



Three Phase Commercial Inverter

Quick Installation Guide

PN: xSE-SIN-USxxlxxxx

For North America
Version 1.1

Scan for full
installation guide



Legend



NOTE

This symbol denotes information intended to assist the user in making optimum use of the product.



CAUTION!

Denotes a hazard. It calls attention to a procedure that, if not correctly performed or adhered to, could result in damage or destruction of the product. Do not proceed beyond a caution sign until the indicated conditions are fully understood and met.



WARNING!

Denotes a hazard. It calls attention to a procedure that, if not correctly performed or adhered to, could result in injury or loss of life. Do not proceed beyond a warning note until the indicated conditions are fully understood and met.



Do not cut the wire connectors.

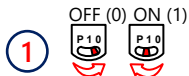


Torque value



This symbol appears at grounding points on the SolarEdge manuals and equipment.

LEDs



Turn the P1/0 Switch OFF. After turning OFF the switch wait at least 5 minutes for DC voltage to decrease to a safe level before removing the front panel.

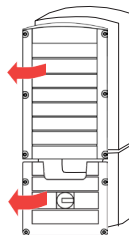


Turn OFF the main circuit board DC Switch. After turning off, wait at least 5 minutes for DC voltage to decrease to a safe level before removing the front panel.



Turn OFF the AC Disconnect Switch. After turning OFF, wait at least 5 minutes for DC voltage to decrease to a safe level before removing the front panel.

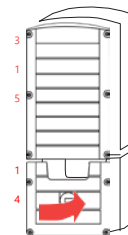
1. Turn the P1/0 Switch to OFF (0).
2. Turn the Safety Switch to OFF.
3. Turn OFF the AC Disconnect switch before you unscrew the cover.



Fasten screws in described order.



9.0N·m / 6.6lbf·ft
10.3N·m / 7.6 lbf·ft (plastic)



SAVE THESE INSTRUCTIONS – This manual contains important instructions for the Three Phase Inverter that shall be followed during installation and maintenance.



WARNING! Upon servicing or replacing equipment, instructions in the installation manual must be followed to maintain the integrity of the PV hazard control system. SolarEdge commercial optimizers and three phase inverters should only be replaced with SolarEdge commercial optimizers and inverters. Third party equipment is not compatible.



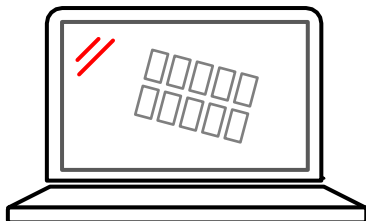
THREE PHASE INVERTERS, INCLUDE A PHOTOVOLTAIC RAPID SHUTDOWN SYSTEM (PVRSS). SUCH INVERTERS, INCORPORATE ONE OR MORE PIECES OF EQUIPMENT THAT EXERCISE THE RAPID SHUTDOWN CONTROL OF PV SYSTEM CONDUCTORS REQUIRED BY SECTION 690.12 OF THE NEC (NFPA 70). OTHER EQUIPMENT INSTALLED IN OR ON THIS PV SYSTEM MAY ADVERSELY AFFECT THE OPERATION OF THIS PVRSS. IT IS THE RESPONSIBILITY OF THE INSTALLER TO ENSURE THAT THE COMPLETED PV SYSTEM MEETS THE APPLICABLE RAPID SHUT DOWN FUNCTIONAL REQUIREMENTS. THIS EQUIPMENT MUST BE INSTALLED ACCORDING TO THE MANUFACTURER'S INSTALLATION INSTRUCTIONS

Install the Power Optimizers

1

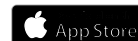
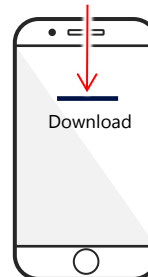
1

Use [SolarEdge Designer](#)
to design SE system



2

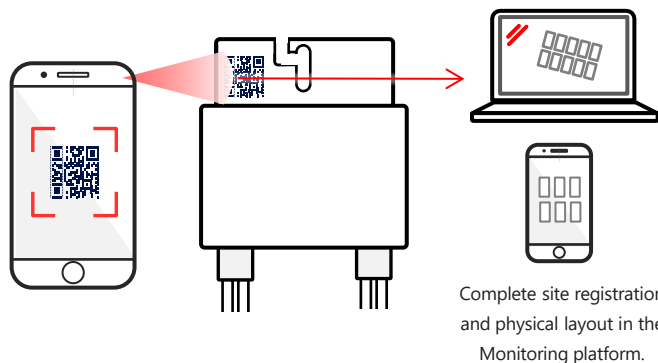
Download SolarEdge Mapper to
map Power Optimizers



