INSTALLATION MANUAL

Smart Charge Controller 1.1

SCC-1

EN

Version: 1.0
Date: 16/02/2023

CE

Contents

1. Introduction

This manual provides the important and necessary information on the installation, operation and handling of the Smart Charge Controller, an electronic device used in conjunction with an EV charging station that supports the Dynamic Load Balancing function.

Please read the manual carefully to ensure that you are familiar with all its contents.
instructions in the manual carefully. Always perform the actions in the correct order.

This manual should be kept in a safe, dry and shady place for future reference. If you lose this manual, you can
ew copy from
the supplier.

PLEASE NOTE! Always check the specifications and installation conditions for the electrical connections in the manual of the supplier of your EV charger and in the integration document of the Smart Charge Controller and the EV charger. In the event of doubt, always contact your supplier and Xemex NV.

1.1 Target group

The installation and operation of this device and any maintenance must be carried out by a qualified technician in accordance with the applicable local standards and safety regulations.

It is important that the qualified technician meets the following requirements:
- Knowledge of the general and specific rules for safety and accident prevention.
- Extensive knowledge of the relevant electrical regulations.
- The ability to identify risks and avoid potential hazards.
- Has received and read these installation and operating instructions

1.2 Intended use

The Smart Charge Controller may only be used as a current meter for an EV charging station and only operates within the specified values.

1.3 Technical assistance

If technical assistance is required, please contact Xemex NV:

XEMEX NV
Metropoolstraat 11a
B-2900 Schoten
Belgium

Tel: +32 201 95 95
Email: support@xemex.eu

1.4 Disclaimer

This document has been thoroughly checked for technical accuracy prior to publication. The document is regularly updated and any changes and corrections are incorporated into future versions. The contents of this document have been compiled purely for information purposes.
Although Xemex NV has made every effort to keep the document as correct and up to date as possible, Xemex NV is in no way liable for any defects and damages arising from the use of information contained in this document.
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2. Warnings and safety measures

2.1 Key: (Meaning of the symbols)

Safety instructions and warnings in this manual are indicated by symbols.
The following symbols are used in this document and/or are displayed on the product:

Symbol	Description
	**PLEASE NOTE!** Read the manual carefully.
	Do not switch on/ ensure that the device is not switched on during installation.
	**PLEASE NOTE!** Special information, commands and prohibitions regarding damage prevention. **Hazardous/ particularly important information to read carefully.**
	**WARNING:** A warning signifies possible injury to the user or significant material damage to the device if the user does not (carefully) follow the procedures. **Risk of electric shock!**
	**WARNING:** earthing / ensure that the system is properly earthed.
	Alternating current
	Single-phase alternating current
	Three-phase alternating current

2. Warnings and safety measures

2.2 Safety instructions

These safety instructions are intended to ensure safe usage. Failure to follow these instructions in accordance with general safety guidelines concerning electricity may result in risk of electric shock, fire and/or life-threatening injury.

DANGER - DANGEROUS VOLTAGES

WARNING - This installation manual is only intended for qualified personnel. To avoid electric shock, do not perform any work other than that described in this installation manual unless you are qualified to do so.

The use of this device is expressly forbidden in the following situations:
- In locations with a gas or dust explosion hazard and in the vicinity of explosive or highly flammable substances.
- If the device is located in or near water.
- If the product or individual components are damaged.
- By children or persons who are not capable of understanding the risks involved in using this device.

Xemex NV is not liable in any way for damages and the warranty on the device becomes void in the following situations:
- If the ambient temperature is lower than -10°C or higher than 55°C.
- If the device has been subjected to improper use, installation or maintenance.
- If the device is disassembled, modified or repaired.
- If the instructions are not followed.
- If the device is used in the vicinity of explosive or highly inflammable substances or in or near water; or in the case of normal wear and tear.
- If there is a fault in the distribution network.
- As a result of a force majeure situation or if the damage is caused from outside.

