# Sigenergy C&I Products and Solutions Overview

2025/02/07

SIGENERGY

# Overview of C&I Product Family

## Sigen PV Inverter

Sigen PV 50/60/80/100/110/125M1



**Available***
*125 kW ready in August*

## Sigen Hybrid Inverter

Sigen PV 50/60/80/100/110/125M1-HYA



**Available***
*125 kW ready in August*

## SigenStack

**SigenStack BC**
Battery Controller



**SigenStack BAT**
SigenStack BAT 12.0





**Available**

## SigenStor



**SigenStor EC**
Energy Controller

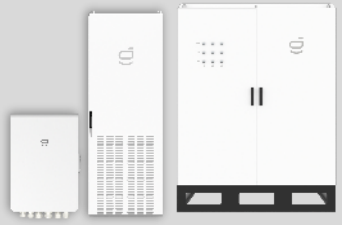
**SigenStor BAT**
SigenStor BAT 5.0 / 8.0

**Available**

## Sigen Energy Gateway

C60-2
C120-6
C180-9
C300-12
C600
C1200

**Available**



## Sigen Data Logger



Sigen Logger A1-01

**Ready in April 2025**

## Sigen Comm. Module



Sigen CommBridge

**Ready in April 2025**

## Sigen Comm. Module



Sigen CommMod

## Sigen Power Sensor





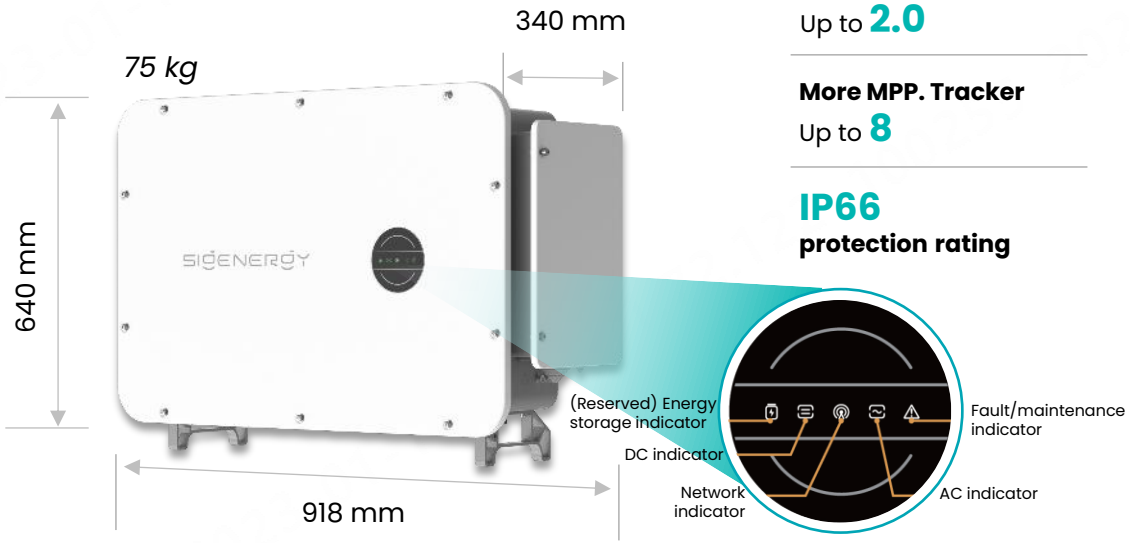
Sigen Sensor TP-CT120-DH
Sigen Sensor TP-CT300-DH
Sigen Sensor TP-CT600-DH
Sigen Sensor TPX-CH



## Sigen Cloud
## MySigen App

# Sigen PV Inverter, **Only for PV**

## Sigen PV Inverter



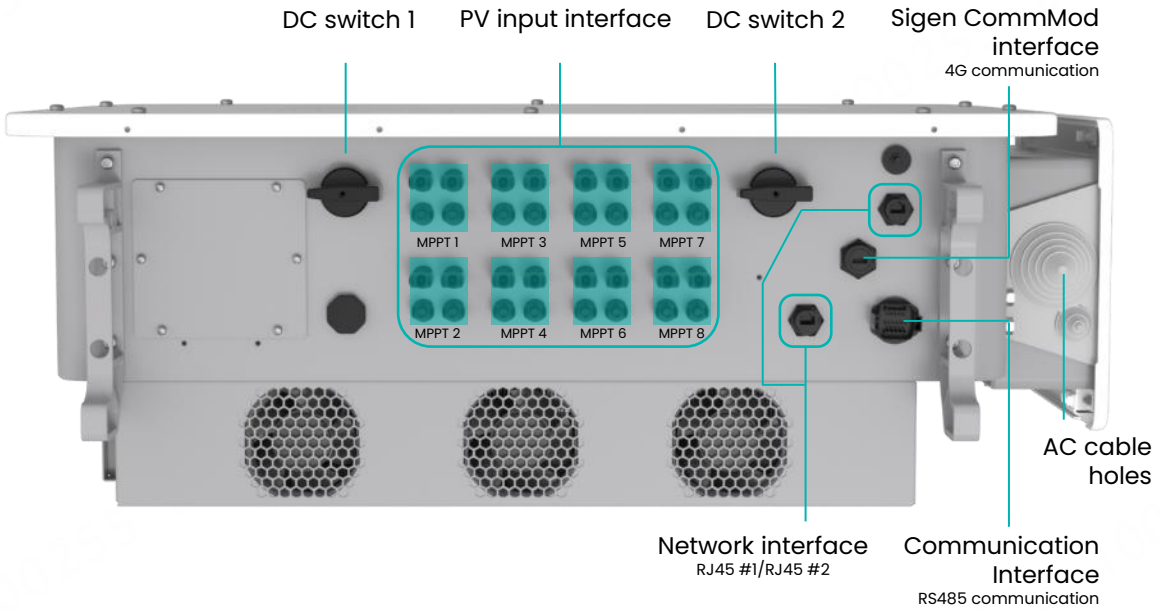

**Higher DC/AC ratio**
Up to **2.0**

**More MPP. Tracker**
Up to **8**

**IP66**
**protection rating**

| | | | | | | |
|---|---|---|---|---|---|---|
| Nominal output power (kW) | 50 | 60 | 80 | 100 | 110 | 125 |
| Max. output power (kW) | 55 | 66 | 88 | 110 | 121 | 137.5 |
| Max. input current per MPPT (A) | 32 | 32 | 32 | 32 | 32 | 40 |
| | 4 MPPT | 5 MPPT | 6 MPPT | 8 MPPT | | |

