

# Application Note – Installing SolarEdge Home Hub three phase inverters and SolarEdge Home 48V Batteries in Commercial Sites

## Revision History

Version 1.0 (December 2023)

## Introduction

This document provides design principles for SolarEdge commercial PV sites consisting of SolarEdge Commercial inverter(s) and SolarEdge Home Hub inverter(s) - Three Phase, connected to SolarEdge Home Battery 48V.

### NOTE

For detailed installation and design guidelines for SolarEdge products described in this document, refer to [SolarEdge Knowledge Center](#).

## Supported Storage Applications

Maximize Self-Consumption (MSC)

[Time-of-Use \(TOU\)](#)

## Compatible Battery

Battery Model	Battery Part Number	Supported Firmware Versions
SolarEdge Home Battery 48V	BAT-05K48M0B	1.13 or later

## Compatible Inverters

Inverter Model	Inverter Part Number	Supported Firmware Versions
SolarEdge Home Hub - Three Phase	SExx-RWB48BFN4	4.20.xx
SolarEdge Three Phase Commercial Inverter SolarEdge Three Phase Inverters with Synergy Technology	SExxK-xxxxlxxxx SExxxK-xxxxlxxxx	4.20.5xx

## Home Hub Inverter - Design Considerations

Only a Home Hub Three Phase Inverter can be the Leader inverter on site.

The Leader Home Hub Three Phase Inverter MUST connect to the SolarEdge Monitoring Platform.

The Leader Home Hub Three Phase Inverter MUST connect to at least one battery module (see compatible battery table above).

All Follower SolarEdge Home Hub Three Phase inverters may be connected to a compatible battery(s).

All Home Hub Three Phase Inverters may be connected to PV strings with a single compatible power optimizer per PV module (1:1).

## Three Phase Commercial Inverter - Design Consideration

When adding a Home Hub Inverter to an existing commercial site, the commercial Leader inverter, at the existing site, MUST be configured as a Follower Inverter.

## Supported Interfaces and Control Features

Site Export Limitation Control

[SolarEdge Firefighter Gateway](#) (FFG)

[SolarEdge Commercial Gateway](#) (CCG) - when used for communication and connection of environmental sensors.

[Power Reduction Interface](#) (PRI) – for inverter power control

## Limitations and Exclusions

SolarEdge Smart Home Devices are not supported (such as: SolarEdge EV Charger, SolarEdge Hot Water Controller, SolarEdge Home Load Controller and Home Smart Switch).

Backup operation and SolarEdge Backup Interface (BUI) are not supported

## System Description

Function	Description
Leader Inverter	Only SolarEdge Home Hub Inverter – Three Phase, Part Numbers: SExxK-RWB48Bxxxx, SExxK-ILB48Bxxxx, SExxK-ILBZ48Bxxxx can be used as a Leader Inverter. The Leader inverter MUST connect to: A compatible battery SolarEdge Monitoring Platform A supported Export/Import meter (See Supported Meters below)
Follower Inverters	Up to 2 SolarEdge Home Hub Inverters – Three Phase, Part Numbers: SExxK-RWB48Bxxxx, SExxK-ILB48Bxxxx, SExxK-ILBZ48Bxxxx (See <a href="#">Datasheet</a> , <a href="#">Guide</a> ).  And a combination of the below commercial inverter options:  Up to 3 inverters in any combination of Three Phase Commercial Inverters, PN: SExxK-xxxxlxxxx (See <a href="#">Datasheet</a> , <a href="#">Guide</a> ), and Three Phase Inverters with Synergy Technology, PN: SExxxK-xxxxlxxxx (See <a href="#">Datasheet</a> , <a href="#">Guide</a> )
Batteries	The Leader inverter MUST connect to at least one compatible battery model: BAT-05K48 (See <a href="#">Datasheet</a> , <a href="#">Guide</a> ). Each Home Hub Inverter – Three Phase can connect to between 1-5 battery modules.  The Follower Commercial Inverters cannot connect to SolarEdge batteries.
Supported Meters	SE-MTR-3Y-400V-A or SE-WND-3Y400-MB-K2 (For UK, G100 compliant meter). Note – The SolarEdge Home Inline meter is not supported in this configuration
Maximum site power	Maximum site production is the sum of all inverters' nameplates
Maximum power when no PV power	When the PV strings are not producing power, the maximum discharged power depends on the total number of Home Hub Inverters – Three Phase and the number of connected battery modules. Each Home Hub Inverter – Three Phase can provide the following charge / discharge power: When a single battery module is connected to the Inverter, the power is (charge/discharge) 2625W / 4096W When two or more battery modules are connected to the Inverter, the power is (charge/discharge) 5000W / 5000W

