



IYILO ENERGY LOADING MANAGEMENT

ENERGY METER INSTALLATION GUIDE

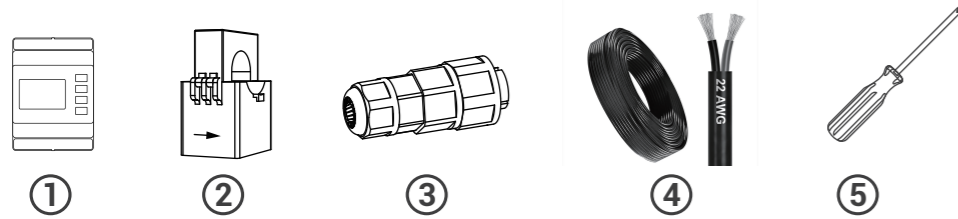
This document provides installation instructions for the IYILO energy management systems

IYILO ENERGY METER INSTALLATION

Important Notice Before Installation

1. Please install the IYILO Energy Meter according to the instructions below. Improper installation or misuse may result in connection failure or inaccurate performance.
2. Please do not use any NON-IYILO branded or unauthorized energy meters for installation. Unauthorized meters will not support energy load management and may lead to potential malfunction or failure of product features.
3. This type of installation involves certain risks and is recommended to be performed by a licensed electrician. Please strictly follow the NEC Code and all applicable local codes.
4. Please ensure this IYILO charger is upgraded to the latest firmware version.
5. The RS485 communication cable is not included with the product. To ensure reliable communication between the IYILO charger and the external energy management system, it is strongly recommended to use 2 Core Twisted Pair Shielded Cable (two insulated twisted wires with a shielding layer; twist the drain wire into a single strand before connecting) specifically designed for RS485 Communication.
6. The IYILO Energy Meter can measure current up to 200A

1-WHATS IN THE BOX?



No.	Name	Quantity	Description
1	Energy Meter	1	Used to collect clamp parameters and communicate with the charging station
2	Clamps (up to 200A)	2	Obtain total household current sensor
3	Quick Connector	2 (1 Spare part)	Quick connector installed at the RS485 communication interface on the charging station side
4	Meter power cord	1	Supply operating voltage to the Energy Meter
5	Phillips screwdriver	1	Used for installing RS485 cable

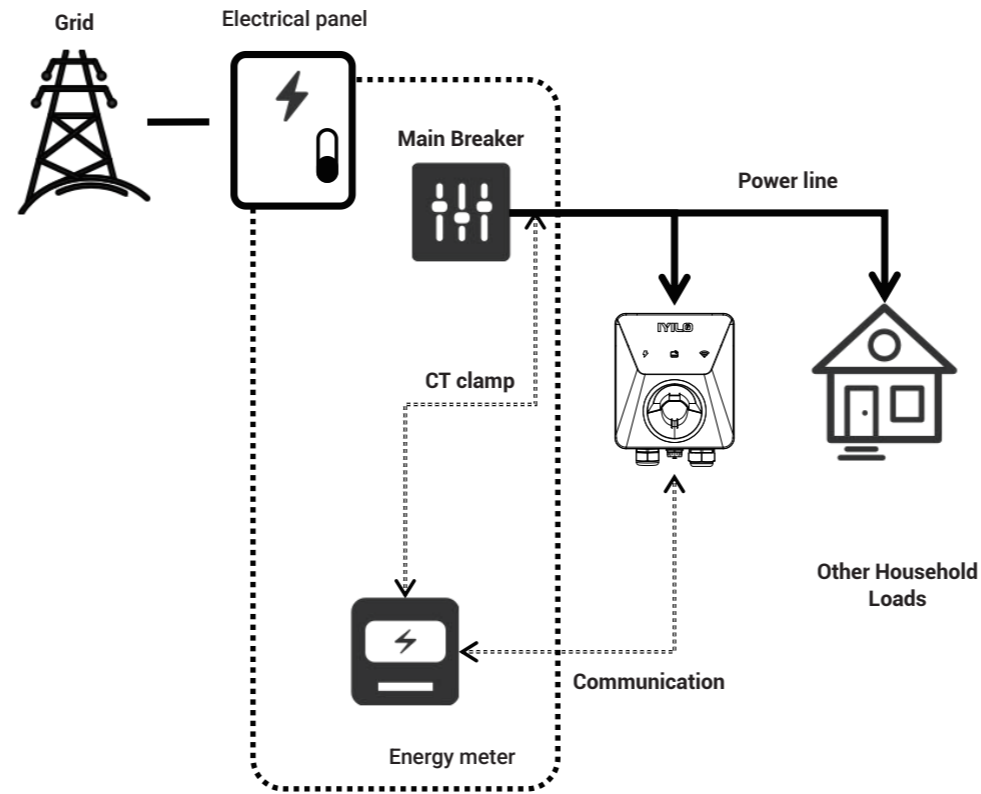
2-Tools and Accessories Required (Not Included)