1 Install the Power Optimizers

3

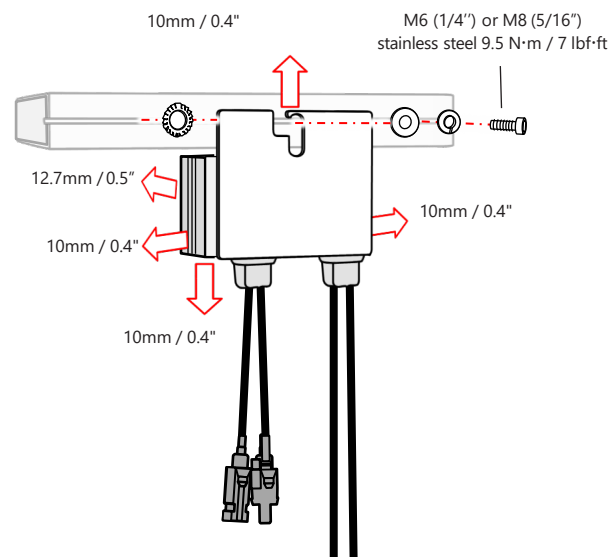
Scan QR code using Mapper



Star washers for the C-series optimizer are not included and can be purchased in large quantities. SolarEdge part numbers: OPT-Washer-100 or OPT-Washer-500.

4

Install Power Optimizer

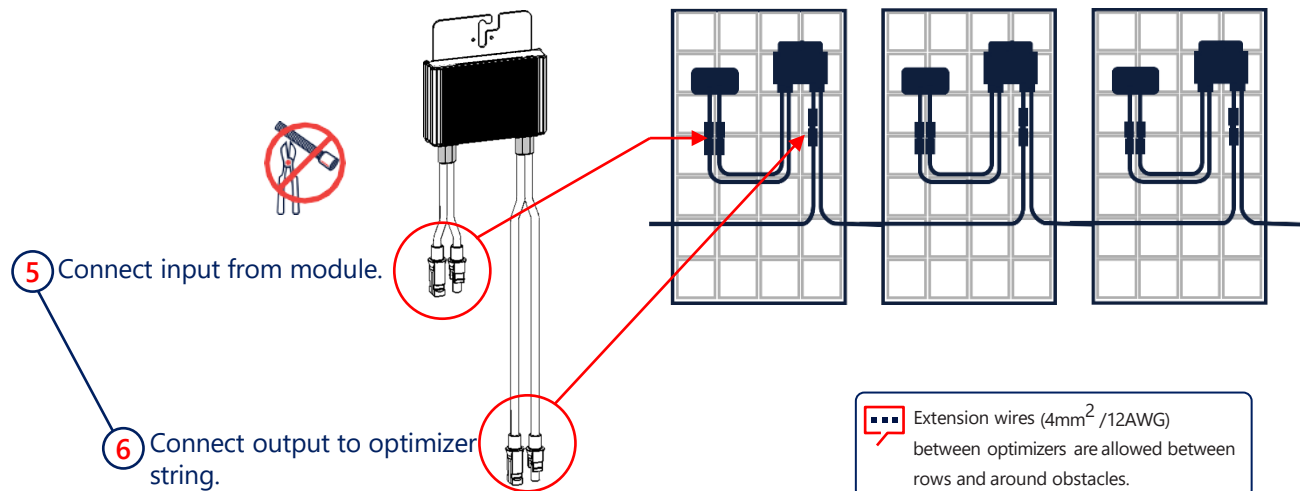


The Power Optimizer must be grounded. For details, see [Grounding SolarEdge Power Optimizers – Application Note](#)

