SUNGO
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Installation Guide for PV Optimizer SUNGO OPT PRO

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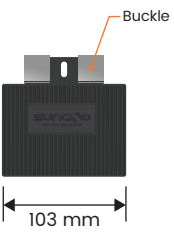
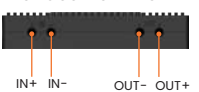
1. Product Overview



Model Explanation

SUNGO OPT PRO
-Smart PV Optimizer
-Maximum Input Power 800W

Interface Definition



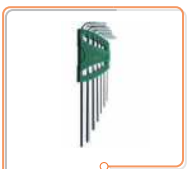
- Module-level MPPT eliminates shading concerns, increasing power generation by up to 30%
- Easy installation and broad compatibility, ideal for both power plant upgrades and new installations
- Compatible with all PV modules on the market and over 99% of inverters
- 25-year product replacement warranty

2. Installation Instructions

Tools

The following tools are required for installation, inspection, and replacement:

Phillips screwdriver
(Phillips head - M4)



Hex key wrench

Multimeter

Clamp meter

MC4 connector wrench

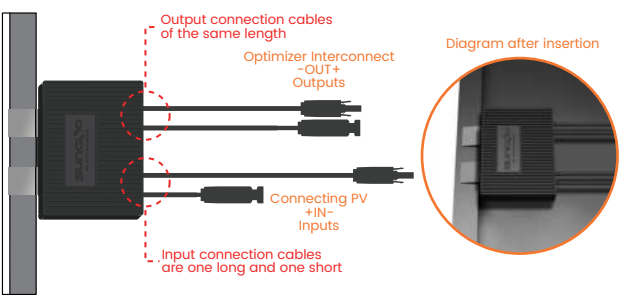
3. Installation Steps

Step 1.

Before installing the optimizer, ensure the inverter is shut down and the connection between the inverter and the component array is disconnected.

Step 2.

Install the Optimizer on the PV Frame.
Attach the optimizer to the outer frame on the back of the solar panel using the buckle. The installation is complete when the buckle is fully engaged with the outer frame.

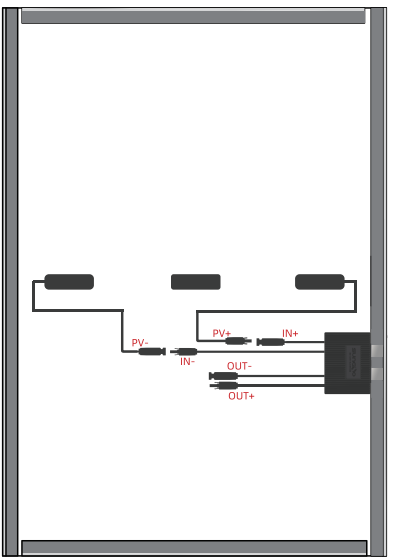


Plan the optimizer installation location appropriately to ensure that the cables between the optimizer and the components as well as the cables of neighboring optimizers can be connected properly.
Optimizer IN+: cable length 200mm IN-: cable length 1100mm OUT+/OUT-: cable length 750mm.

Attention: The positive and negative terminals of the input connection cable are connected to the positive and negative terminals of the PV module, do not connect the positive and negative terminals of the output connection cable to the PV.

Step 3. Input cable connection

- Connect the positive output (PV+) connector of the PV module to the positive input (IN+) connector of the optimizer
- Connect the negative output (PV-) connector of the PV module to the negative input (IN-) connector of the optimizer.
- Repeat the above actions for all PV modules to complete the input wire connections and confirm that the connectors are securely connected.。



Attention !

When installation

The input lines of the optimizer must be connected first, then the output lines of the optimizer.

When removing

You must disconnect the output line of the optimizer first, before disconnecting the input line of the optimizer.

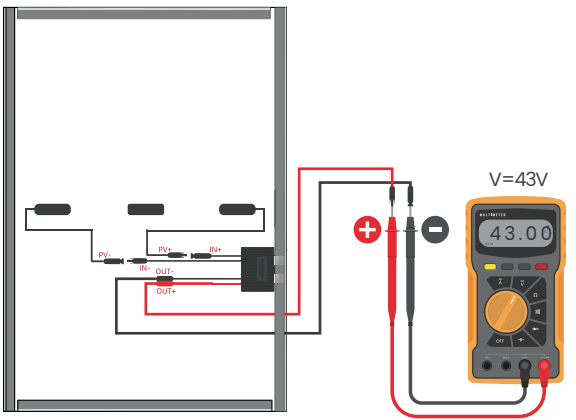
Step 4. Detection modalities

Warnings

Make sure the optimizer input (IN) and output (OUT) are wired correctly.
Reversing the wiring can cause damage to the unit.

1. Connect the optimizer input (IN) to the PV junction box.

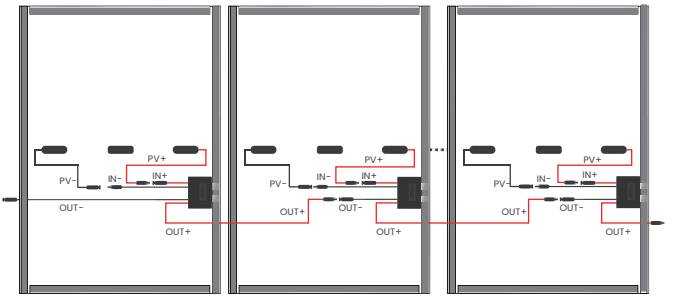
2. Check the voltage of individual optimizer outputs by using a multimeter with the positive pen connected to the optimizer output positive terminal and the negative meter connected to the output negative terminal.



Voltage	Reason	Solve suggestion
V≈Voc×95%	Optimizer normal	——
V<Voc×30%	Optimizer fault	Replacement optimizer
Voc×30%<V<Voc×95%	·Weak light ·The optimizer is wired incorrectly ·Optimizer fault	1. Voltage is measured when light is sufficient 2. Connect the optimizer input cable 3. Adjust the optimizer cable connection and connect the optimizer input cable to the PV module output 4. If the voltage is still abnormal, replace the optimizer

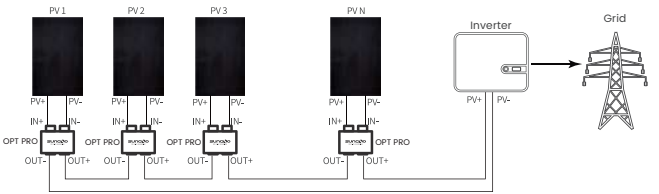
Step 5. Connect output cables into strings

Connect the positive output (OUT+) connector of the first optimizer in the series to the negative output (OUT-) connector of the second optimizer in the series; Repeat the above actions until the group string connection is complete.



Step 6. Connect the strings to PV inverter

Connect the (OUT-) of the first optimizer to the (PV-) of the inverter and then connect the (OUT+) of the last optimizer to the (PV+) of the inverter.
The second string repeats the connection of the first string.



Optimizer connection schematic

Step 7. Inverter startup

Check all connections of entire system, then turn on PV inverter.

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