



PRISM

SOLAR RFID

Installation, use and maintenance manual



rel. 2.2.2 - rev. 20220517

Note

The information in this manual is subject to change over time. To always have the latest version of the documentation, scan the QR Code or go to

<https://silla.industries/documentazione/>

See PDF documentation



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WARNINGS

Verify that the product packaging contains all the items listed in the Packaging section, and immediately notify Silla if any components are missing or even partially illegible. If any part of the documentation is missing or illegible, consult Silla SRL before performing any further work on the device.



Read this manual carefully before carrying out any work with the Prism

The intervention procedures described in the documentation must be carried out in the manner indicated. The safety rules and procedures for installation, configuration, operation and maintenance given in this document are also a supplement to the general work safety rules that must be observed. Different countries may have different safety regulations. It should therefore be noted that in all cases in which the standards of the documentation are in conflict with or reduce the standards of the country in which Prism is used, the standards of the country will take precedence over the standards of the documentation.

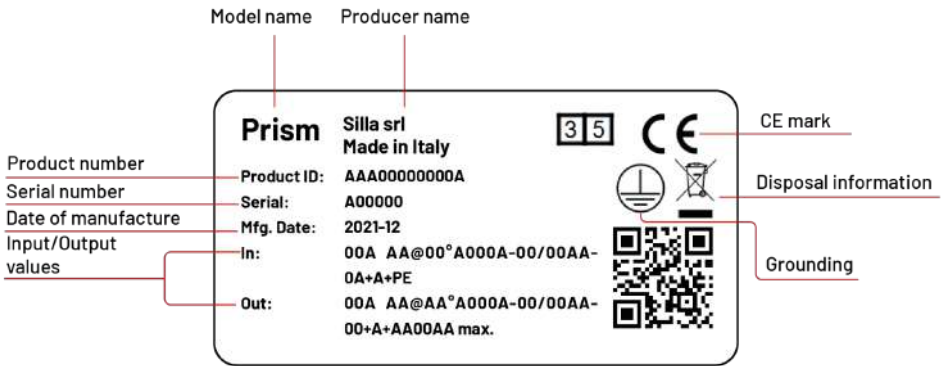


Silla cannot under any circumstances be held liable for accidents or damage resulting from the inappropriate use of Prism, as well as from the non-observance, even partial, of the safety regulations and intervention procedures described in the documentation.

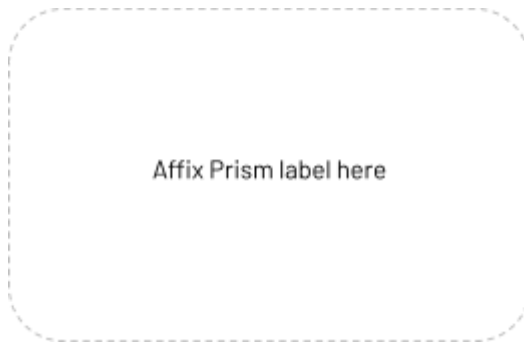
Failure to comply with the instructions for use, installation, configuration, operation and maintenance of the loader and its accessories contained in the manual will also invalidate the terms of the warranty. During installation, configuration and subsequent use of the Prism, incorrect operating situations may occur which are not foreseen in the documentation. These abnormal situations can be caused by environmental factors or accidental failures not foreseeable by Silla. In these situations, stop all operations in progress and contact support. The manual must be kept by the user and/or personnel responsible for the installation, operation, maintenance and use of the loader and its accessories. In the event of deterioration or loss, a certified copy may be requested from Silla. Keep the documentation in a place where it cannot be damaged or lost.

Identification of product

To correctly identify your Prism, refer to the data on the label on the outside of the Prism. The label contains the following information:



To identify the Wi-Fi network connecting to Prism, and to know the credentials set by default for the different user profiles, please refer to the label below (**username on the left, password on the right**).



Location of assembly

The installation of Prism must be carried out by qualified personnel in accordance with the applicable regulations. Local electrical installation regulations, fire and accident prevention measures and emergency routes from the point of installation must be taken into account.

Please contact an electrician or arrange installation at your utility with your local distributor.

Find a location for the Prism that allows the vehicle to be within easy reach of the integrated charging cable.

We recommend an installation height of 130 - 170 cm between the floor and the lower edge of the outer structure.



Sufficient air circulation must be ensured in the installation position so that the Prism cools down when it is recharging.

The mounting surface must have a flat base that provides sufficient stability for mounting the Prism, taking into account the possible mechanical stresses resulting from the use of the charging cable.

It must be ensured that the maximum permissible operating temperature cannot be exceeded under the influence of external influences such as direct sunlight or similar.

Prism meets the requirements for outdoor installation. In order to minimise dirt and weather wear, it is recommended that the Prism be mounted outdoors in a covered area.



Do not install the Prism in the vicinity of flammable, explosive or combustible materials, chemicals or solvents, gas pipes or steam vents, radiators or batteries, as well as in areas subject to flooding, high humidity or running water. Do not install Prism in direct sunlight.

Safety - Line electrical



Infringement of or failure to observe these guidelines may result in serious injury due to electric shock, with even fatal consequences. In addition, regular use of Prism cannot be guaranteed in the event of infringement of these warnings.

The Prism models are designed to operate at a mains voltage of 230V (single-phase) or 400V (three-phase) 50Hz.

An adequately dimensioned mains connection must be available at the installation site. This connection should only be provided for Prism and cannot supply other electrical equipment. If necessary, a separate supply line must be arranged in accordance with the general requirements on supply lines and building technology.

The cable cross-section must be adjusted in accordance with the desired connected power and other aspects (such as line length, material, type of arrangement, etc.). The Prism connection terminals are designed for a line with a minimum cross-section of 2.5mm² up to 10mm².

Prism incorporates a type B RCD (20mA AC, 6mA DC). The supply line for Prism must always be dimensioned and secured in accordance with nationally applicable regulatory requirements.

Prism does not have a separate on/off switch. If you want to deactivate the Prism, you must always set the MCB switch installed upstream in the domestic installation to position 0 (off).



In various countries, the requirements set out in this manual differ from the connection conditions for the electricity grid local. Prism must always be connected in accordance with the applicable regulations for the installation location.

Security - Use



Infringement of or failure to observe these guidelines may result in serious injury due to electric shock, with even fatal consequences. In addition, regular use of Prism cannot be guaranteed in the event of infringement of the above warnings.

No adapter or extension cable may be used to connect the Prism to the vehicle. Always check the charging cable and contacts for damage and dirt before connecting the vehicle. Never connect the cable to the vehicle if the connector is dirty or damp or if the cable is damaged.

Never use force to disconnect the cable connector from the vehicle connector.

Always make sure to disconnect the charging cable before starting the vehicle.

If the device or connector emits smoke or starts to melt, never touch the charging cable.

Stop the charging process immediately and disconnect the power supply to the Prism.

Ensure that the charging cable is out of the reach of children. Do not step on the cable or its connector.

Once the vehicle is connected, the cable must never be stretched. Never charge if the cable is taut.

Prism does not support the ventilation mode of the charging zone.

It is absolutely forbidden to:

- Use of the device for applications other than those indicated.
- Modify the device (hardware and firmware).
- Use the device with non-compatible accessories.
- Tamper with the safety devices

IT Security

In order to take full advantage of the Prism functions, the user may authorise Silla to acquire, store and process certain sensitive data.

Please visit <https://silla.industries/privacy> to view the Privacy Policy. Prism has been designed with safety in mind. Despite this, it is still an IoT device connected to the network and as such should be integrated following standard cyber security guidelines.



It is the sole responsibility of the user to implement the necessary security measures to mitigate potential attacks based on the configuration of the existing network.

Good practices for IoT security

Update the firmware of Internet of Things devices whenever the device requires it, even if you have just purchased it. Enable the option to automatically update the firmware if available.

Change the default password, and choose strong passwords when registering for online services. Most users use the same password to access the services they use most frequently. This practice is wrong and very dangerous. The security of your data is more important than ease of use.

Properly set up the security of the router, which is the main access node for potential cyber attacks. To protect the router keep the firmware up to date and change the password to access the device.

Create an isolated secondary network for IoT devices to keep them separate from the internal network.

Replace connected objects that no longer receive updates with newer models.

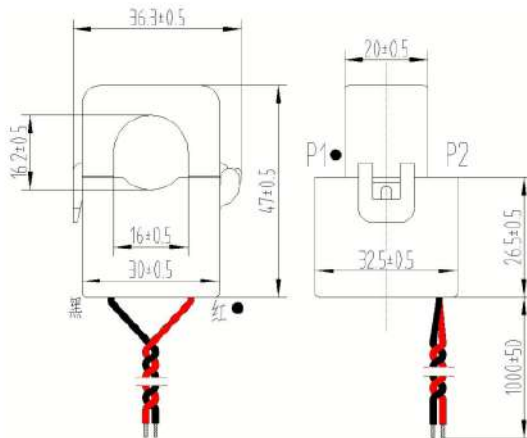
Non-updated devices are more exposed on the security front, not receiving any kind of update against new attacks.

