



# Wallbox zeroCO<sub>2</sub> sun charger

## Operation Manual

TM018 Rev.006



# Table of Contents

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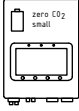



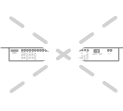
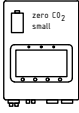







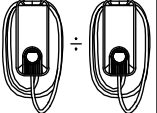




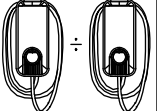

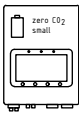


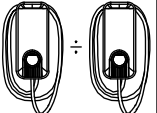
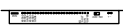
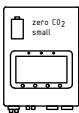
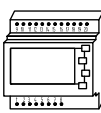



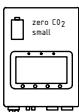
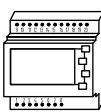
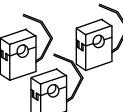
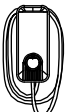

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# Single-phase wallbox wiring diagrams

The following table shows the expected configurations.

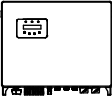
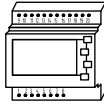




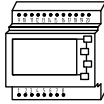
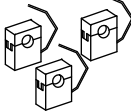
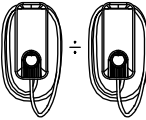


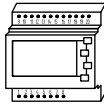
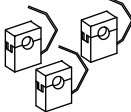
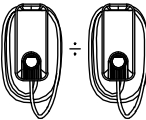


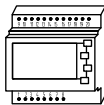

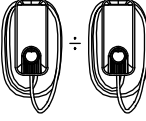


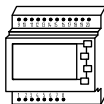
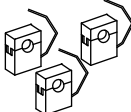
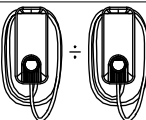

By clicking on the link in the DIAGRAM column you can download the corresponding wiring diagram.

INVERTER	METER	CT	WALLBOX	DCM	SCHEMA
					<a href="#">Meter SDM120M wallbox 1ph WD042</a>
					<a href="#">Meter SDM120CTM wallbox 1ph WD073</a>
					<a href="#">Meter SDM120CTM wallbox 1ph WD112</a>
					<a href="#">Meter SDM120M wallbox 1ph WD113</a>
					<a href="#">Meter SDM120CTM wallbox 1ph WD114</a>
					<a href="#">Meter SDM120CTM wallbox 1ph WD044</a>
					<a href="#">Meter SDM120MCT wallbox 1ph WD074</a>

# Three-phase wallbox wiring diagrams

The following table shows the expected configurations.

By clicking on the link in the DIAGRAM column you can download the corresponding wiring diagram.

INVERTER	METER	CT	WALLBOX	DCM	SCHEMA
					<a href="#">Meter SDM630 wallbox 3ph WD078</a>
					<a href="#">Meter SDM630MCT wallbox 3ph WD079</a>
					<a href="#">Meter SDM630MCT wallbox 3ph WD109</a>
					<a href="#">Meter SDM630 wallbox 3ph WD108</a>
					<a href="#">Meter SDM630MCT wallbox 3ph WD115</a>

# 1. Introduction




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## 1.1 Models

- zeroCO<sub>2</sub> sun charger A0070230E11
- zeroCO<sub>2</sub> sun charger A0220400E11

## 1.2 Symbols

Pay particular attention to the notes in this manual when the symbols indicated below appear.

SYMBOL	DESCRIPTION
	<b>INDICATE:</b> Descriptive text indicating the meaning of the indicated signal.
	<b>NOTICE:</b> Indicates important information that prevents injury or damage.
	<b>WARNING:</b> Warning sign that indicates the presence of potential hazards which, if not avoided, could lead to injury, product damage, or charging disruption.

- Read this manual carefully before using the product and keep it for future needs.

## 2. Safety standards and warnings

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### INDICATE

Skills required for installation and maintenance personnel:

- Certified qualification in the field of installation and maintenance of electrical power systems and knowledge of the risks deriving from potentially hazardous operations (such as working on live electrical systems).
- Knowledge of how battery chargers work and how to install them.
- Knowledge and skills in wiring power lines.
- Knowledge of safety standards regarding electrical risk, as well as the ability to read and understand this manual.



### NOTICE

- The product is a battery charger for electric vehicles that can be used indoors and outdoors.
- Comply with the local regulations in force for the installation and use of this product..
- In any situation, the use of the product must comply with the indications established by this manual.
- The conservation of the product described must comply with the following requirement:
  - until the product is installed, it must be kept together with its accessory components in a closed, dry and well-ventilated place to avoid exposure to atmospheric phenomena such as rain, etc.
- The product is developed, manufactured and tested according to high safety standards. Therefore, if the instructions and suggestions regarding safety are respected, the product will not cause damage to private property or to the safety of people under normal circumstances.
- The instructions contained in this manual must be strictly followed to avoid potential risks for health or for the functioning of the safety devices. In addition to the indications given in the manual, always pay attention to the safety and accident prevention regulations in force at the time of installation and use.

## 2. Safety standards and warnings

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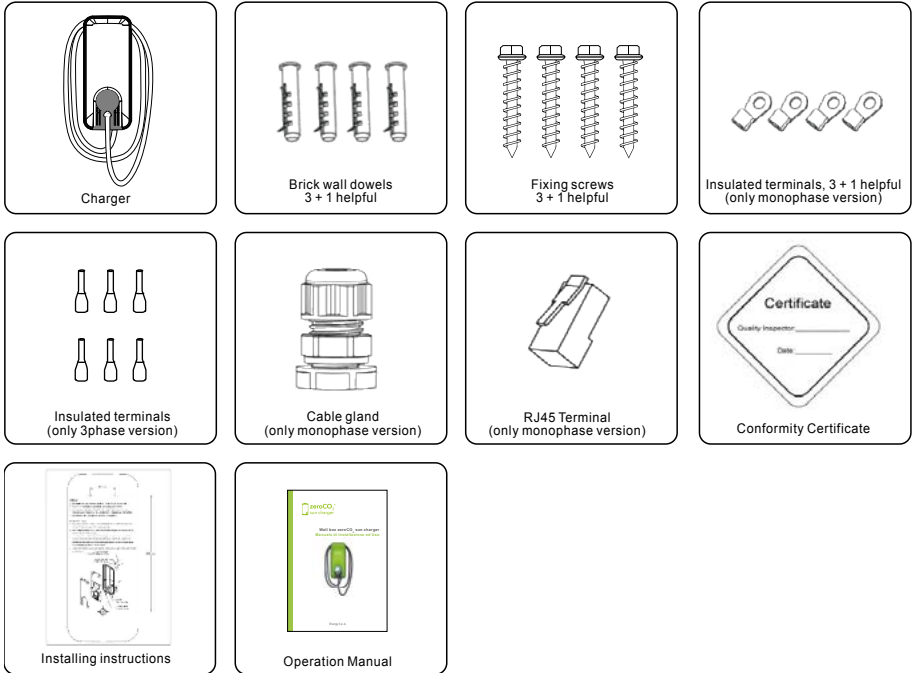
### WARNING

- Persons not authorized by Energy S.p.A. are not allowed to open the product.
- Do not disassemble, repair or act on the product and its components without authorization. Improper operation may cause product damage, loss of liquid, power, or potential personal injury. In case of need for maintenance, modifications or other operations, contact Energy S.p.A. customer service.
- Do not bring combustible, explosive or gas emitting chemical materials and other dangerous objects close to the product.
- Children are not allowed to approach or use the product to avoid any accidental injury.
- Use the product according to this manual and the indications given by Energy S.p.A. When connecting or disconnecting the charging connector to the vehicle, pay attention to the force applied and make sure that you have unlocked the socket lock.
- Verify that the charging connector is fully secured to the vehicle before start the charging process.
- It is forbidden to drive and move the vehicle during recharging, furthermore it is forbidden to disconnect the power cable from the vehicle during recharging.
- In case of leakage, fire, electrical malfunction and other abnormal behavior during charging, press the emergency button immediately.
- After the charging process has been completed, return the charging connector to its slot to prevent it from being further exposed to external phenomena or abnormal contamination.
- The product must be installed in a place that guarantees at least the degree of IP protection declared in this manual.
- In case of rain, make sure that both the wallbox connector and the one on board the vehicle are completely dry. If there is water in even just one of the two, charging is absolutely forbidden.
- It is strictly forbidden to use the product when itself (including connector charger, power cable, electrical insulation and all other components) is visibly damaged. In case of anomalies or doubts about the safety of the product, contact Energy S.p.A. customer service.
- It is strictly forbidden to touch the charging connector with metal objects. If the connector is damaged in any way, do not use the product and contact Energy S.p.A. customer service.
- While not in use it is recommended to disconnect the power circuit to avoid any accident.



# 3. Package Contents

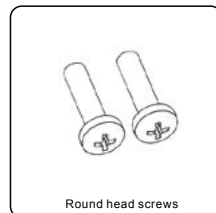
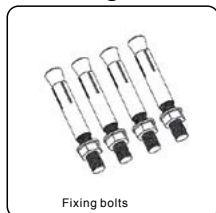
## 3.1 Single-phase and three-phase package contents



Item	Model	Pcs	Dimensions / Weight
zeroCO <sub>2</sub> sun charger	A0070230E11, A0220400E11	1	170x110x400mm / 3,7 kg
Dowel	Φ6x28 mm	4	
Fixing screws	ST3.9x27	4	525x245x274mm / 4.3 kg
Insulated terminals	RV5.5-5 (A0070230E11)	4	(Full package)
	E6012 (A0220400E11)	6	
Cable gland		1	
RJ45 Terminal		1	
Conformity certificate		1	
Installing instruction		1	
Operation Manual		1	

# 3. Package Contents

## 3.2 Support Column Package Contents (optional)



Item	Model	Pcs
Support Column	AC1-SCE	1
Fixing bolts	M10x120mm	4
Screws with washer	M4x10_SL / SUS 304	1
Round head screws	M4x16_SL / SUS 304	2

# 4. Product introduction

## 4.1 Appearance

zeroCO<sub>2</sub> sun charger can be fixed to the wall or to the appropriate column support, the place of installation can be adapted to your needs.

It supports protections for voltage and current overloads as well as for under discharge, it is equipped with IP54 surface protection. It can also be used in addition to electrical meters and inverters depending on the required configuration.

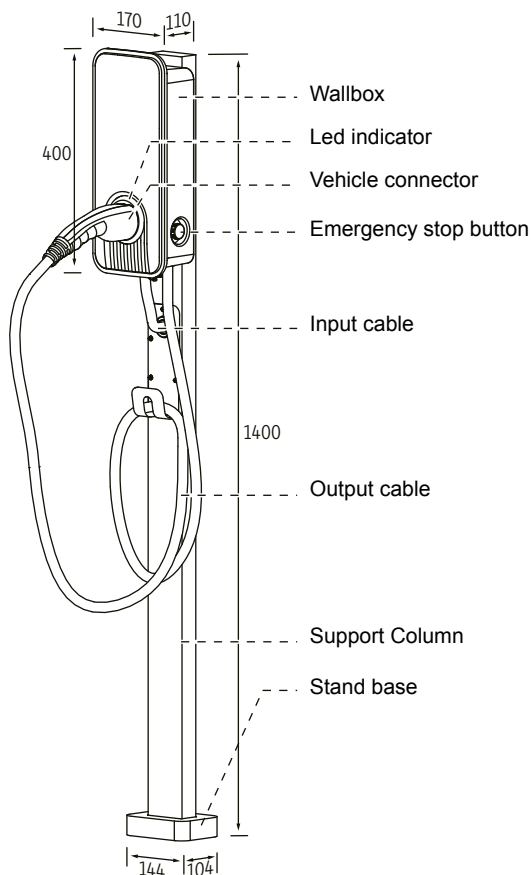


Figura 1 - Support Column (optional). Unit in mm

# 4. Product introduction

## 4.2 Technical parameters

<b>Technical data</b>	<b>zeroCO<sub>2</sub> sun charger</b>	
Model	A0070230E11	A0220400E11
Charging interface type	2	
Cable length [m]	5	
Nominal power [kW]	7.3	22
Minimum operating power [kW]	1.7	4.5
AC Input voltage [V]	230 ±10%	400 ±10%
Nominal frequency [Hz]	50 – 60	
Output current [A]	0 – 32	
Ways of working	Plug & charge / APP	
Noise produced [dB]	≤ 65	
Working temperatures [°C]	-30 – 50	
Storage temperatures [°C]	-40 – 70	
Working humidity range [%]	5 – 95	
Maximum working height [m]	≤ 2000	
IP Certification	IP54	
Dimensions [WxDxH, mm]	170x110x400	
Weight (with/without stand) [kg]	4.3 / 3.7	5.9 / 5.1
How to install	Wall mount (Optional column support)	
Progress bar	3 color LED	
Communication protocol	Bluetooth / (Wi Fi /Ethernet)	
Meter operation	Optional	
External communication interface	RS485 / CAN	
Security features	Overload protection, under-discharge protection, short circuit protection, grounding protection and emergency stop button	
Residual current protection	30mA type A RCBO external / 6mA DC RCD internal	
Operating standards	IEC-61851-1-2017 / IEC-61851-21-2-2018	

# 4. Product introduction

## 4.3 Security protections

- **Electrical protections**

zeroCO<sub>2</sub> sun charger has protection functions for overload, under-discharge, short circuit and grounding.

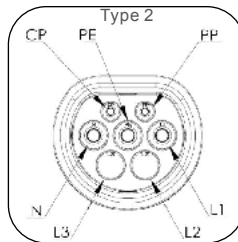
- **Emergency stop protections**

In the event of an emergency during charging, press the emergency stop button to stop the process immediately.

Do not use the emergency button unless necessary. If the emergency button is pressed, there will be no voltage at the battery charger output but the voltage at the input will remain.

The owner cannot disassemble the product without permission to avoid accidents. If the emergency button is pressed by mistake, causing the charge to stop, rotate the button in the direction indicated on it to restore normal operation.

## 4.4 Charging connector



## 4.5 LED status indicator

Status indicator	Battery Charger Status
Ⓞ always ON	standby
Ⓞ blinking	charge completed
Ⓛ slow blinking	connected and waiting for charging to start
Ⓛ fast blinking	charging started
Ⓛ always ON	in charge
Ⓛ → Ⓛ repeat	CP state normal
Ⓛ → Ⓛ → Ⓛ repeat	emergency stop
Ⓛ → Ⓛ → Ⓛ → Ⓛ repeat	current loss
Ⓛ → Ⓛ → Ⓛ → Ⓛ → Ⓛ repeat	voltage overload
Ⓛ → Ⓛ → Ⓛ → Ⓛ → Ⓛ → Ⓛ repeat	current overload
Ⓛ → Ⓛ → Ⓛ repeat	not enough voltage
Ⓛ → Ⓛ → Ⓛ → Ⓛ repeat	ground error
Ⓛ → Ⓛ → Ⓛ → Ⓛ → Ⓛ repeat	relay error

Note: "G" green light, "B" blue light, "R" red light, "○" steady on, "Ⓛ" blinking.

