



Solis PLC CCO (CCO: Central Controller Installation Guide

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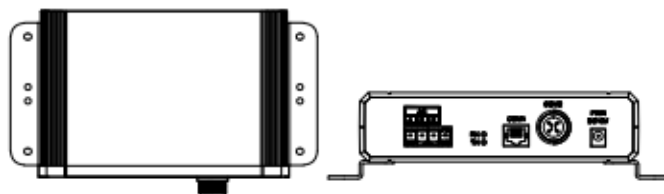


Solis PLC CCO (CCO: Central Controller



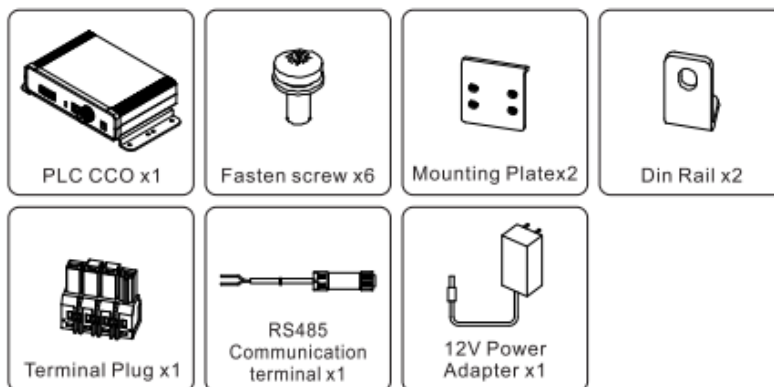
introduction

Solis PLC CCO is applied in PV systems to achieve power line communication. Power Line Communication is the transmission of data over the AC Wires of the system.



Package List

The package list is shown below:



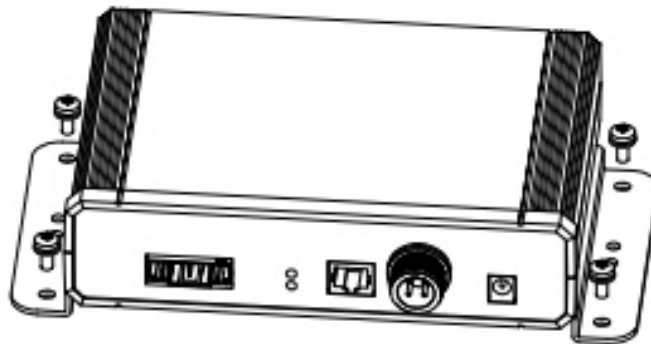
Warning

1. Disconnect any electrical connection and verify no live voltage before installation to prevent potential electrical hazard.
2. Verify Inverter AC Switch is in the "OFF" position.
3. Verify equipment has adequate ventilation to ensure system performance.
4. Ensure area of operation has no strong electromagnetic sources nearby.
5. Please ensure there is no heat source nearby.
6. Before doing any maintenance work, please ensure the power is off

Note: All operations must be conducted by professional electrical technicians

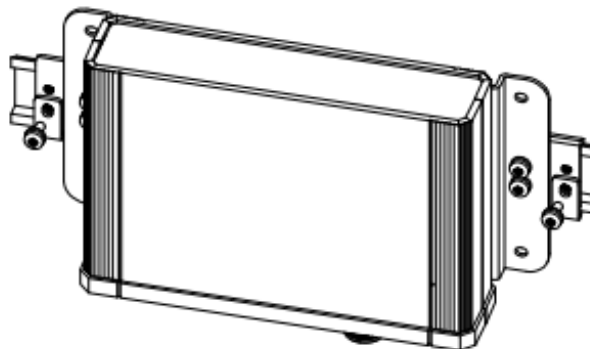
Wall Installation

1. Use the 4 M4 x 10 cross screws to fix unit to the wall.
2. Torque value = 1.2Nm



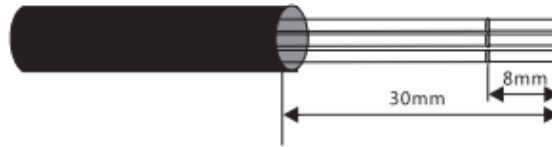
Din Rail Installation

1. Fix the PLC CCO with 4 M4*10 screws onto the mounting plate with torque 1.2Nm.
2. Clip the PLC CCO into the guide rail as shown below.
3. Use two M4 x 10 screws to fasten the PLC to guide the rail.
4. Torque value = 1.2Nm