Sigen PV Inverter ports demonstration

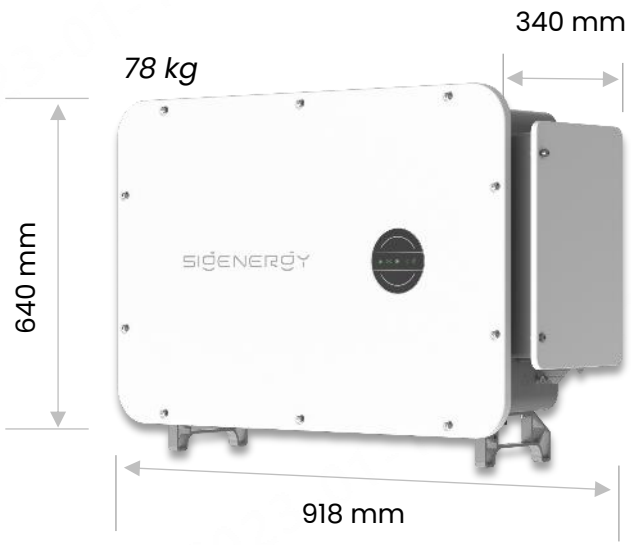



**Nominal output voltage:** 220/380V, 230/400V

**Communication:** WLAN / Fast Ethernet / RS485 / Sigen CommMod (4G/3G/2G)

# Sigen Hybrid Inverter, **Battery Ready for ESS**

## Sigen Hybrid Inverter




**Higher DC/AC ratio**
Up to **2.0**

**More MPP. Tracker**
Up to **8**

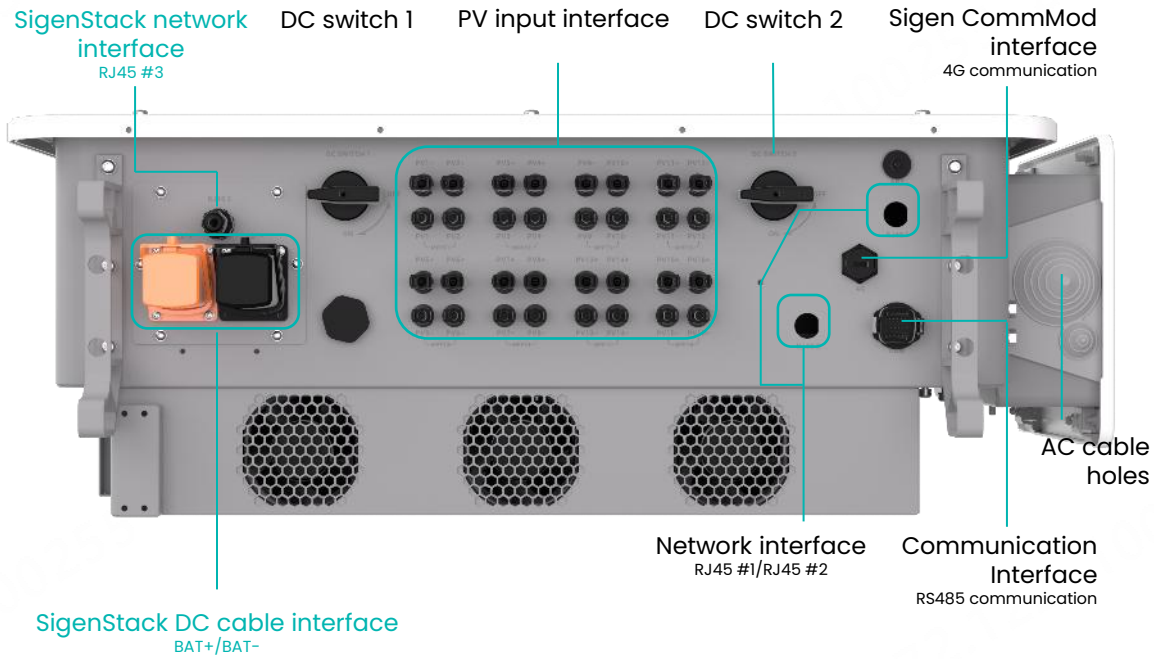
**IP66**
**protection rating**

**SigenStack**
**Compatible Battery**

**Max. operating current**
**180 A**

| | | | | | | |
|---|---|---|---|---|---|---|
| Nominal output power (kW) | 50 | 60 | 80 | 100 | 110 | 125 |
| Max. output power (kW) | 55 | 66 | 88 | 110 | 121 | 137.5 |
| Max. input current per MPPT (A) | 32 | 32 | 32 | 32 | 32 | 40 |
| | 4 MPPT | 5 MPPT | 6 MPPT | 8 MPPT | | |

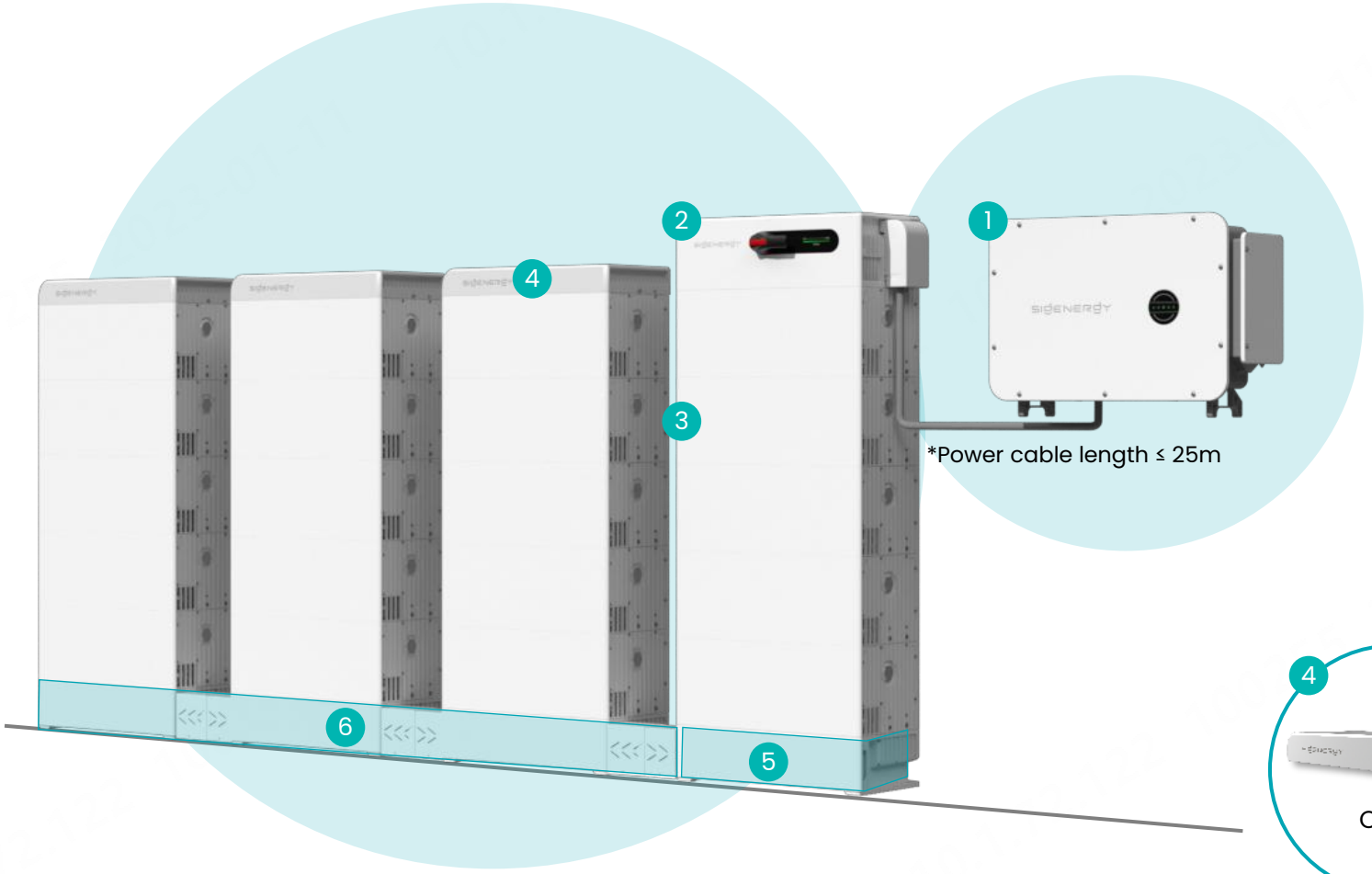
Sigen Hybrid Inverter ports demonstration