# 4. Product introduction

## 4.6 Operating configurations

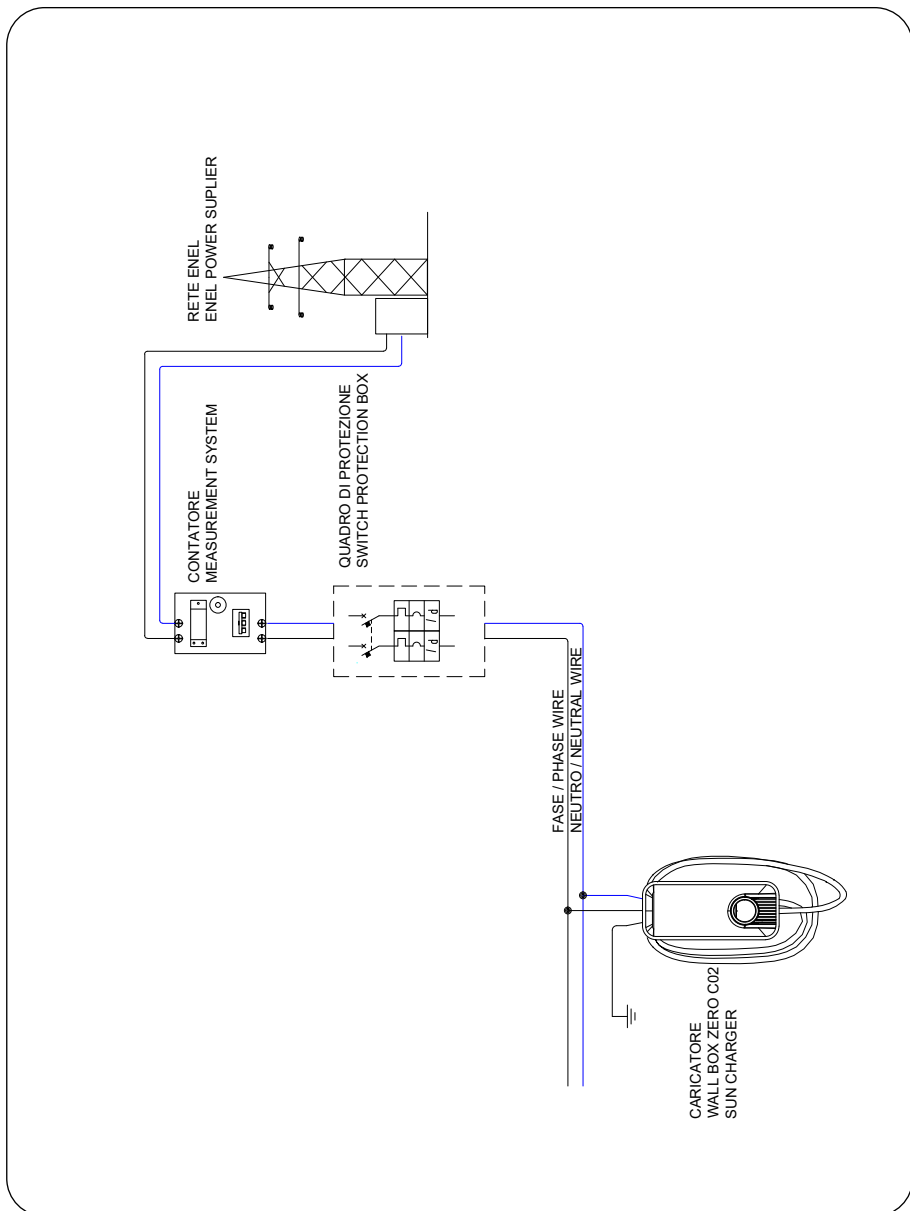


Figure 2 - Stand Alone single phase

# 4. Product introduction

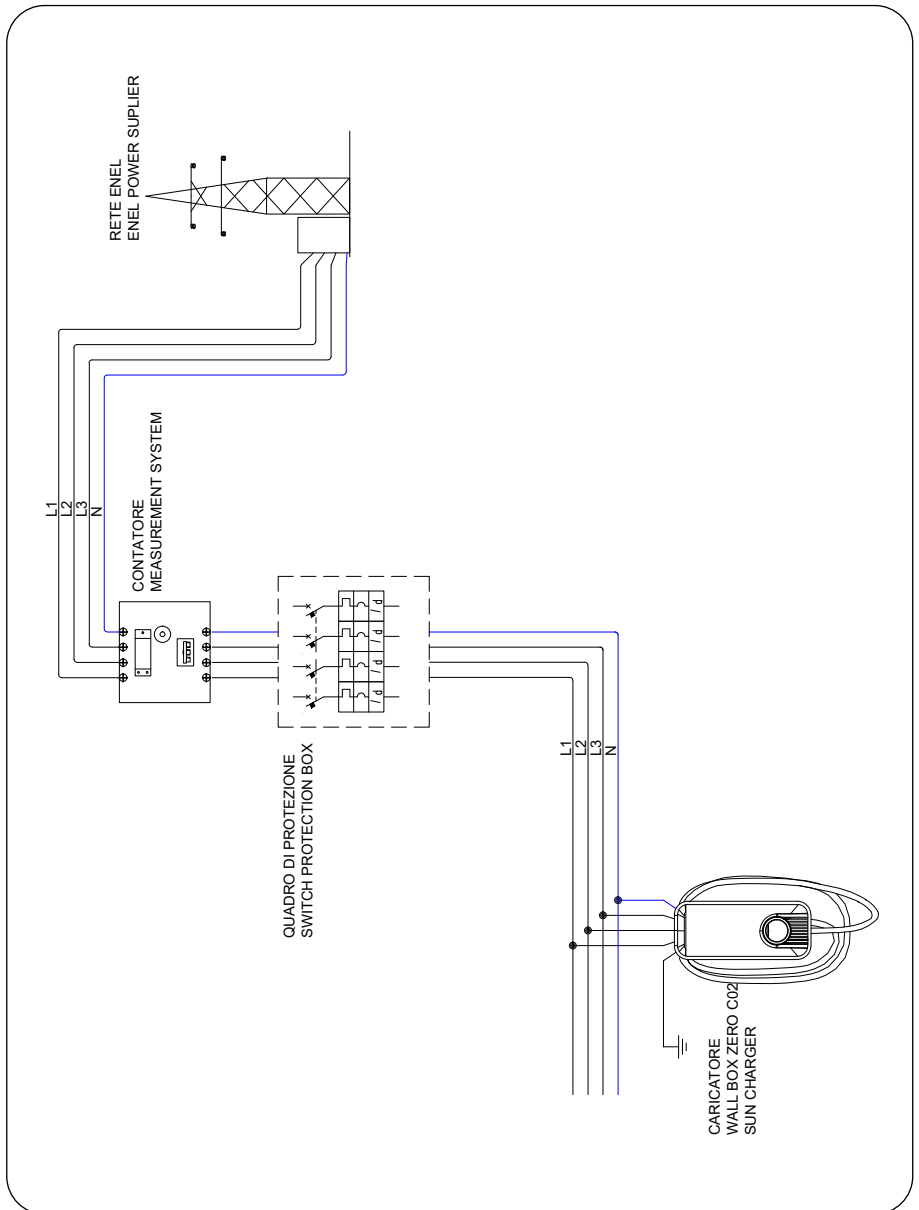


Figure 3 - Stand Alone three-phase

# 4. Product introduction

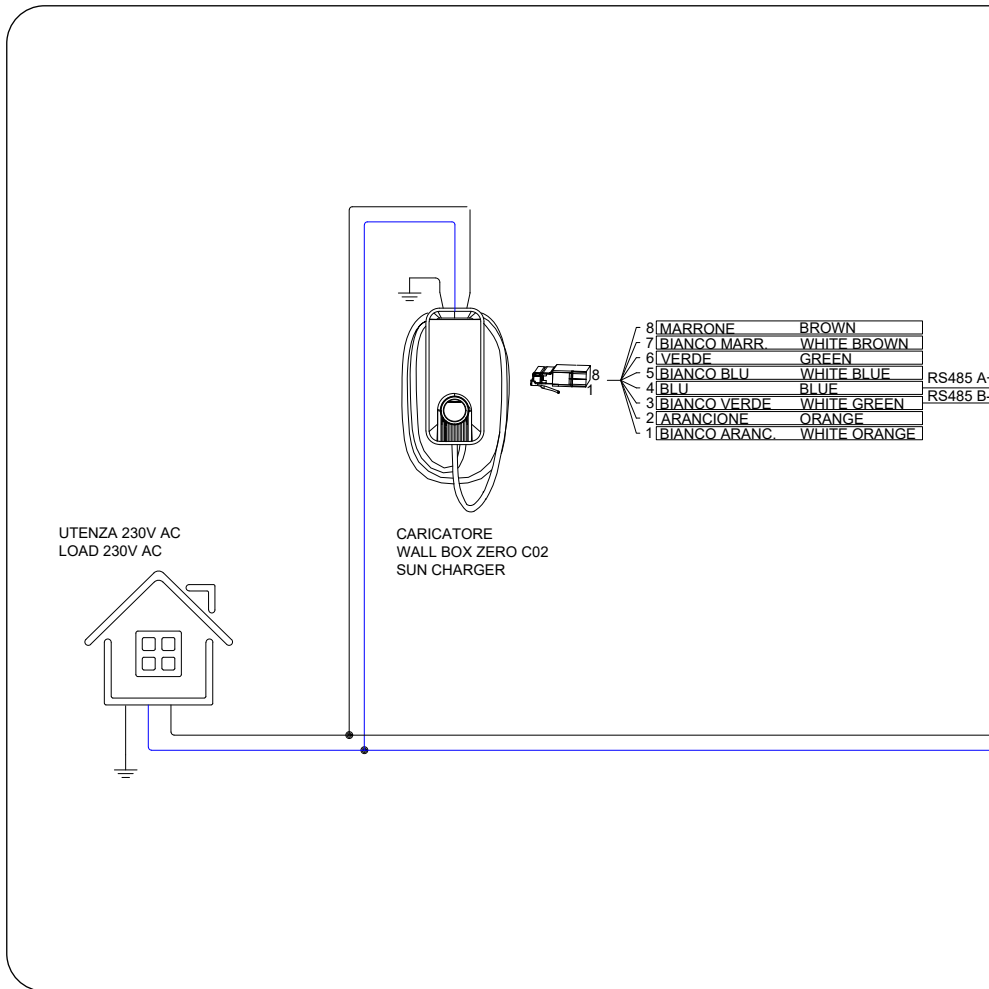
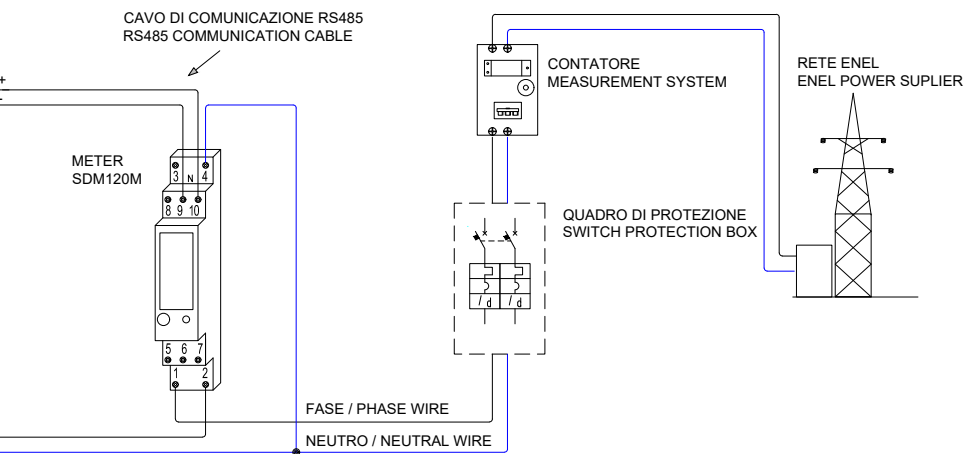


Figure 4 - Use with SDM120M single-phase electric meter



# 4. Product introduction



# 4. Product introduction

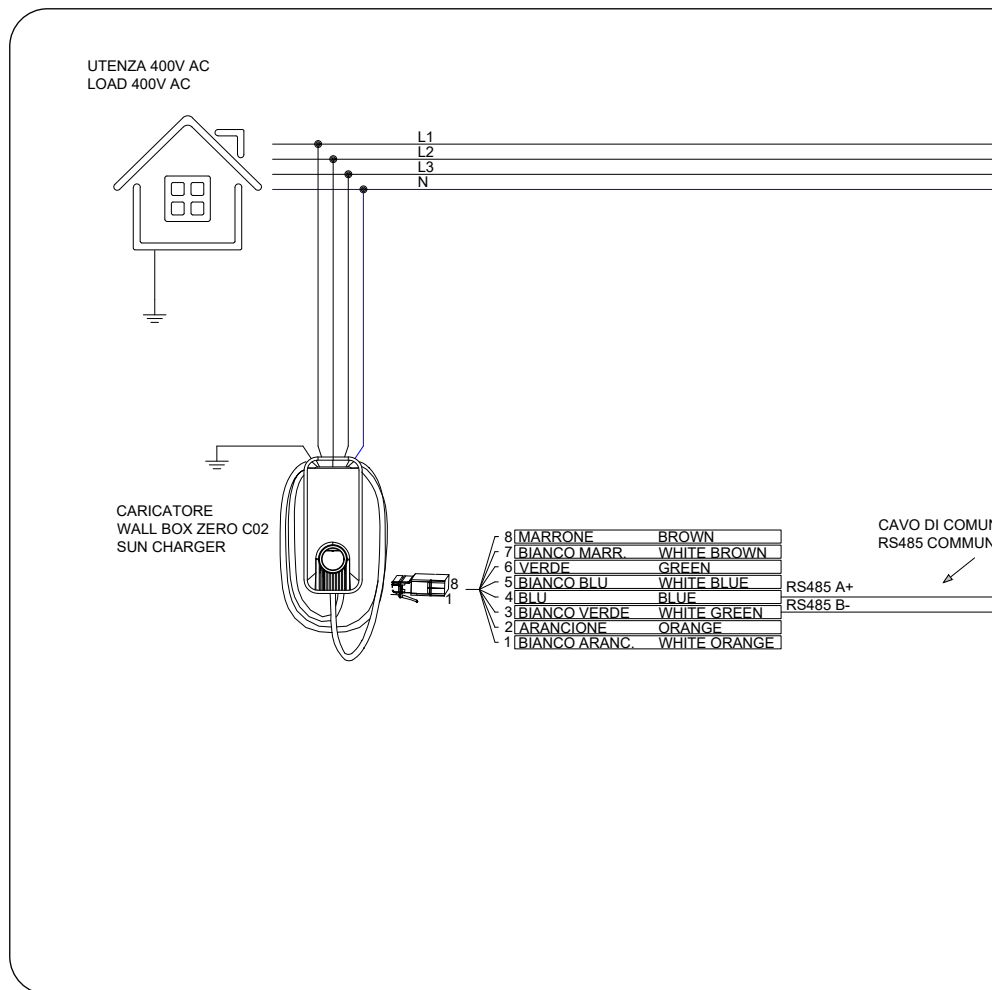
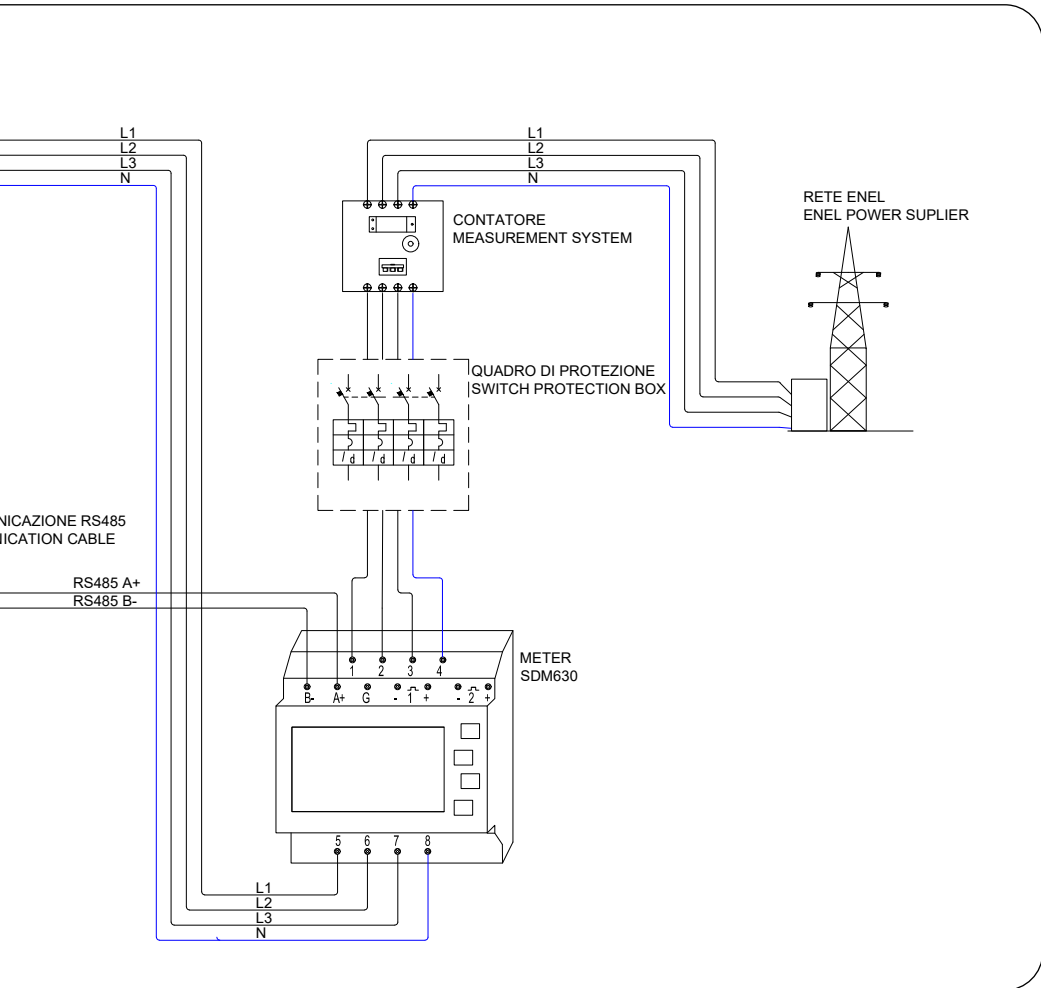


Figure 5 - Use with SDM630M three-phase electric meter

# 4. Product introduction



# 4. Product introduction

To use zeroCO<sub>2</sub> sun charger with zeroCO<sub>2</sub> small inverter the ct direction function must be set on the inverter! (MENU-ADVANCED SETTING-PASSWORD 0010-STORAGE ENERGYSET-METER SET-CT DIRECTION-REVERSE). If this parameter is not set, the system will not work correctly.