No.	Name	Quantity	Description
1	RS485 Communication Cable (20-22AWG)	1	Used to connect the charger and the meter for data communication Option 1: 2 Core Twisted Pair Shielded Cable(Recommend) Option 2: 2 Conductor Stranded Copper Shielded Cable
2	wire stripper	1	for RS485 cable preparation

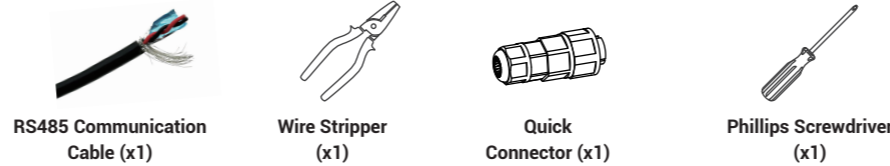
3-Installation Diagram

Please install according to the layout diagram below & the load balancing layout diagram.



4-EV Charger RS485 Port Installation

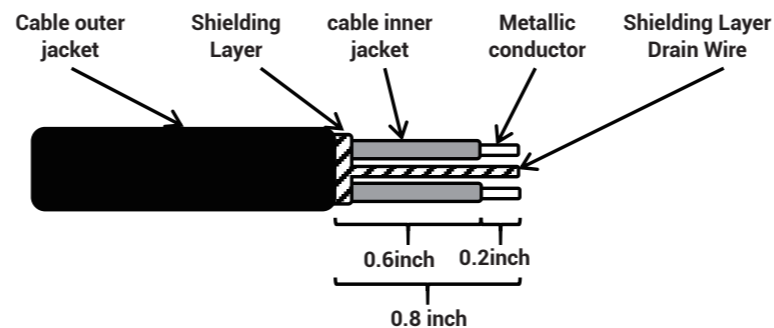
RS485 Communication Cable: Option1: Recommend use 2 Core Twisted Pair Shielded Cable (two insulated twisted wires with a shielding layer; twist the drain wire into a single strand before connecting)
Option 2:2 Conductor Stranded Copper Shielded Cable (for short runs under 20 meters)



Step 1: Communication Cable Stripping Procedure

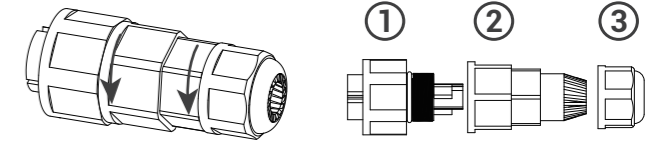
Note: Use a wire stripper to prepare the communication cable insulation for connection (improper stripping dimensions may result in water ingress risk).

- 1-1, First, strip approximately **0.8 inches** of the communication cable outer jacket.
- 1-2, Strip approximately **0.2 inches** of the communication cable inner insulation.
- 1-3, Finally, expose **0.2 inches** of the metal conductor and **0.6 inches** of the inner insulation.

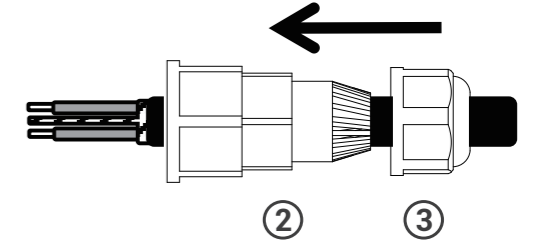


Step 2: Connect Communication Cable to Quick Connector

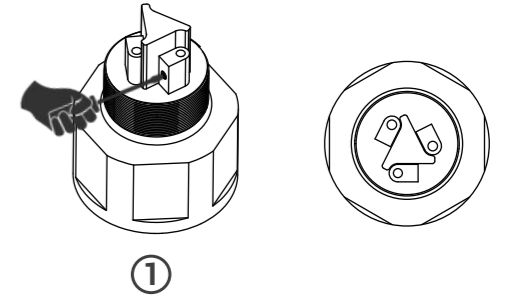
2-1 Remove the quick connector and twist the two components counterclockwise to separate it into three parts.