**Nominal output voltage:** 220/380V, 230/400V, **277/480V**

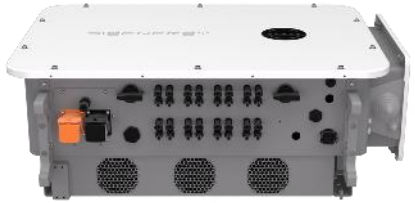
**Communication:** WLAN / Fast Ethernet / RS485 / Sigen CommMod (4G/3G/2G)

# SigenStack, Innovative Modular BESS Energy Solution




## 1 Sigen Hybrid Inverter

**50/60/80/100/110/125 kW**



## 2 Battery Controller

**180 A** Max. output current



## 3 Battery Module

Model: SigenStack BAT 12.0

**12.06 kWh** energy capacity per module

**4 ~ 21** modules connected per inverter



4 Cover

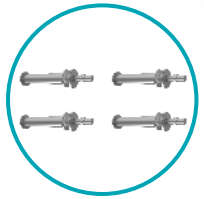


5 Base MAIN
**0.5C/1C**



6 Base SUB
**0.5C/1C**



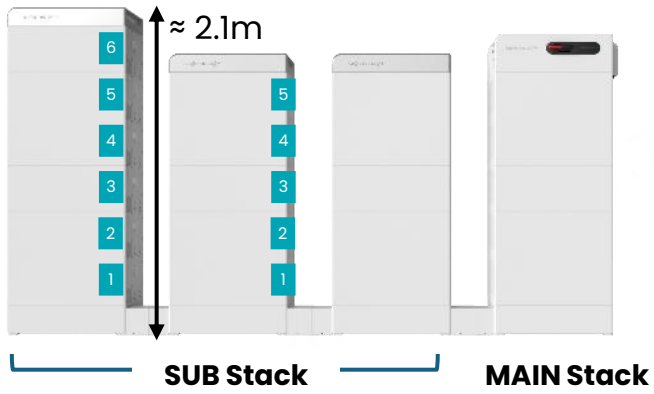


Handles
**1 inverter with 1 set**
*recommended*

# Basic Principles of Configuration

## Limitation of module number and height

**4~21** modules per system




≤5 modules

For security and ease of O&M

6/7 modules

Should Install with additional fixed structures

## What is Battery Controller ?



Models:

1. SigenStack BC M2-0.5C
2. SigenStack BC M2-1C-BST
3. SigenStack BC M2-0.5C-BST

M2: Support 1250V input Voltage

can connect more batteries when M2 inverter is configured

BST: With DC-DC Boost Module

Use it when number of battery module ≤ 19

Use it for PV + ESS (DC coupling) projects

## Type of SigenStack Base



SigenStack Base SUB-0.5C

SigenStack Base SUB-1C



SigenStack Base MAIN-0.5C

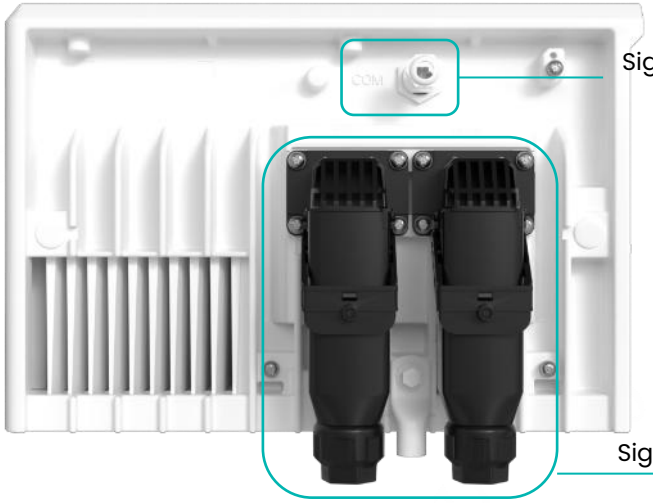
SigenStack Base MAIN-1C



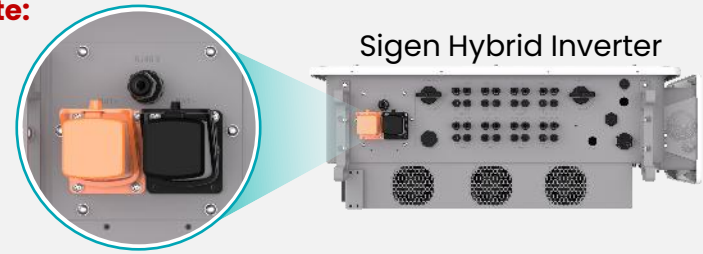
SigenStack Base 4S-0.5C

# SigenStack BC & Base Ports Demonstration

## SigenStack BC ports demonstration




**Note:**

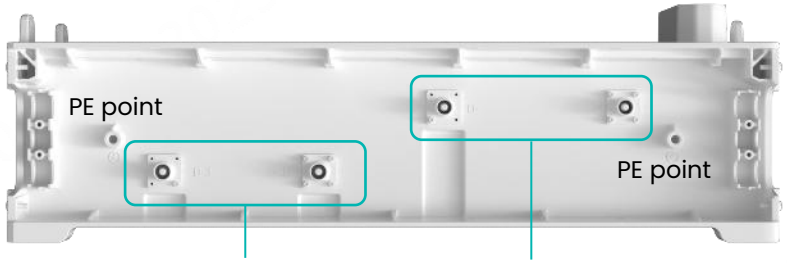



*The *PE cable, Power cable and Signal cable between the inverter and the battery controller* need to be prepared by installer