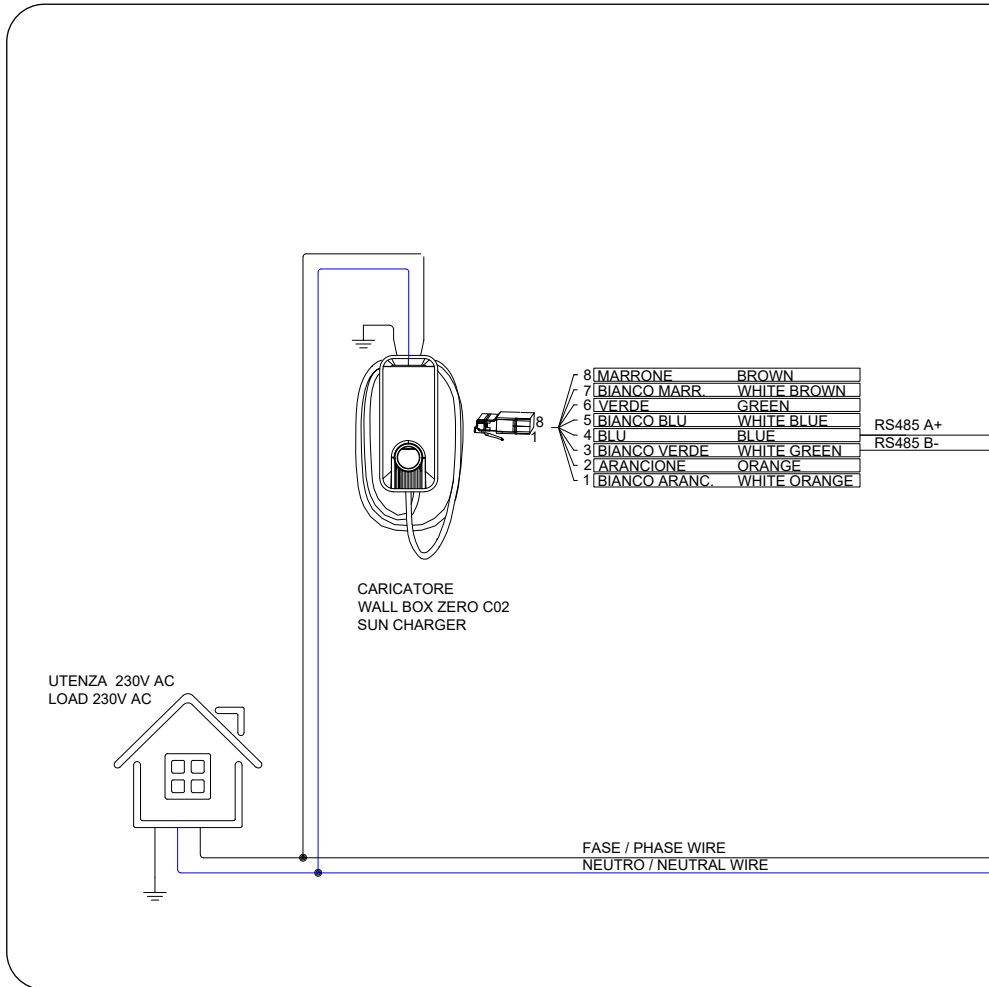
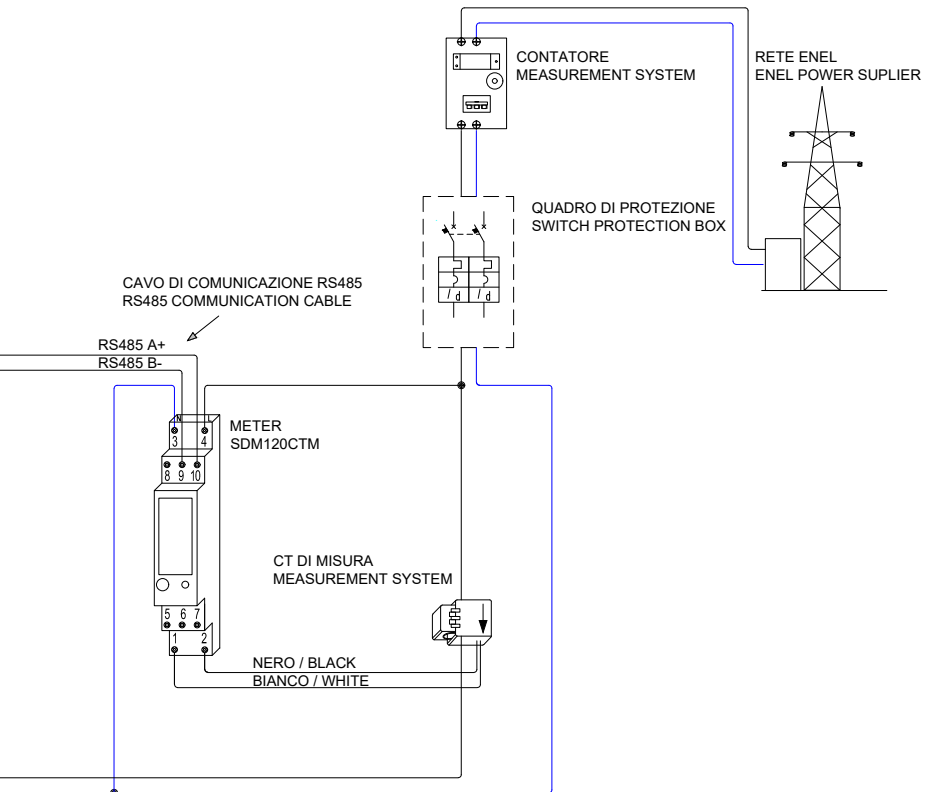


Figure 6 - Use with SDM120CT single-phase electric meter

# 4. Product introduction



# 4. Product introduction

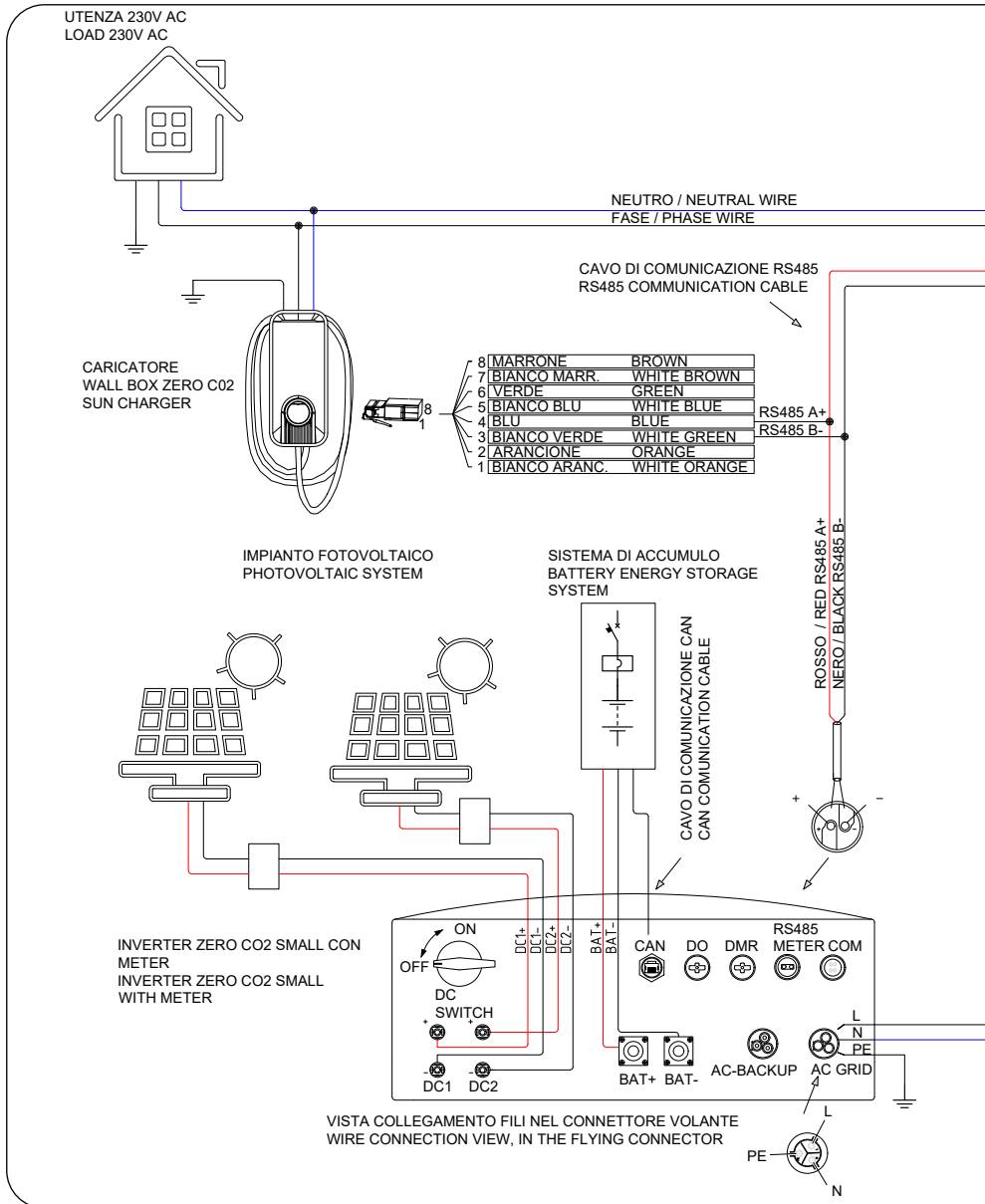
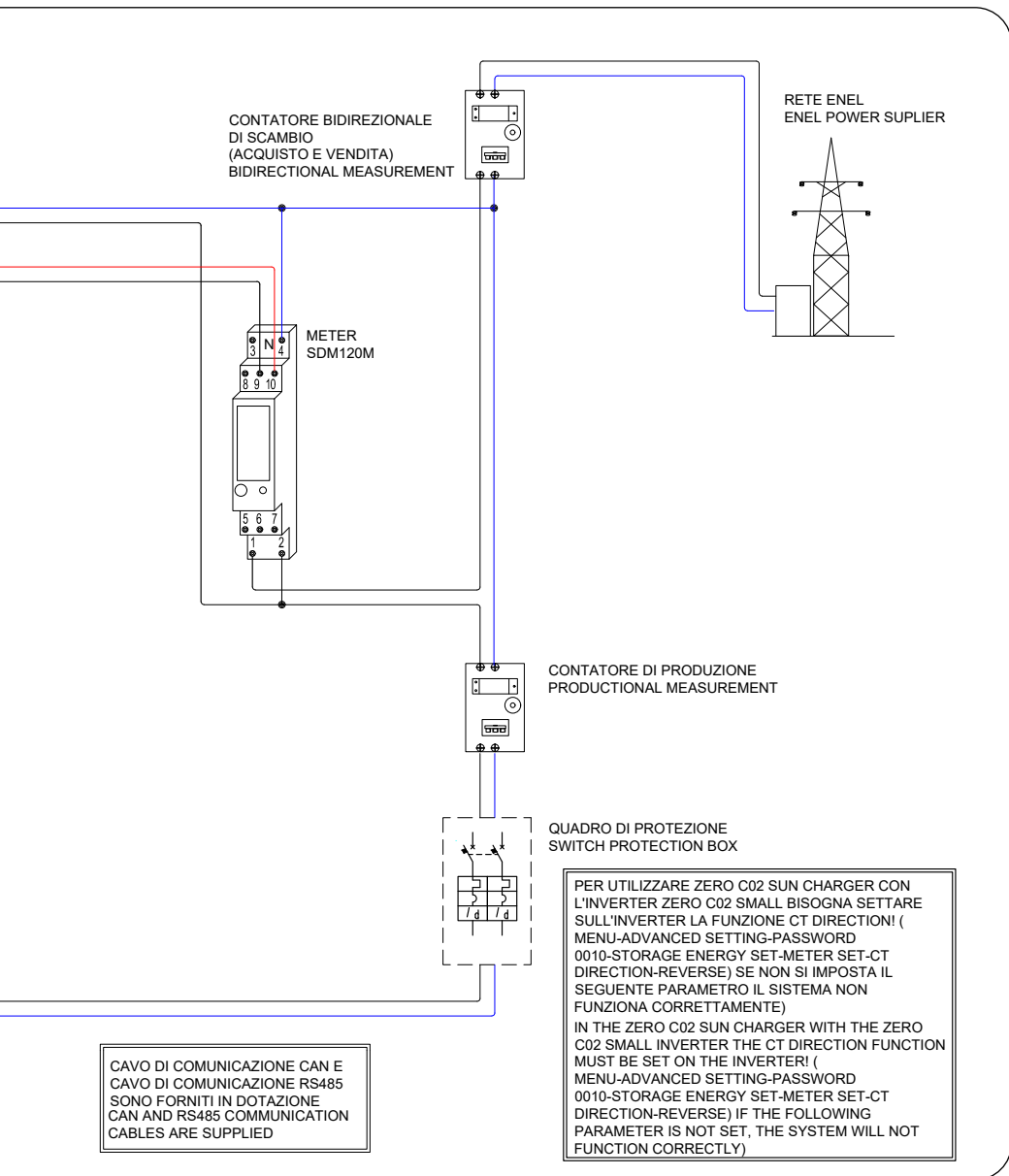


Figure 7 - Use with SDM120M single-phase electric meter and zeroCO<sub>2</sub> small

# 4. Product introduction



# 4. Product introduction

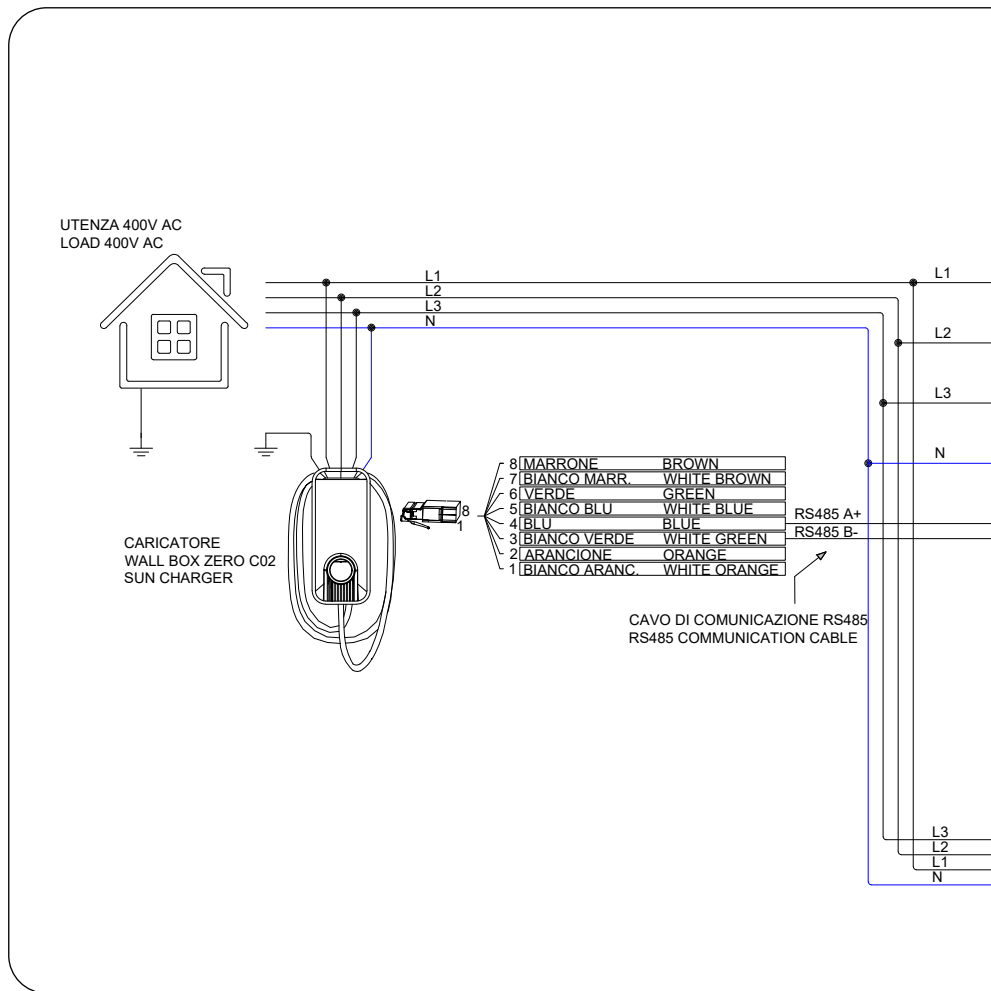
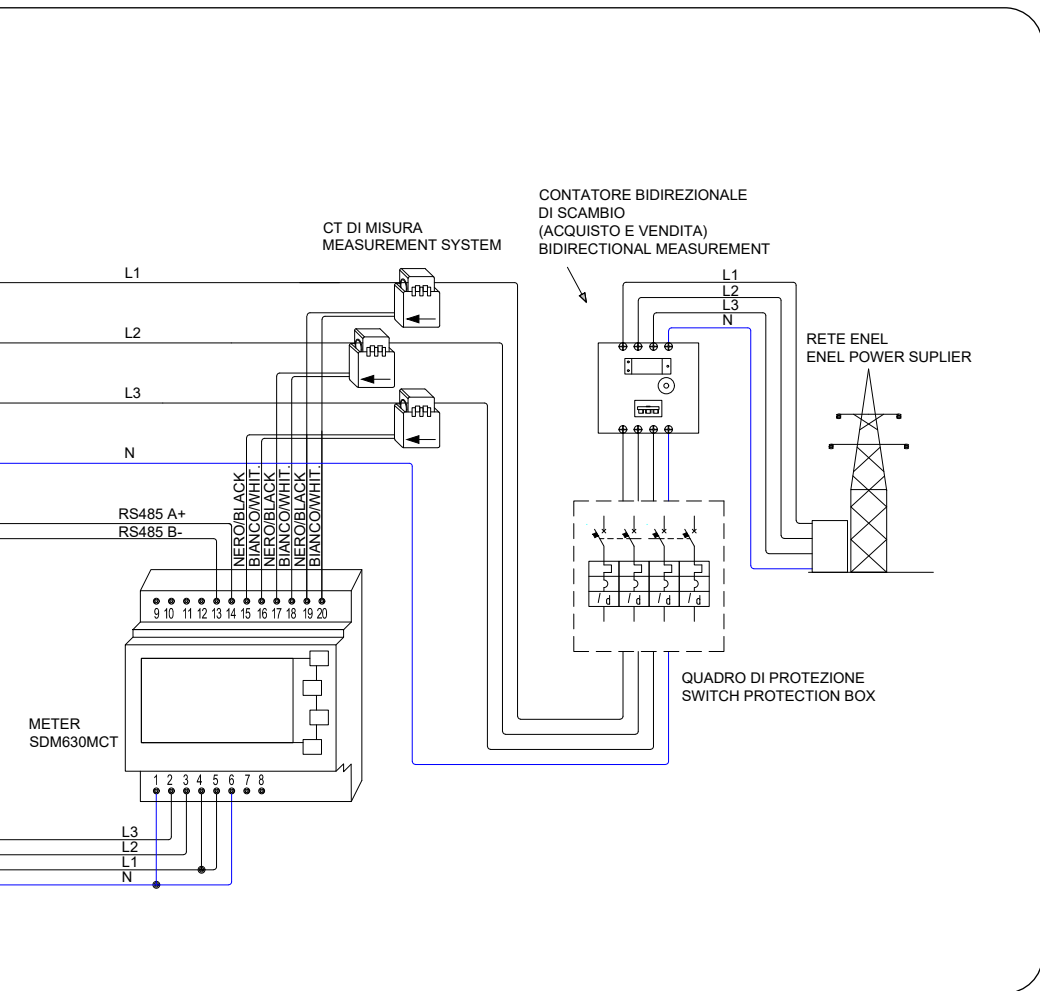