PLEASE NOTE! Always adhere to the following checklist:

1. Only qualified personnel or authorised electricians may install the Xemex Smart Charge Controller. Mains voltages above 50VAC may cause personal injury or even death!
2. Follow all applicable local and national electrical and safety regulations.
3. Install the device in an electrical enclosure (panel or junction box) or in an electrical room with limited access.
4. Check that the circuit voltages and currents are within the correct range for the Smart Charge Controller.
5. Use current transformers (CTs) with built-in TVS (= transient voltage suppressor) with a dielectric strength of 3.5KV 50Hz 1min minimum and an operating voltage of 660V. Do not use current output current transformers (ratio) such as 1 amp or 5 amp current transformers: they may irreversibly damage the Smart Charge Controller.
6. Ensure that current transformers are placed behind fuses or circuit breakers.
7. Equipment must be disconnected from DANGEROUS voltages before they are manipulated. Do not carry out any work on the device when it is still live.
8. If a fault or defect is detected, the device must be switched off immediately. To do this, first switch off the mains power and then contact should be made with the supplier.
8. Before switching on the power, check that all wires are securely fastened by pulling on each wire.
9. Do not install the Smart Charge Controller in a location where it may be exposed to temperatures below -10°C or exceeds 55°C , excessive moisture, dust, salt spray or other contaminants. The device requires an environment with a pollution degree (PD) no worse than 2 (normally only non-conductive pollution; occasionally a temporary conductivity caused by condensation should be expected).
10. Do not drill any mounting holes in the device. Instead, snap the module onto a DIN rail.
11. If the Smart Charge Controller is not installed correctly, the safety features may be compromised.

2.3 Storage and transport

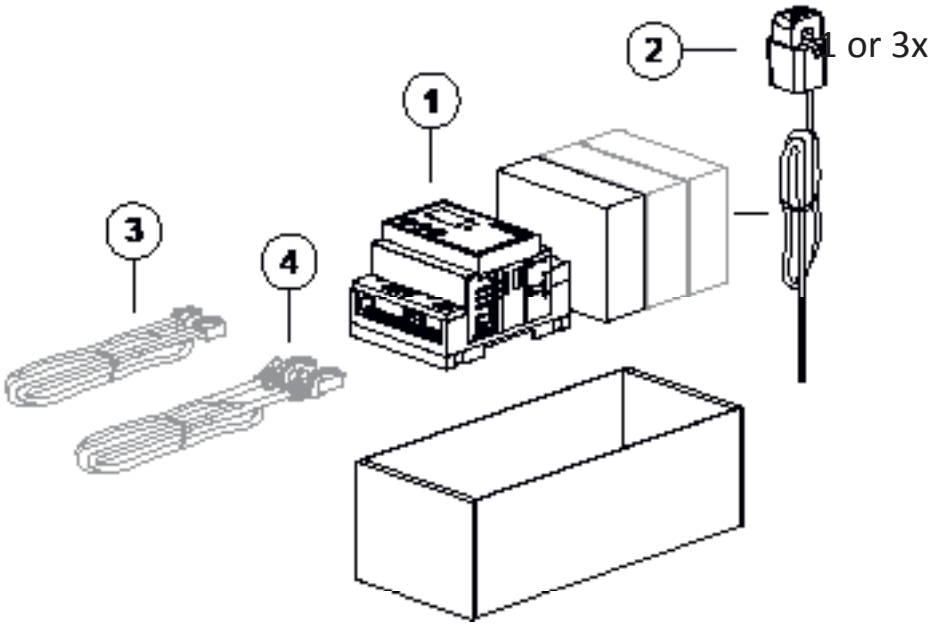
Always keep the Smart Charge Controller in its original packaging until installation.
The Smart Charge Controller should be stored safely in a dry, ventilated area, not exposed to direct sunlight. The packaging is not weatherproof.
The Smart Charge Controller should be stored at a temperature between -20°C and 80°C.