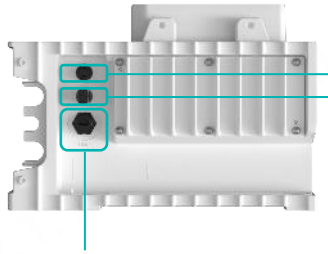
## SigenStack Bases ports demonstration

### Base SUB **0.5C/1C**

**Front view**

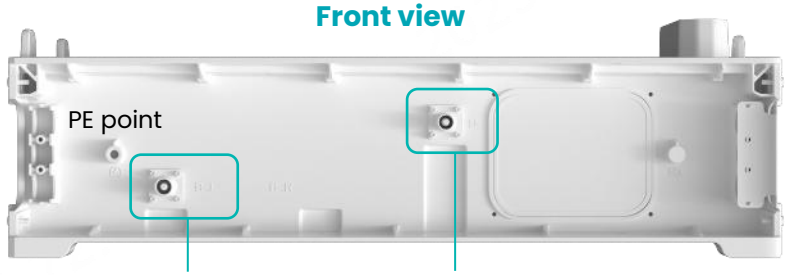



**Right view**

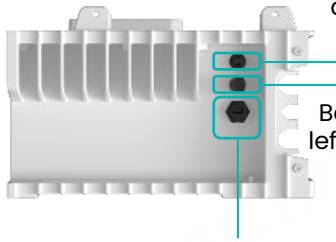



### Base Main **0.5C/1C**

**Front view**

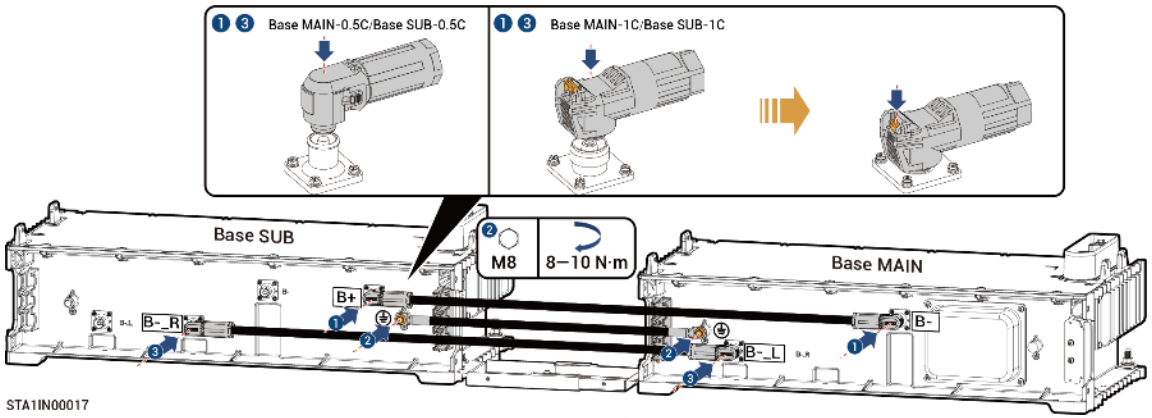



**Left view**



# Cable Connection between SUB and Main Bases

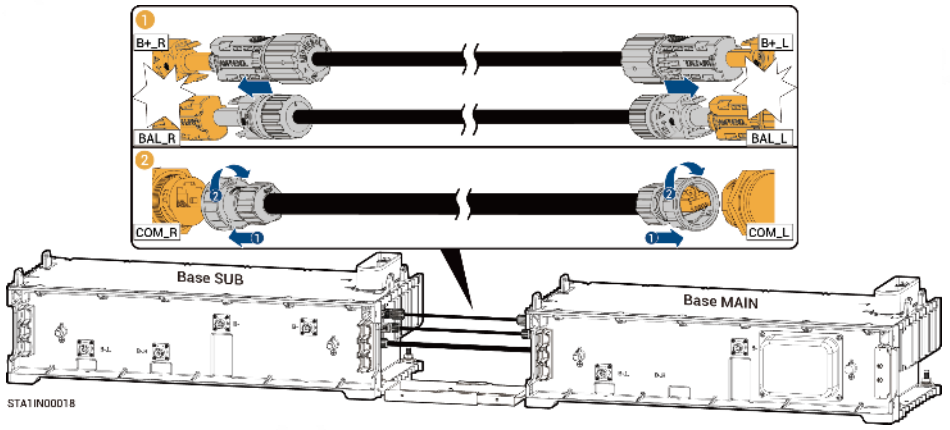
## Power Cable and PE Cable Connection




| Connection between Base SUB and Base SUB | |
|---|---|
| **Base SUB** | **Base SUB** |
| B+ | B- |
| ⏚ | ⏚ |
| B-_R | B-_L |

| Connection between Base SUB and Base MAIN | |
|---|---|
| **Base SUB** | **Base MAIN** |
| B+ | B- |
| ⏚ | ⏚ |
| B-_R | B-_L |

## Aux. Power Supply, Balancing & Comm. Cables Connection



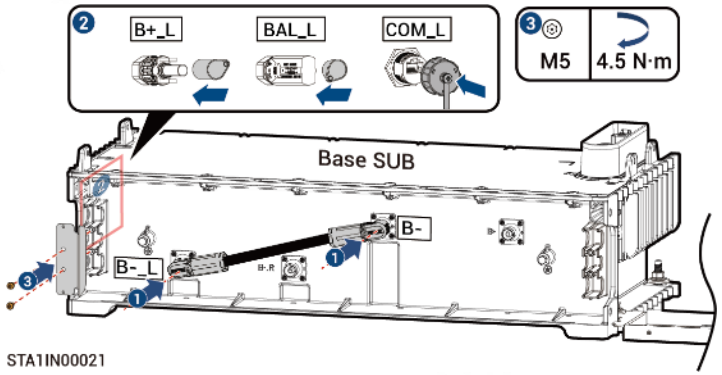

| Connection between Base SUB and Base SUB | |
|---|---|
| **Base SUB** | **Base SUB** |
| B+_R | B+_L |
| BAL_R | BAL_L |
| COM_R | COM_L |

| Connection between Base SUB and Base MAIN | |
|---|---|
| **Base SUB** | **Base MAIN** |
| B+_R | B+_L |
| BAL_R | BAL_L |
| COM_R | COM_L |

Note: Cables are supplied with the packing box.

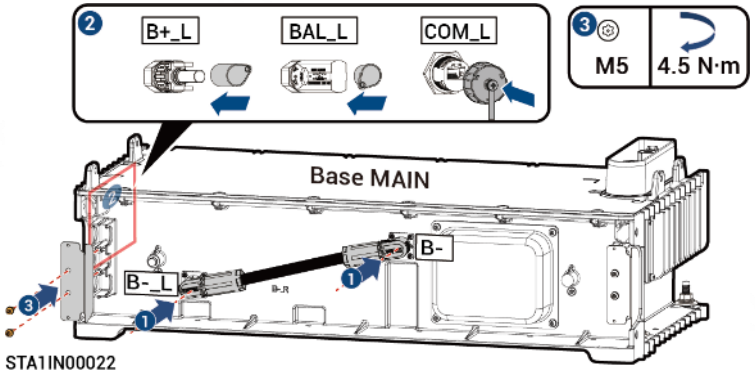
# Jumper Cable Connection

## Cable Connection for the leftmost SUB base



STA1IN00021

## Cable Connection with Only the MAIN Base Used



STA1IN00022

1. Please use **Jumper Cable** to connect **B- and B-_L**
2. Please use **terminal plugs** to seal **B+_L, BAL_L and COM_L**

Note: Cables and terminal plugs are supplied with the packing box.