Do not connect your smart devices to unsecured connections, whose origin and operator you are not sure of. Disconnect Internet of Things devices when no longer in use.

Packaging

Check that the packaging delivered contains:

- Prism
- Small parts kit:
 - 4 flat head screws 8 x 60 with dowel and washer with gasket for fixing the bottom of the Prism
 - 12 screws for fixing the cover
- Installation, use and maintenance manual
- Drilling patterns
- 1 sensor (for single-phase Prism)



- 3 sensors + SEM Three module with manual (for Prism Three and Prism Duo)

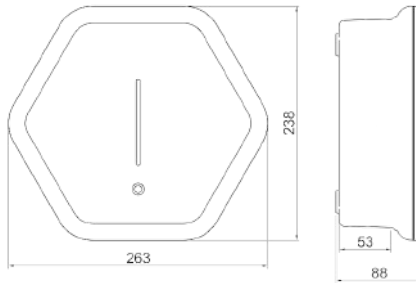
Tools needed

In addition to the contents of the packaging, the following tools are required for installation:

- Phillips screwdriver
- Cordless drill or screwdriver
- Conical cutter
- Drill bit for wall \varnothing 8 mm
- Grommet or cable gland

A spirit level is recommended.

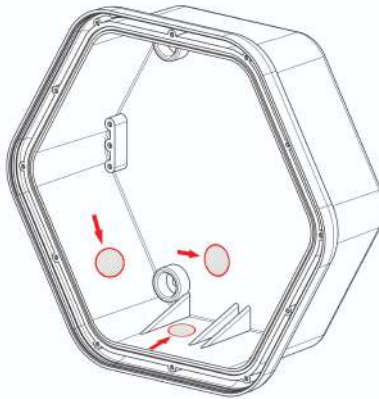
Product dimensions (mm)



Input for power supply

Drill the hole for the cable passage on the base of the Prism, choosing between the bottom or the bottom, depending on how you want to bring the power supply to the Prism. Follow the guide point engraved on the Prism casing to drill the hole. For the hole at the bottom, install a suitable cable gland with a maximum diameter of 32 mm and a maximum nut size of 36 mm.

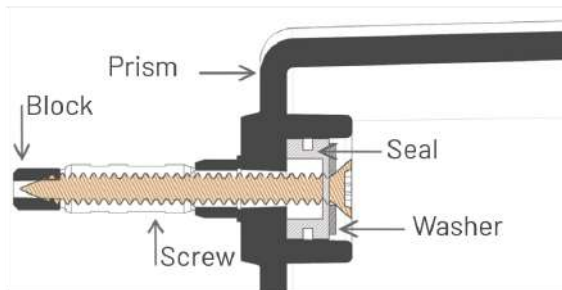
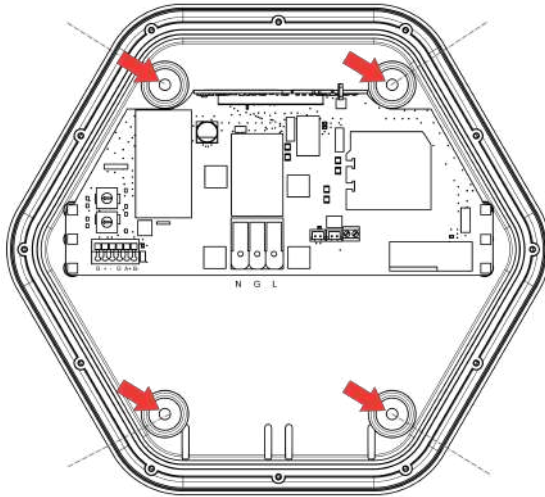
The cable glands used must be selected and installed in such a way as to maintain the IP rating of the enclosure.



Do not drill prisms in places other than those indicated in this manual. Drilling at points other than those indicated will result in the loss of the warranty.

Fixing to wall

Use the enclosed drilling template to drill the holes in the supporting wall.
Screw the supplied screws (8 x 60) into the dowels provided.



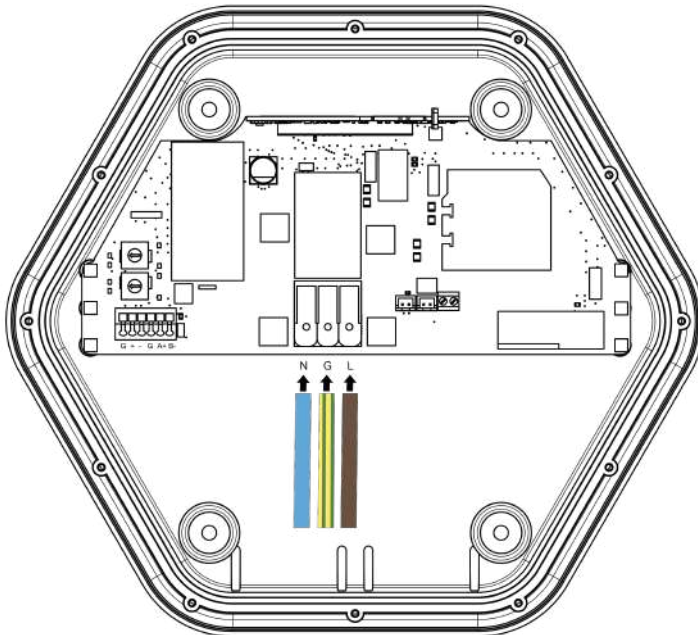
The IP degree of protection of the Prism is only guaranteed if the supplied screws and washers (or equivalent) are used

PRISM SINGLE-PHASE

Connection power supply

For single-phase variants, connect the power supply according to the following diagram:

Name	Thread colour	Connection marking
Phase 1	Brown	L1
Neutral conductor	Blue	N
Conductor on the ground	Green-yellow	G

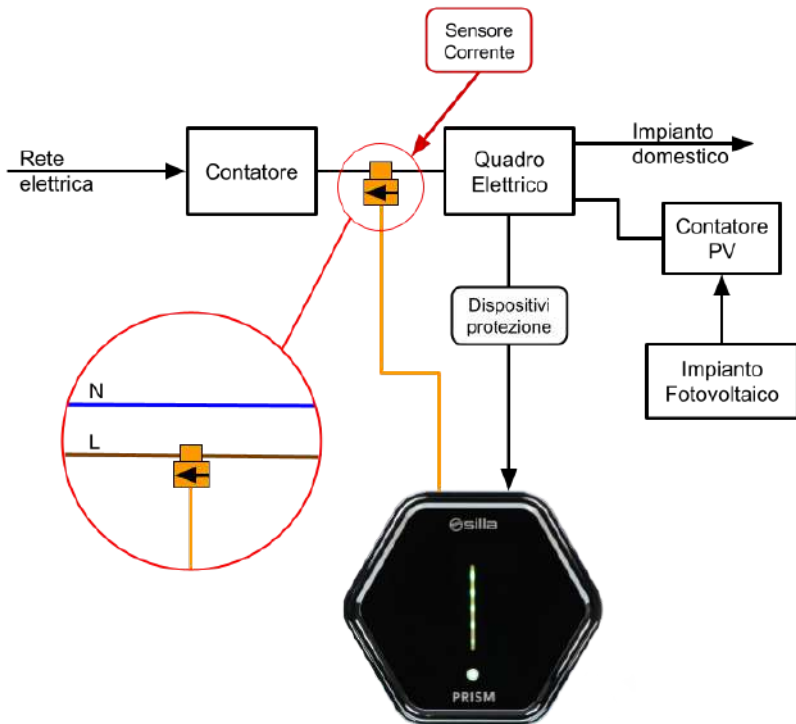


Sensor Placement

The sensor allows Prism to regulate the charging current according to household loads and any photovoltaic system.

Refer to the following diagrams for installation of the additional sensor. In the diagrams only the phase line is shown, **the neutral must be passed outside the current sensor.**

In the case of single-phase systems **without a storage system**, the current sensor should be placed according to the following diagram:



Note: for systems with storage systems, please refer [to the section on systems with storage systems.](#)

Connecting the sensor to Prism Single-phase

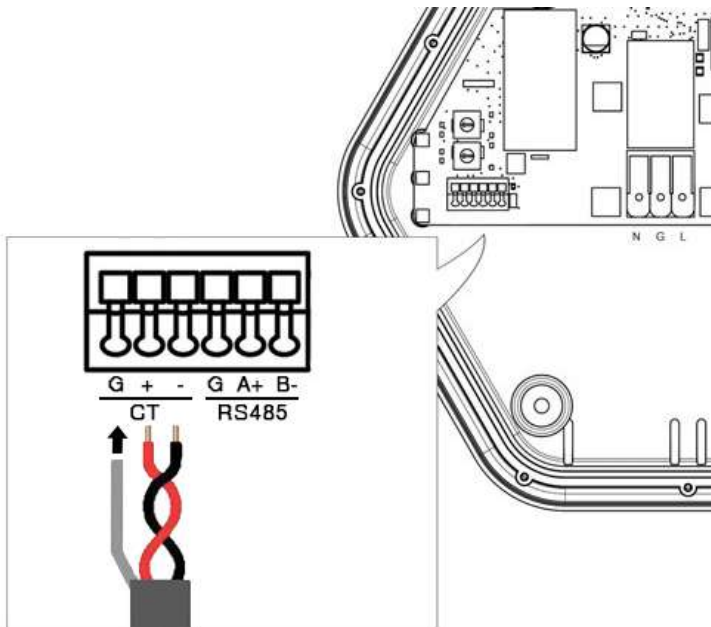
For single-phase Prism, the sensor must be connected as follows:

Name	Thread color	Connection marking
Positive	Red	+
Negative	Black	-
Screen	Open stocking	G

To extend the connection, use a **twisted pair** with a recommended cross-section of **0.25-0.5 mm²**.