Install the Power Optimizers

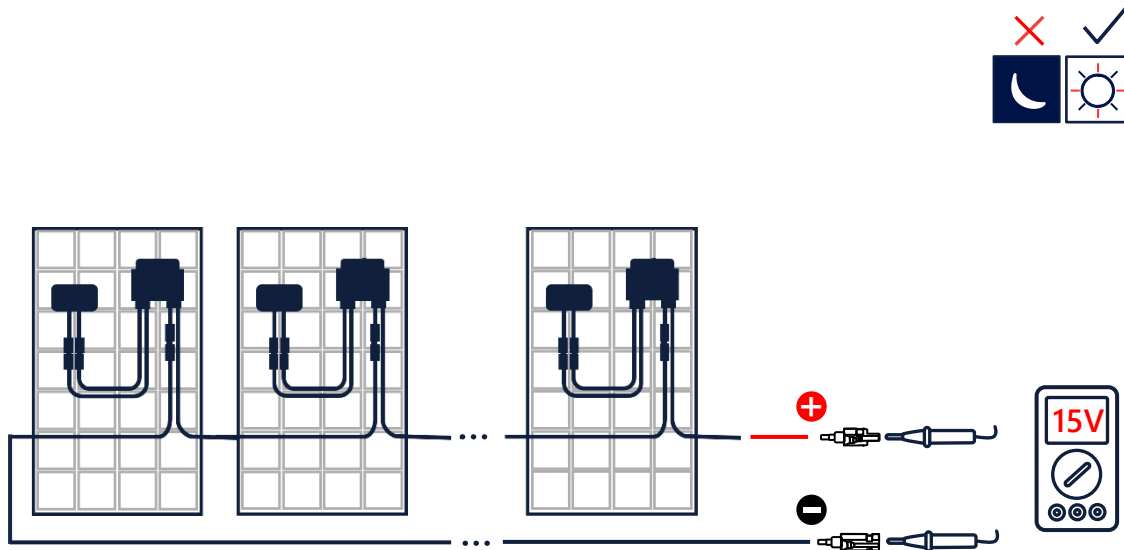
1

1:1 Series connection



2

Connect the PV Array

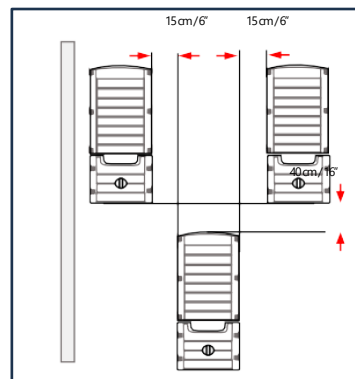
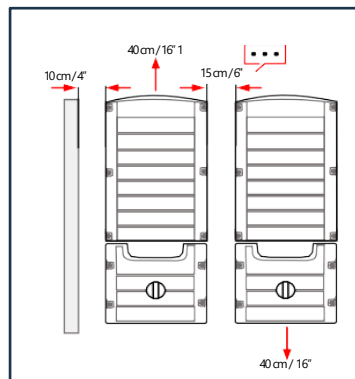


Check array polarity.
Verify 0.5+/-0.075V per optimizer
Example: 30 optimizers = ~15V

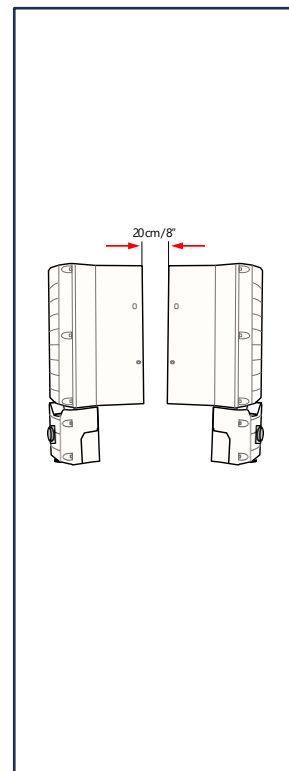
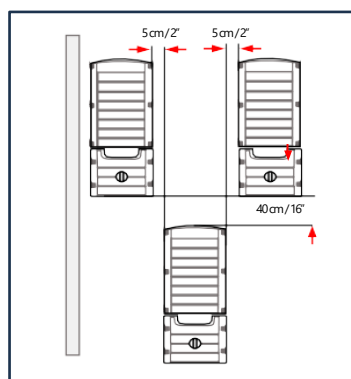
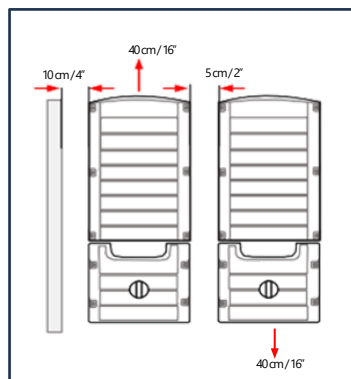
Maintain Clearance