Figure 8 - Use with SDM630CT three-phase electric meter



# 4. Product introduction



# 4. Product introduction

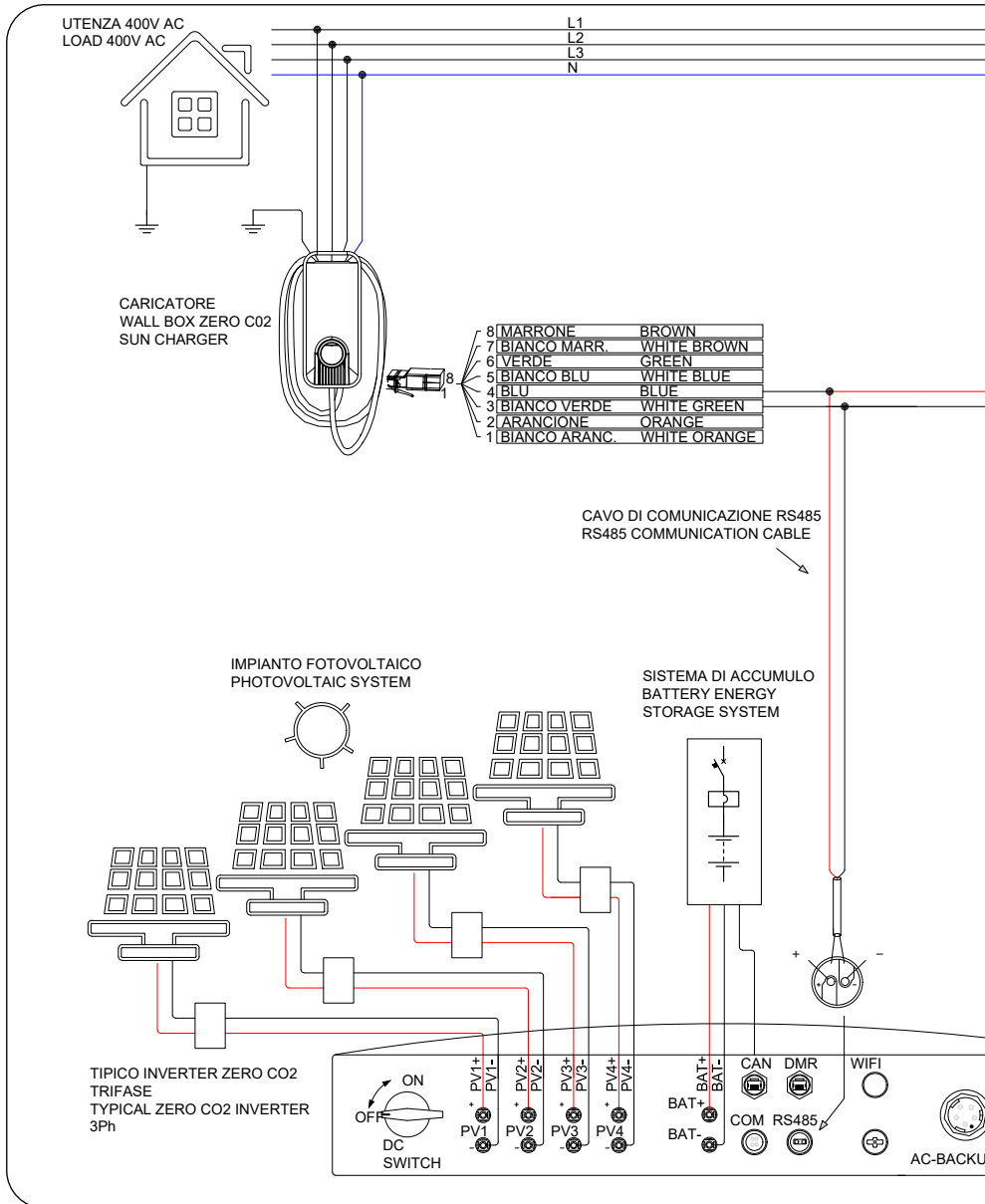
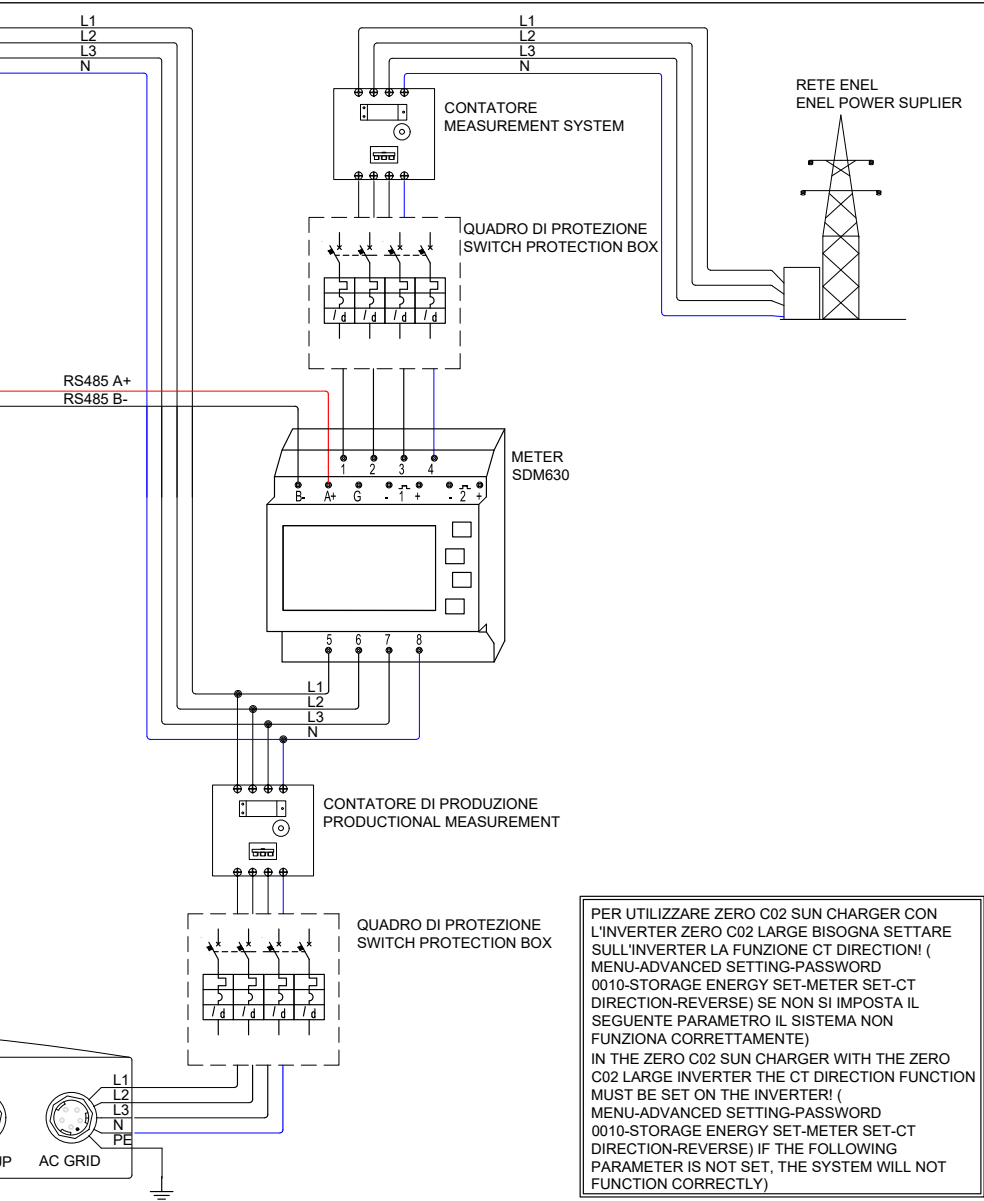


Figure 9 - Use with SDM630 three-phase electric meter and zeroCO<sub>2</sub> Large

# 4. Product introduction



PER UTILIZZARE ZERO C02 SUN CHARGER CON L'INVERTER ZERO C02 LARGE BISOGNA SETTARE SULL'INVERTER LA FUNZIONE CT DIRECTION! ( MENU-ADVANCED SETTING-PASSWORD 0010-STORAGE ENERGY SET-METER SET-CT DIRECTION-REVERSE) SE NON SI IMPOSTA IL SEGUENTE PARAMETRO IL SISTEMA NON FUNZIONA CORRETTAMENTE)  
 IN THE ZERO C02 SUN CHARGER WITH THE ZERO C02 LARGE INVERTER THE CT DIRECTION FUNCTION MUST BE SET ON THE INVERTER! ( MENU-ADVANCED SETTING-PASSWORD 0010-STORAGE ENERGY SET-METER SET-CT DIRECTION-REVERSE) IF THE FOLLOWING PARAMETER IS NOT SET, THE SYSTEM WILL NOT FUNCTION CORRECTLY)

# 4. Product introduction

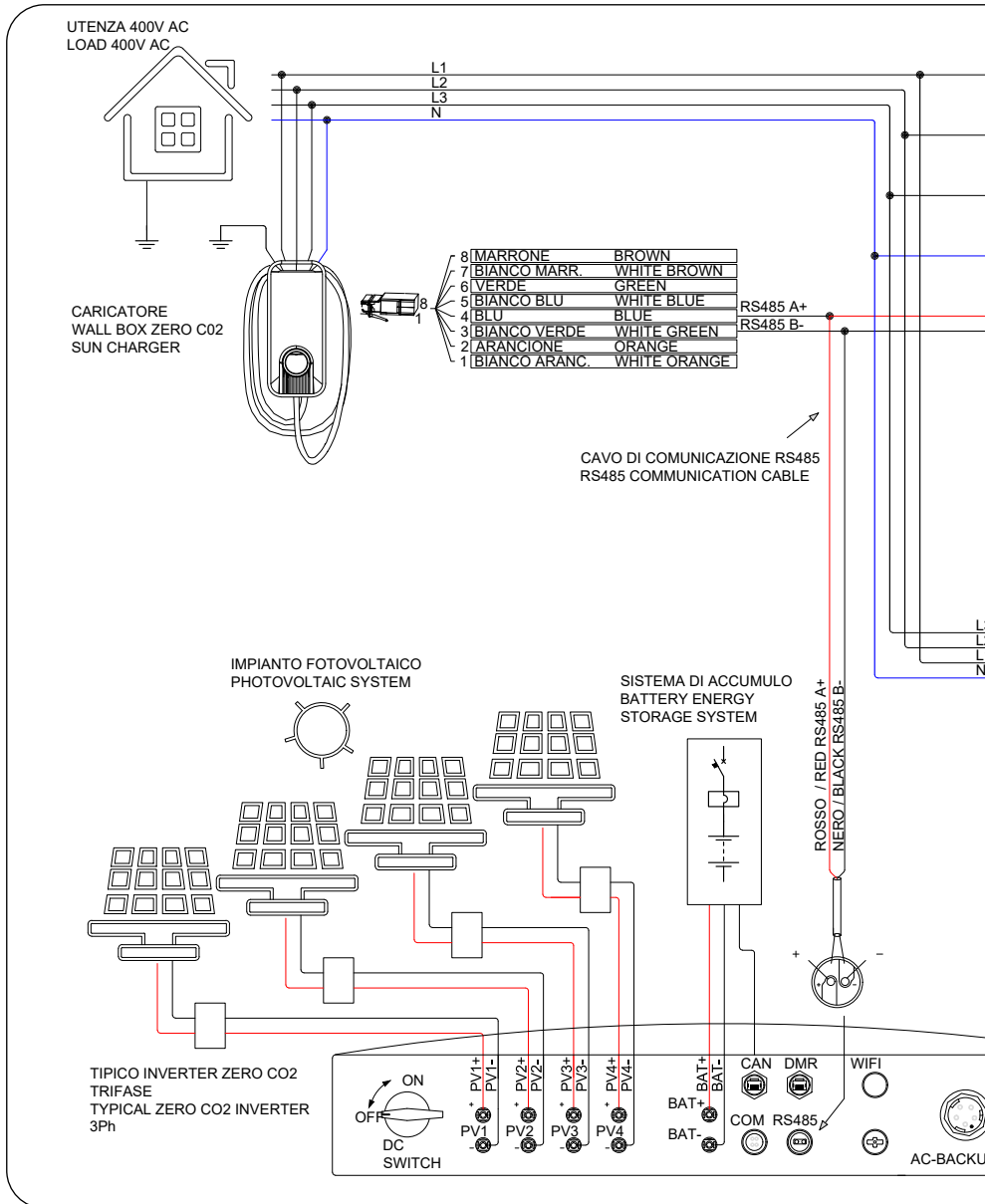
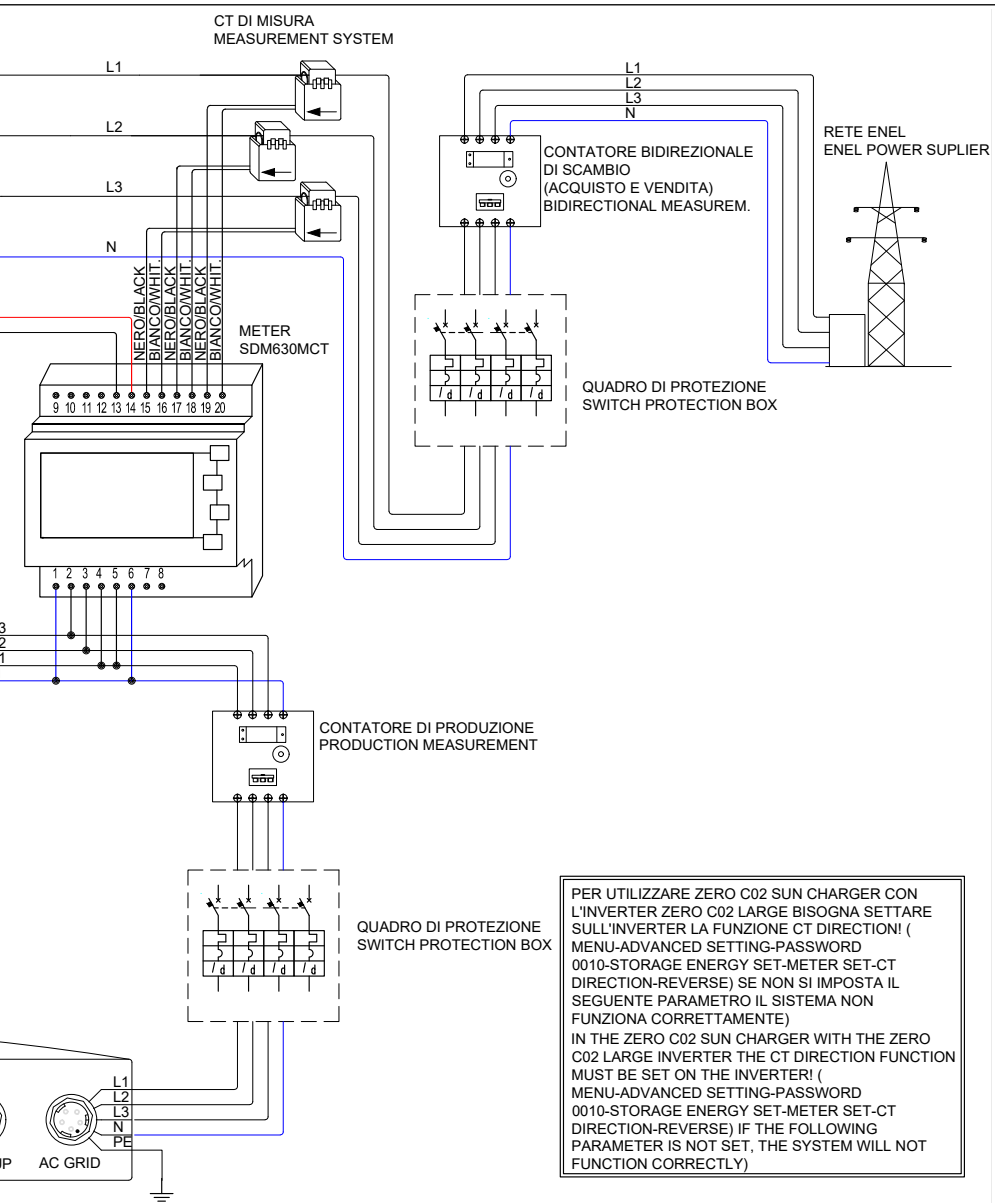