# 0.5C Scenario, System Scale - (96kWh ~ 145kWh)

0.5C Scenario 1 | 96kWh ~ 145kWh

1



× **1** pcs

SigenStack BC M2-0.5C-BST

4



× **1** pcs

SigenStack Base MAIN-0.5C
(the cables, cable protection covers and terminal plugs are **included**)

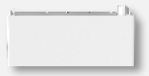
4



× **1** pcs

SigenStack Base SUB-0.5C
(the cables, cable protection covers and terminal plugs are **included**)

2



× **8~12** pcs

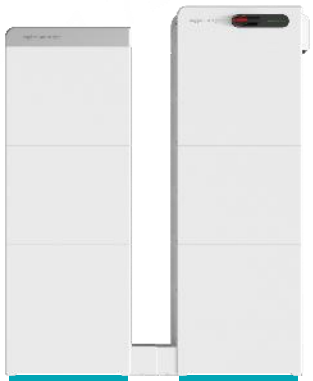
SigenStack BAT 12.0

3



× **1** pcs

SigenStack Cover



SUB Stack MAIN Stack

## Recommended System Configuration

| Capacity (kWh) | Packs | Packs of SUB Stack | Packs of MAIN Stack | Cover | Recommended inverters |
|---|---|---|---|---|---|
| 96 | 8 | 4 | 4 | 1 | Sigen PV 50M1-HYA |
| 109 | 9 | 5 | 4 | 1 | Sigen PV 50M1-HYA |
| 121 | 10 | 5 | 5 | 1 | Sigen PV 60M1-HYA |
| 133 | 11 | 6 | 5 | 1 | Sigen PV 80M1-HYA |
| 145 | 12 | 6 | 6 | 1 | Sigen PV 80M1-HYA |

# 0.5C Scenario, System Scale - (157kWh ~ 217kWh)

0.5C Scenario 2 | 157kWh ~ 217kWh

1



× 1 pcs

SigenStack BC M2-0.5C-BST

4



× 1 pcs

SigenStack Base MAIN-0.5C
(the cables, cable protection covers and terminal plugs are **included**)

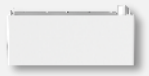
4



× 2 pcs

SigenStack Base SUB-0.5C
(the cables, cable protection covers and terminal plugs are **included**)

2



×**13~18** pcs

SigenStack BAT 12.0

3



× **2** pcs

SigenStack Cover




## Recommended System Configuration

| Capacity (kWh) | Packs | Packs of SUB Stack 2 | Packs of SUB Stack 1 | Packs of MAIN Stack | Cover | Recommended inverters |
|---|---|---|---|---|---|---|
| 157 | 13 | 5 | 4 | 4 | 2 | Sigen PV 80M1-HYA |
| 169 | 14 | 5 | 5 | 4 | 2 | Sigen PV 80M1-HYA |
| 181 | 15 | 5 | 5 | 5 | 2 | Sigen PV 100M1-HYA |
| 193 | 16 | 6 | 5 | 5 | 2 | Sigen PV 100M1-HYA |
| 205 | 17 | 6 | 6 | 5 | 2 | Sigen PV 100M1-HYA |
| 217 | 18 | 6 | 6 | 6 | 2 | Sigen PV 110M1-HYA |

# 0.5C Scenario, System Scale - (229kWh)

0.5C Scenario 3 | 229kWh

1  × **1** pcs

SigenStack BC M2-0.5C-BST

4-1*  × **1** pcs

SigenStack Base 4S-0.5C
(the cables, cable protection covers and terminal plugs are **pre-installed**)

2  × **19** pcs

SigenStack BAT 12.0

4-2*  × **1** pcs

SigenStack Base MAIN-0.5C
(the cables, cable protection covers and terminal plugs are **included**)

4-2*  × **3** pcs

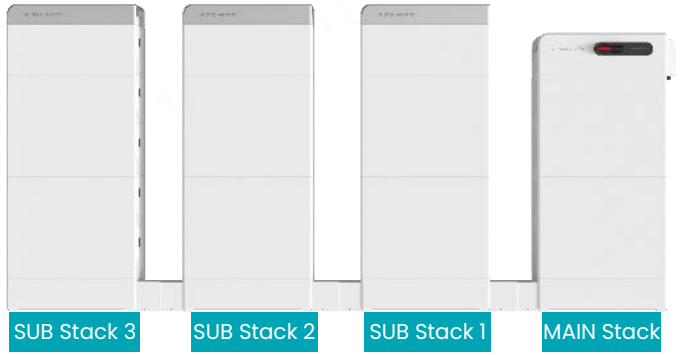
SigenStack Base SUB-0.5C
(the cables, cable protection covers and terminal plugs are **included**)

3  × **3** pcs

SigenStack Cover

## Recommended System Configuration

| Capacity (kWh) | Packs | Packs of SUB Stack 3 | Packs of SUB Stack 2 | Packs of SUB Stack 1 | Packs of MAIN Stack | Cover | Recommended inverters |
|---|---|---|---|---|---|---|---|
| 229 | 19 | 5 | 5 | 5 | 4 | 3 | Sigen PV 110M1-HYA |




*Note: Please choose either Option 4-1 or 4-2. Option 4-1 is more suitable for the standard design of large-scale projects, while Option 4-2 is more appropriate for stockpiling in small-scale C&I businesses

# 0.5C Scenario, System Scale - (241kWh ~ 253kWh)

## 0.5C Scenario 3 — 229kWh

1 × **1** pcs
SigenStack BC M2-0.5C*

4-1** × **1** pcs
SigenStack Base 4S-0.5C
(the cables, cable protection cover and terminal plugs are **pre-installed**)

2 × **20/21** pcs
SigenStack BAT 12.0

4-2** × **1** pcs
SigenStack Base MAIN-0.5C
(the cables, cable protection cover and terminal plugs are **included**)

4-2** × **3** pcs
SigenStack Base SUB-0.5C
(the cables, cable protection cover and terminal plugs are **included**)

3 × **3** pcs
SigenStack Cover

## Recommended System Configuration

| Capacity (kWh) | Packs | Packs of SUB Stack 3 | Packs of SUB Stack 2 | Packs of SUB Stack 1 | Packs of MAIN Stack | Cover | Recommended inverters |
|---|---|---|---|---|---|---|---|
| 241 | 20 | 5 | 5 | 5 | 5 | 3 | Sigen PV 125M1-HYA |
| 253 | 21 | 6 | 5 | 5 | 5 | 3 | Sigen PV 125M1-HYA |