3

Indoor

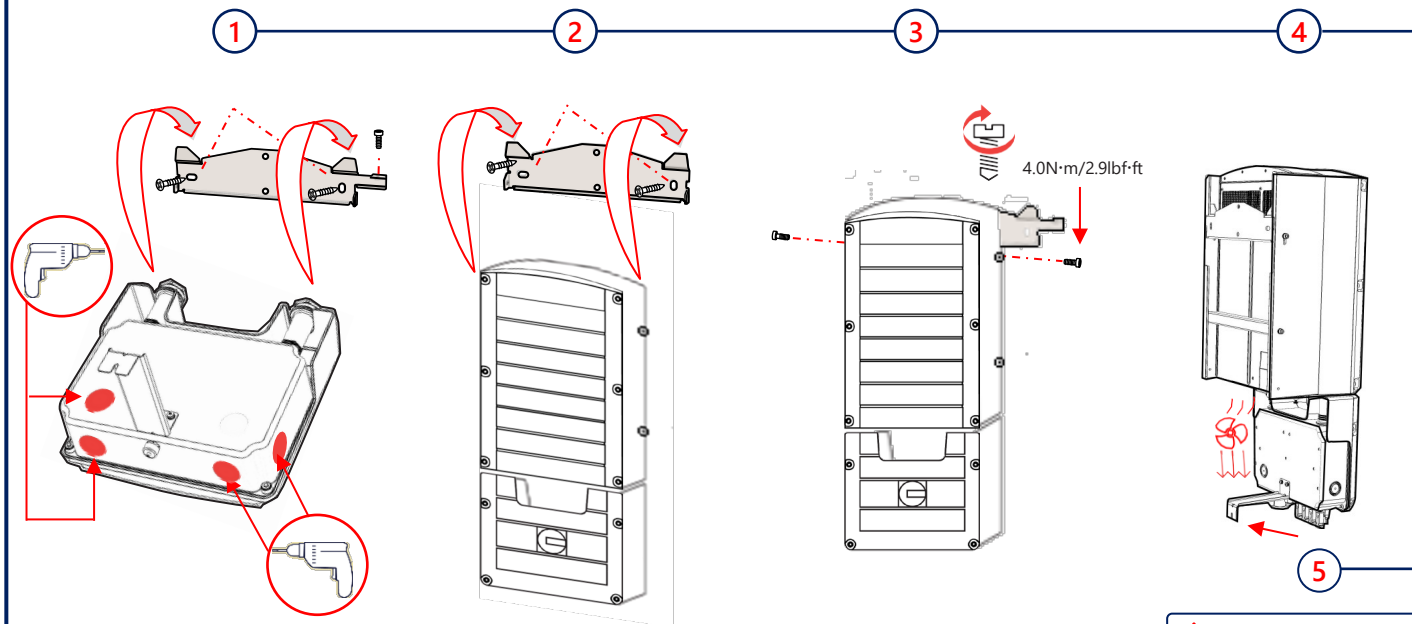



Outdoor



20 cm / 8" where
annual average high
temperature equals
or above 25°C / 77°F

4 Install the Inverter



 Use 1.9cm/0.75" or 2.24cm/1" Unibit drill to create holes for AC and DC conduits.

 **CAUTION!** Do not block the air flow.

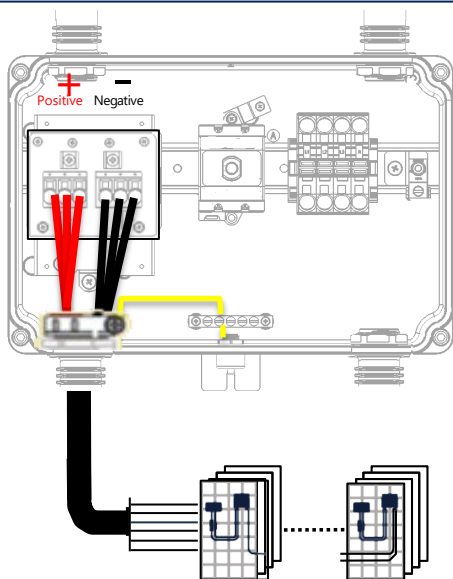
Connect the PV Array Cables

5

DC safety unit with multiple string connections



When installing a system with more than two strings per inverter, ensure compliance with the latest applicable standards, such as NEC.



1

a



OFF

b

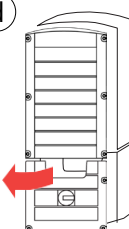


OFF

c



d



2

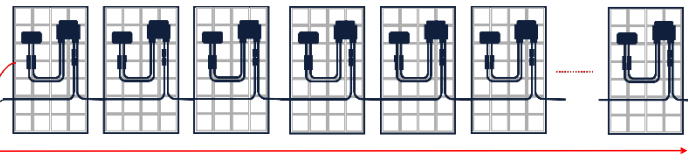
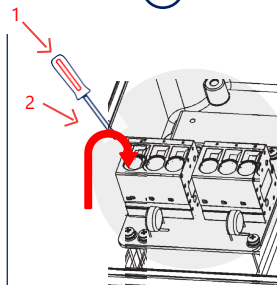
6- 12 AWG

0.7" /18 mm



When using a stranded wire, the use of the ferrule is at the installer's discretion.

3



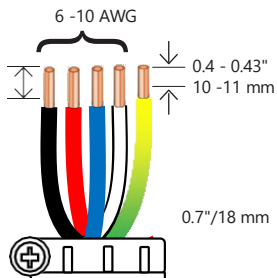
- For inverter models SE10KUS and SE17.3KUS $\leq 300\text{m}/1000\text{ft}$.
- For inverter models SE30KUS and SE40KUS $\leq 700\text{m}/2300\text{ft}$.

6

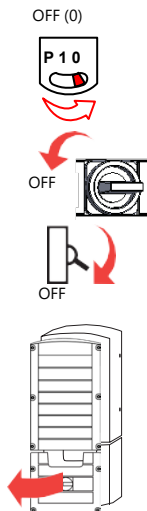
Connect AC and Protective Earth

The inverter supports 4 wire + PE or 3 wire + PE connection.