2-2 As shown in the illustration, pass the RS485 communication cable sequentially through component ③ and component ②.



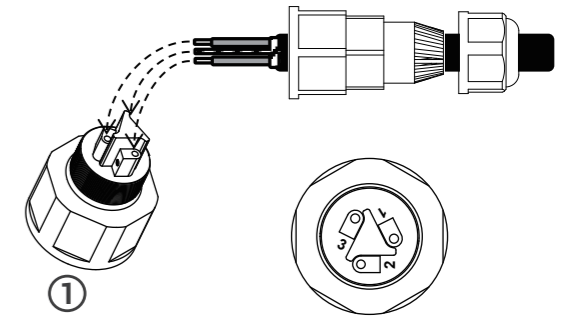
2-3 Use a screwdriver to turn the screw in component ① counterclockwise four full turns to loosen it. (Turning too many times may cause the screw to fall out, making it difficult to handle.)



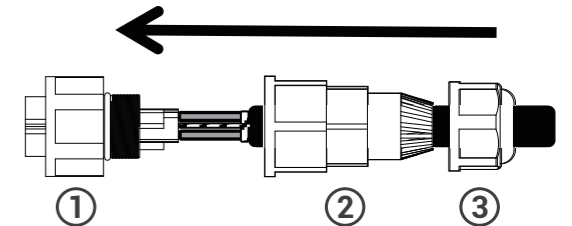
2-4 Insert the metal conductor part of the communication cable into component ①. You can record the corresponding wire harness in the table below. Please connect the shield drain wire to Terminal 1 (Twist the drain wire strands together before connection)

Component ①Terminal	Color
Terminal_1	Shielding Layer Drain Wire
Terminal_2	
Terminal_3	

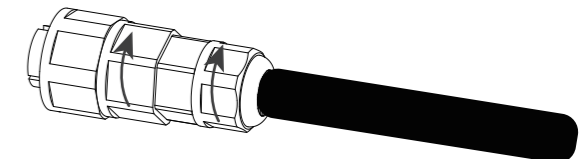
Table1



2-5 Assemble components ② and ①

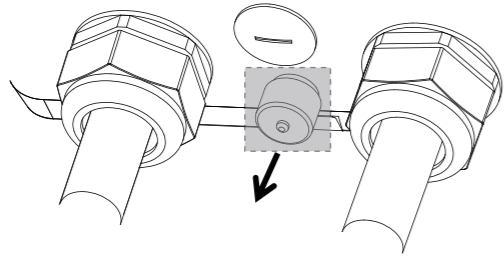


2-6 Tighten clockwise to complete the assembly of the connector

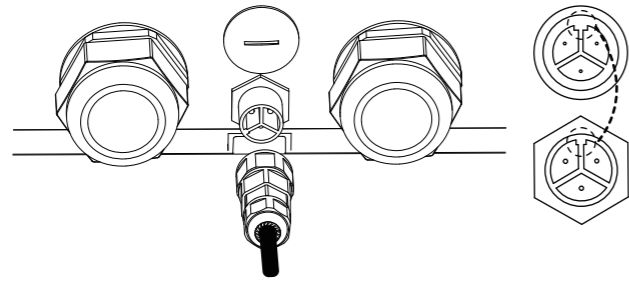


Step 3: Connecting the Wired Quick Connector to the Charging Station

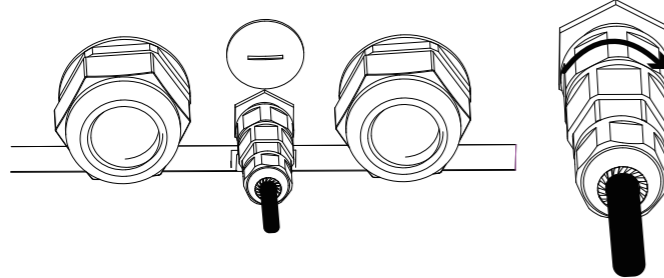
3-1 Remove the Cap from the Plug



3-2 Connect the quick connector (with communication cable attached) to the main body of the charging station. Ensure the plug protrusion is properly aligned before securing.