The following figure shows a diagram with the maximum number of inverters supported by a storage commercial site.

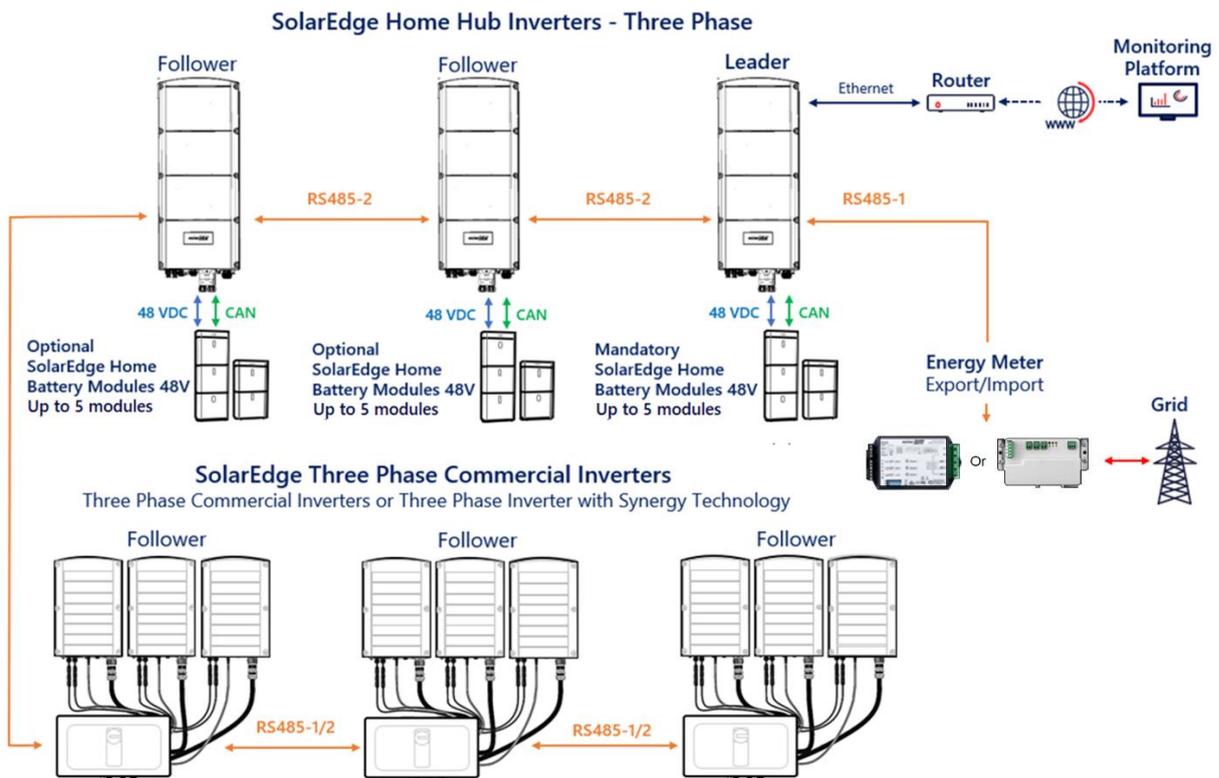


Diagram of a Storage commercial site with a maximum number of Inverters