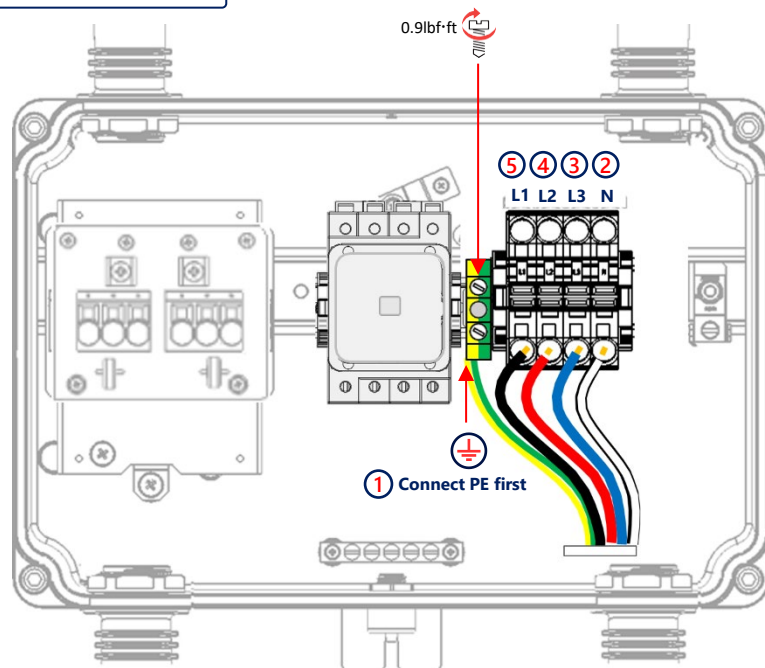
Overcurrent protection for the AC output must be provided by others, see manual for guidance.



The decision to use a ferrule with a stranded wire is left to the discretion of the installer.



WARNING! Wait at least 5 minutes after turning OFF the P1/O switch.







Set up Communication

7

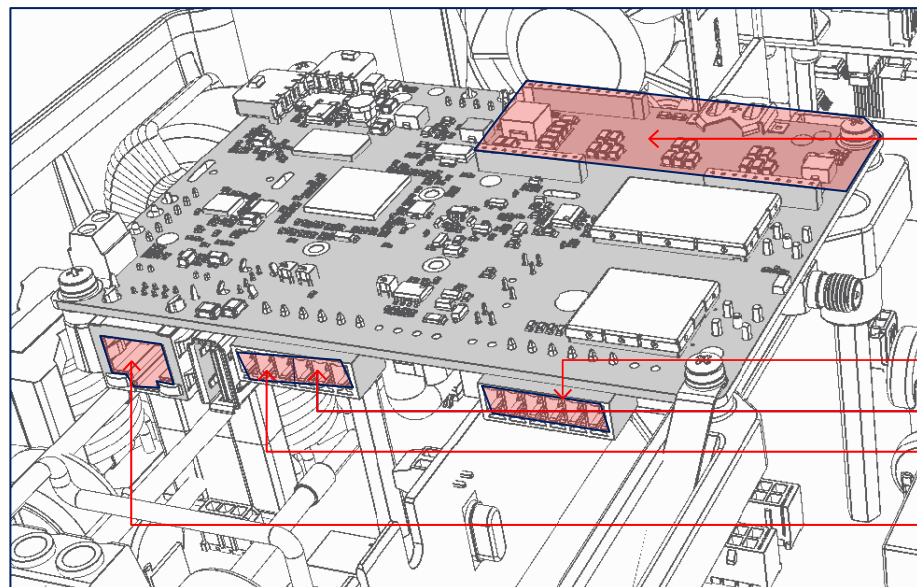
Built-in:

- Ethernet, see p. 11
- RS485, see pp. 12-13

Optional

Device	Image	QR Code
Wireless Gateway		
Cellular Plug-in		

7 Set up Communication



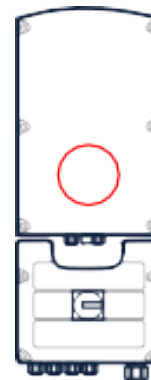
Cellular/ZigBee Plug-in

PRI Control

RS485-2

RS485-1

Ethernet



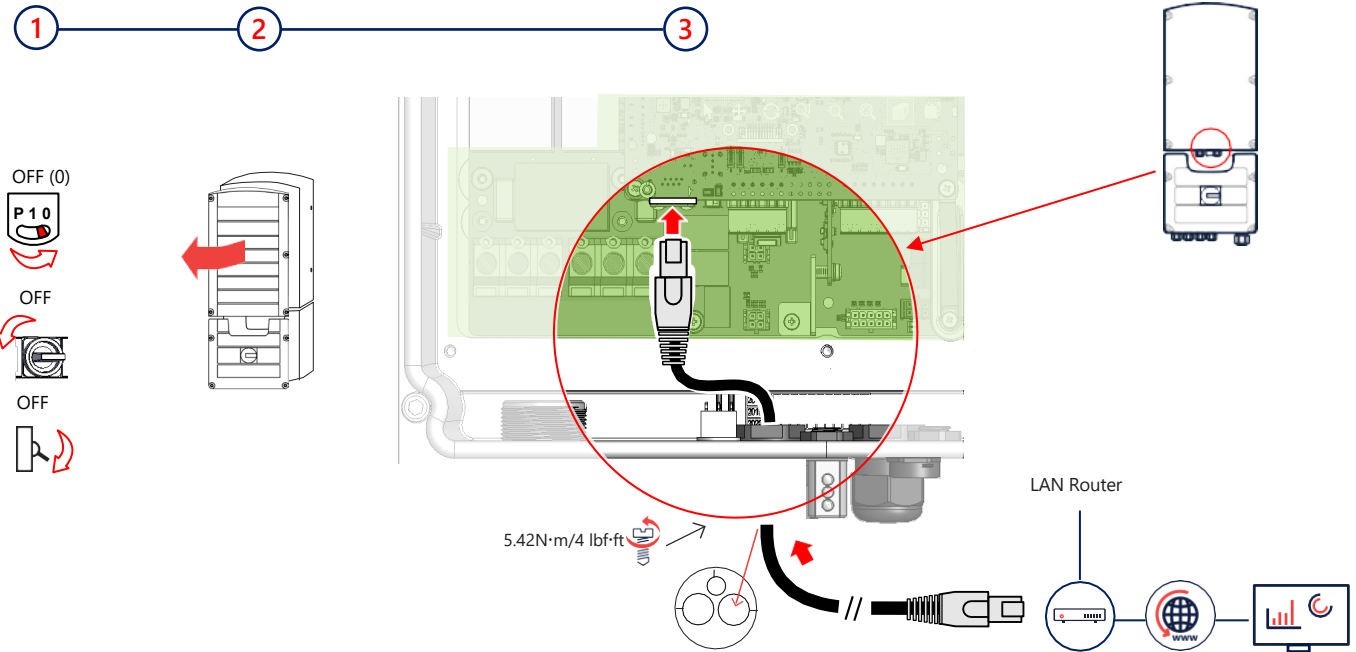
Scan QR code
for troubleshooting



Scan QR code for
communication options

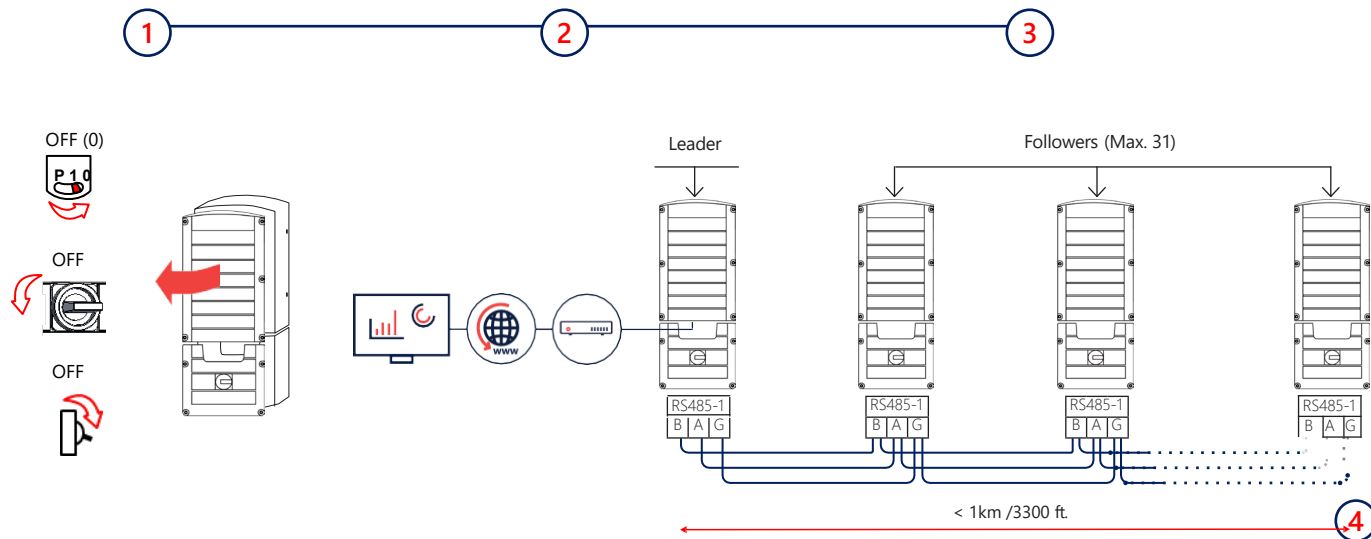
Establish Ethernet Communication

8



9

Establish RS485 Bus Connection

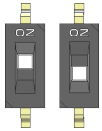


A minimum of 3-wire shielded twisted pair is required (a 4-wire cable is also acceptable).
The wire cross-section should be within the range of 0.2-1 mm².