Note: for **distances below 100 m** a pair of CAT5 or similar **cables can be used**.

If the twisted pair is laid in contact with power cables or Ethernet cables, or the installation takes place in a place where electromagnetic interference is present, **the use of a shielded cable is recommended**. Connect the braid on the Prism side only.

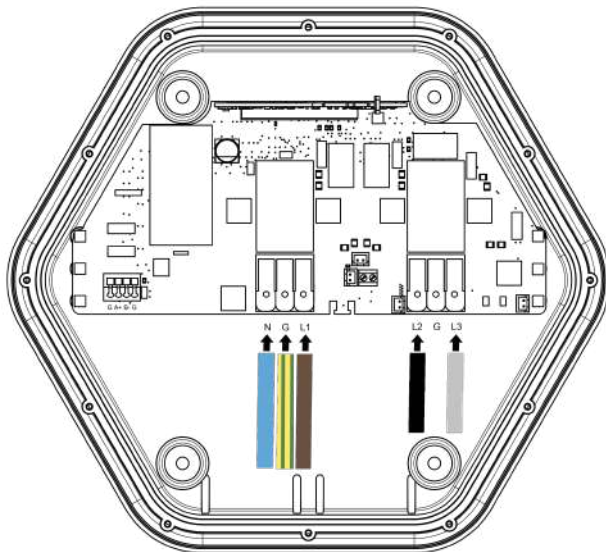


PRISM THREE-PHASE

Connection power supply

For three-phase variants, connect the power supply according to the diagram:

Name	Thread colour	Connection marking
Phase 1 (see note)	Brown	L1
Phase 2	Black	L2
Phase 3	Grey	L3
Neutral conductor	Blue	N
Earth conductor	Green-yellow	G



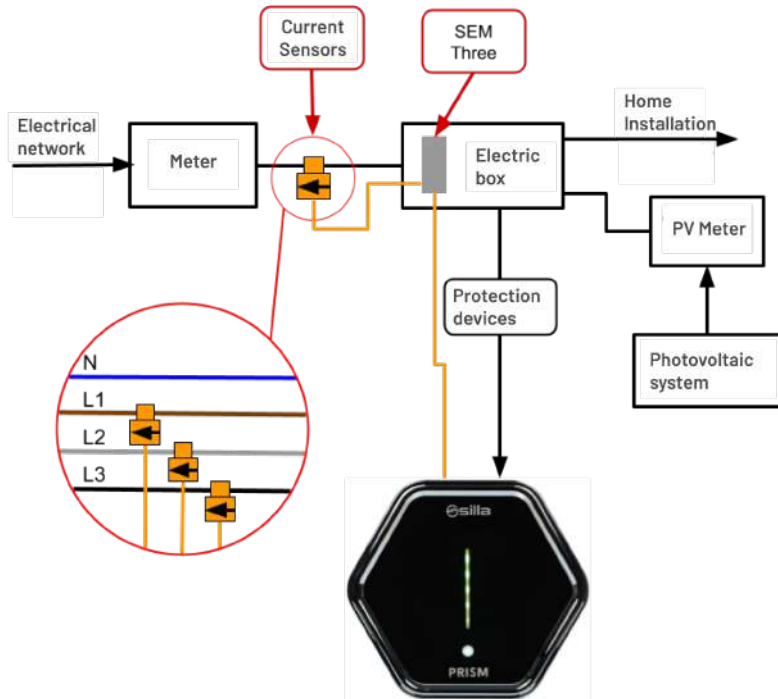
Note: some cars charge using only one phase. For this reason, it is advisable to **connect the least engaged phase of the system to L1** in order to mitigate the imbalance created during single-phase charging.

Location of Sensor

The sensor allows Prism to regulate the charging current according to household loads and any photovoltaic system.

Refer to the following diagrams for installation of the additional sensor. Only the phase line is shown in the diagrams. **The neutral must be passed outside the current sensor.**

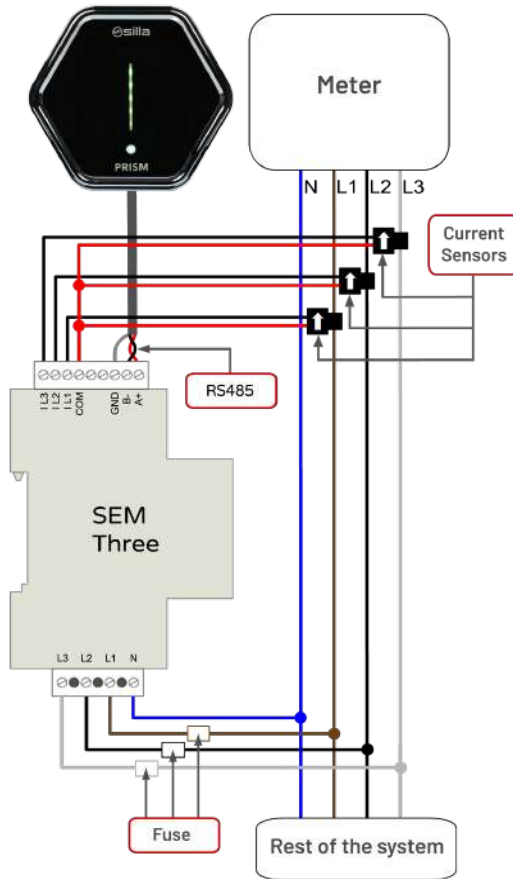
In the case of systems **without a storage system** the current sensor should be placed according to the following diagram:



Note: for systems with storage systems, please refer [to the section on systems with storage systems](#).

Sensor installation for Prism Three-phase

For three-phase Prism, the 3 sensors are connected according to the following diagram:

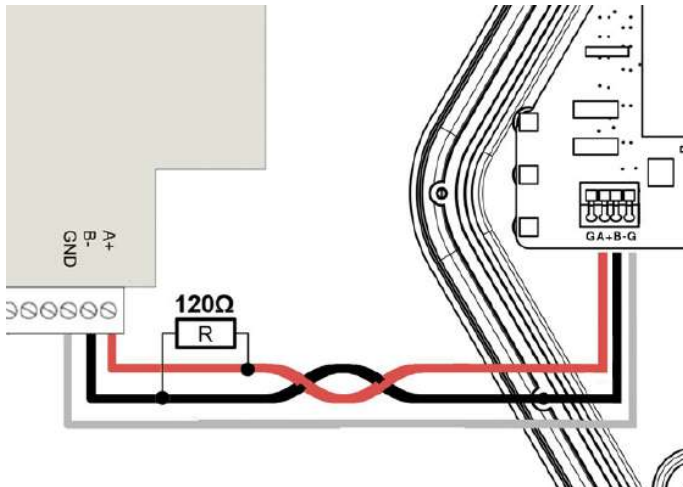


For installation of the device (**SEM Three**) refer to the manual supplied with it. Use **type gL (IEC 269) or type M fuses of 0.5A to 2A** for instrument protection.

Connecting the sensor to Prism Three-phase

For three-phase Prism, the sensor must be connected as follows:

Connection marking	Connection marking
A+ RS485	A+
B- RS485	B-
GND	G



Terminating resistors:

The **120 ohm terminating resistor** is connected to the end of the cable at the meter terminals. Inside Prism, check that the jumper on the right-hand side of the connector is correctly installed.

Cables:

- The communication line is RS485 at 9600bps
- The length of the cables should not exceed 200 metres
- Use a **twisted and shielded twisted pair, with GND conductor, with a recommended cross section of 0.25-0.5 mm²**.