Make sure that the packaged Smart Charge Controller is exposed to minimal vibration during transport. Transport / move the packaging carefully.
Pay attention to ergonomic conditions such as lifting, bending, reaching, etc. while working on the device.

3. CHECKING THE DELIVERY

3.1 Checking delivery / parts overview

PLEASE NOTE! Check the delivery immediately upon receipt. In the event of damage or an incomplete delivery, please
contact your supplier immediately.
Open the packaging carefully. Take care not to damage the product. To avoid damage to the Smart Charge Controller, place the parts on a soft, clean and flat surface.



1. Smart Charge Controller

2. Current transformers (1 for single-phase type or 3 for multi-phase type)

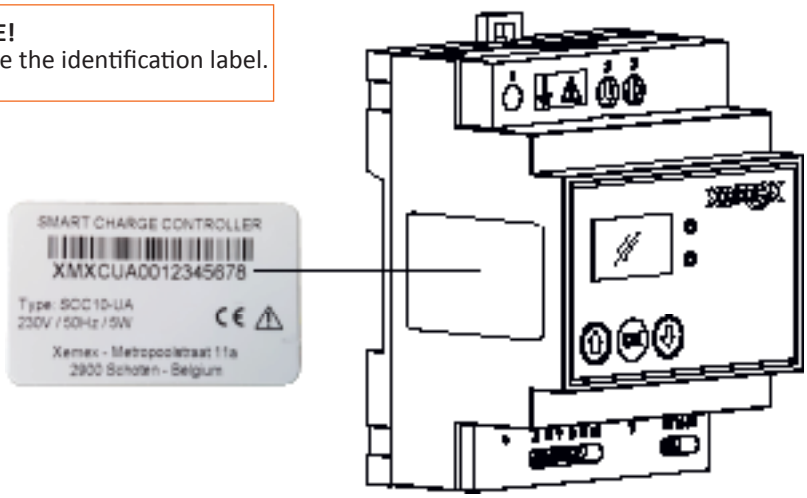
3. P1 cable (optional when using smart meter)

4. LAN cable / Modbus TCP/IP connection (not supplied as standard)

3.2 Identification label

The identification label on the side of the Smart Charge Controller specifies, among others, the following elements:
• Model, serial number.
• Type number.
• Maximum connection voltage / Nominal frequency / Connecting power.
Always keep the serial number to hand when contacting Xemex NV, so that we can help you as quickly as possible.

PLEASE NOTE!
Never remove the identification label.



