SUNGROW
Clean power for all

THE NEW COMMERCIAL EXTREME SERIES

NOW COMPATIBLE WITH OPTIMIZERS



Module-level Optimization

Enhances PV modules' performance, ensuring maximum energy output

Highest Safety Standards

Ensures module-level rapid shutdown, complying with NEC 2017 & 2020 standards

Seamless Commissioning

Provides real-time monitoring via iSolarCloud for plant management

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Get the full picture

Compatibility Overview

Single Inverter Installations:

- SG25-50CX-P2 V21 + SP600S + WiNet-S2 or Logger1000A-EU/COM100D-EU
- SG125CX-P2 V21 + SP600S + WiNet-S2 or Logger1000A-EU/COM100D-EU

Multiple Inverter Installations:

- SG25-50CX-P2 V21 + SP600S + WiNet -S2 (if no power control needed)
- SG125CX-P2 V21 + SP600S + WiNet-S2 (if no power control needed)
- SG25-50CX-P2 V21 + SP600S + Logger1000A-EU/COM100D-EU
- SG125CX-P2 V21 + SP600S + Logger1000A-EU/COM100D-EU

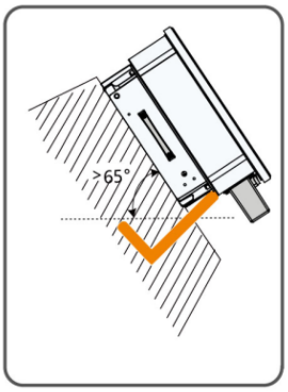
Please note that in multi-inverter installations where only the WiNet-S2 is used, power control functionality is not available. Therefore, for larger systems with more than one inverter, it is recommended to use the Logger1000A-EU/COM100D-EU for effective power control.

Installation Overview: What you need to know

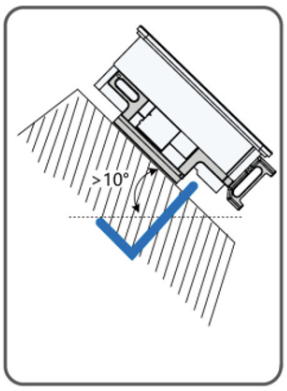
Mechanical Installation

1. Inverter Installation:

- Avoid direct sunlight and exposure to rain/snow; ensure proper ventilation
- SG25-50CX-P2: Install at an angle greater than 65°
- SG125CX-P2: Maintain a 10° or greater angle



Installation Angle Requirements for SG25-50CX-P2



Installation Angle Requirements for SG125CX-P2

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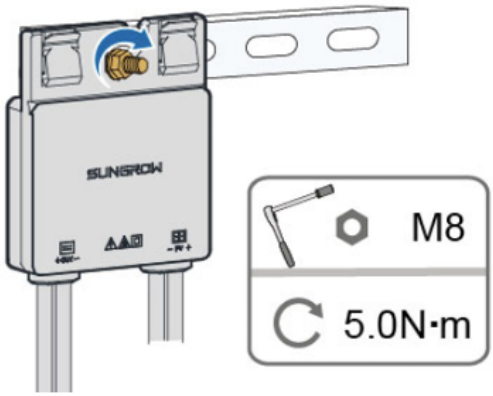
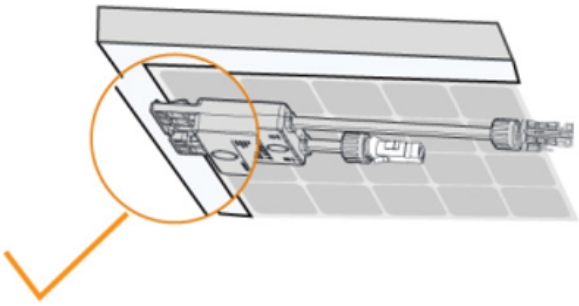
2. SP600S Optimizer Installation:

- The SP600S optimizers should be securely mounted on the back of each PV module. Ensure they are well-protected from environmental elements such as direct sunlight and rain
- Optimizers must be installed one-to-one with each PV module in a string, and all modules under the same MPPT must be equipped with SP600S optimizers