3-3 Tighten the screw of component ① clockwise to complete the communication cable installation on the charging station side.



5-IYILO Energy Meter Installation

▲ Important: Check Your Installation Before Use. This meter is designed to work only with the following electrical setup:

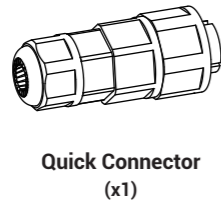
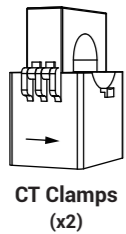
3-wire system (2 hot wires and 1 neutral)

Voltage between phases: 208–240 V

Voltage between phase and neutral: 120 V

Warning: To prevent electric shock or injury, always turn off the main breaker of the electrical panel before proceeding with the meter installation.

Energy Meter Installation in Electrical Panel Preparation Required:



Step 1. Meter Power Supply Installation

Note: 1.The IYILO EV Charger requires a power supply (less than 0.1A). You can connect the power cord of the energy meter to an appropriate circuit breaker, which can be shared with an existing breaker if available.
2.The rated voltage of the meter is 100-277V.
3.The power cord is pre-scored at the bare wire section. Please remove the outer insulation before use.

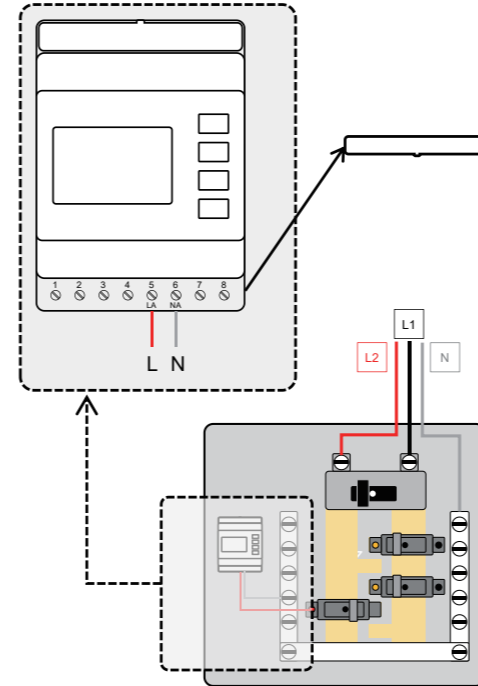
1-1 Remove the lower cover panel of the meter to prepare for wiring.

1-2 Connect the live wire (red): insert the conductor end into terminal 5 of the meter, and connect the bare stripped end to the circuit breaker.

1-3 Connect the neutral wire (Black): insert the conductor end into terminal 6 of the meter, and connect the bare stripped end to the neutral bar

1-4 Power on and test: the screen lighting up indicates successful meter power-up.

1-5 Turn off the meter power and reinstall the cover panel removed in step 1-1.



Step 2. Connect the CT clamp

Note: When installing the clamp, the arrow should point towards the internal electrical panel.

2-1 Remove the upper cover panel of the meter

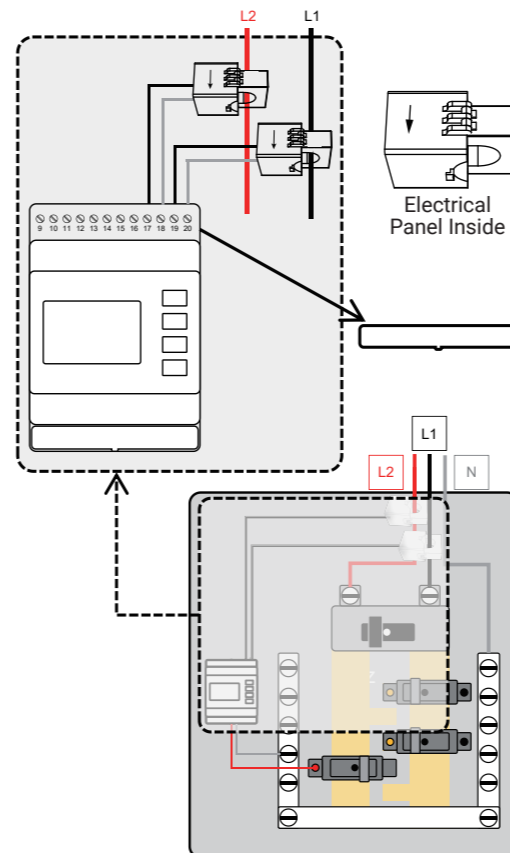
2-2 Connect the white wire of the L1 current transformer to terminal 20.

