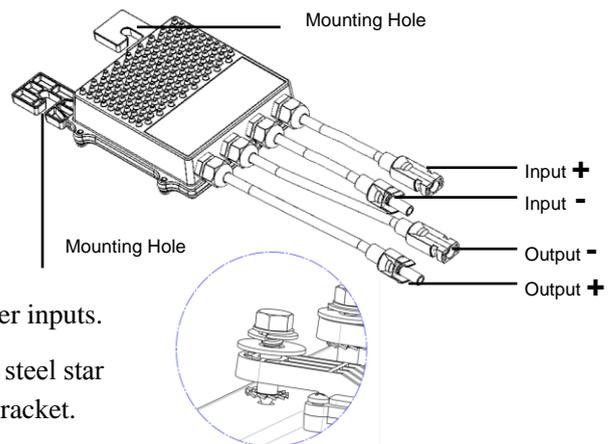


# SolarEdge Quick Installation Guide – North America Version

**NOTE:** For full installation and safety details, you must refer to the *SolarEdge Installation Guide*. Make sure you read, fully understand and follow the detailed instructions in the *SolarEdge Installation Guide* in any installation. **Failure to do so could result in injury or loss of life and damage or destruction of the equipment.** This Quick Installation Guide must be used only after reading the *SolarEdge Installation Guide*.

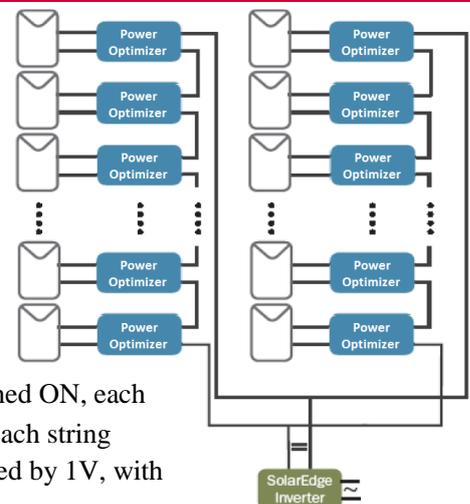
## Connecting Power Optimizers to Modules

- 1** Mount the power optimizers in a shaded location near the PV modules on the structure or racking to which the module is attached using both mounting holes. Avoid mounting power optimizers in locations where they will be exposed to direct sunlight. Make sure that each power optimizer is positioned within reach of each module’s cables.
- 2** Verify polarity and connect the modules to the power optimizer inputs.
- 3** Ground the power optimizer enclosure using a 5/16” stainless steel star washer between the railing and the flat side of the mounting bracket.



## Connecting Power Optimizers to a String

- 1** Make sure that the inverter ON/OFF switch is switched OFF during power optimizer installation.
- 2** Connect the power optimizer outputs in series.
  - The minimum string length is eight power optimizers.
  - As a rule of thumb, use two strings on the 6kW and on the 7kW inverters. Consult the SolarEdge Site Designer for verification.
  - Strings **DO NOT** have to be the same length.
- 3** **Verify proper connection of power optimizers:** Before the inverter is turned ON, each power optimizer produces *1V safety-voltage*, which should be verified for each string with a voltmeter. The voltage on a string is the number of modules multiplied by 1V, with a deviation of 10mV per module.

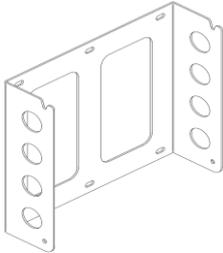


**NOTE:** If several strings are connected in parallel, verify voltage for each string separately.

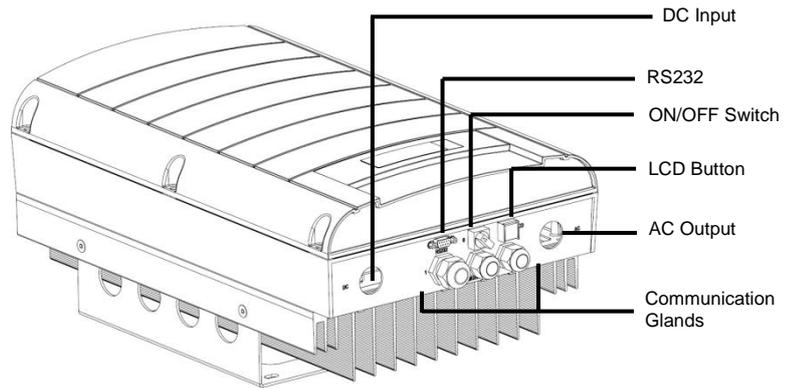
- 4** In order to benefit from the physical mapping of the installation in the SolarEdge Monitoring Portal, you must record each power optimizer’s location by peeling off its removable barcode sticker and sticking it on the reporting template, or by scanning the barcode with the SolarEdge iPhone Site Mapper app, and uploading the map to the SolarEdge website, using the site registration form.