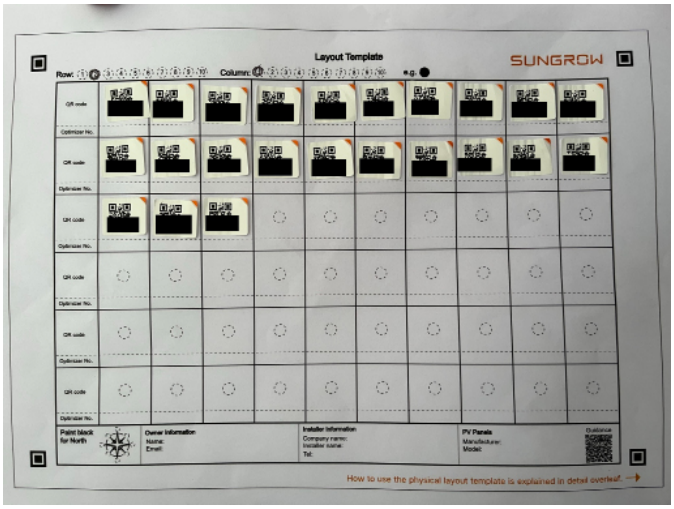
Rail or PV Module Bolt Installation



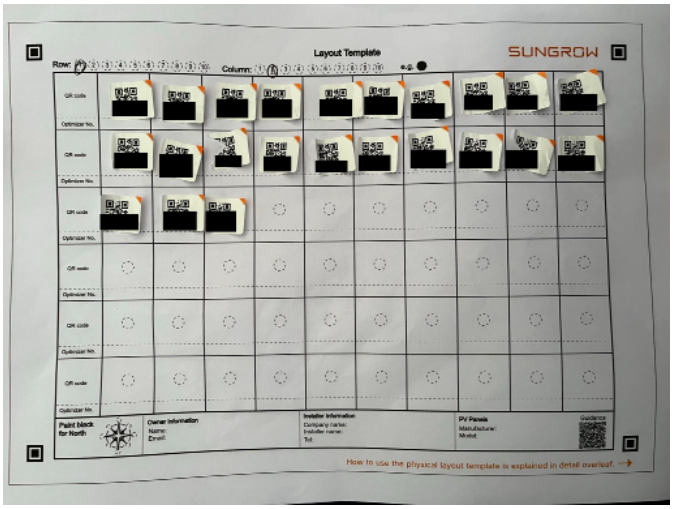
PV Module Clip Installation

3. QR Code Placement:

- Ensure all SP600S QR codes are accurately pasted on the A4 layout template to prevent recognition issues during commissioning
- It is recommended to use one A4 template per string to maintain a logical structure and reduce manual adjustments later



QR Code Placement Good Example



QR Code Placement Bad Example

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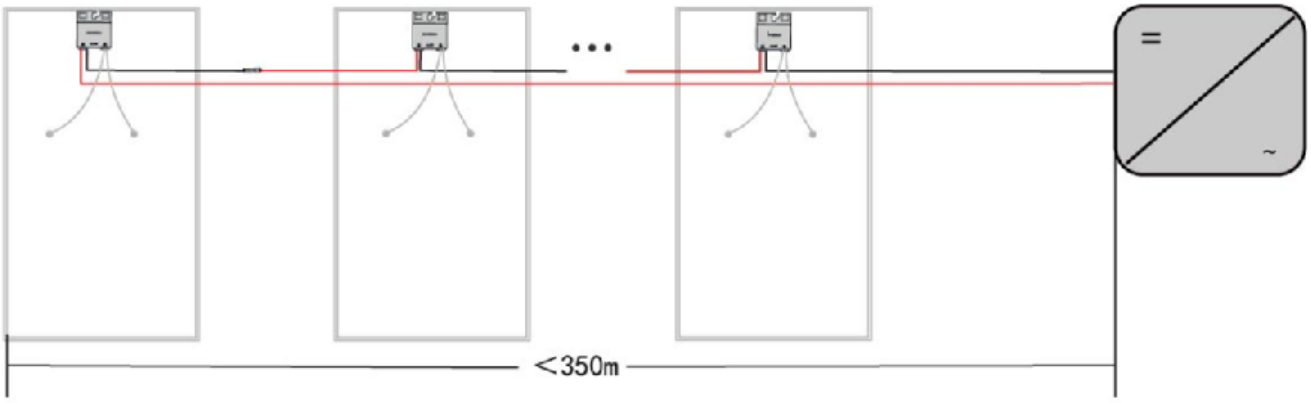
Electrical Installation

