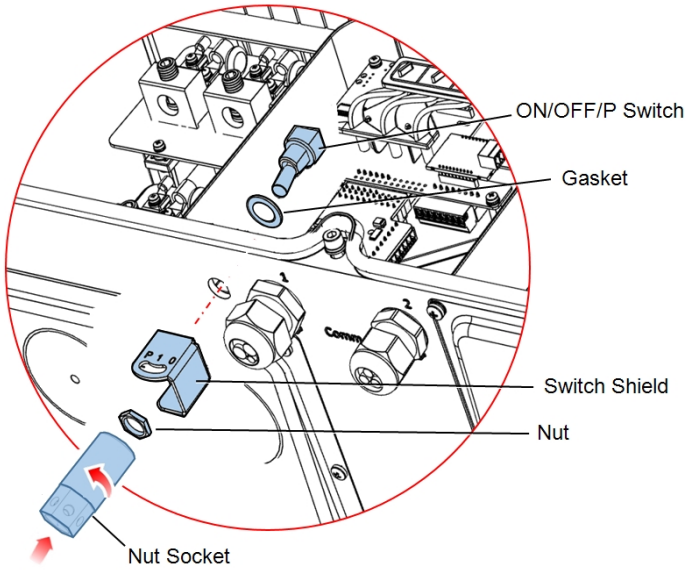

Figure 5: Removing the ON/OFF/P switch

Installing the Replacement Switch

→ To install the ON/OFF/P switch:

1. Assemble the replacement switch, gasket, switch shield and fasten the nut with a torque of 1.2 N*m (0.88 lb*ft) (see *Figure 5*).
   Make sure that:
   - The switch shield, showing the P/1/0 marking, is facing out towards the user
   - The switch is moving freely between all positions
   - The switch wires are correctly oriented, as shown in *Figure 6*.

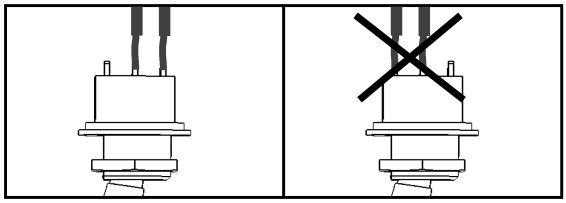

Figure 6: Orintation of the ON/OFF/P switch

   - The switch nut is oriented with the flat side facing up, as shown in *Figure 7*.

Figure 7: Orintation of the switch nut

2. Route the switch wires through the communication board enclosure and reconnect the wires (see *Figure 3*).
3. Position the communication board enclosure and fasten the five standoffs with a torque of 1.3 N*m (0.96 lb*ft) (see *Figure 3*).

   NOTE

   Make sure to position the Ground conductor under the standoffs (see *Figure 3*).

4. Connect all cables to the communication board.
5. Position the communication board on the the standoffs and fasten the five screws with a torque of 1.3 N*m (0.96 lb*ft) (see*Figure 2*).

6. Install the cover of the communication board enclosure.
7. Close the Synergy Manager cover and fasten the six Allen screws with a torque of 3.5 N*m (2.6 lb*ft).

Support Contact Information

If you have technical problem concerning SolarEdge product, please contact us at:

https://www.solaredge.com/service/support

https://www.solaredge.com/us/service/support

Before contacting, make sure to have the following information at hand:

- Model and serial number of the product in question.
- The error indicated on the product SetApp mobile application, LCD screen, indication LEDs or in the monitoring platform (if available).
- System configuration information, including the type and number of modules connected and the number and length of strings.
- The communication method to the SolarEdge server (if available).
- The product's software version as it appears in the ID status screen of the LCD or SetApp mobile application.