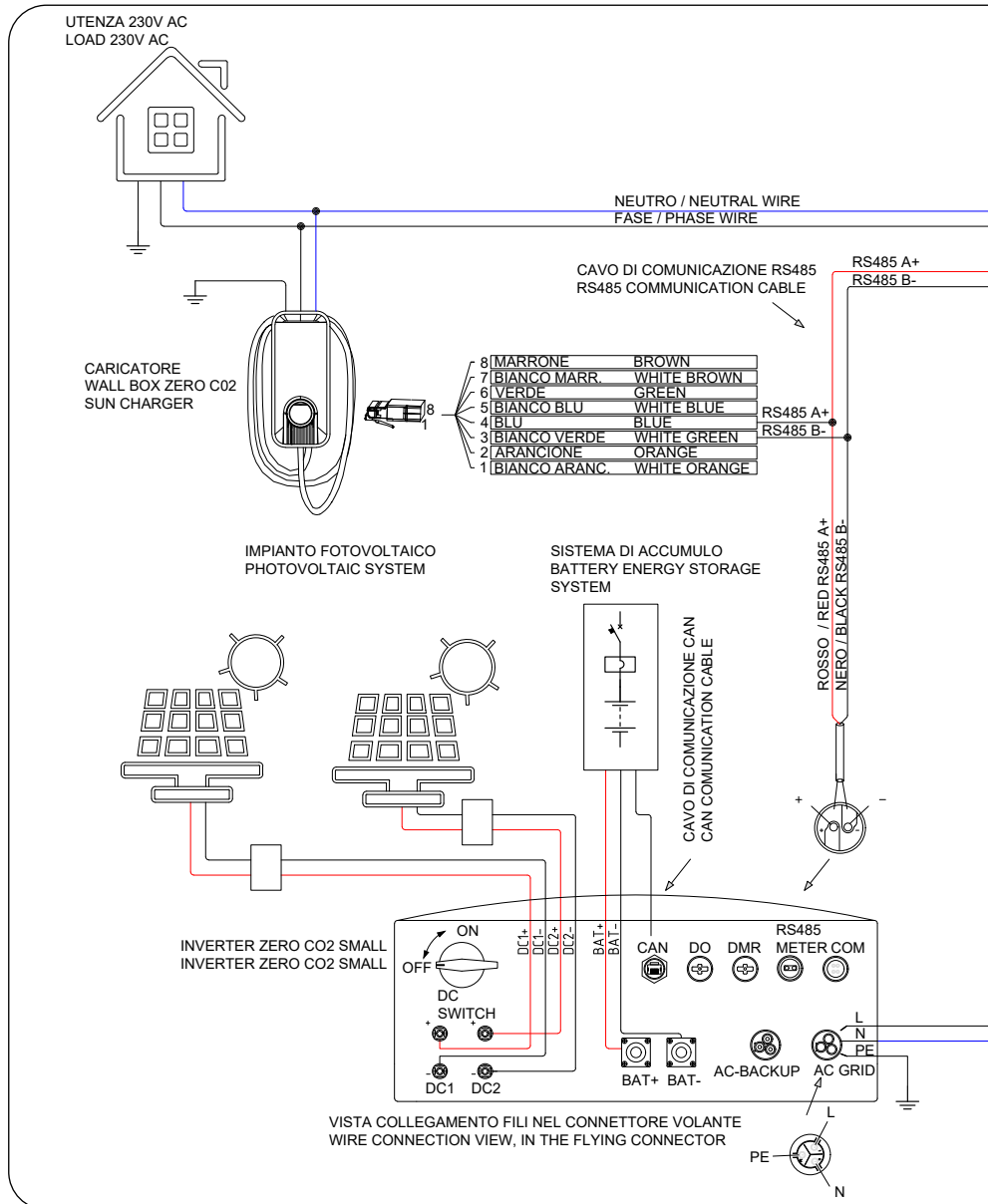
Figure 10 - Use with SDM630MCT three-phase electric meter plus external CTs and zeroCO<sub>2</sub> Large

# 4. Product introduction



# 4. Product introduction

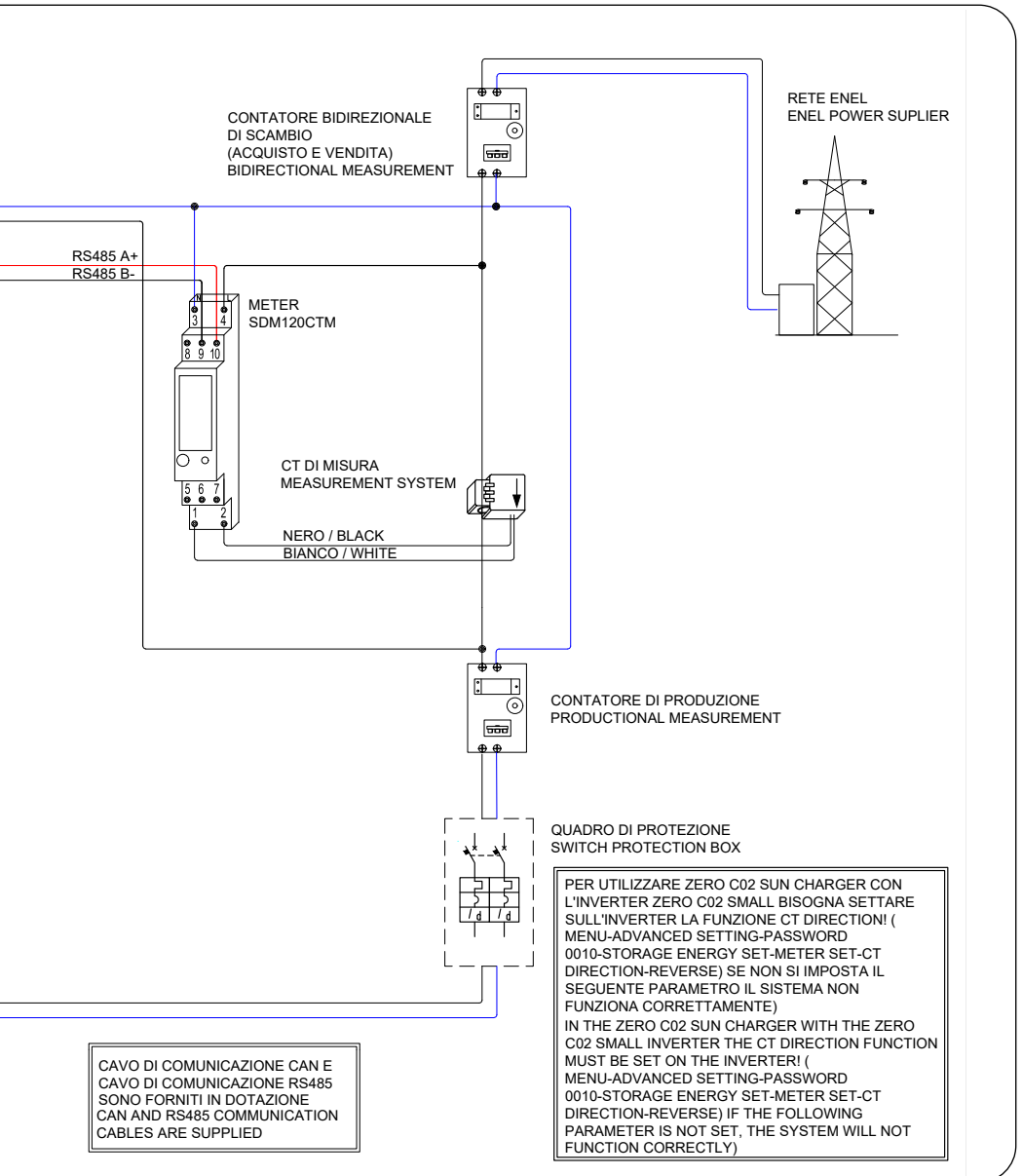
To use zeroCO<sub>2</sub> sun charger with zeroCO<sub>2</sub> small inverter you must set the ct direction function on the inverter!



30 . Figure 11 - Use with SDM120CT single-phase electric meter and zeroCO<sub>2</sub> Small

# 4. Product introduction

**(MENU-ADVANCED SETTING-PASSWORD 0010-STORAGE ENERGY SET-METER SET-CT DIRECTION-REVERSE).** If you don't set this parameter system does not work correctly.



# 4. Product introduction

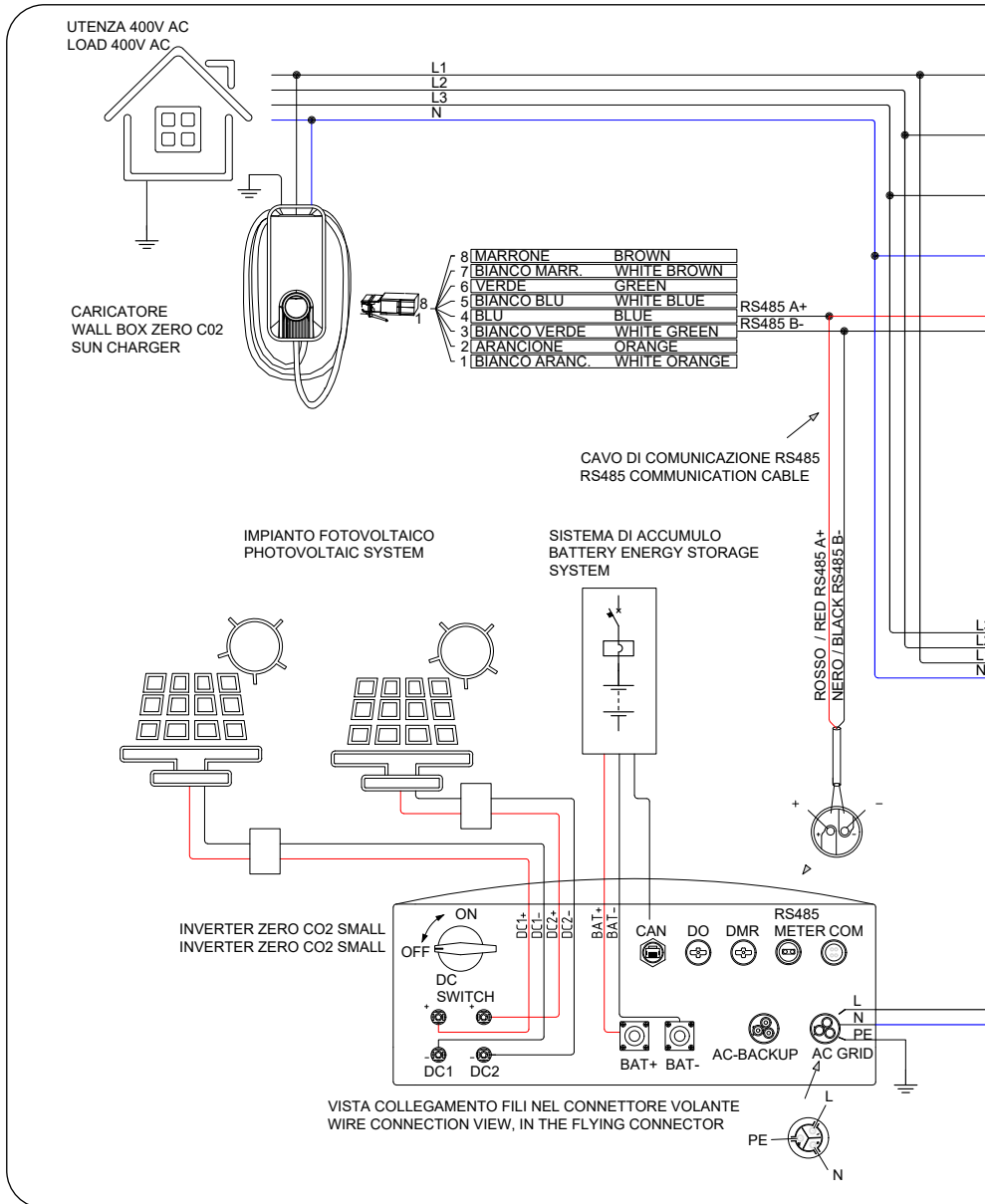
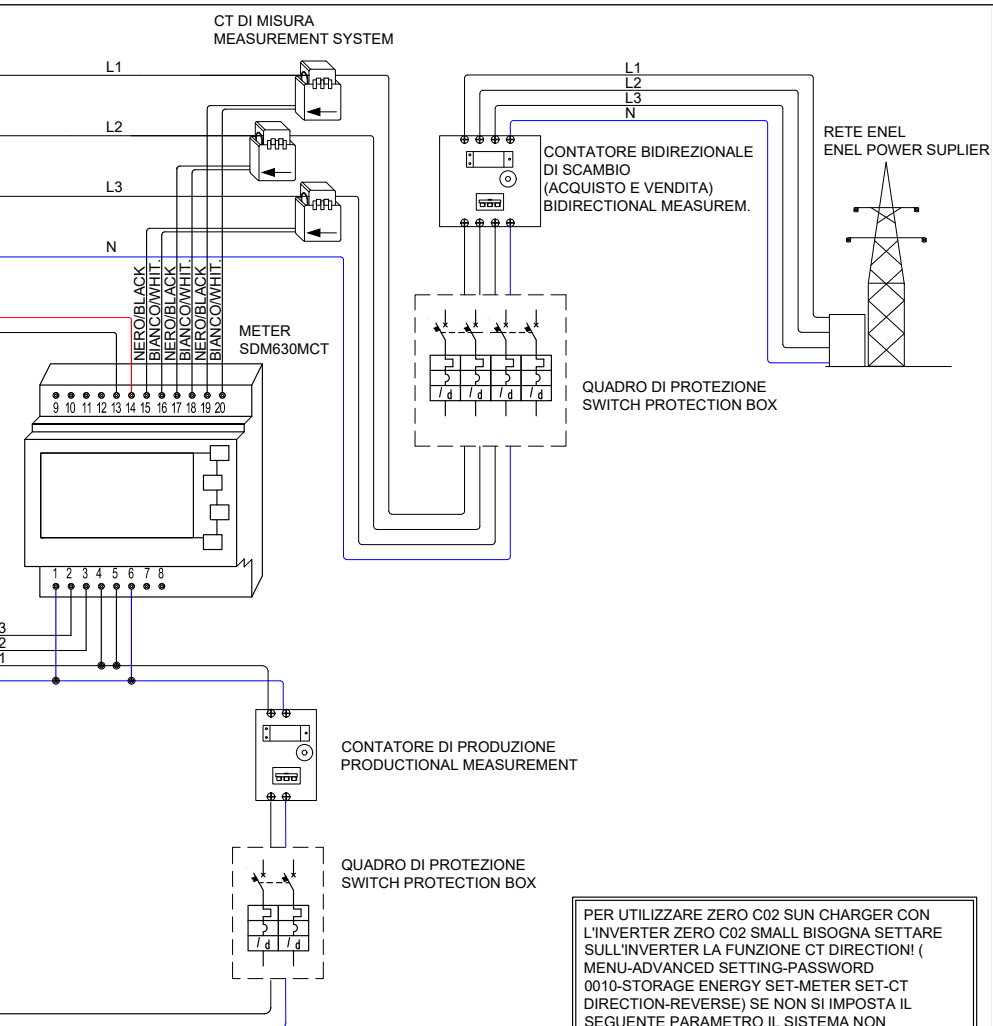