## Installing the Inverter and Connecting the String to the Inverter

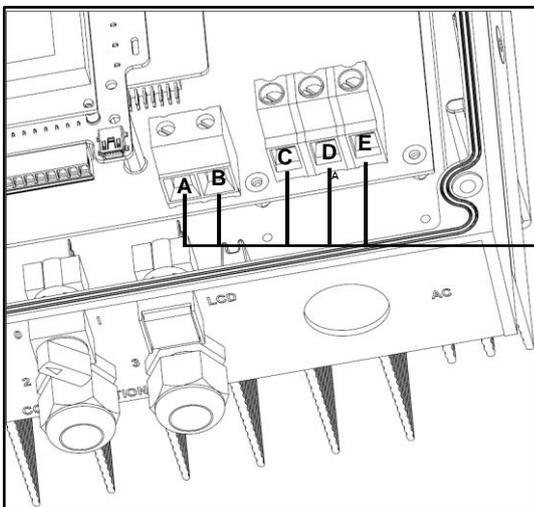
- 1** Make sure that the inverter ON/OFF switch is switched OFF during inverter installation and that the AC circuit breaker is OFF.
- 2** Install the mounting bracket on the wall with the u-shaped part on top. Mount the inverter on the bracket. Secure it to the bracket using the two supplied screws.
- 3** Make sure to leave clearance areas open in order to cool the inverter: 8” above and below, 4” on both sides.
- 4** Open the inverter cover by opening the six cover screws.



Mounting Bracket Orientation



- 5** Connect the AC cables. The AC connection terminal block is comprised of a two terminal block and of a three terminal block found in the lower right hand corner of the inverter. The terminal blocks are labeled A through E. Below the terminal blocks on the inverter chassis, there is a label, shown below, which illustrates how to connect the wires when connecting to a 208V/240V grid or to a 277V grid (the 277V grid is supported by the 5kW, 6kW and 7kW inverters). Be sure to follow these connection instructions in order to ensure proper connection.



Terminal Connectors

	A	B	C	D	E
208/240	⊖	N	⊖	L1	L2
277	⊖	-	⊖	L	N

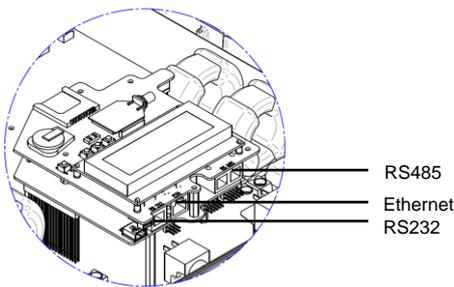
- 6 Connect the Ethernet cable and the RS485 connections if necessary. Ethernet and RS485 are connected to a connector inside the inverter. An inverter communication board has either RJ45/RJ11 connectors or block terminal connectors for communication.



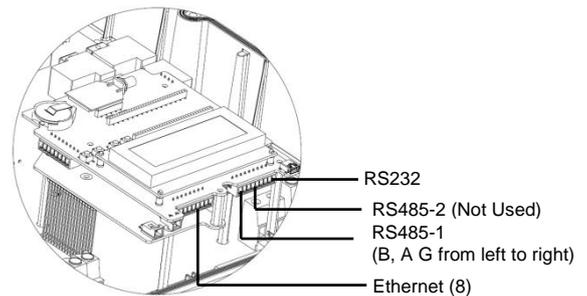
Ethernet Pin Out



RS485 Pin Out



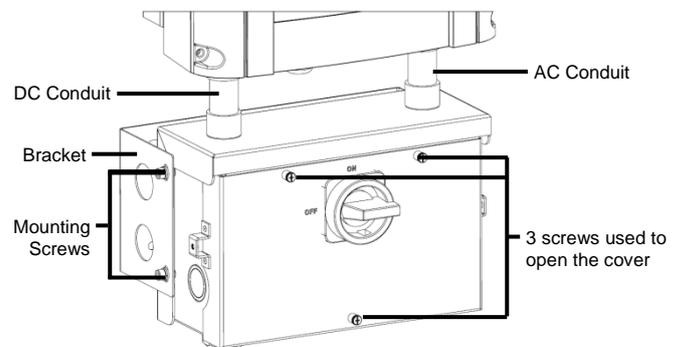
Communication Board - RJ45/RJ11 Connectors