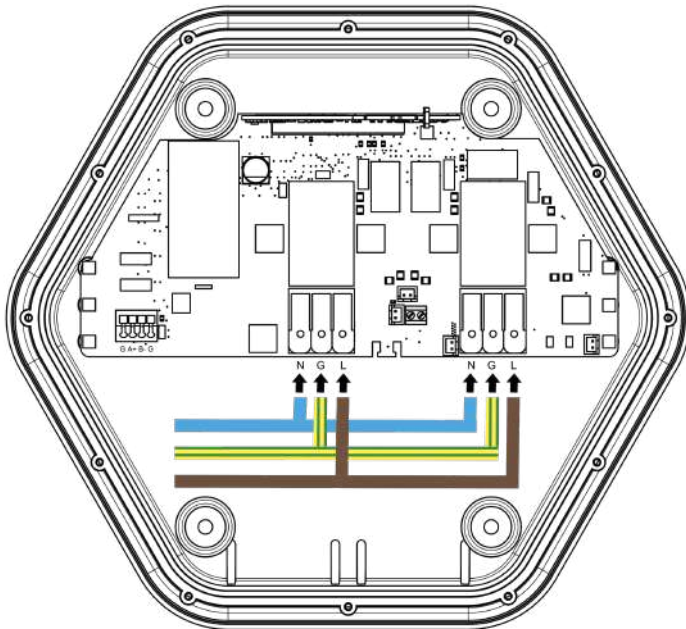
For distances less than 100 m, a pair of CAT5 cable or similar can be used. Preferably, choose a cable suitable for RS485/Modbus communication.

PRISM SOLAR DUO

Power connection in system single-phase

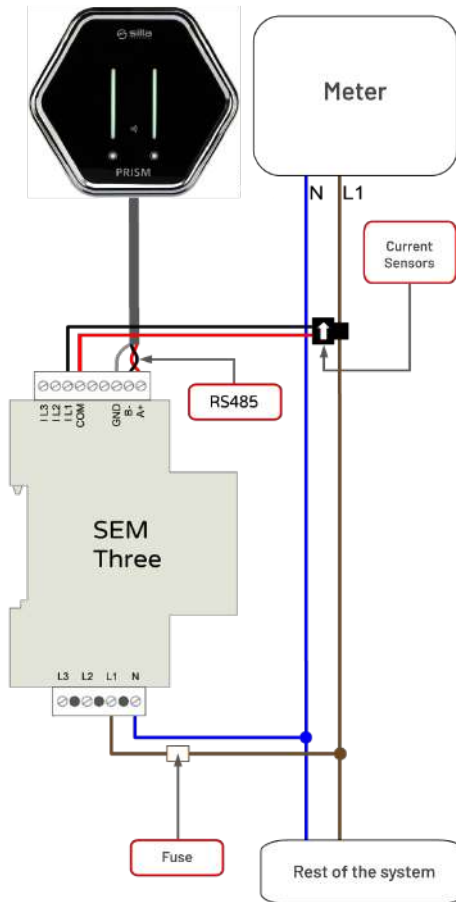
For single-phase installations, connect the power supply according to the following diagram:

Name	Thread colour	Connection marking
Phase 1	Brown	L1 - L2
Neutral conductor	Blue	N - N1
Conductor on the ground	Green-yellow	G - G



Installation of the sensor for Prism Duo in a single-phase installation

To install the device (SEM Three), refer to the related manual at disposal.



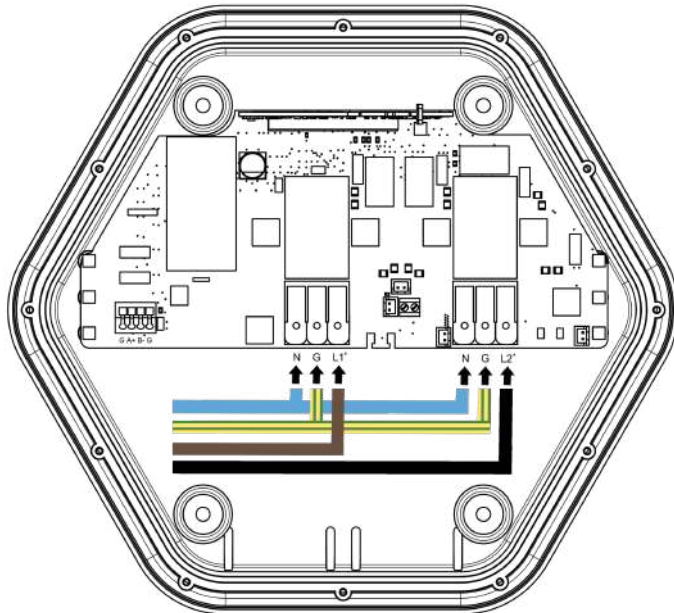
To use type **gL (IEC 269)** or type **M da 0.5A a 2A** to protect the device.

Power connection in system three-phase

Each of the two single-phase outlet will use one phase of the three-phase system, so they will use the maximum power of the phase (max 7.4 kW), connecting Prism DU0 following the scheme below:

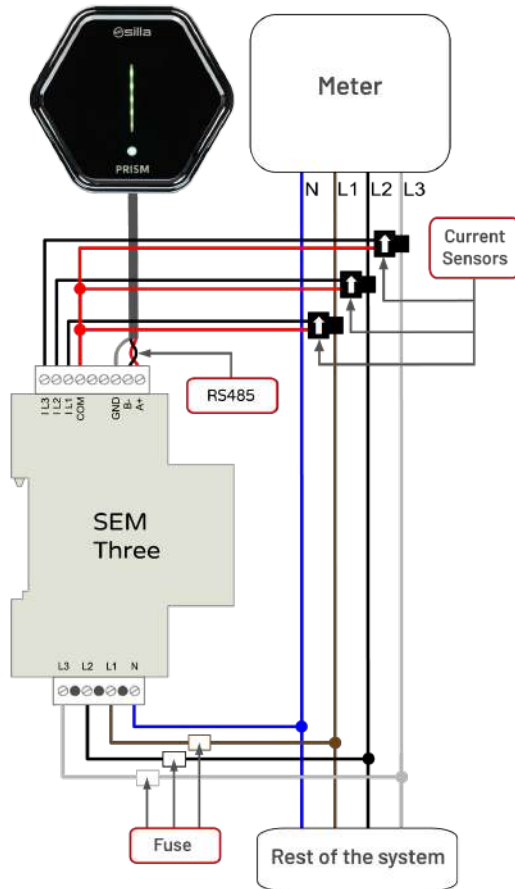
Name	Thread colour	Connection marking
Phase 1	Brown	L1
Phase 2	Black	L2
Neutral conductor	Blue	N - N1
Conductor on the ground	Green-yellow	G - G

Note: two different phases of the three-phase system must be connected to terminals L1 and L3.



Installation of sensors for Prism Duo in a three-phase installation

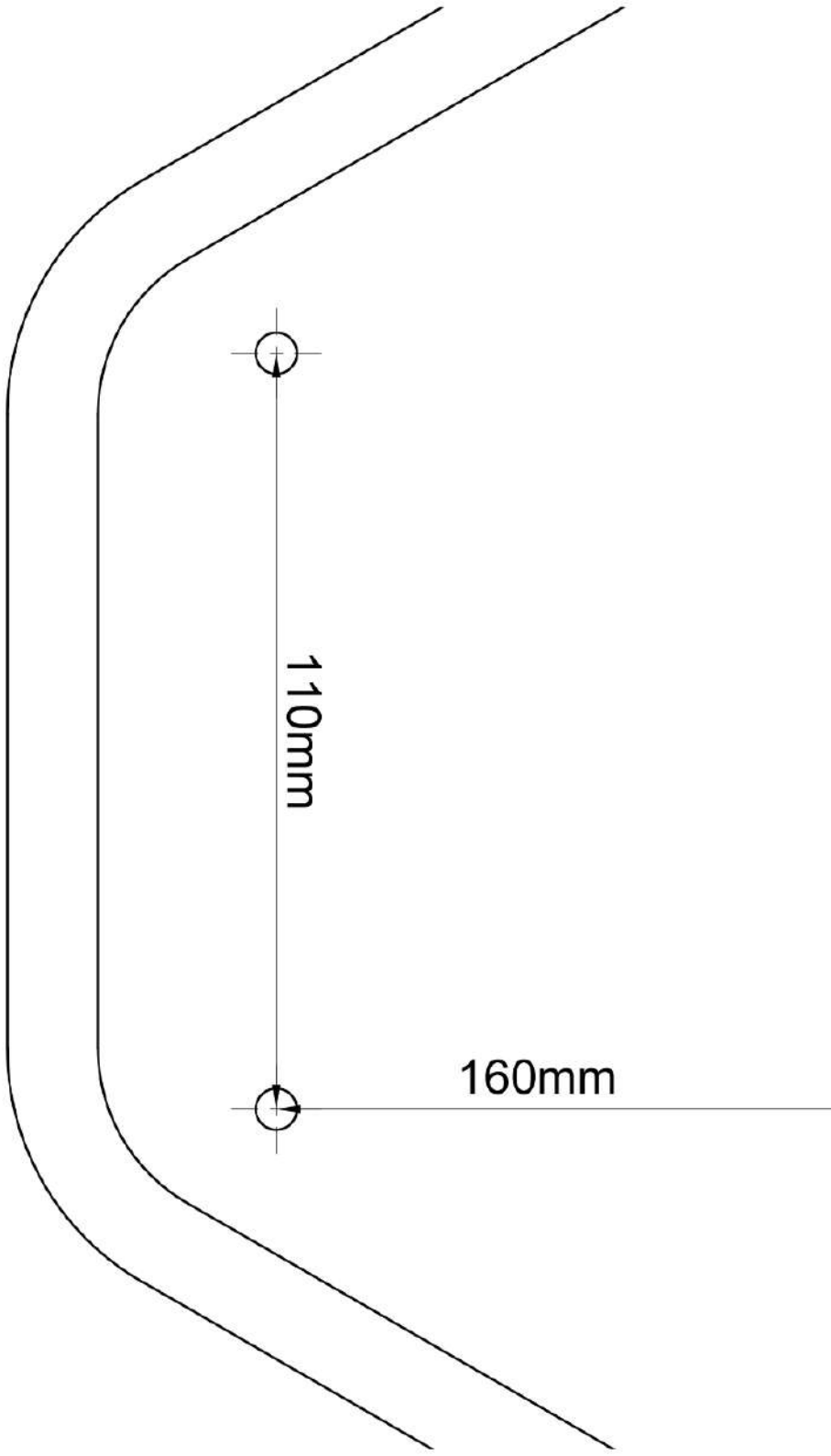
For three-phase Prism, the 3 sensors are connected according to the following diagram:

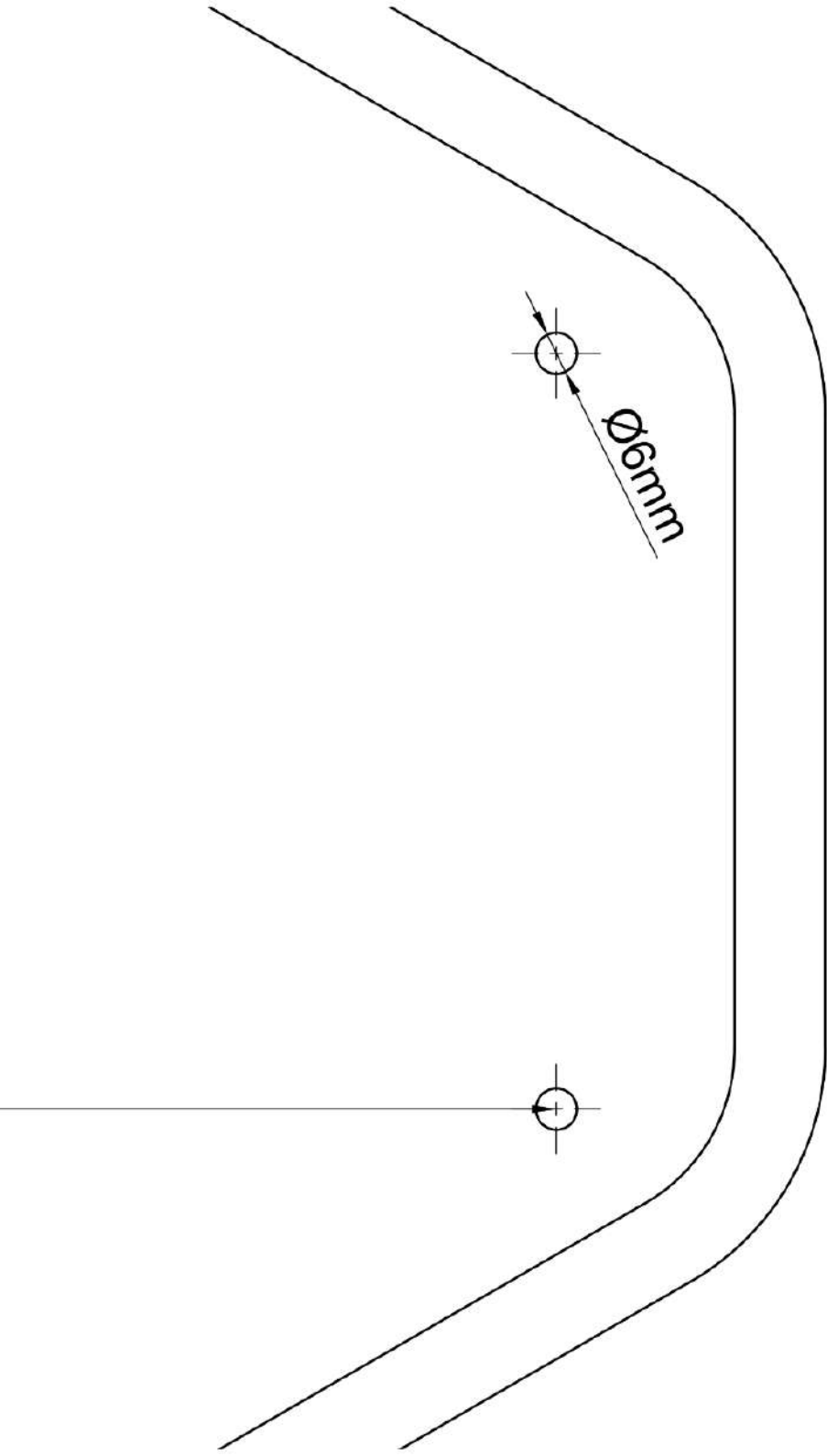


For installation of the device (**SEM Three**) refer to the manual supplied with it. Use **type gL (IEC 269) or type M fuses of 0.5A to 2A** for instrument protection.

PRISM WALL-MOUNTING TEMPLATE

Remove these centre pages and use them as a template to mark the position of the PRISM wall-mounting holes. Use the dowels provided.



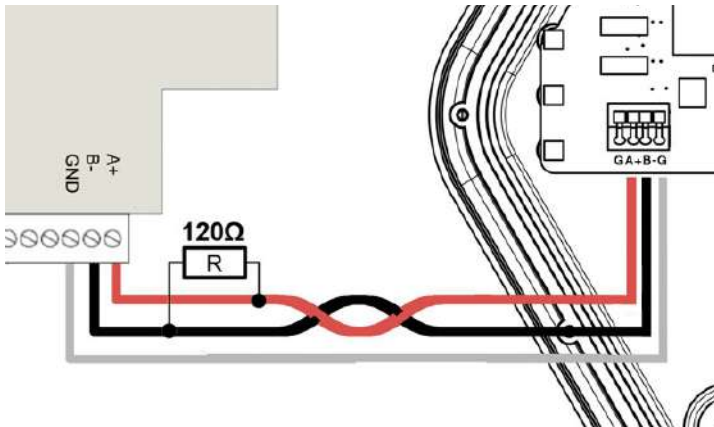


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Connecting sensors to Prism Duo

For three-phase Prism, the sensor must be connected as follows:

Name	Connection marking
A+ RS485	A+
B- RS485	B-
GND	G



Terminating resistors

The **120 ohm terminating resistor** is connected to the end of the cable at the meter terminals. Inside Prism, check that the jumper on the right-hand side of the connector is correctly installed.

Cables

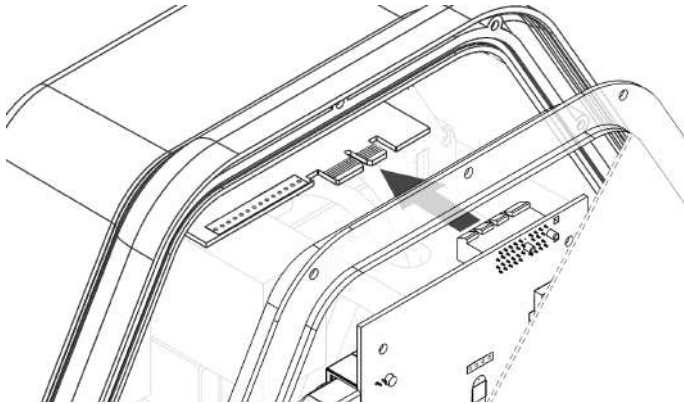
- The communication line is RS485 at 9600bps
- The length of the cables should not exceed 200 metres
- Use a **twisted and shielded twisted pair, with GND conductor, with a recommended cross section of 0.25-0.5 mm². For distances less than 100 m, a pair of CAT5 cable or similar can be used.** Preferably, choose a cable suitable for RS485/Modbus communication

COMPLETE THE INSTALLATION

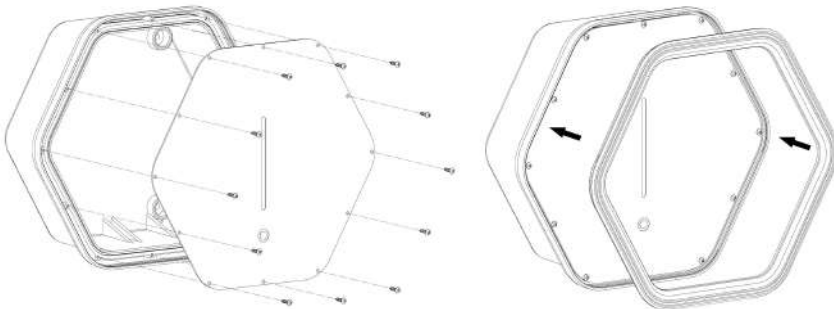
Closing of cover

Once installation is complete, insert the front cover.