4. Product description

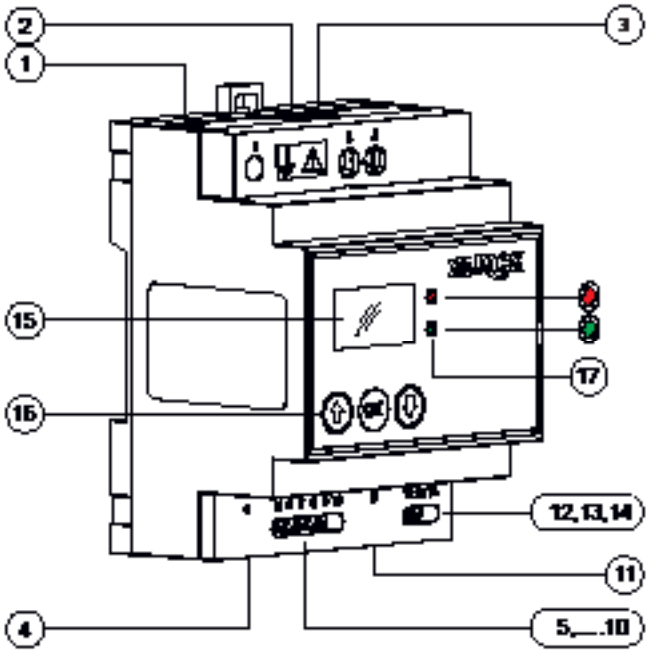
4.1 Purpose, operation and function

The Smart Charge Controller is an electronic device that is used in combination with an EV charging station.
The device measures the mains current and regulates the charging current of the EV charging station based on the Dynamic Load Balancing function of the charging station and a chosen charging mode.
Any EV charging station that supports Dynamic Load Balancing based on a Modbus RTU or Modbus TCP/IP current meter can be controlled if the correct configuration is installed on the Smart Charge Controller.
The Smart Charge Controller can be used for both single-phase and multiphase installations.
A maximum of 3 current transformers can be connected to the Smart Charge Controller to measure the mains current.
Optionally, the P1 output of a connected smart meter can be used to measure the grid current.
Wi-Fi is available to commission the device and to enable firmware updates when connected to the internet via the home router.
The device is powered from the mains.
The user selects the charging mode via the user interface, which consists of an OLED display and 3 buttons.
The following charging modes are available: PV only, PV + 6 A and Capacity (4-22kW, in 1 kW steps)
Selecting the charging mode via a smartphone app is a future feature.

The purpose of the Smart Charge Controller is to externally control the actual charging current used by EV charging. Based on:
- The Dynamic Load Balancing function of the EV charging station
- The selected operating mode of the Smart Charge Controller
- GRID parameter settings
- The processed/recalculated current by the Smart Charge Controller

And this is for the purpose of energy management in the context of:
- Optimisation of own consumption
- Capacity tariff

4.2 Overview of functionalities / connection points



1.	Earth connection
2.	230AC, N connection
3.	230AC, L1 connection
4.	P1 connection
5,...10.	Current transformer connection
11.	Modbus TCP/IP connection
12,13,14	Modbus RJ485 / RTU
15.	OLED display
16.	Control buttons
17.	LED indicators The red LED flashes when a Modbus read-out has taken place. The green LED flashes when a P1 message has been received (= future functionality).

4.3 Conditions for the proper functioning of the energy management function

The proper functioning of the energy management function of the Smart Charge Controller depends on the Dynamic Load Balancing functionality of the EV charging station.

It is assumed that this Dynamic Load Balancing functionality works as follows:
- When dynamic load balancing is enabled, the charging station works as a modbus master and the connected Smart Charge Controller acts as a modbus slave.
- The purpose of dynamic load balancing is to charge the car as quickly as possible, so the charge point asks the meter how much power is currently being consumed by the mains connection so that the remaining power from the mains connection can be used to charge the car.
- The charge point thus charges the car with a calculated maximum current of : “Maximum current of the mains connection point - the current mains consumption of the household.”

4.4 Technical specifications

4.4.1 Physical characteristics

Housing	DIN rail form factor (DIN 43880), 4U
Weight	142 g
Dimensions	90 x 72 x 65 mm

4.4.2 Environmental conditions

Protection class	II
Ambient temperature	-10 °C - +55 °C
Storage temperature	-20 °C - +80 °C
Operating humidity	10%-95%RH (non-condensing)
Storage humidity	5%-95%RH (non-condensing)
Pollution Degree	2
Altitude	< 2000m
Application area	Residential, inside suitable meter cupboard

4.4.3 Power supply interface

Connector	Screw terminal connector for N, L1 and functional earthing
Voltage range:	230 VAC, +/-10%
Frequency:	50 Hz
Power:	5 W
Overvoltage category:	II
External fuse:	16 A

4.4.4 Modbus RTU Interface

Connector	Screw terminal connector for A(+), B(-) and GND (= signal reference for RS485)
Bus termination	120 Ohm
Protocol	Modbus RTU via RS485
Max. cable length:	100 metres
Cable location:	Indoor + outdoor
Cable type:	Preferably armoured twisted pair with earth wire. Cross-section 0.20 ... 0.50 mm².
Example of cable type:	Belden 3107A

4.4.5 Modbus TCP/ IP Interface

Connector	RJ45
Protocol	Modbus TCP/IP via Ethernet
Max. cable length:	100 metres
Cable location:	Indoor + outdoor
Cable type:	UTP CAT-5

4.4.6 Measurement interface

PLEASE NOTE! Use current transformers (CTs) with built-in TVS (= transient voltage suppressor) with a dielectric strength of 3.5KV 50Hz 1min and an operating voltage of 660V. Do not use current output current transformers (ratio) such as 1 a or 5 amp CTs: they may irreversibly damage the Smart Charge Controller. Ensure that current transformers are placed behind fuses or circuit breakers.