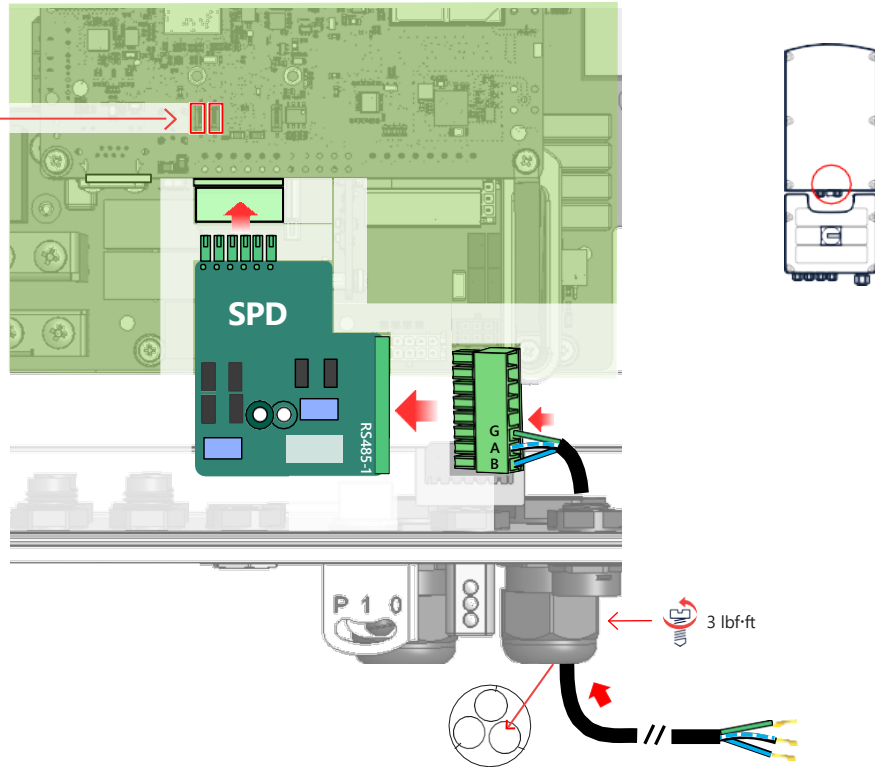
Establish RS485 Bus Connection

9

SW1

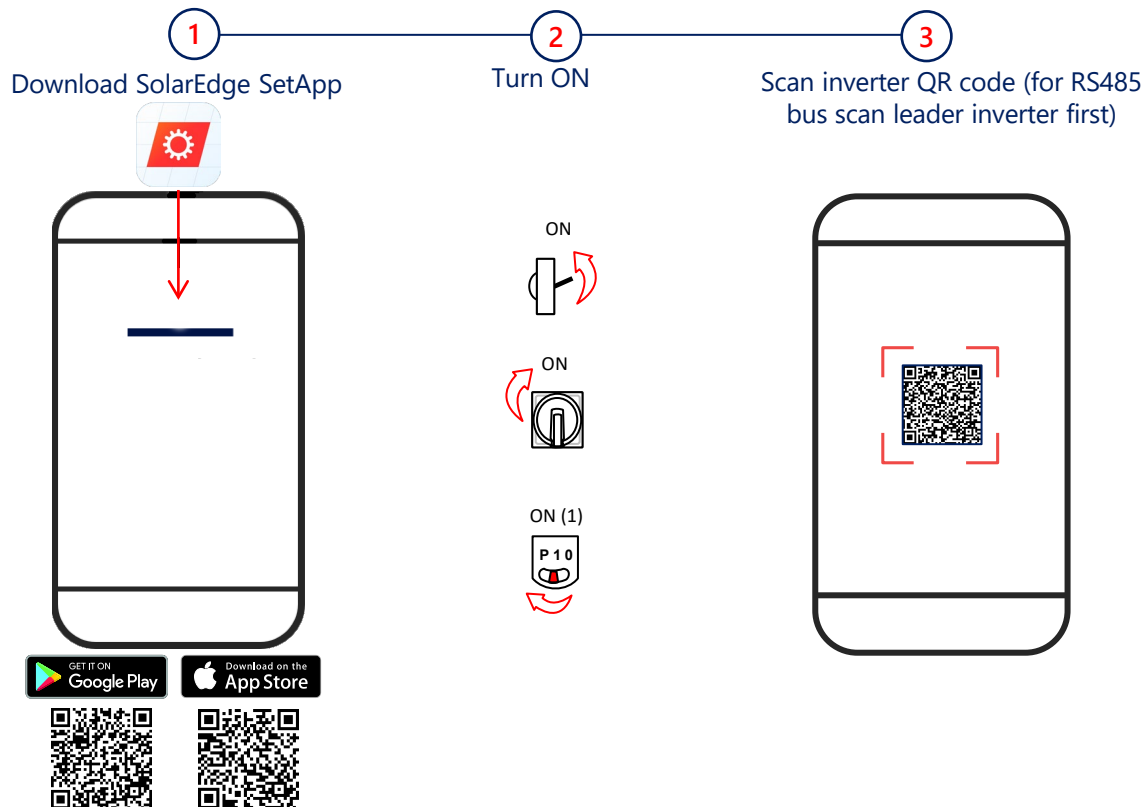


Move SW1 switch to ON (up)
to terminate first and last
inverters on RS485 bus.