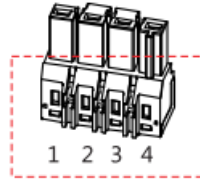


Cable Connection

1. Strip off the insulation as shown below.



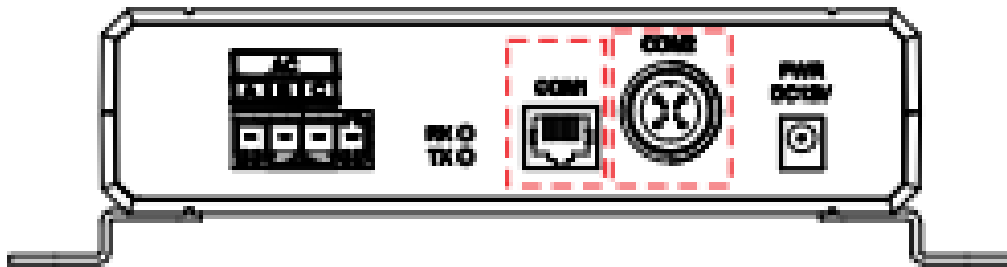
2. Use a slot-type screwdriver to press the position in red and insert the A, B, C, and N to Pin 1,2,3,4. Neutral is not necessary.



3. Connect the terminal to PLC CCO as shown below.



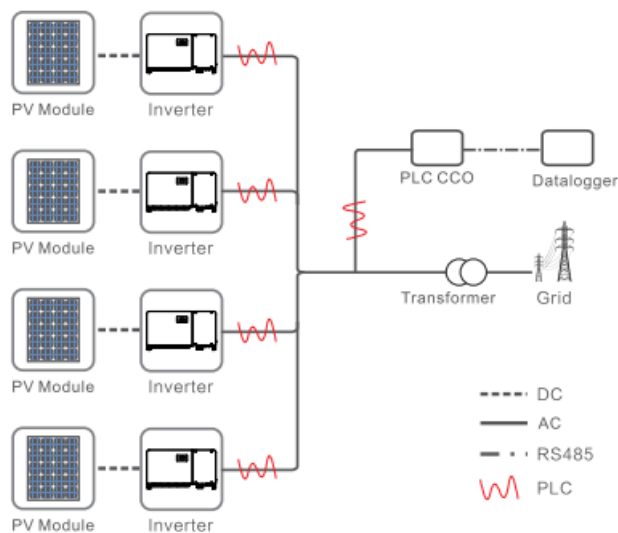
4. Connect RS485 communication cable to COM1 (RJ45) or COM2(4 core connector)
5. Connect the 12V power line to the PWR DC 12V port on the PLC CCO device.



Working Principle

Solis string inverters integrated with PLC communication module “PLC STA” can conduct PLC through AC power cables and communicate with the PLC CCO. The PLC CCO uses the isolation coupling circuit to isolate low-frequency AC power and protects the internal board. It conducts bi-directional PLC signaling and RS485 signal conversion to communicate with a corresponding datalogger.

The diagram of PLC communication system is as follows:



Characteristic

1. Adopt OFDM technology, subcarrier supports BPSK, QPSK, 8QAM, 16QAM, and 64QAM modulation methods.
2. Integrated with a high-performance ARM CPU, the main frequency reaches 266MHz, satisfying smart grid requirements.
3. Support FEC and CRC function with strong capability of noise reduction and error recovery.
4. Support ad-hoc network and dynamic-route addressing function.

Technical specifications

Product name	PLC CCO
Input voltage of the power adapter	100V AC-240V AC, 50Hz/60Hz
Power consumption	<5W
Input cable voltage of the AC port	380V AC-800V AC
Operating temperature	-25 °C- +70°C
Relative humidity (non-condensing)	5%-95%
Altitude	0m-4000m
Protection level	IP20
Installation mode	Hanging installation or Din Rail installation
Maximum number of PLC STAs that can be connected	80pcs
Maximum transmission rate	115200bit/s
Dimensions (W x H x D)	180mmx 120mmx45mm
Weight	485g
Certification	UL, FCC

Documents / Resources



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PLC CCO, CCO Central Controller, Central Controller, Controller