Figure 12 - Use with SDM630MCT three-phase electric meter and zeroCO<sub>2</sub> small



# 4. Product introduction



PER UTILIZZARE ZERO C02 SUN CHARGER CON L'INVERTER ZERO C02 SMALL BISOGNA SETTARE SULL'INVERTER LA FUNZIONE CT DIRECTION! ( MENU-ADVANCED SETTING-PASSWORD 0010-STORAGE ENERGY SET-METER SET-CT DIRECTION-REVERSE) SE NON SI IMPOSTA IL SEGUENTE PARAMETRO IL SISTEMA NON FUNZIONA CORRETTAMENTE)  
IN THE ZERO C02 SUN CHARGER WITH THE ZERO C02 SMALL INVERTER THE CT DIRECTION FUNCTION MUST BE SET ON THE INVERTER! ( MENU-ADVANCED SETTING-PASSWORD 0010-STORAGE ENERGY SET-METER SET-CT DIRECTION-REVERSE) IF THE FOLLOWING PARAMETER IS NOT SET, THE SYSTEM WILL NOT FUNCTION CORRECTLY)

# 5. Installation and wiring



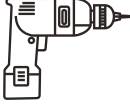

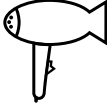
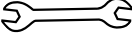




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## 5.1 Installation site requirements

- It is recommended that the installation be carried out by technicians authorized by Energy S.p.A.
- Do not install the product near dangerous locations such as water, gas or steam pipes.
- The product should not be installed in places subject to intense vibration or high temperatures.
- The product should not be installed in places where there may be water accumulation or leaks.
- The product must be installed vertically, taking care to prevent it from somehow rotating on itself or in any direction.
- The position of the installation must be consistent with the charging needs, also the length of the charging cable must be shortened to avoid excessive power loss.
- It is recommended that the product be properly fixed to the wall. The fastening must be such as to support the weight of the product and avoid unwanted inclinations.
- It is recommended to install the product in a place protected from excessive exposure from sunlight.
- Lighting and easy accessibility to the installation site must be ensured.
- Be sure to install the product in a place where you can inspect and maintain it.
- Make sure that the ground cable is properly and firmly connected with the ground cable of the electrical circuit.

# 5. Installation and wiring

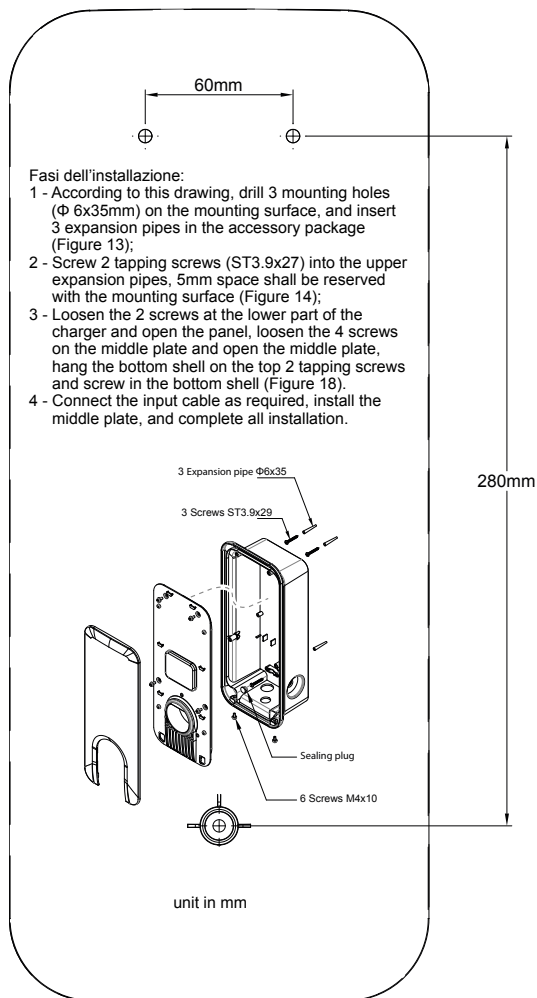
## 5.2 Required installation tools

Tool	Picture	Function	Tool	Picture	Function
Multimeter		Electrical Circuit Control	Crimping tool		To press the connection terminals
Electric drill		Drill holes for Installation	Hammer		To fix brick dowel
Heat Air Gun		To heat the heat shrinkable tubing	17 mm Wrench		Secure the nuts if installing the pillar stand
Cross screwdriver / PH2		Fix screws	Crimper (RJ45)		To wire RJ45 cable
Cutters		Cut and strip the cables	Slotted screwdriver / 2mm		Fix screws

# 5. Installation and wiring

## 5.3 Wallbox installation on the wall

1. Drill three holes ( $\Phi 6 \times 35$  mm) on the mounting surface following the diagram.



# 5. Installation and wiring

2. Insert the 3 dowels ( $\Phi 6 \times 28$  mm) supplied

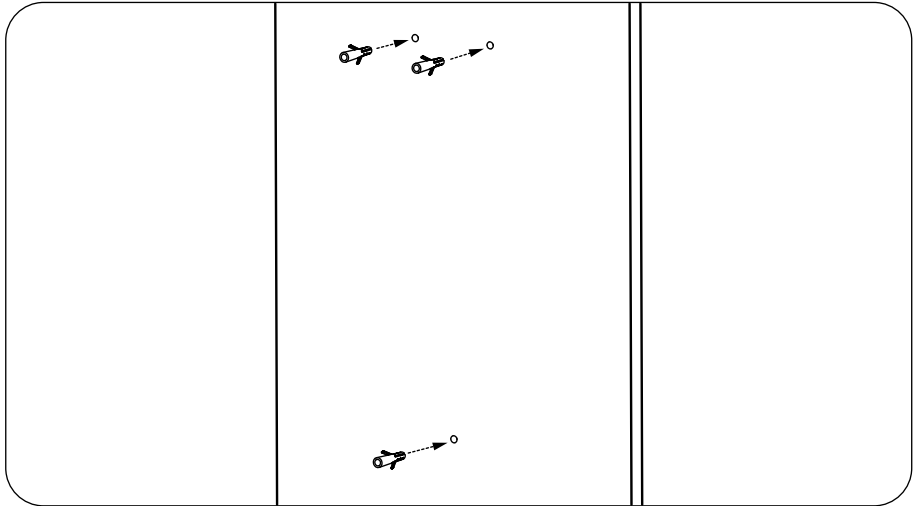


Figure 13

3. Fix 2 round-headed ST3.9x27 screws in the two upper plugs, leaving about 5 mm from the mounting surface

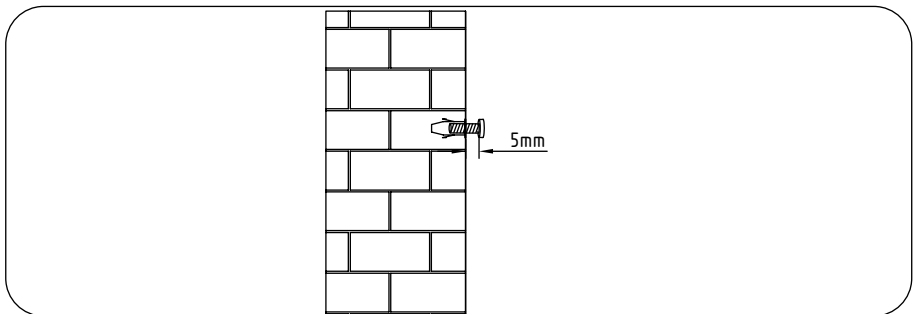


Figure 14

## 5. Installation and wiring

4. Unscrew the two screws at the bottom of the product, slide the cover up to open it.

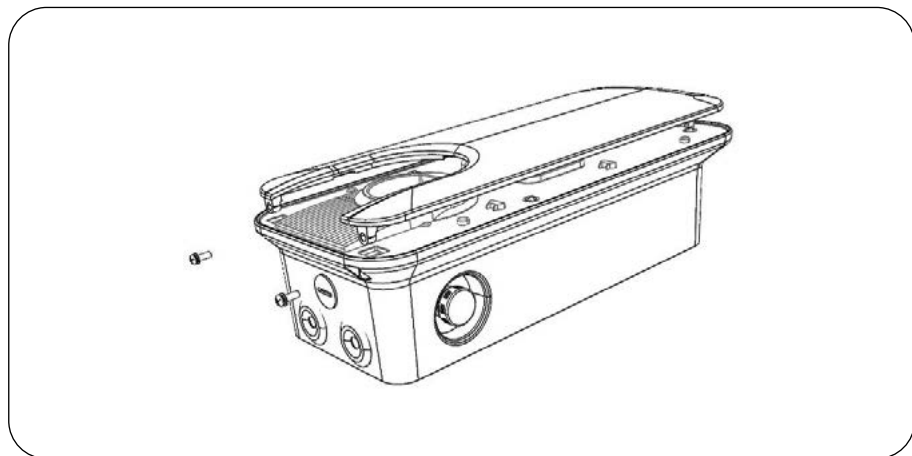


Figure 15

5. Warning: the two parts are connected to each other via communication cables which must not be removed. One person must hold the top panel while a second will carry out the following operations. Unscrew the 4 screws of the inner cover to remove it..

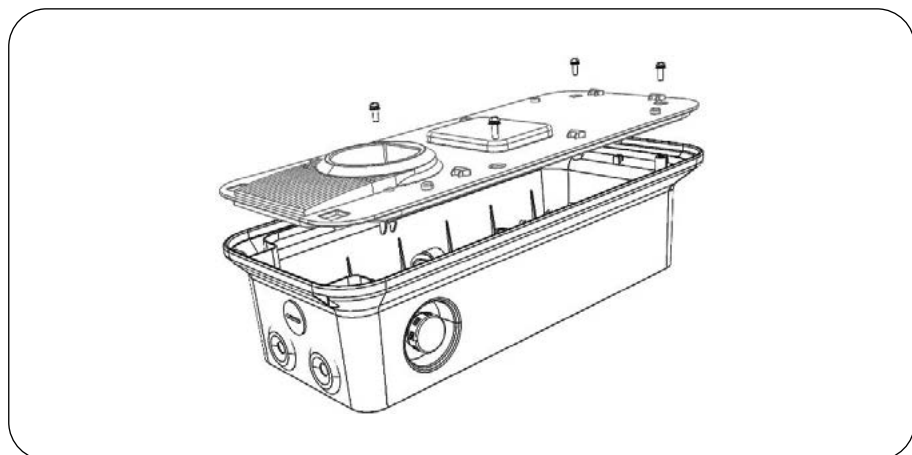


Figure 16

## 5. Installation and wiring

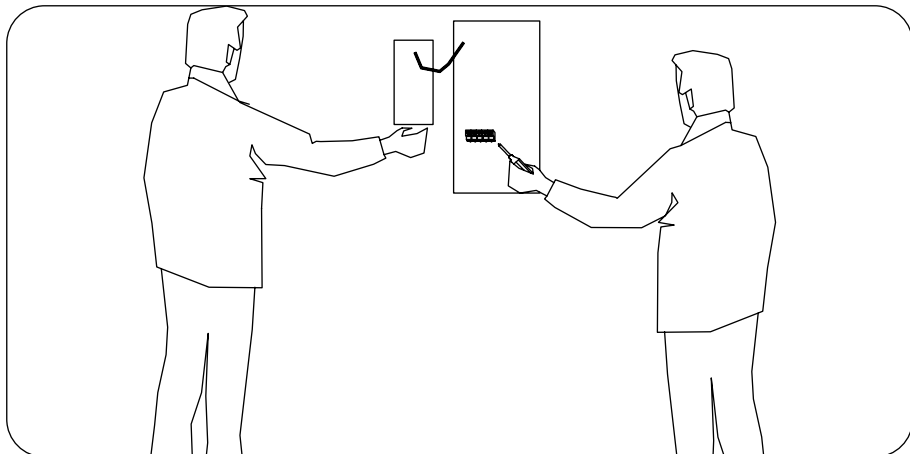


Figure 17

6. Hang the product on the previously installed 2 screws and fix it with the third screw in the bottom.

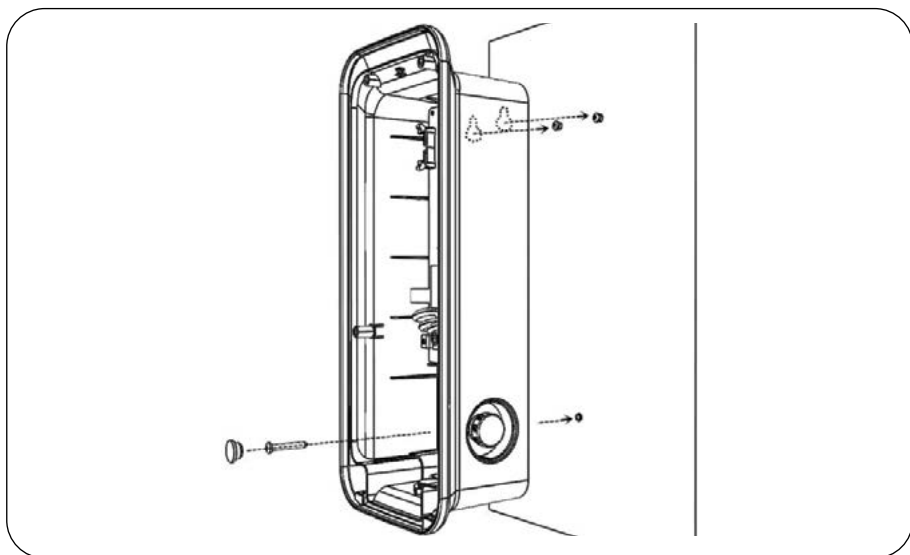


Figure 18

# 5. Installation and wiring

## 5.4 Wallbox installation on column

1. Make 4 holes ( $\Phi 12 \times 120$  mm) on the base as shown in Figure 19 (units in mm).
2. Install 4 fixing bolts M10x120 (Figure 20) in the holes made and fix them for make sure there is a height of 15 ~ 25mm.

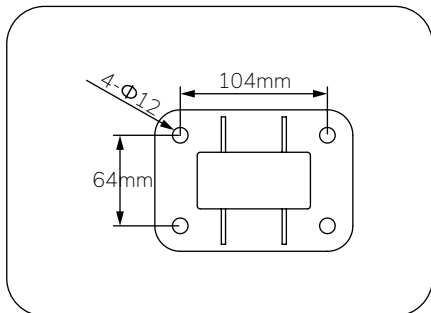


Figure 19

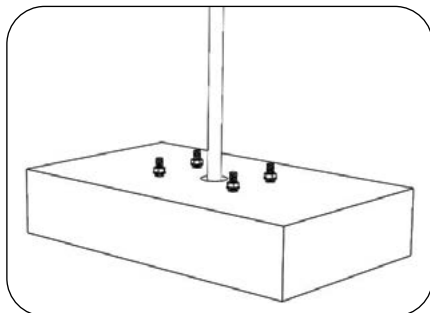


Figure 20

3. Pass the cable inside the column (Figure 21) until it comes out of the special hole.

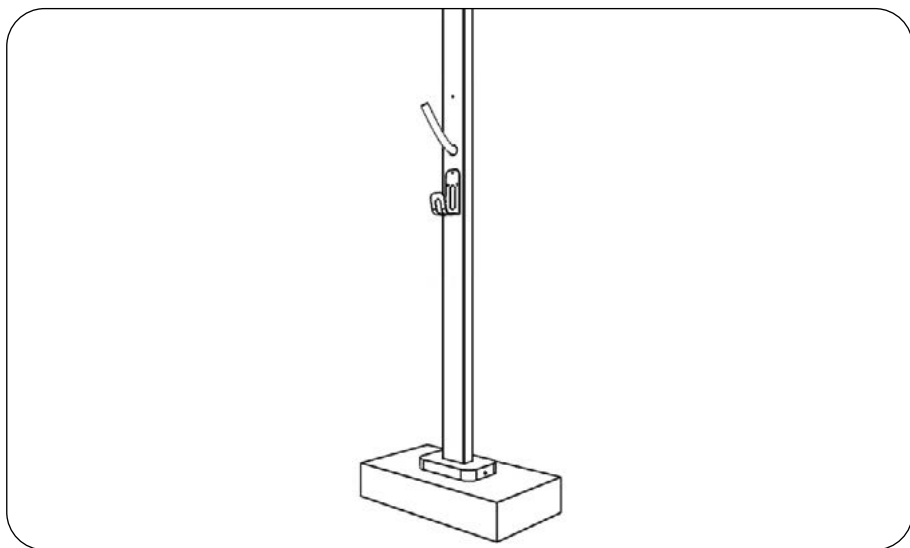


Figure 21



# 5. Installation and wiring

4. Unscrew 3 M3x8 screws on the base of the post (Figure 22), lift the cover and align it with the installation holes before fixing the bottom bolts.
5. Close the cover and attach 3 M3x8 screws to complete the installation of the column (Figure 23).