1. DC Wiring Requirements:

- The positive and negative DC cables of the same string should be routed side by side to maintain communication quality. Coiling of cables is not allowed. Ensure that the farthest optimizer in the string is no more than 350 m from the inverter, and the total string loop length is no more than 700 m

2. String Design:

- No partial optimizer installation is allowed. In a C&I installation with SG25-125CX-P2 inverters, all modules must be equipped with SP600S optimizers
- Up to 35 optimizers per string are supported. When the string contains more than 28 optimizers, the system voltage after rapid shutdown may exceed 30V. Compliance with local regulations needs to be ensured



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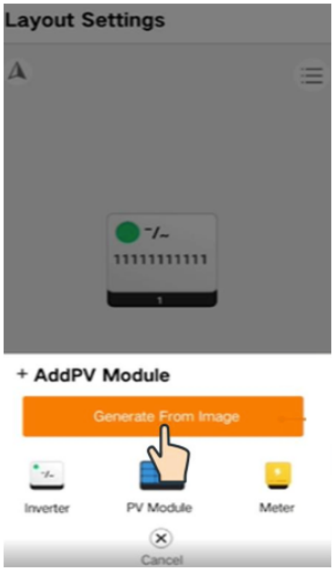
Commissioning

1. Commissioning Methods:
- Web-Based Commissioning (Recommended): Use the iSolarCloud web version for commissioning systems with many optimizers (SP600S)
- Mobile App Commissioning: While possible, it is not recommended for larger systems due to complexity
2. Inspection Before Commissioning:
- Ensure all equipment, including inverters and optimizers, has been reliably installed.
- Set the DC switch of the inverter to „ON“ and verify that the AC circuit breaker is switched on.
3. Optimizer Physical Layout Setting:
- After creating a plant in iSolarCloud, set the physical layout by using the QR code recognition feature to upload the layout template photo.
- If QR codes are not recognized, manually bind the optimizers to the PV modules using their serial numbers (S/N)



4. Logical Layout Configuration:
- After setting the physical layout, configure the logical layout to reflect the actual string connections, and use the manual configuration method for SG25-125CX-P2 inverters
5. Viewing Optimizer Status:
- Use the iSolarCloud App to monitor the optimizer‘s running status. Optimizer status is indicated by colors:
  * Blue: Running properly
  * Red: Fault detected
  * Gray: Offline (e.g., poor connection or shaded PV module)
- Detailed information on each optimizer, including daily and total yield, can be viewed in the App

For detailed instructions on the commissioning process, please refer to the SP600S User Manual.

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FAQ: CX-P2 Devices with SP600S

1 **How should I place the QR code stickers for SP600S optimizers?**
The QR code stickers should be placed uniformly on the A4 layout template to ensure proper recognition. It is recommended to use one A4 layout template per string and also to mark the string number on the layout template to avoid confusion during commissioning

2 **What is the recommended method for commissioning CX-P2 devices with SP600S optimizers?**
The only recommended scenario for using your phone during the commissioning process is to initially take photos of the A4 layout templates and upload them to iSolarCloud. Subsequently, it is highly recommended to use the web-based version of iSolarCloud for commissioning CX-P2 devices with SP600S optimizers. The mobile App can also be used for commissioning, but it is less ideal for large installations with many optimizers

3 **Which monitoring devices are needed together with the SG25-125CX-P2 inverters so that optimizers can be used?**
To use optimizers with SG25-125CX-P2 inverters, you need monitoring devices such as the WiNet-S2 or the Logger1000A-EU/COM100D-EU. These devices enable communication between the inverters and optimizers, allowing for real-time monitoring and system management via iSolarCloud

4 **Can I install optimizers partially on some strings only?**
No, partial installation of optimizers together with the SG25-125CX-P2 is not allowed. All modules within a string and system must be connected to optimizers for the system to function properly

5 **Can SP600S optimizers be used with any inverter model?**
No, SP600S optimizers are specifically designed for use with compatible Sungrow inverters. It's important to verify the inverter-optimizer compatibility before installation. Currently, the following inverter models are supported to be used with SP600S Sungrow optimizers:

- SG25-50CX-P2 V21
- SG125CX-P2 V21
- SG3.0-10RS V13
- SH3.0-6.0RS V13

6 **Can I mix modules with and without optimizers in the same system?**
In C&I installations with SG25-125CX-P2, it is not possible to mix modules with and without optimizers in the same system. All modules should be equipped with SP600S optimizers

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