

Commercial EPC Information Kit

Version history

- Version 1.5 – Dec 2017: updated links
- Version 1.4 – Aug. 2017:
 - Added Gen erators on Site section
 - Updated wiring details

Introduction

Thank you for choosing the SolarEdge DC optimized inverter solution!

This document explains all necessary steps to install, configure and commission a commercial SolarEdge system and will guide you through the process. A dedicated SolarEdge Project Manager can assist with any questions that may arise.



NOTE

This information kit contains links to all documents relevant for your SolarEdge installation. Ensure that you print out all referenced documents prior to installation or save them locally on an accessible device.

Pre-Installation

Training

SolarEdge offers technical training for commercial EPCs / Installers. To make sure that you have all the necessary knowledge prior to initiating your SolarEdge system installation, contact your SolarEdge Project Manager to schedule a technical training session.

We offer installation training tailored to both first-time and experienced SolarEdge installers. Training typically includes hands-on work with SolarEdge products, design guidelines, installation procedures, technical system background, troubleshooting, and more. It is also an opportunity to get to know your local SolarEdge staff and share your feedback with us.

Training videos and on-demand webinars are also available on the SolarEdge [website](#) and [YouTube channel](#).

Communication Planning

Before the on-site installation, it is essential to create a communication plan for the site. This plan should designate the communications between the SolarEdge inverters and the SolarEdge cloud-based monitoring platform, required for remote system monitoring. Connection is done via the internet or the cellular network.

SolarEdge supports multiple connection options. To find the right solution for your installation, please contact your Project Manager or refer to the relevant section on the [SolarEdge website](#), or see the [Communication Options Application Note](#).

Creating an Account in the SolarEdge Monitoring Platform

First time users should visit <https://monitoring.solaredge.com> to create a new user account in the monitoring platform. The signup process is quick and straightforward. It typically takes 24 hours for the account to be approved by SolarEdge. Detailed registration instructions can be found [here](#).

Site Preparation



NOTE

If your installation configuration conflicts with any of the specifications in the SolarEdge datasheets or manuals, contact your Project Manager to discuss possible solutions.

The following preparations should be made prior to installation:

Site Layout and Drawings

Site mapping should be done immediately after your installation is completed and before commissioning. Before mapping the site, you should create and upload your virtual site layout to your site in the SolarEdge monitoring platform. If your site layout does not yet appear in the monitoring system, please create it using one of the site layout options detailed in the [Mapping Guidelines](#).

Communication

If the site's communication plan requires a connection to a local cellular or internet network via GSM, Ethernet, ZigBee or Wi-Fi, consult with your site IT manager to verify the proper configuration of site network equipment (router, firewall etc.).

Note that the SolarEdge Control and Communication Gateway (CCG) requires an AC power source.

If the SolarEdge system will be connected to an existing Wi-Fi network, ensure that you have the network password before installation.

Grid

Contact your local grid operator or Electricity Company to obtain updated requirements for connecting your system to the grid.

Inverter Location

Before installation, inspect the site and determine the mounting location for the inverters. Make sure that the location meets the requirements as described in *Chapter 3* of the [SolarEdge Inverter Installation Guide](#).

Take into account the distance between the inverter and the closest optimizer in each string and make sure it is within the permitted range, as well as within the limitations of the chosen communication topology.

Generators on Site

A SolarEdge inverter may be installed in a site with a generator, however must not operate at the same time as the generator. Operating an inverter and a generator simultaneously will void the inverter warranty.

SolarEdge requires installing a physical or electronic interlock which will prevent the generator and inverter from operating simultaneously. Interlock procurement, installation, maintenance and support are the responsibility of the installer. Damage to the inverter due to incorrect interlock installation or use of an interlock that is incompatible with the SolarEdge system will render the [SolarEdge warranty](#) invalid.

Generators are not always visible. Enquire about the existence of any emergency / backup power systems during the site's planning phase. If there are backup power generators on site, please notify SolarEdge Support.

Installation

This section contains necessary information for installing and commissioning the SolarEdge system. Follow the instructions carefully and read the manuals linked to this document. They were created to assist you in the field and provide answers to common issues.

If you require further assistance or information, contact SolarEdge Support or your Post-Sale Project Manager.

Required Tools

Standard tools can be used during your SolarEdge system installation. Recommended equipment includes:

- Allen screwdriver for M6/M8 screw types
- Standard flat head screwdrivers set
- Voltage tester screwdriver
- Drilling motor and bits suitable for the surface on which the inverter will be installed
- Suitable hardware for attaching the inverter mounting bracket
- Suitable fasteners for securing slack optimizer cables
- M6 (1/4") or M8 (5/16") stainless bolts, nuts, and washers for attaching power optimizers to the racking
- MC4 Crimper
- Wire cutters
- Wire strippers
- Voltmeter
- Insulation tester (Megger)

You may also need the following:

For mapping (see the [Mapping Guidelines](#) for a detailed review of available options with the necessary equipment):

- Tablet, smartphone or laptop
- 2D Barcode Scanner

For Ethernet:

- CAT5/5E STP twisted pair Ethernet cable with RJ45 connector
- If using a CAT5/5E STP cable spool: RJ45 plugs and RJ45 crimper

For RS485:

- Min. 3-wire shielded twisted pair (a shielded Ethernet cable (Cat5/5E STP) may be used)
- Watchmaker precision screwdriver set

For CCG:

- DIN rails
- Drill and 4mm diameter bits
- Three twisted wires or four-wire twisted pair cable

Installation Steps

The following tables detail the installation steps and refer to relevant documents. Follow the steps below and use the checklist at the end of each section before continuing to the next section.