10

Commission the Inverter

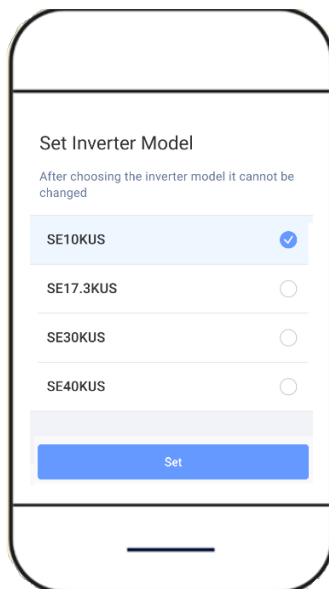


Commission the Inverter

10

1

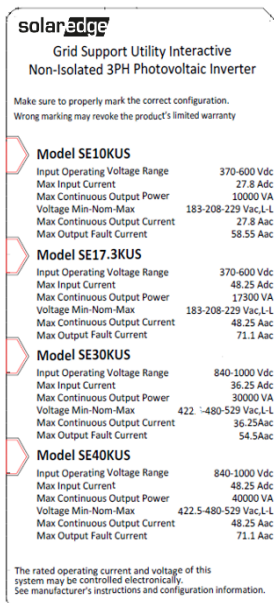
Set inverter model



After confirming the inverter model in SetApp, only the SolarEdge support team can modify the inverter model.

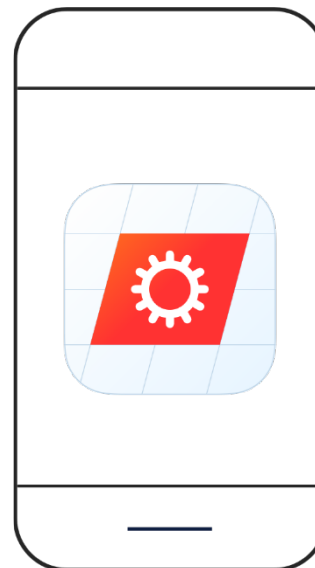
2

Peel off the tab next to the selected inverter model

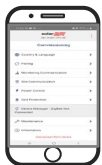


3

Start and follow SetApp



Commission the Leader Inverter



13:53

solar^{edge}
SN 7C17FC-8F

Commissioning

- 1 Country & Language >
- 2 Pairing >
- 3 Site Communication >
 - RS485-1 → Protocol → SolarEdge → SolarEdge Leader
 - RS485-1 → Follower Detect
- 4 Status >

Monitoring Communication >

Power Control >

Grid Protection >

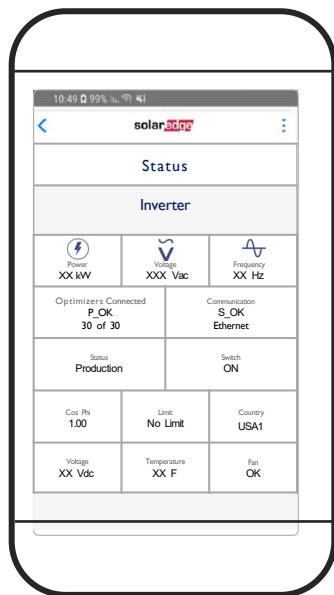
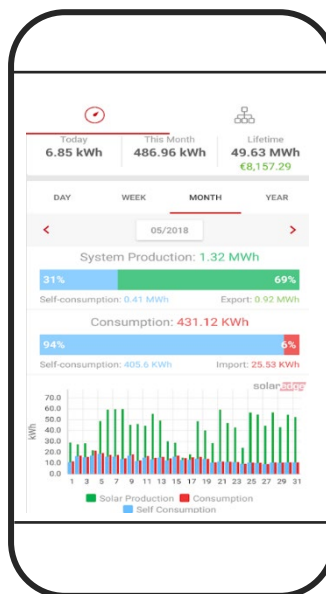
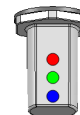
Device Manager - ZigBee Not Connected

Maintenance >

Information >

Central Setting >

III ○ <

SetApp Status
screenMonitoring
platformMain LEDs
Indications

14 Product Information and Support

For the latest updates, see:

Quick Installation Guide (online)



Datasheet



SolarEdge Customer Support





Support Contact Information

If you have technical problems concerning SolarEdge products, please contact us:
<https://www.solaredge.com/service/support>

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