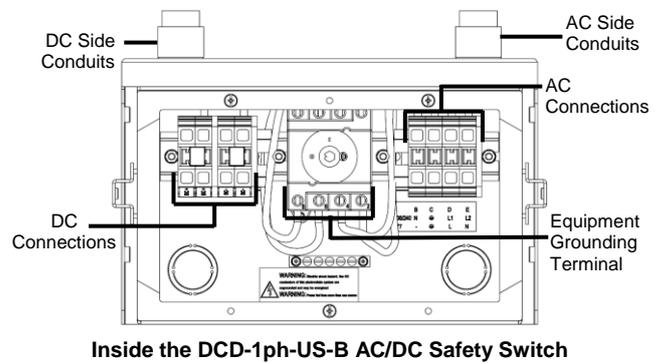
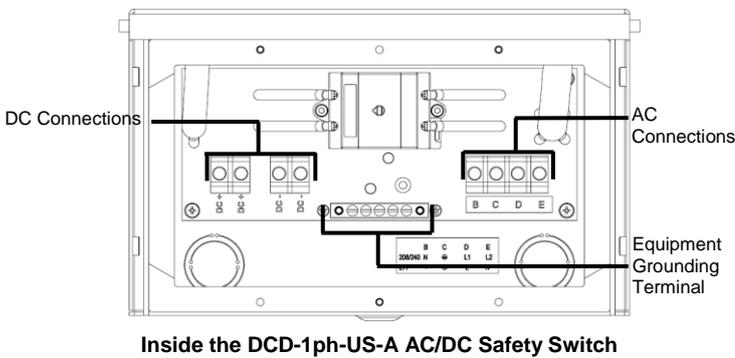
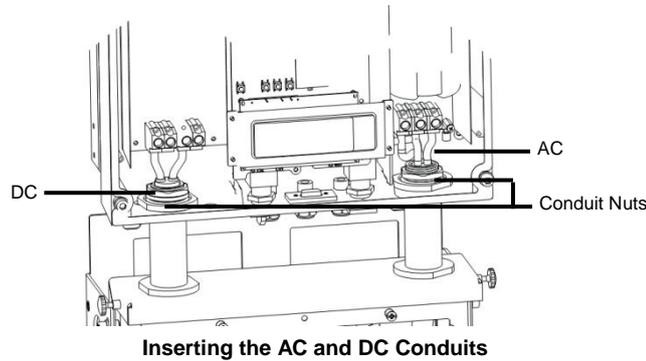
Communication Board – Terminal Blocks

## Installing the AC/DC Safety Switch

- 1 Mount the Safety Switch on its mounting bracket, using the paper template to determine the location for the holes. Make sure the AC and DC wires extending from the AC/DC Safety Switch are inside the inverter, so that they can later be connected to the inverter. Secure the two washers and screw the bracket to the wall or to a pole.
- 2 Move the Safety Switch to the OFF position. Open the three screws of the front cover of the AC/DC Safety Switch and remove the cover.
- 3 Connect the DC+ of the inverter input to the red wire, and the DC- of the inverter input to the black wire.
- 4 Connect the AC to the terminal blocks in the inverter, from left to right: the white wire to terminal block B, the green/yellow wire to terminal block C, the red wire to terminal block D, and the black wire to terminal block E.
- 5 Connect the DC (PV) side and AC side wiring as labeled. Recheck correct polarity of the DC wiring with a voltmeter. The polarity can be determined by measuring the safety voltage that is now present on the DC input terminals.
- 6 Verify proper grounding of the inverter and of the installation.



- 7 Close the AC/DC Safety Switch cover by putting back the three screws. Install the decorative plastic cover using the screws.