Please send progress photos along with project status updates to your SolarEdge Project Manager to support you during your installation.

Power Optimizer Installation - Reference	
Safety	Installation Manual - Chapter 2: Installing the Power Optimizers
Mounting and wiring	Installation Manual - Chapter 2: Installing the Power Optimizers
System mapping	Mapping Guidelines
Verifying proper connection	Installation Manual - Chapter 2: Installing the Power Optimizers
Power Optimizer Installation - Checklist	
1	All optimizers mounted according to clearance specifications <input type="checkbox"/>
2	All connectors properly closed <input type="checkbox"/>
3	Mapping completed <input type="checkbox"/>
4	Mapping documents uploaded to the monitoring platform <input type="checkbox"/>
5	All optimizers connected properly (string V check) <input type="checkbox"/>
Inverter Installation - Reference	
Package contents and interfaces	Installation Manual - Chapter 3: Installing the Inverter
Mounting the inverter	Installation Manual - Chapter 3: Installing the Inverter
Connecting the inverter	Installation Manual - Chapter 4: Connecting the AC and the Strings to the Inverter
Activating the system	Installation Manual - Chapter 5: Commissioning the Installation
Verifying proper operation	Installation Manual - Chapter 5: Commissioning the Installation
User interface	Installation Manual - Chapter 6: User Interface
Configuration	Installation Manual - Chapter 6: User Interface
Inverter Installation - Checklist	
1	Mounted according to clearance specifications <input type="checkbox"/>
2	AC connected <input type="checkbox"/>
3	DC (strings) connected <input type="checkbox"/>
4	Inverter activated using SD card <input type="checkbox"/>
5	Country configuration verified <input type="checkbox"/>
6	Vdc within range <input type="checkbox"/>
7	Vac within range <input type="checkbox"/>
8	All optimizers paired <input type="checkbox"/>
Power Control / Export Limitations – Reference	
Power control configuration	Power control configuration app note
Feed in limitation configuration	Feed-in limitation app note
Meter installation	Feed-in limitation app note
Communication – Reference	
Communication overview	Installation Manual - Chapter 7: Setting Up Communication
Communication options	Communication options app note
CCG	SolarEdge Gateway Installation Guide
Ethernet (LAN) connection	Installation Manual - Chapter 7: Setting Up Communication
RS485 connection	Installation Manual - Chapter 7: Setting Up Communication

Communication - Checklist	
1	Communication plan created <input type="checkbox"/>
2	Inverter bus connected <input type="checkbox"/>
3	All slaves detected <input type="checkbox"/>
4	Masters connected to the internet <input type="checkbox"/>
5	Connection to SolarEdge server verified (S_OK) <input type="checkbox"/>
Environmental Sensors - Reference	
Overview on using sensors	Environmental Sensors Overview
CCG installation	SolarEdge Control & Communication Gateway Installation Guide - Chapter 2: Installing the SolarEdge Gateway
Sensor installation	SolarEdge Control & Communication Gateway Installation Guide - Chapter 4: Connecting Environmental Sensors (Optional)
Sensor - Checklist	
1	CCG & sensor connection and location planned <input type="checkbox"/>
2	CCG installed and connect to bus (RS485) <input type="checkbox"/>
3	RS485 connection verified <input type="checkbox"/>
4	Sensors connected and configured <input type="checkbox"/>
5	Sensors appear in the monitoring platform <input type="checkbox"/>
6	Proper readings in the monitoring platform verified <input type="checkbox"/>
Troubleshooting - Reference	
Installation Manual	Installation Manual - Appendix A: Errors and Troubleshooting

SolarEdge Support

The SolarEdge Support team can assist you with any enquiry or technical issue before, during or after the installation. Before contacting SolarEdge Support, ensure that you have the following information:

- Inverter and power optimizer model numbers
- Serial numbers of the products in question
- The error code indicated on the inverter screen or on the SolarEdge monitoring platform, if applicable
- System configuration information, including the type and number of modules connected and the number and length of strings
- The communication method to the SolarEdge monitoring platform
- The inverter firmware version as it appears in the ID status screen on the inverter LCD

When you have the above information in hand, you are ready to proceed with your enquiry. To do so, log a case in the monitoring platform or contact your Project Manager directly. To get assistance from the Support team, you can [visit the online SolarEdge support portal](#), or call your local SolarEdge support representative, or email us at support@solaredge.com.