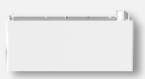



*Note: For PV+ESS DC coupling system, Battery controller should always use the model with "BST" (SigenStack BC M2-0.5C-BST)
**Note: Please choose either Option 4-1 or 4-2. Option 4-1 is more suitable for the standard design of large-scale projects, while Option 4-2 is more appropriate for stockpiling in small-scale C&I businesses

# 1C Scenario, System Scale - (48kWh ~ 72kWh)

1C Scenario 1 | 48kWh ~ 72kWh

1  × 1 pcs
SigenStack BC M2-1C-BST

2  × 4~6 pcs
SigenStack BAT 12.0

3  × 1 pcs
SigenStack Base MAIN-1C
(the cables, cable protection covers and terminal plugs are **included**)


MAIN Stack

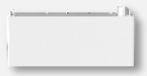
## Recommended System Configuration

| Capacity (kWh) | Packs | Packs of MAIN Stack | Cover | Recommended inverters |
|---|---|---|---|---|
| 48 | 4 | 4 | / | Sigen PV 50M1-HYA |
| 60 | 5 | 5 | / | Sigen PV 60M1-HYA |
| 72 | 6 | 6 | / | Sigen PV 80M1-HYA |

# 1C Scenario, System Scale - (84kWh ~ 121kWh)

1C Scenario 2 | 84kWh ~ 121kWh

1  × 1 pcs
SigenStack BC M2-1C-BST

2  × 7~10 pcs
SigenStack BAT 12.0

3  × 1 pcs
SigenStack Cover

4  × 1 pcs
SigenStack Base MAIN-1C
(the cables, cable protection covers and terminal plugs are **included**)

4  × 1 pcs
SigenStack Base SUB-1C
(the cables, cable protection covers and terminal plugs are **included**)

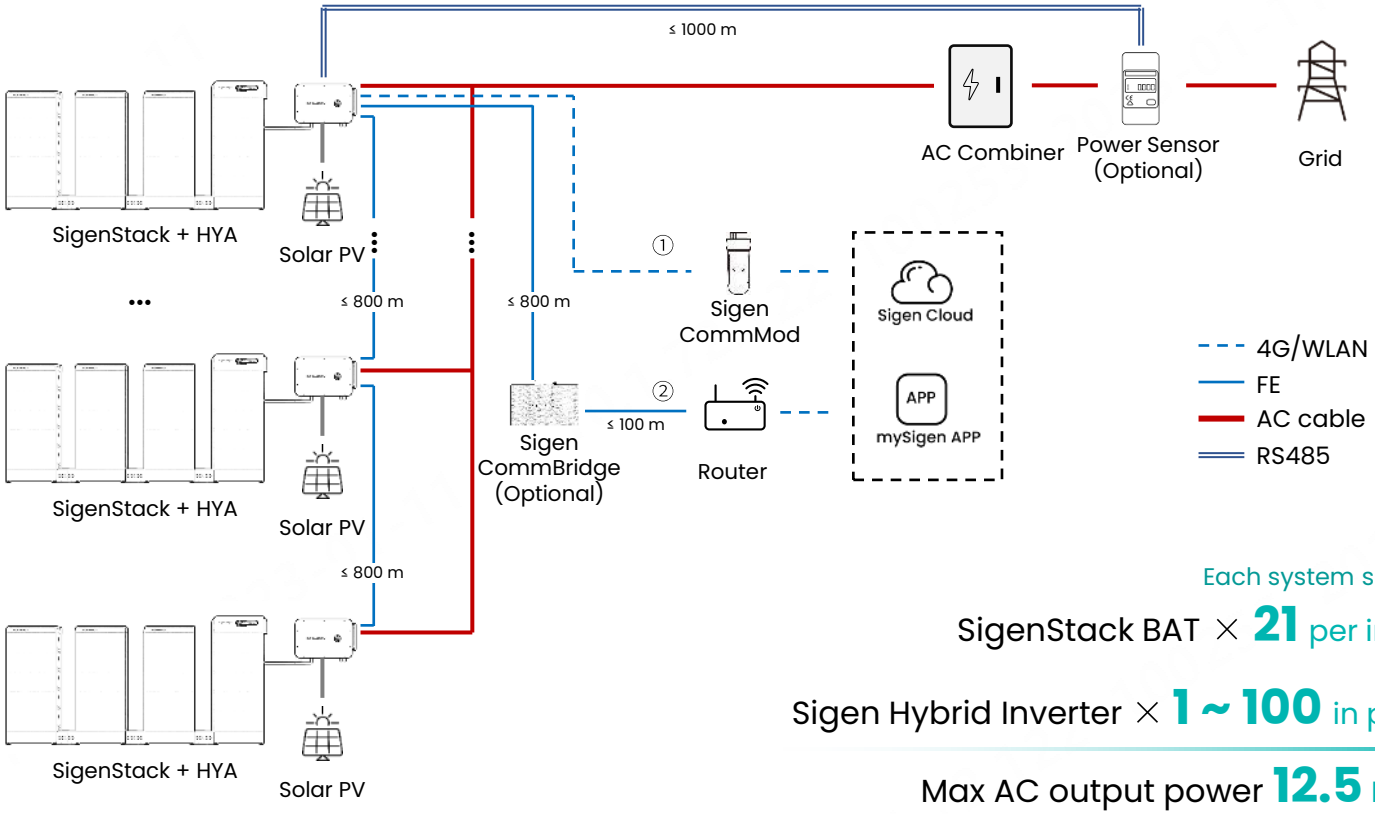

SUB Stack MAIN Stack

## Recommended System Configuration

| Capacity (kWh) | Packs | Packs of SUB Stack | Packs of MAIN Stack | Cover | Recommended inverters |
|---|---|---|---|---|---|
| 84 | 7 | 4 | 3 | 1 | Sigen PV 80M1-HYA |
| 96 | 8 | 4 | 4 | 1 | Sigen PV 100M1-HYA |
| 109 | 9 | 5 | 4 | 1 | Sigen PV 110M1-HYA |
| 121 | 10 | 5 | 5 | 1 | Sigen PV 125M1-HYA |

# SigenStack on-grid solution, large-scale PV+BESS

## Any Sigen Hybrid Inverter can be a master unit – less than or equal to 100 inverters




*Communication distance:*

*RS485 cables ≤ 1000 m*

*FE cables ≤ 800 m*

**For communication with third party devices, FE ≤ 100 m*

Each system supports :

SigenStack BAT × **21** per inverter

Sigen Hybrid Inverter × **1 ~ 100** in parallel

Max AC output power **12.5** MWac*

Max. ESS capacity **25** MWh*

**Take Sigen Hybrid Inverter 125 kW & SigenStack BAT 12.0 as an example*



### Sigen Hybrid Inverter

Sigen PV 50/60/80/100/110/125M1-HYA



### SigenStack

SigenStack BC M2-0.5C
SigenStack BC M2-0.5C-BST
SigenStack BC M2-1C-BST
SigenStack BAT 12.0