Make sure that the connector on the cover engages properly with the gold comb on the base board.



Tighten the 12 screws provided in the relevant holes. Install the interlocking frame and remove the protective film of the cover.



First use



Before proceeding, disconnect the connector from the car.

Prism is provided with a guided procedure that makes it easy to install. To start this initial configuration it is necessary first of all to connect to Prism internal WiFi so that it is possible to access to the guided configuration:

- Look for Prism among the available WiFi networks via smartphone, tablet or PC . Its format will be Prism-xxxxx where xxxxx stands for a number;
- Connect to Prism net using the WiFi credentials on the sticker in the product [identification section](#).

Once you are are successfully connected to Prism WiFi navigate on the address <http://192.168.8.1/benvenuto> and log in using **'installer' credentials** shown on the sticker in the product [identification section](#)

Prism Solar
Configurazione guidata

Username

Password

Accedi

Guided configuration wizard

After logging in, the configuration page to fill out with essential data to make Prism work will appear. Carefully follow the on-screen directions.

Configurazione di Prism | Impostazione Rete | Fine configurazione

Tipologia di installazione di Prism
Prism può essere installato da solo, in un'installazione **singola**, oppure insieme ad altri Prism in configurazione Cluster5, dove un Prism **principale** controlla e comanda fino ad altri 4 Prism **secondari**; ulteriori informazioni su <https://alla.industrydocuments.com>. Scegliere qui la tipologia corretta per questo Prism.

Prism singolo

Sistema dell'impianto elettrico: numero delle fasi
E' importante scegliere il corretto sistema dell'impianto elettrico cui Prism è collegato, pena il malfunzionamento di Prism.

Monofase Bifase Trifase

Taratura interruttore magnetotermico a protezione linea Prism (A)
Selezionare la taglia dell'interruttore magnetotermico installato a protezione della linea di alimentazione di Prism.

6

Potenza del contatore (W)
Indicare la potenza massima disponibile al contatore del fornitore di energia elettrica. Questo valore verrà utilizzato da Prism per calcolare la corrente massima disponibile in ogni momento per la ricarica.

4000

Sensore a valle del contatore
Indicare se è stato installato il sensore a valle del contatore, necessario per il corretto bilanciamento dei carichi.

NO

Presenza dispositivo di accumulo Powerwall®
Indicare se nell'impianto è presente un dispositivo Powerwall® e consultare il manuale completo per la sua configurazione.

NO

Abilitazione Autostart
Quando l'Autostart è abilitato consente l'avvio automatico della ricarica al momento dell'inserimento del connettore nell'auto. Se disabilitato richiede che la carica venga autorizzata con l'APP o con una delle chiavette in dotazione.

SI

Salva e continua >

For each item to be completed, there are instructions to follow.

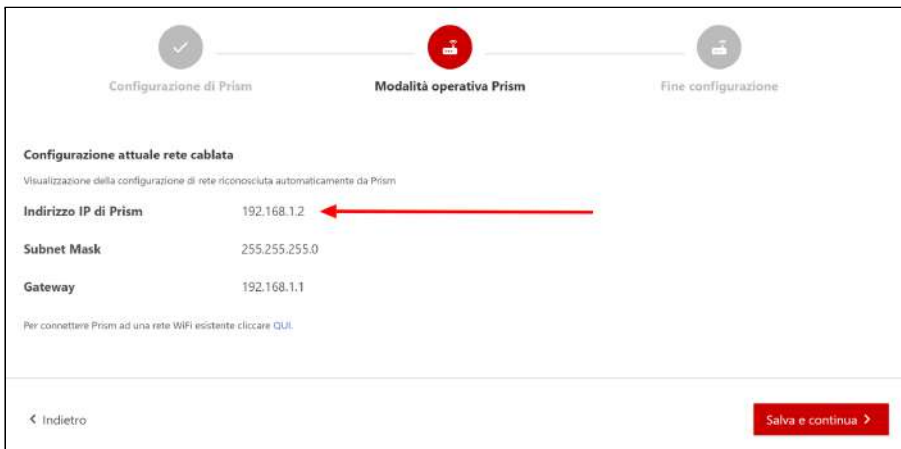
CONNECTION TO INTERNET

In order to receive updates and to be able to use Prism remotely, Prism must be connected to the internet.

Once connected to the internet, the Prism Wi-Fi can also be used as an internet access point.

Connection to a wired network (Ethernet)

By connecting the Prism via Ethernet to a DHCP-enabled network, you will immediately be able to access the Internet and no further network configuration is required. The second page of the configuration wizard shows the IP address assigned to Prism by the router:



Note: we recommend that you assign Prism a fixed IP (from your router or Prism settings) so that you can reach the interface more comfortably over the local network, using the new IP address instead of the default 192.168.8.1.

Connection to an existing WiFi network

If it is not possible to connect Prism to the Internet via ethernet cable, it is possible to connect Prism to an existing WiFi network.

On the second page of [Guided Configuration](#) a link will lead you to the section where you can configure Prism connection to an existing WiFi network

- Click on the link indicated



- Login using the "installer" credentials shown on the sticker in the product [identification section](#)



- Open the **Network -> WiFi** ("Wireless" on some versions) menu
- Press the '**SCAN**' button. Prism will scan for available Wi-Fi networks, which will be listed on the next screen.

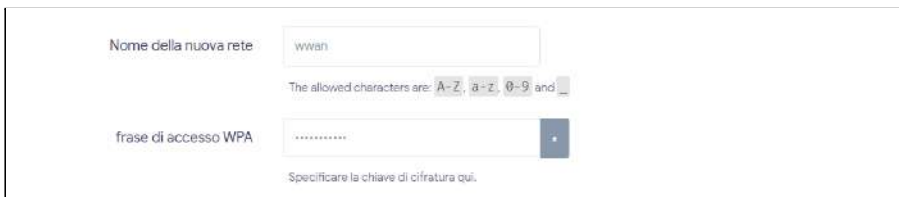


- Select the Wi-Fi network to which you want to connect Prism by clicking the **"Add Network"** button.

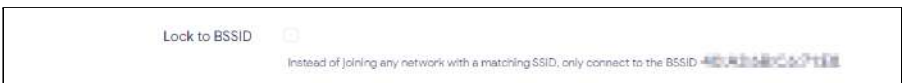
Note: networks with a signal lower than -75dBm (1 or 2 out of 4 bars) may have problems with connection stability.



- On the next screen, if necessary, enter the Wi-Fi password from in the **"WPA access phrase"** box.



- **Note:** If you use several access points with the same SSID and you want to make sure that Prism connects to a specific one, select "Lock to BSSID" (typically the closest one with the best signal).



- Click on **'SEND'** to continue with the configuration.
- On the next page, click **"SAVE"** without changing any other settings.
- Once back on the main page, click **"Save & Apply"**

By this time, Prism disables its internal WiFi and tries for about 90 seconds to connect to the WiFi network newly configured.

If the **procedure is successful**:

- Prism internal WiFi will be available again;
- Reconnect to Prism internal WiFi to complete the procedure (not every phone/PC automatically reconnect to it when it becomes available again, if the net does not appear, you need to wait for a few seconds);
- The procedure is completed by returning to the Guided Configuration page and then by clicking on the button on the right below 'Save and continue'.

Is the procedure **fails** (e.g. wrong credentials):

- After 90 seconds Prism internal WiFi will be available;
- On the WiFi configuration page a banner 'Failed to confirm apply within 90s, waiting for rollback...' will appear
- Repeat the [Connection procedure to an existing WiFi network](#).

Note: if you do not connect to Prism internal WiFi again within 90 seconds, the previous setting will be restored.

Note: if Prism loses the connection to the chosen WiFi network, it may not be reachable via its internal WiFi. If that is the case, the [reset procedure](#) needs to be carried out. At the end of this one, the WiFi connection procedure need to be redone.

USE OF PRISM

Button touch

Through the touch button on the cover it is possible to control the charging process:

- **3 short presses - pause/resume charging**

by briefly pressing the touch button 3 times, if the Prism is charging, charging is paused.

Pressing again 3 times restarts charging.

- **2 short presses - change mode**

pressing the touch button briefly twice changes the current mode, according to the diagram:

- normal -> solar



- solar -> normal
- pause -> normal

Touch button presses are also sent, if enabled, via MQTT. For more information see the MQTT manual available at <https://silla.industries/documentazione/>

Note: to disable touch controls, see the [Settings](#) section.