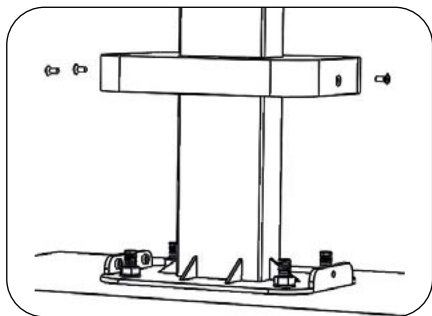


Figure 22

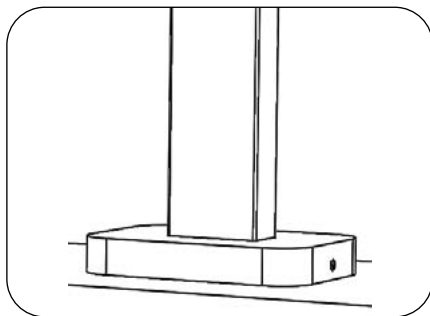


Figure 23

6. Screw the 2 screw M4x16 screws into the two holes at the top of the column.

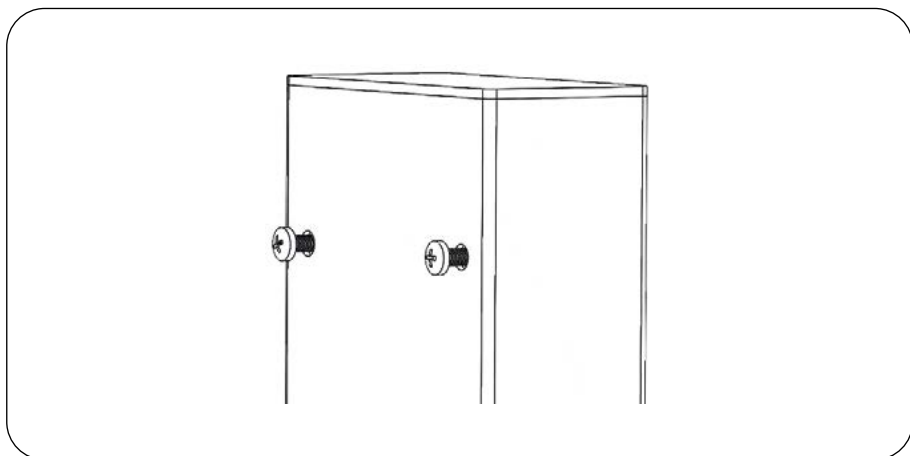


Figure 24

7. Refer to steps 4, 5 and 6 chapter “Wallbox installation on the wall” at page 36 to complete the installation.

# 5. Installation and wiring

## 5.5 Connection to single-phase or three-phase power grid

It is mandatory to provide a circuit-breaker with differential (RCBO) to protect the circuit.

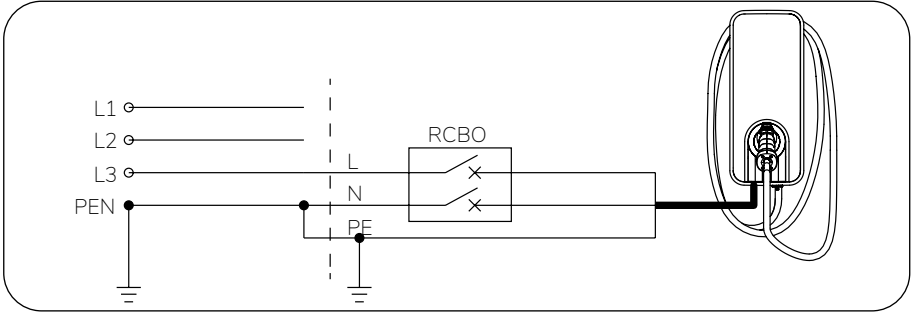


Figure 25 - **TN-C-S**.

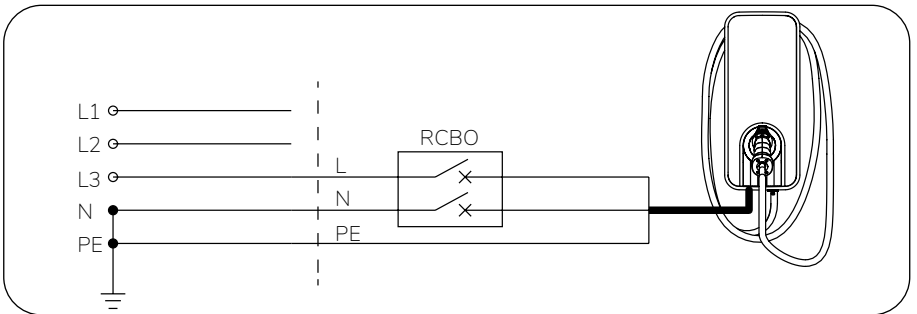


Figure 26 - **TN-S**

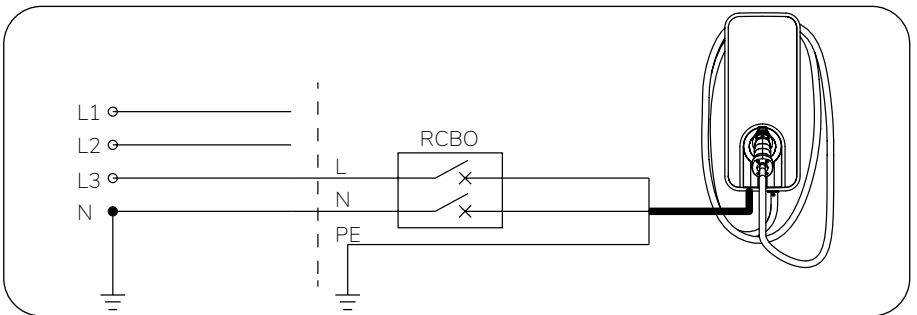


Figure 27 - **TT**

# 5. Installation and wiring

## 5.6 Power wiring

- **A0070230E11 (single-phase)** - 3x6mm<sup>2</sup> AC power cables (outer diameter range: 13 ~ 16mm) are recommended, prepared as shown in Figure 28.

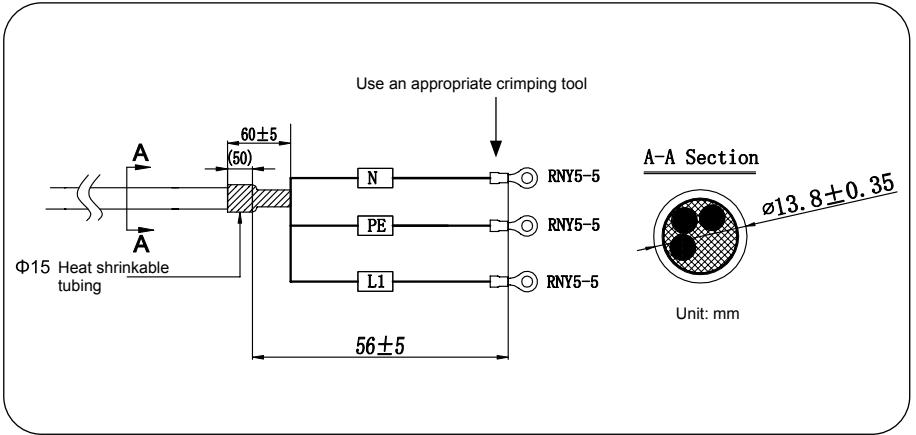


Figure 28

- **A0220400E11 (three-phase)** - 5x6mm<sup>2</sup> AC power cables are recommended, prepared as show in Figure 29.

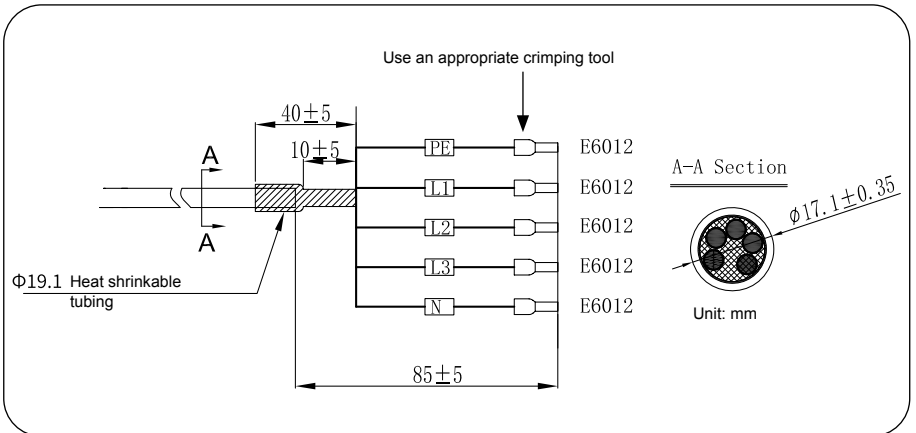


Figure 29

# 5. Installation and wiring

## 5.7 Communication wiring

- If it is necessary to use RS485 communication, it is recommended to use EIA / TIA 568B standard cables.

The specific wiring is shown in Figure 30 and Figure 31:

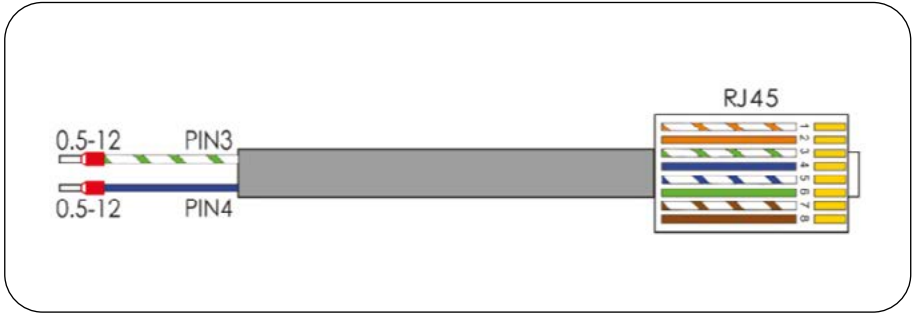


Figure 30

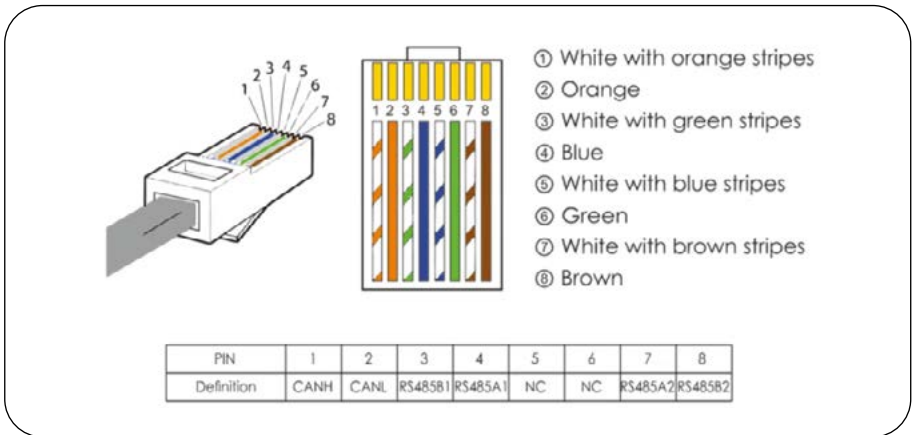


Figure 31

# 5. Installation and wiring

## 5.8 Wallbox wiring

1. Pass the power cord through the gasketed hole and into the cable tray inside it and make the connection as follows.
2. Connect the "L", neutral "N" and ground "PE" phase cables respectively (single-phase version, Figure 32) into the corresponding terminals with the M5x10 screws. Note: the fixing force for the screws is 2.8Nm.
3. Connect the phase cables "L1", "L2", "L3", neutral "N" and ground "PE" (three-phase version, Figure 33) respectively into the corresponding terminals with the M5x10 screws. Note: the fixing force for the screws is 2.8Nm.

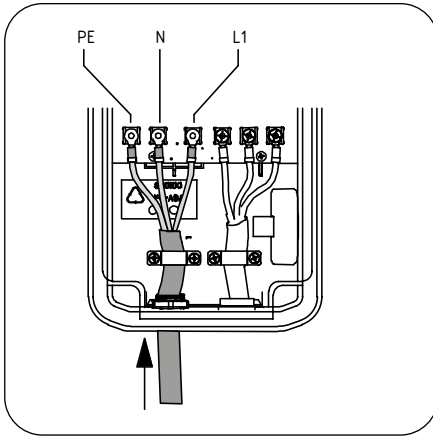


Figure 32

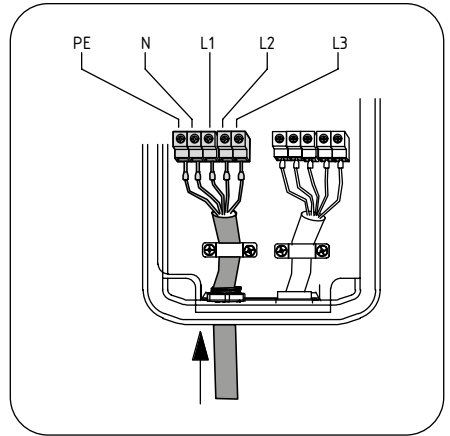


Figure 33

# 5. Installation and wiring

4. Connect an electrical circuit differential switch upstream of the battery charger so as to be able to disconnect the product in the event of maintenance or problems.

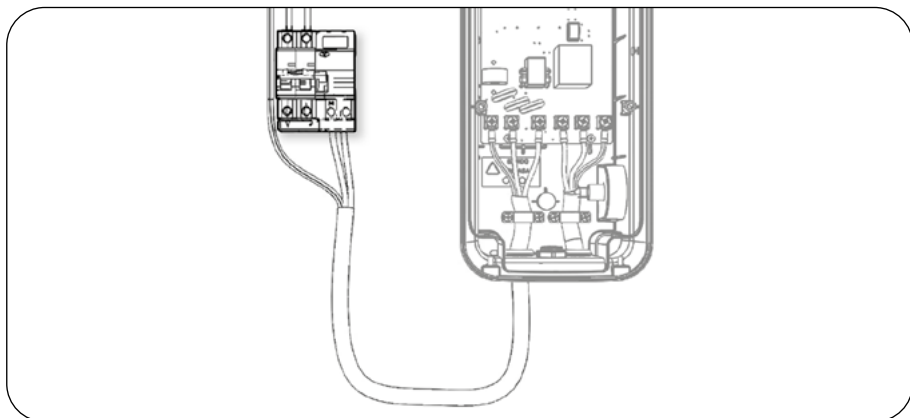


Figure 34

5. If you want to integrate the use of an external meter, use a network cable for RS485 communication. The connection diagram is shown in Figure 35.