### Sigen Communication Module

Sigen CommBridge



### Sigen Communication Module

Sigen CommMod



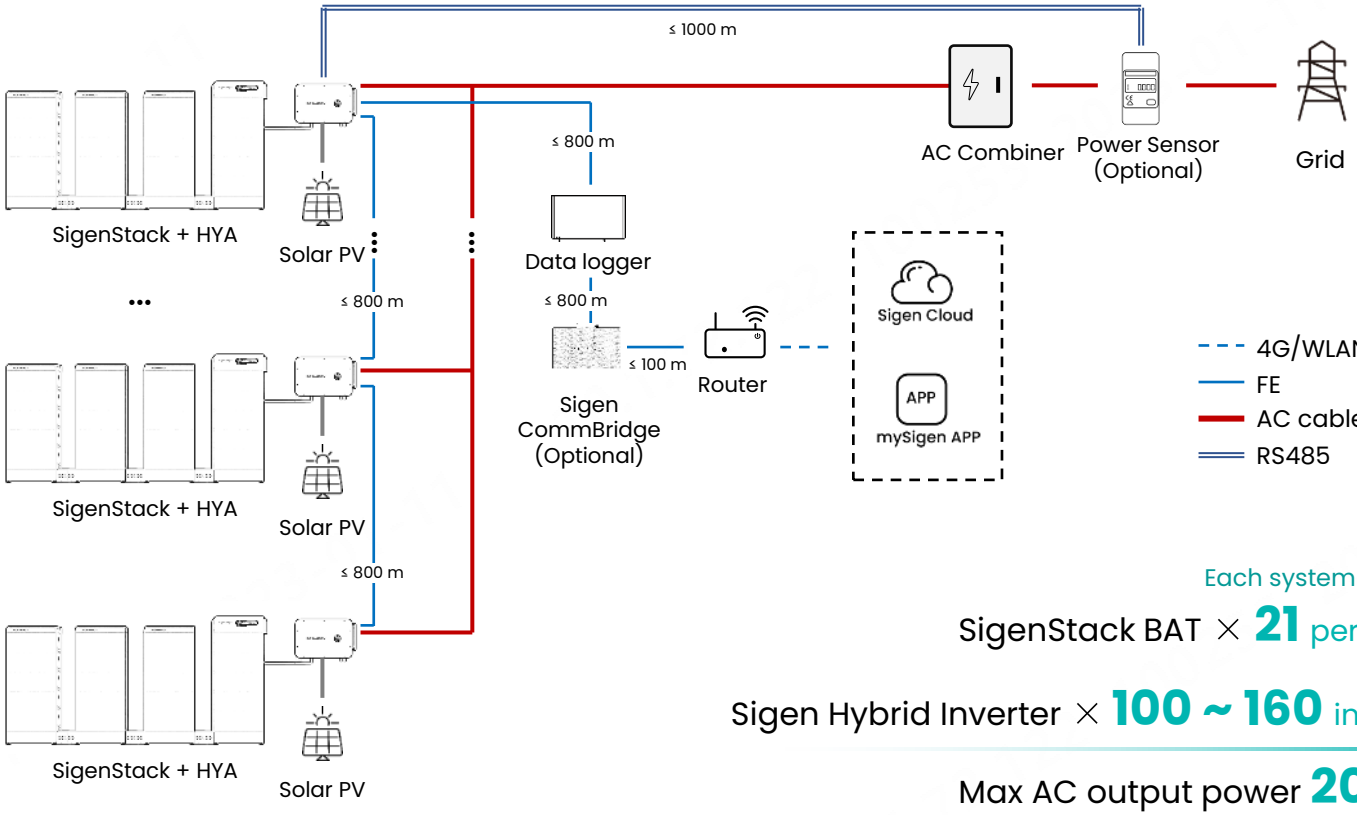


### Sigen Power Sensor

Sigen Sensor TP-CT120-DH
Sigen Sensor TP-CT300-DH
Sigen Sensor TP-CT600-DH
Sigen Sensor TPX-CH

# SigenStack on-grid solution, expand with data logger

## Sigen Data Logger is a master unit – less than or equal to 160 inverters




*Communication distance:*

*RS485 cables ≤ 1000 m*

*FE cables ≤ 800 m*

**For communication with third party devices, FE ≤ 100 m*

Each system supports :

SigenStack BAT × **21** per inverter

Sigen Hybrid Inverter × **100 ~ 160** in parallel

Max AC output power **20** Mwac*

Max. ESS capacity **40** MWh*

**Take Sigen Hybrid Inverter 125 kW & SigenStack BAT 12.0 as an example*



### Sigen Hybrid Inverter

Sigen PV 50/60/80/100/110/125M1-HYA



### SigenStack

SigenStack BC M2-0.5C
SigenStack BC M2-0.5C-BST
SigenStack BC M2-1C-BST
SigenStack BAT 12.0