2-3 Connect the black wire of the L1 current transformer to terminal 19.

2-4 Connect the white wire of the L2 current transformer to terminal 18.

2-5 Connect the black wire of the L2 current transformer to terminal 17.

2-6 Clamp the L1 and L2 current transformers on to the L1 and L2 cables respectively, ensuring the arrows on the transformers point downward.



Step 3. RS485 Communication Cable Connection at the Meter Side

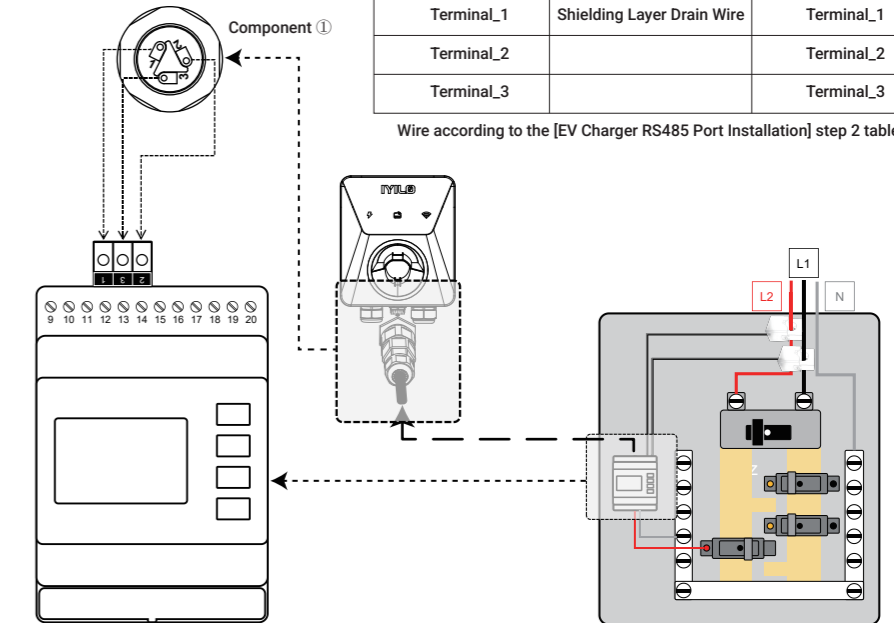
3-1 Route the communication cable, which has already been connected to the charger side, to the vicinity of the home electrical panel (maximum length should not exceed 300 ft).

3-2 Use wire strippers to remove approximately 0.2 inches (5 mm) of insulation from the cable's conductor

3-3 Connect the wires according to the following wiring table.

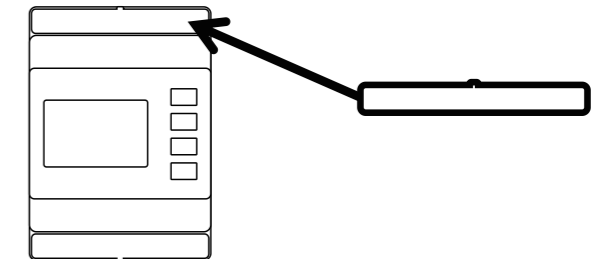
Terminal	Color	Terminal
Terminal_1	Shielding Layer Drain Wire	Terminal_1
Terminal_2		Terminal_2
Terminal_3		Terminal_3

Wire according to the [EV Charger RS485 Port Installation] step 2 table 1.



Step 4. Assembly Complete

4-1 Place the upper cover panel back in position



4-2 Turn on the smart meter power supply and open the app.

4-3 In the app, Tap the Advanced, then selected load balancing

4-4 Enable Dynamic load balancing; Confirm real-time meter reading appear

4-5 Enter your household breaker rating to finish setup.

Download IYILO APP



APP User Guide