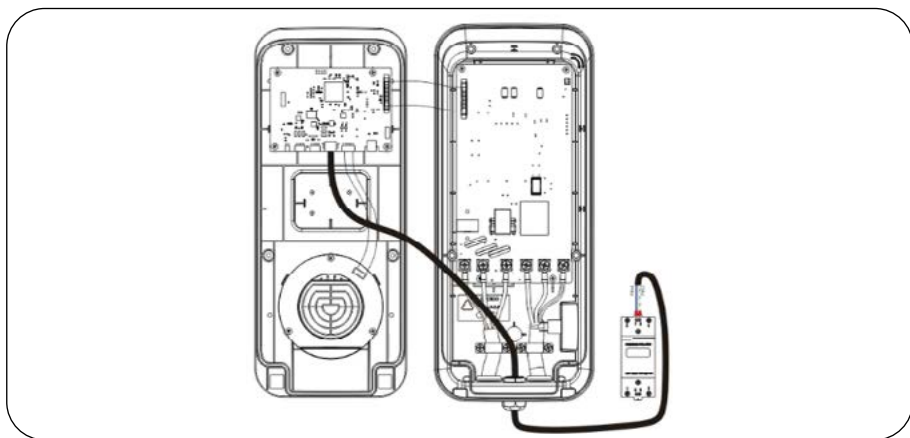






Figure 35

# 5. Installation and wiring

6. After having carried out the wiring of the post it is necessary to set the micro switches present in the single-phase (Figure 36) or three-phase (Figure 37) board as shown in the following table:

Switch	Description	ON	OFF
	Current limitation	Current limitation to 16A.	Current limitation to 32A.
	Not used		
	Not used		
	Plug & Charge	After connecting the plug to the vehicle, the charge is activated instantly	Once the plug has been connected to the vehicle, charging is activated only by APP or by RFID card

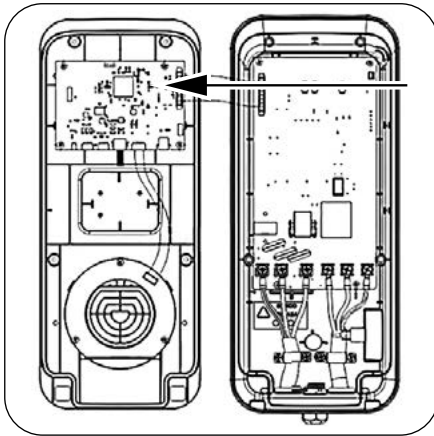


Figure 36

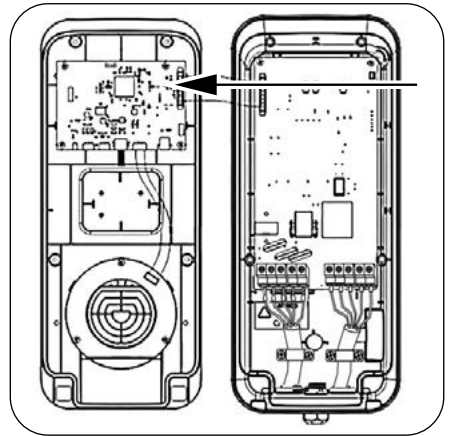


Figure 37

## 6. Installation and wiring

7. To connect the communication cable, remove the cap 1 (Figure 39) (inside there is a plastic nut that will have to be removed) and install the cable gland supplied in the kit (Figure 40). Fix and tighten the cable gland (6Nm) in order to restore the declared IP protection value.
8. Close the battery charger body and secure with the relative screws (Figure 38).
9. Fix the front plate and tighten the screws in the lower part (Figure 39).

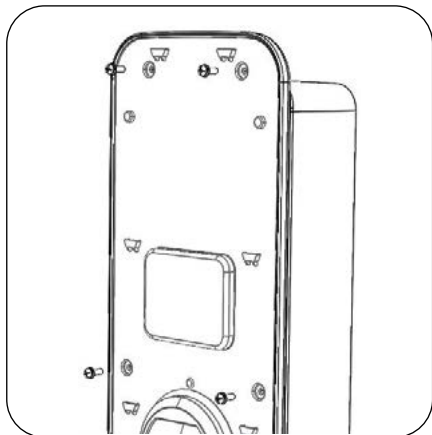


Figure 38

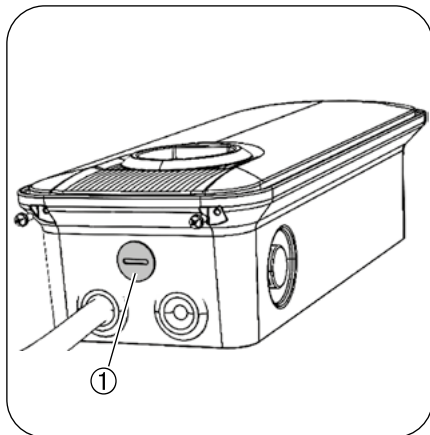


Figure 39

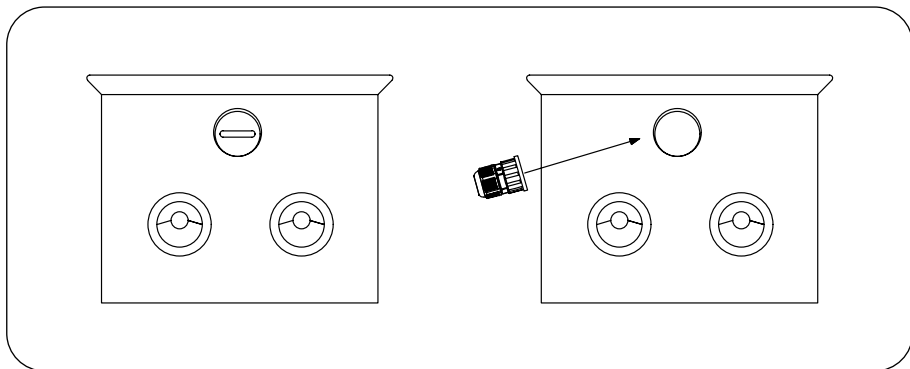


Figure 40



## 6. Installation and wiring

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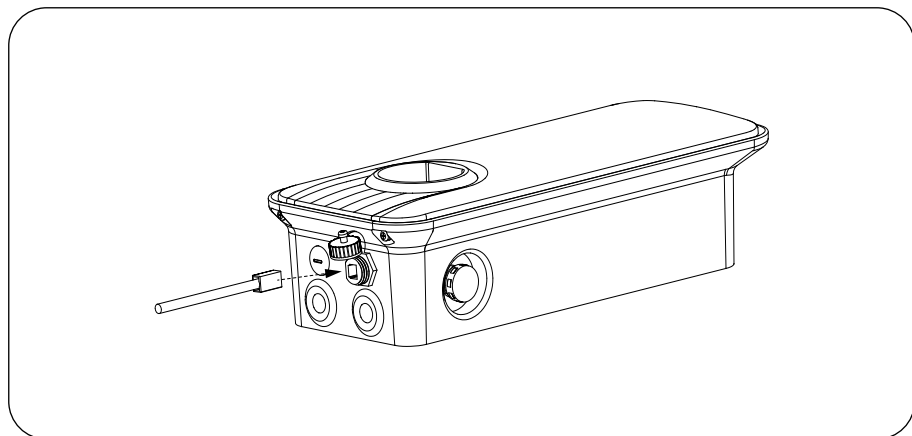


Figure 41

NB: the pinout of the communication port remains the same in both configurations.  
In some models the RJ45 communication connector is present on the outside of the machine body; in this case, connect the cable directly as shown in Figure 41.  
In the three-phase column the RJ45 connector is always on the outside.

# 6. Instruction for use

## 6.1 Plug&charge

- The battery charger supports the Plug&Charge function. When the battery charger is in standby status, the user can insert the charging connector into the appropriate slot of the electric vehicle. The battery charger, after carrying out a connection check, will start the charging process based on the last setting made via the application. Once the battery is fully charged, the charger stops charging and the process is complete. At this point, please remove the connector from the vehicle and place it in the appropriate seat in the battery charger.

## 6.2 Charing via App

- The charger also supports functions selectable via the application.

## 6.3 Instructions on App functions

1. Pairing your device with the zeroCO<sub>2</sub> sun charger.



- Activate the Bluetooth of your smartphone;
- Open the ZCO2.SC app, access the “Local Mode” screen and then “Bluetooth mode” and select your zeroCO<sub>2</sub> sun charger;
- Type the password: “111111” to complete the pairing.


**Note: product name is AC - {last 8 digits of S/N}.**

After the first login, the user can reset the Bluetooth password by going to “Settings” > “General Settings” > “Reset Bluetooth Password”.

# 6. Instruction for use

- Configure the different working modes:



After arriving on the Homepage, you can access the settings via the gear icon  from which you can then enter the “Working Mode

### 2. “Constant Power Mode” configuration:

Mode in which charging is carried out with a constant power that can be set by the user and expressed in kW. The maximum power that can be set is 7.3 kW

### 3. “Power Management Mode” configuration:

Usable only in the presence of an electric meter, this mode allows you to set the maximum power that can be absorbed from the network and therefore charge the vehicle with the available power. This makes it possible to never exceed a certain absorption threshold by the entire system, adapting the charging power to any other absorption present on the network.

### 4. “Power Scheduling” configuration:

It is possible to program in advance the time intervals in which we want the zeroCO<sub>2</sub> sun charger to charge.

- Enter the menu through the “Power Scheduling” option available in “Working Mode Menu” then click “+” icon to add time slots to the calendar.
- Set the “Start Up” and “End Up” charging start time and any periodic repetition with “Repeater”. Save the settings to confirm.

**Note:** For all operating modes, the minimum power that can be set is 1,4 kW.



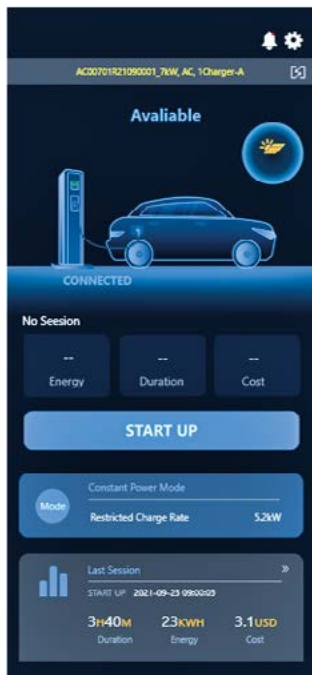
## 6. Instruction for use

**Note:** if you want to use the Wallbox in configuration with zeroCO<sub>2</sub> small inverter, it is necessary to check the software version of the inverter. If the software version is earlier than "3DXXX" contact **Energy S.p.A.** service to proceed with the software update. Then make sure to select the "**Reverse**" option in the "**CT Direction**" menu to allow correct communication between the inverter and the Wallbox zeroCO<sub>2</sub>. For further clarifications, contact **Energy S.p.A.** service.



# 6. Instruction for use

## 5. Charging start:



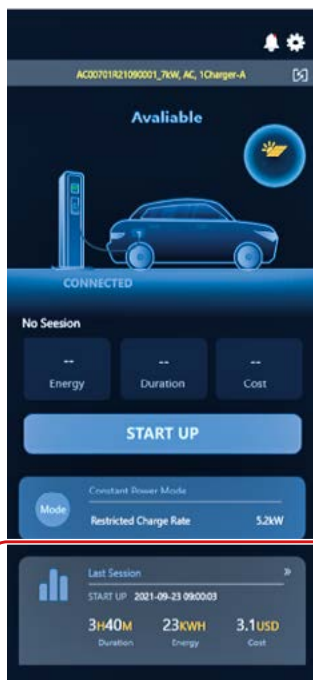
- Check the status of the charger and connector in the app. If the status is “Available” and “Half Connected” it is possible to select “Start Up” to start charging.

- After the “Start Up” command, select the end of charge conditions by setting whether you want the complete charge, the charge of a given number of kW or the charge for a given period of time.



# 6. Instruction for use

6. See past charging sessions:

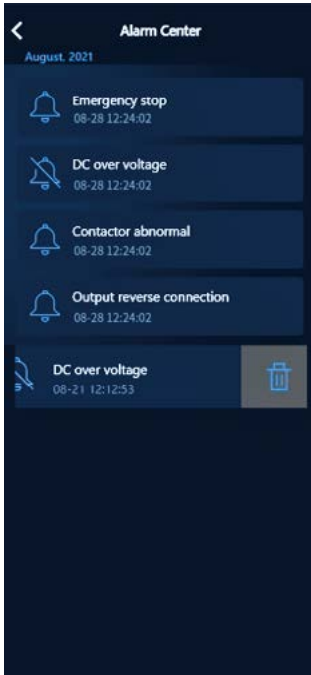



The history of the charges made can be accessed via the “**Last Session**” menu on the home page.



# 6. Instruction for use

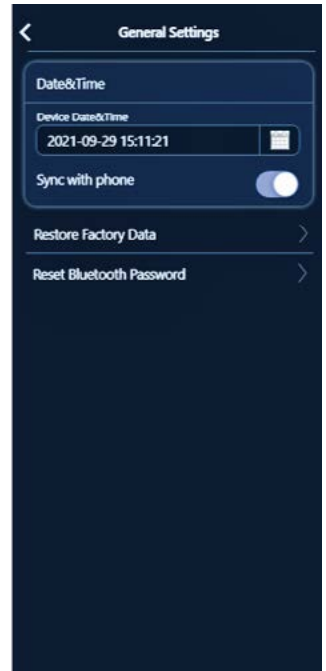
## 7. Alarm history



The alarm history can be accessed via the icon  located at the top of the home page to view all past alarms and eventually remove them.

## 8. “General settings”.

- **“Date & Time”** configuration.  
zeroCO<sub>2</sub> sun charger supports manual setting of date and time. The user can decide to activate the **“Sync with phone”** option to automatically set the charger date and time the same as those of our smartphone.
- **“Restore Factory Data”** option.  
Allows you to reset the charger settings to the original factory setting.
- **“Reset Bluetooth Password”** option.  
Allows you to change the Bluetooth pairing password.  
**Note:** The default product name is AC - {last 8 S/N digits}. After the first login, the user can reset the Bluetooth password by going to “Settings” > “General Settings” > “Reset Bluetooth Password”



# 6. Instruction for use

## 9. "Local tariff setting".



Lo zeroCO<sub>2</sub> sun charger supports a function for estimating vehicle charging costs. In this menu you can set the various time slots with the respective energy cost per kW. To access this menu follow "**Settings > Local Tariff Setting**".



# 6. Instruction for use

## 10. "Network configuration".



The charger supports Internet connection via Wi-Fi or Ethernet cable. To set up the connection follow "**Settings > Network Configuration**".

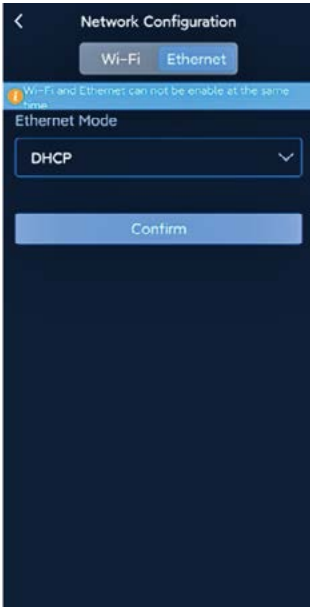
## 11. "Wi-Fi" configuration.

- Remove the existing network and enter the name of your Wi-Fi network;
- Delete the password and type the correct password of your Wi-Fi.



# 6. Instruction for use

## 12. "Ethernet" configuration.



- Connect the charger to the router via the Ethernet cable;
- Select "Ethernet" and wait for connection. This process can take up to 2 minutes.

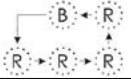

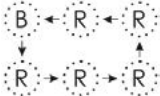
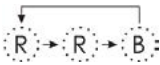
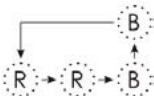



iOS App:  
<https://apps.apple.com/mo/app/ltk-ev/id1602804768>



Android App:  
<https://play.google.com/store/apps/details?id=com.hexing.zco2>

# 7. Troubleshooting

Error	Cause	Solution
The status indicator is off	No input power	Check if the power cable is connected correctly and if the circuit breaker is in the correct position.
	Input voltage too high	Measure the input voltage with a multimeter. If it exceeds 264V for short periods, wait for the voltage to return to normal values.
	Input voltage too low	Measure the input voltage with a multimeter. If it is lower than 195V for short periods, wait for the voltage to return to normal values.
	The setting of the current exceeds actual output	Reconnect the connector to the vehicle and try charging again. If the error recurs, contact customer service.
	Emergency button pressed	Rotate the emergency button in the indicated direction to reset its position.
	Unsafe connection of ground wire	Check if the PE connector is connected correctly and firmly. After verification, try charging again.
	CP sampling value other than 6V	Contact customer service for assistance.
Charging fails	The battery charger connector is not properly connected to the vehicle	Check the plug connection
	Presence of foreign objects in the connector	Contact customer support.

Note: If the problems are not solved, contact customer service promptly.  
 "B" Blue light, "R" red light, "◌" blinking.

# 8. Disclaimer

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## 8.1 Product Disclaimer

There are specific indications for the transport, storage and installation of the zeroCO<sub>2</sub> sun charger.

Energy S.p.A. is not obligated to offer certain services free of charge such as technical support or compensation in specific cases which include::

- zeroCO<sub>2</sub> sun charger warranty has expired and a warranty extension has not been purchased.
- A purchase invoice or serial number is not provided to customer support.
- The product is damaged by improper use.
- Product damage caused by force majeure (such as earthquake, flood, storm, fire, etc.).
- The installation or use of the product violates local laws or regulations
- The installation or use of the product does not comply with the indications contained in this manual.
- Presence of hardware or software modifications not expressly authorized by Energy S.p.A.
- Changes to product communication protocols not expressly authorized by Energy S.p.A.
- Installation of monitoring systems not expressly authorized by Energy S.p.A.

**Energy S.p.A. reserves the right to interpret any indication given in this manual.**









Imported by:

**Energy S.p.A.**

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