### Sigen Communication Module

Sigen CommBridge



### Sigen Data Logger

Sigen Logger A1-01

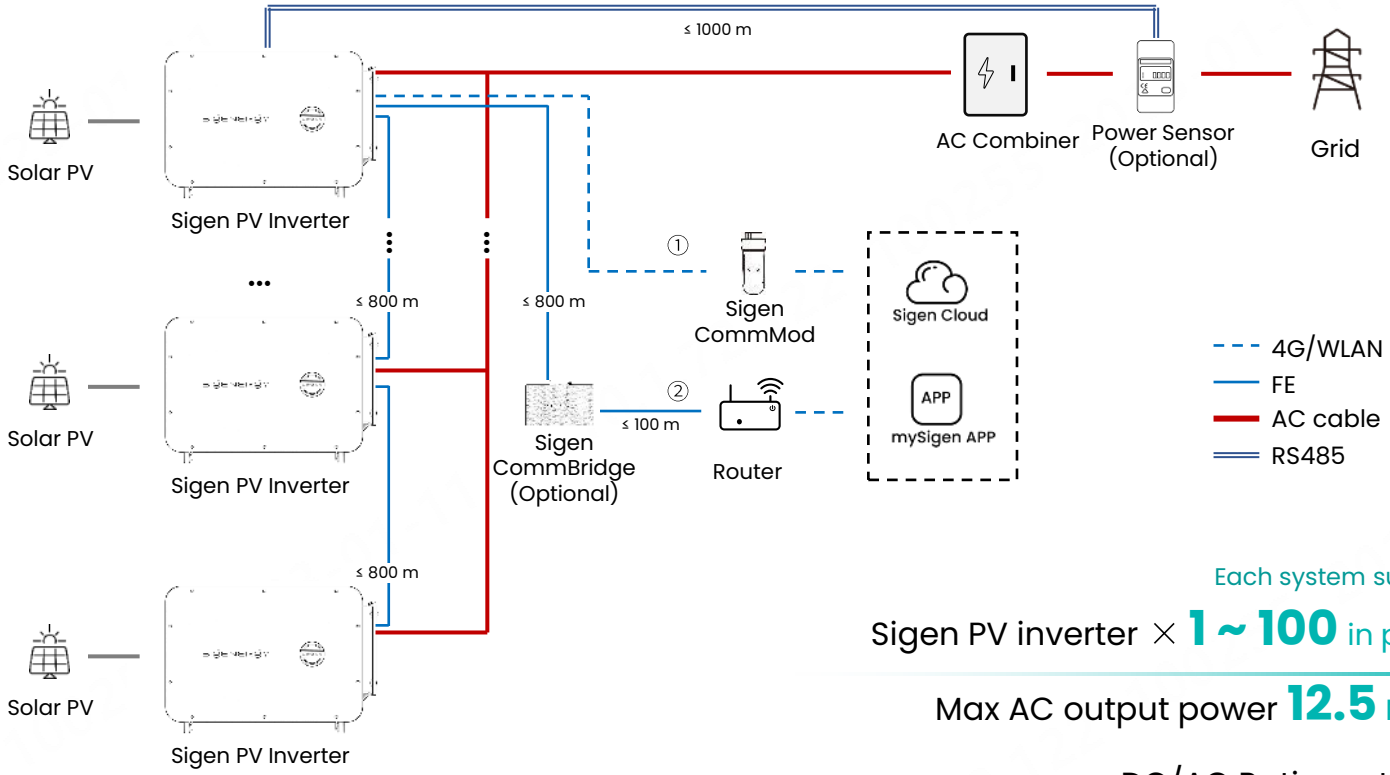


### Sigen Power Sensor

Sigen Sensor TPX-CH

# Sigen PV inverter, large-scale solar PV

## Any Sigen PV Inverter can be a master unit – less than or equal to 100 inverters




Each system supports :

Sigen PV inverter × **1 ~ 100** in parallel

Max AC output power **12.5** MWac*

DC/AC Ratio up to **2.0**

**Take Sigen PV Inverter 125 kW as an example*

*Communication distance:*

*RS485 cables ≤ 1000 m*

*FE cables ≤ 800 m*

**For communication with third party devices, FE ≤ 100 m*



### Sigen PV Inverter

Sigen PV 50/60/80/100/110/125M1



### Sigen Communication Module

Sigen CommBridge



### Sigen Communication Module

Sigen CommMod



### Sigen Power Sensor

Sigen Sensor TP-CT120-DH

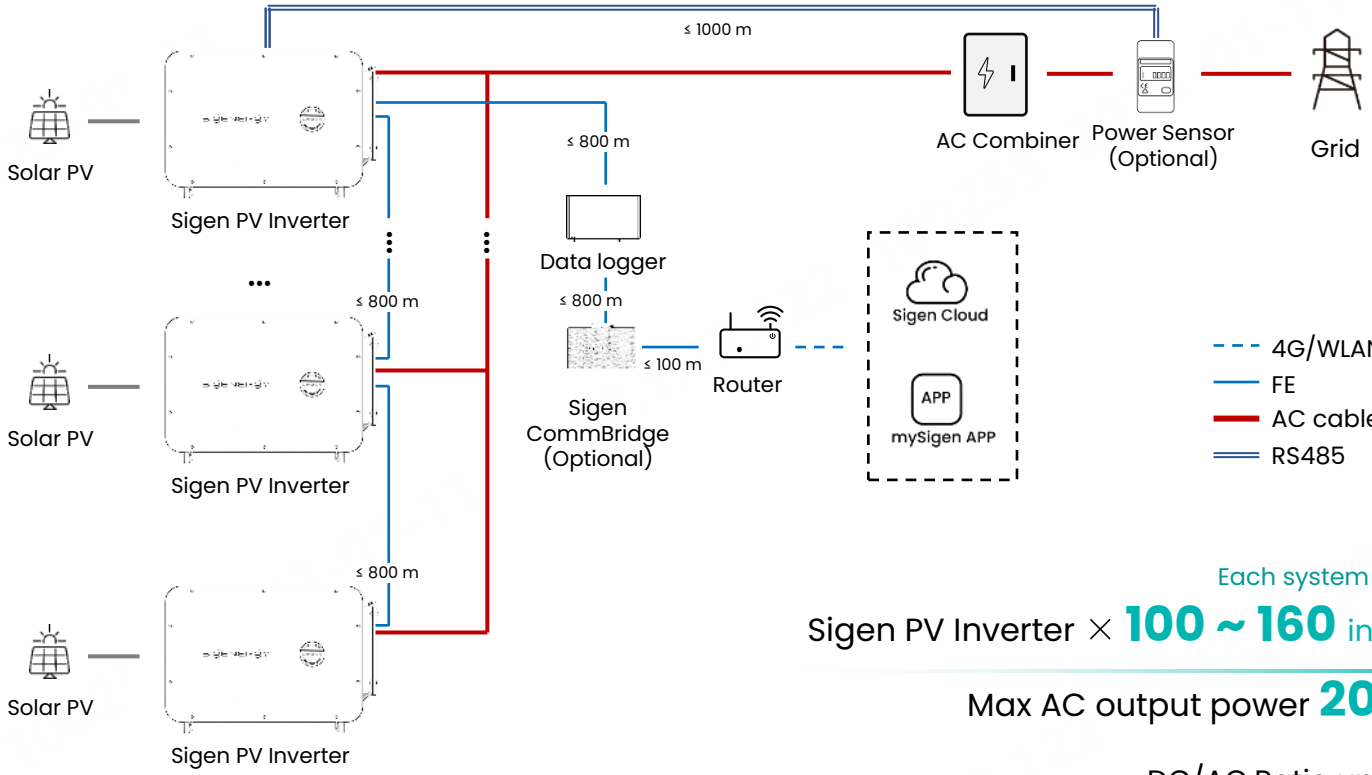
Sigen Sensor TP-CT300-DH

Sigen Sensor TP-CT600-DH

Sigen Sensor TPX-CH

# Sigen PV inverter, expand with data logger

## Sigen Data Logger is a master unit – less than or equal to 160 inverters




*Communication distance:*

*RS485 cables ≤ 1000 m*

*FE cables ≤ 800 m*

**For communication with third party devices, FE ≤ 100 m*

Each system supports :

Sigen PV Inverter × **100 ~ 160** in parallel

Max AC output power **20** MWac*

DC/AC Ratio up to **2.0**

**Take Sigen PV Inverter 125 kW as an example*



### Sigen PV Inverter

Sigen PV 50/60/80/100/110/125M1



### Sigen Communication Module

Sigen CommBridge



### Sigen Data Logger

Sigen Logger A1-01



### Sigen Power Sensor

Sigen Sensor TPX-CH

# Thank you.

Enjoy Green Energy

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