Connect to Prism with PC or Smartphone via internal WiFi

- Search for Prism among the available Wi-Fi networks, using a smartphone, tablet or PC.
 - Note:** check that the network name is the same as the one in the [Product Identification](#) section.
- Connect to the Prism network using the Wi-Fi credentials available in the [Product Identification](#) section.

Main page

Once the connection is established, navigate to <http://192.168.8.1/>. The main Prism screen will appear:

From this page you can view data about the current status of Prism:

- **status:** indication of the status of the current charging process
 - **disconnected:** no vehicle is connected
 - **connected:** a vehicle is connected and is not charging
 - **in charge:** a vehicle is connected and in charge
 - **stopped:** a vehicle is connected but charging is paused because the user has selected Pause mode or there is not enough power available to charge the vehicle
- **charging current / maximum current :**
 - current measured charge current (left)
 - user-set maximum charging current (right)



- **km charged per hour:** indication of the estimated average mileage charged with the current charge setting. This figure is calculated from the auto settings entered by the user in the settings screen
- **charging power in kW:** indication of the charging power currently delivered
- **advanced:** access to advanced Prism settings
- **waiting for power:** this indication appears when the charge is waiting for power, either to keep the meter from blowing or to wait for photovoltaic production (in solar mode)

At the bottom, data from the last charging session are available:

- **Duration:** duration of the session, expressed in hours and minutes
- **autonomy:** km of added autonomy. This parameter is influenced by the options auto
- **energy:** energy fed into the battery

Functionality Advanced

Click on the **"advanced"** button on the main page.

Login using **'user'** or **'admin'** as the user name and the password will be the corresponding one in the [Identification section of the product](#).

Once logged in, the advanced functionalities will appear:

Current setting of recharge

On the main page, buttons for increasing or decreasing the charging current will be displayed ("+" and "-" buttons).

Each time the button is pressed, the current will be increased or decreased by 1 A.

Modes of recharge

The main page will display buttons to change the charging mode. Please refer to the [Charging Modes](#) section for guidance on how to charge.



Charging Modes

Prism natively provides for three different charging modes, while a fourth mode, i.e. Night mode that allows the car to be recharged only at night (configurable) when energy costs less, is available through <https://my.silla.cloud>

Mode Solar

In this mode Prism will try to use only the excess energy produced by the solar system. If sufficient power is not exported to the grid to charge the car, charging will be temporarily interrupted.

Prism will attempt to limit the power drawn from the grid to the value set in the Solar max power parameter. It is recommended to set this parameter to a low value (50-100W) to follow the solar production. It is possible to set negative values if you want to give priority to the storage system.

Mode Normal

In this mode Prism charges at the current set by the user via the interface buttons.

If load balancing is active (see section First Configuration - Load Balancing), the charging current will be automatically reduced to keep the power imported from the grid below the limit set in Max power. If sufficient power is not available to charge the car, charging will be temporarily interrupted.

If the solar installation is producing energy, this will be added to the energy drawn from the grid, however respecting the installation current limit and the current chosen by the user. For example, if a limit of 3000W has been set in Max power and there is an instantaneous solar production of 2000W (with no other household loads), it will be possible to charge to 5000W if the system allows it.

Attention: the standard requires a minimum charging current of 6A. This is equivalent to about 1.4kW for single-phase systems, and about 4kW for three-phase systems. If the solar system does not reach these powers in Solar mode, or if the available power net of household loads does not reach these thresholds, charging may never start.

Mode Pause

The Pause button allows you to manually interrupt charging, and resume it later by selecting Normal or Solar.

RFID Display

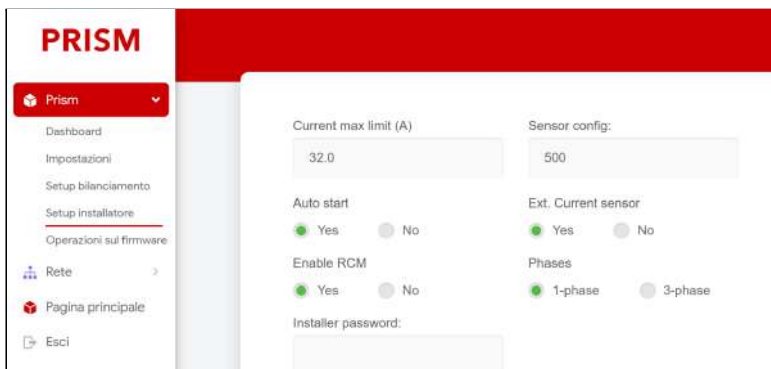
Prism Solar is provided with a RFID display placed under its frontal cover, near the visible logo beside the bar led.

RFID is the acronym of Radio-Frequency Identification, and it is a technology that allows unambiguously an electronic device such as a key or a card in credit card format. Two RFID keys to be used with that specific Prism are supplied with Prism Solar; the two keys will not work with other Prims. The one-to-one pairing between the supplied keys and the RFID display installed on Prism allows to recognize the keys owner as the legitimate owner of Prism, so that it will enable him operations that otherwise would not be possible or that would be only possible using My.Silla.Cloud App.



Key usage with RFID display

The main function of the key and RFID display pairing is to recognize the Prism owner and to allow him to start charging without using the APP. The charging starts by default when the connector is plugged into the car using the charging mode set. Auto-start can be turned off via Prism configurations.



The voice 'Auto-start' is normally selected by default to allow the charging to start right when the connector is connected to the car. If this option is unchecked, the charging will NOT automatically start, and the frontal led will turn orange while waiting for authorization, that will have to be manually allowed via My.Silla.Cloud APP or via the supplied keys. By putting on of the keys near the RFID symbol, which is on the front cover, a beep sound will be emitted as confirmation; the led bar will turn from orange to the color related to the previously selected charging mode. The charging will start.

How to store the charging cable

Prism was specially designed to wrap the cable on Prism itself. To store the cable it will suffice to wrap it

around Prism, making sure that the connector is at more than 0,5m from the ground.

Note: the connector has to be protected by the rubber cap connected to the connector itself.

Procedure reset

If you can no longer access the Prism web interface (e.g. if you change or lose your password, or if the network is incorrectly configured), you must reset the settings to the factory defaults.

- Ensure that there are no vehicles in charge
- Switch off the Prism from the upstream disconnecter and wait at least 30 seconds
- Switch the Prism back on and wait about 1 minute
- Within 5 minutes, press and hold the Prism touch button for 30 seconds (use the left button for the Duo version)
- Prism will light up purple LEDs
- Release the touch button
- Wait at least 10 minutes without switching off the Prism
- The settings are restored. You can now access the Prism Wi-Fi using the factory credentials in the [Product ID](#) section

Update

If Prism is connected to the internet, updates will be installed automatically.

On the <https://silla.industries/changelog/> you can find all information about Prism updates.

Note: some special updates that change the operation of Prism require manual intervention to install. Read the changelog and follow the instructions received by email to start this update.

Cleaning periodically



Disconnect the device from its power supply before carrying out any cleaning or maintenance work.

A damp, non-abrasive cloth without alcohol or aggressive solvents can be used to clean the Prism from any build-up of dust and dirt that may have formed on its outer surface

Disposal

The possibility of reusing certain parts of the device is under the full responsibility of the user. The label bears the symbol indicated in Legislative Decree No. 49 of 14 March 2014, transposing Directive 2012/19/EU, which indicates the need to dispose of the product in separate waste, specifically in electrical and electronic waste. Consult your nearest waste collection centre for more information.

TROUBLESHOOTING

Problems with balancing

Problem: Balancing not working properly (Prism single phase, no Powerwall)

Solution:

- Verify sensor reading in Dashboard
 - is the read value of power imported from the grid 0kW even if there are active loads?
 - Check that the sensor is positioned in the right place, i.e. upstream of all loads. See [Sensor Placement](#) section
 - Ensure that only the phase cable passes through the sensor, not both phase and neutral cables
 - Check that the cables are connected correctly and are not interrupted or short-circuited (use a multimeter)
 - is the reading negative when there is energy import from the grid, and vice versa?
 - reverse the sensor connections or reverse the sensor direction
- Verify that balancing is enabled, and that the settings are entered correctly. See section First configuration - Load balancing

Problem: Balancing not working properly (3-phase Prism, no Powerwall)

Solution:

- Verify sensor reading in Dashboard
 - is the read value of power imported from the grid 0kW even if there are active loads?
 - Ensure that the sensors are positioned in the right place (upstream of all loads)
 - Ensure that only the phase cable passes through the sensor, not both phase and neutral cables
 - Check that all cables are correctly connected and not interrupted or short-circuited (use a multimeter)
 - is the reading negative when there is energy import from the grid, and vice versa?
 - reverse the sensor connections or reverse the direction of the sensors
- error "**err_T**" is displayed ?
 - check that the SEM Three module is powered (green LED ON)
 - check that the SEM Three module is communicating with the Prism (red/green COM LED flashing every 2-5 seconds)
 - check that the RS485 connections are correct (A+, B-, GND)
 - ensure that the GND terminal is connected at both ends
 - ensure that the 120ohm resistor is installed on the SEM Three and the "120" jumper is installed on the Prism.
 - measure the resistance between A+ and B-, check that it is approx. 60ohm
 - Check that all cables are correctly connected and not interrupted or short-circuited (use a multimeter)
 - See [Three-phase Prism Sensor Installation](#) section for wiring diagrams and details
- the value read does not correspond to reality?
 - verify that the sensors correspond to the respective phase
 - verify that the sensors are mounted upstream of all loads in the system
- Verify that balancing is enabled, and that the settings are entered correctly. See section First configuration - Load balancing

Problems with network

Problem: once connected to the Prism Wi-Fi, I can access the settings page but have no access to the internet.