## Commissioning and Activating the Installation

**SolarEdge inverters must be configured for use in each country. If the inverter has not been configured, it may display a voltage or frequency error at first startup. Incorrect configuration will not damage the inverter, but it will not operate normally unless properly configured. Inverter configuration should be verified for all installations at time of installation.**

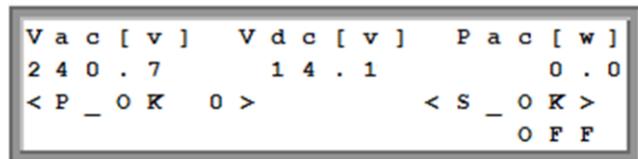
- 1 Turn ON the AC circuit breaker.



**WARNING!**

High AC voltages are present in the inverter – handle with care.

- 2 Verify (and set, if required) the correct country code, display language and communication configuration using the inverter user buttons and LCD. The buttons are located just above the LCD and are numbered **esc**, **1**, **2**, **3/Enter** from left to right. Enter the menus by pressing ENTER for five seconds and then inputting the password **12312312**. To verify that the country code is set to USA, select **1. Country** from the main menu, press **Enter** and select **1. USA+**. In the next menu that appears, select the desired AC grid configuration: Auto, 208V, 240V, 208V No Neutral, 240V No Neutral or 277V from the menu.



LCD Display

- 3 Verify the following in the LCD display:
  - **Vac:** Specifies the grid voltage.
  - **Vdc[V]:** Shows the total string voltage (1V for each power optimizer properly connected in series).
  - **Pac:** AC power production. At this stage it should be 0w.
  - **P-OK:** Specifies the number of properly connected power optimizers.
  - **S-OK:** Indicates the status of the connection to the SolarEdge Monitoring Server.

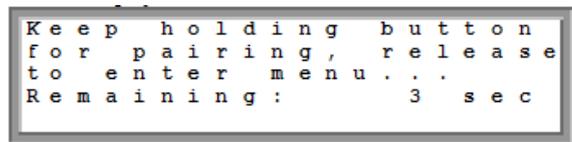
4 Close the inverter cover.



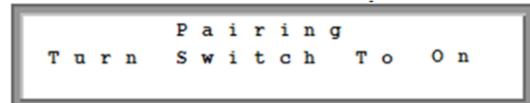
**WARNING!**  
Before proceeding to the next step, make sure that the cover is closed! High Voltage DC will be present in the inverter following in the next step!

5 To pair the power optimizers to the inverter, turn the ON/OFF switch at the bottom of the inverter to OFF. Press and hold down the inverter LCD button for about **10 seconds**.

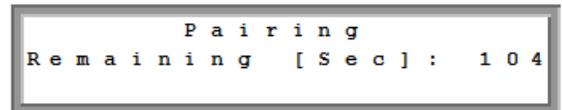
The following screen is displayed:



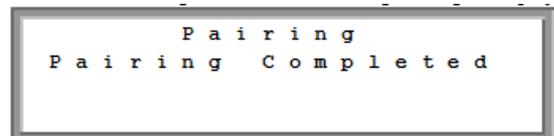
6 Continue to hold for five seconds more. The following screen is displayed:



7 Turn ON the inverter by using the ON/OFF switch. If you fail to turn ON the switch within five seconds, then repeat the pairing step above. The following screen is then displayed indicating that the inverter is performing the process of pairing and is assigning power optimizers to the inverter.



8 After commissioning succeeds, the following message is displayed:



9 At the end of the pairing process, the system will start producing power. Verify on the LCD screen that the number next to **P\_OK** equals the number of installed power optimizers. It may take up to 15 minutes until all the power optimizers display an indication that they are up.



**IMPORTANT SAFETY FEATURE:**  
**For opening the inverter or disconnecting the strings.**  
After switching the Inverter ON/OFF switch to ON, there is HIGH DC VOLTAGE.  
After switching the Inverter ON/OFF switch to OFF, wait for the LCD to indicate that the DC voltage is safe before opening the cover or disconnecting the strings.

Refer to the *SolarEdge Installation Guide* for detailed installation and safety instructions.

**Support and Contact Information**

If you have technical problems concerning our products, please contact us:

- USA and Canada:** 1877 360 5292
- Germany:** 089-45459730 and 089-4161703-39
- France:** 0800917410
- Italy:** 800 784 824
- United Kingdom:** 08002061058
- Israel:** 073 2403118
- Australia:** 1800149229
- Rest of World:** +1 (650) 319-8843
- Fax:** +972 73 240-3117

Email to: [support@solaredge.com](mailto:support@solaredge.com)



MAN - 01 - 00025 - 1 - 7