Solution:

- Verify that the Ethernet cable is correctly crimped and connected to the main router. Most of the cases encountered are the result of faulty crimping of the RJ45 connector.
- Ensure that the internet is available on the network to which Prism is connected
- Go to the Network - Diagnostics page and enter the IP of your router in the "IPv4 PING" box and click on the relevant button. The test should end with the text "**5 packets transmitted, 5 packets received, 0% packet loss**". If instead "**5 packets transmitted, 0 packets received, 100% packet loss**" is displayed:
 - Verify connection to the router
 - Ensure that the router has DHCP server enabled
 - Ensure that the router has assigned an IP to Prism
- Also from the diagnostics page, run the Ping test towards a normally reachable site (e.g. google.com). If previous tests were successful but this one gives an error, the problem lies in the modem/router.

Problem: once connected to the Prism Wi-Fi, I cannot access the settings page.

- Check that you have entered the Prism address correctly and that your phone/PC is connected to the correct network
- Restart the Wi-Fi of the device used
- Restarting Prism
- Verify that the Wi-Fi or Ethernet network to which the Prism is connected is on a different subnet than the Prism (default 192.168.8.0/24). In this case:
 - Change the IP of your router's subnet, or
 - Change the IP of the Prism subnet:
 - Disconnect the Prism's Ethernet cable, or switch off the router
 - Connect to Prism Wi-Fi
 - Go to the page Network - Interfaces - LAN - Change
 - Enter a different address in the 'IPv4 addresses' box, e.g. 192.168.10.1
 - Click on "Save", "Save & Apply"
 - Disconnect and reconnect to Prism Wi-Fi to acquire a new IP
 - Visit the settings page again at the new IP (e.g. 192.168.10.1/network) within 90 seconds to apply the changes.





ATTACHMENTS





Technical sheet

Classification according to IEC 61851-1:2017			
Input	permanently connected to the AC network		
Output	AC		
Environmental conditions	Operating temperature range -25°C to +40°C Storage temperature range -30°C to +60°C Relative humidity max. 100% at 25°C		
Access	even in places with unrestricted access		
Mounting	surface mounting on walls, poles or equivalent positions		
Electrical safety class	Class I		
Protection class	IP65, IK10		
Charging Modes	Mode 3		
	Monophase	Duo	Triphase
Dimensions (without cable)	263 x 238 x 88 mm		
Weight with 7 m cable (kg)	6,5	9	6,5
Material	ABS		
Standard	IEC 61851-1:2019		
Power supply	230V AC	230V/400V AC	400V AC
Absorbed current (max)	32A		
Self consumption	Stand-by 2,5W - Massimo 7,5W		
Safety	RCD 6mA DC / 20mA AC		
Frequency	50 Hz - 60 Hz		
Charging power (max)	7,4kW	7,4kW per cavo	22kW
Inputs	Morsetti a leva 2,5-10 mm ²		
Radio transmitter	Ethernet e Wi-Fi		
Radio wave frequency	2412MHz ~ 2472MHz		
Drive (max):	300Mb/s		
Maximum radio power:	20dBm		

Led Indicator Color Chart

LEDs located on the front cover of Prism indicate the status of use, and any malfunctions that occur during use.

LED	Led bar color	Button color	Status	Description
	First led down light blue	Light blue	STAND BY	Prism is on standby, ready for charging.
	green moving LEDs	green	CHARGING	Vehicle charging regularly.
	green bottom led, top led yellow (depending on the percentage of energy from photovoltaics) moving	yellow	SOLAR	Use of solar generation for charging.
	All purple	purple	UPDATE	A Prism update is in progress. The device will reboot when the update is complete.
LED	Led bar color	Button color	Status	Description

	<p>first led up red</p>	<p>-</p>	<p>ERROR SENSOR</p>	<p>External sensor is not configured or is not working. Warning. balancing will not work, may jump the meter.</p>
	<p>first led on top purple</p>	<p>-</p>	<p>ERROR CONNECTION</p>	<p>Server connection error. Remote functionality may not work</p>
	<p>some red leds</p>	<p>red</p>	<p>ERROR</p>	<p>Different combinations of the LEDs represent error warnings. If all LEDs are red, it is necessary to disconnect the connector, remove power to Prism, and contact service.</p>
	<p>Orange LEDs</p>	<p>orange</p>	<p>WAITING FOR AUTHORIZATION</p>	<p>Prism is waiting for authorization to start charging. Refer to the section The RFID display to enable charging</p>

WARRANTY

- The warranty regulations are only valid if the device is used under the conditions of intended use.
- With the exception of the work described in the MAINTENANCE section and carried out in accordance with the procedures indicated, any repairs or modifications made to Prism by the user or by unauthorised firms will invalidate the warranty.
- The warranty does not extend to damage caused by inexperience or negligence in the use of the device, or by poor or omitted maintenance.
- The warranty is valid for a period of 24 months for all customer types.
- Silla Industries undertakes to replace, at its own discretion, any malfunctioning or incorrectly manufactured parts, only after a careful inspection and detection of incorrect assembly.
- Transport and/or shipping costs for repair or replacement of the product, as well as any uninstallation and installation costs, shall always be borne by the purchaser.
- During the warranty period, replaced products become the property of the manufacturer.
- Only the original purchaser can benefit from this guarantee if he has complied with the normal maintenance instructions in the manual. Silla Industries' liability under the warranty shall expire at the time when the original owner transfers ownership of the product, or when modifications have been made to the product.
- The guarantee does not cover damage resulting from overstrain, such as the use of the product after the discovery of a fault, the use of unsuitable operating methods or failure to observe the operating and maintenance instructions.
- Silla Industries accepts no responsibility for any difficulties arising from resale or use abroad due to the regulations in force in the country where the product has been sold.
- The defective product or part of the product shall not be replaced without proof of purchase (invoice, copy of payment); otherwise the replaced part shall be charged to the purchaser.

Important: If you need to use the warranty, please contact:

Silla Industries

mail: support@silla.industries

phone: +39 049 2325440

DICHIARAZIONE DI CONFORMITÀ UE

Fabbricante: Silla srl
Indirizzo: Via della Meccanica, 2/A
Città: Padova (PD) - Italia

DICHIARA che il/i seguente/i prodotto/i

Tipologia prodotto: caricatore per veicoli elettrici
Nome prodotto: Silla Prism
Codice prodotto: varianti come da allegato A

quando soggetto/i a corretta installazione, manutenzione e metodo di utilizzo, in conformità alle normative e agli standard applicabili nel paese in cui è/sono installato/i, è/sono conforme/i agli standard armonizzati dell'Unione Europea:

Electromagnetic Compatibility Directive (EMC) 2014/30/EU (DIRETTIVA 2014/30/UE DEL PARLAMENTO EUROPEO E DEL CONSIGLIO)

IEC 61851-1:2018

IEC 61851-21-2:2018 "Electric vehicle conductive charging system - Part 21-2:

Electric vehicle requirements for conductive connection to an AC/DC supply - EMC requirements for off board electric vehicle charging systems"

Radio Equipment Directive (RED) 2014/53/EU (DIRETTIVA 2014/53/UE DEL PARLAMENTO EUROPEO E DEL CONSIGLIO)

EN 300 328 V2.1.1:2016 "Wideband transmission systems; Data transmission equipment operating in the 2,4 GHz ISM band and using wide band modulation techniques"

Ogni modifica o alterazione alle caratteristiche del prodotto rende questa dichiarazione invalida.

Questa dichiarazione di conformità è rilasciata sotto la responsabilità esclusiva del fabbricante.

Anno di marcatura: 2020

Padova, 15/02/2021

Alberto Stecca
Rappresentante legale



**DICHIARAZIONE DI CONFORMITÀ UE
ALLEGATO A**

Codice prodotto: MM - E - P - AA - T - C

Simbolo	Descrizione Simbolo	Valori	Descrizione valore
MM	Modello	PB	Prism B
E	Uscite	S	Singola
		D	Doppia
P	Fasi	1	Monofase
		3	Trifase
AA	Amperaggio	32	32 A
T	Tipo connettore	02	Tipo 2
C	Lunghezza del cavo di ricarica	02	2 metri
		05	5 metri
		07	7 metri





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