Connector	Screw terminal connector for max. 3 current transformers
Measurement principle	Current measurement by current transformer
Current range	1A ... 80A (if CT ratio = 2000)
CT ratio	2000 (standard)
Input impedance	20 Ohm
Accuracy	Typically <5 % at 23 °C
Max. Cable length	1 metre

4.4.7 P1-interface

Connector	RJ11
Protocol	DSMR4 / DSMR5
Max. Cable length	3 metres
Cable location	Indoors

4.4.8 User interface

LCD	OLED-screen 128 x 64
Buttons	3 push buttons
LEDs	1 green LED, 1 red LED
Wi-Fi	WEP64/128, AES, WPA, WPA2, WAP 2.4 GHZ AP, STA, AP&STA mode Coding modes IEEE 802.11 b/g/n

4.4.9 Standards and certifications RED (2014/53/EU)

Health and safety	EN 62311, EN 61010-1: 2010 + A1: 2019
EMC	EN 301 489
Radio	EN 300 328 - Wi-Fi 2.4 GHz

5. Installation preparations

5.1 Installation conditions / wiring requirements

Safety and installation guidelines

This installation guide must be consulted in all cases when handling parts marked with the warning symbol.
The installation, operation and maintenance of this device must be carried out by a qualified person in accordance with the applicable local standards and safety regulations.

PLEASE NOTE! Never open the secondary circuit of a current transformer while current is flowing through the primary circuit! If the secondary circuit is opened when the primary current is flowing, the voltage will go to a very high value, which may cause electric sparks and/or electric shocks to maintenance personnel.
Therefore, CTs with internal TVS must be used.
If the "Safety and Installation Guidelines" are not followed, the warranty will no longer apply.

5.2 Installation position

Install the device in a suitable meter cupboard.
Install the device in an electrical enclosure (panel or junction box) or in an electrical room with limited access.
Mount the device in a DIN rail cabinet and click it on to a DIN rail.

If a smart meter is used, mount the device at a distance of less than 3 metres from the smart meter.

There are no specific ventilation requirements.

5.3 Overvoltage protection / residual-current device

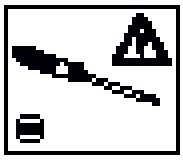
An external circuit breaker / overcurrent protection must be used in the installation. This circuit breaker / overcurrent protection must be suitably located and easily reached. Furthermore it must be marked as the disconnection device for the Smart Charge Controller.

The overcurrent protection should have following ratings:
- 230/400 VAC
- 16 A

5.4 Wiring requirements

Use twisted or solid wires with a cross section of 2.5 mm^2 for AC connections.

5.5 Tool overview



Screwdrivers with flat head
Fully insulated up to 1000V according to DIN EN 609000 / VDE 0682-201

in 2 sizes:
- M3 (0.6 x 3.5)
- M1.6 (0.3 x 1.8)

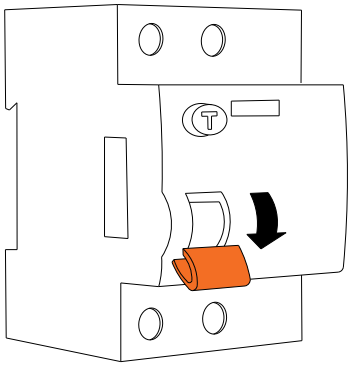
Tightening torque: min. 0.5 Nm / max. 0.6 Nm

6. Installation

6.1 Switch off the main switch in the meter cupboard

The electrical system must be completely disconnected from all power sources / mains before carrying out any installation work!

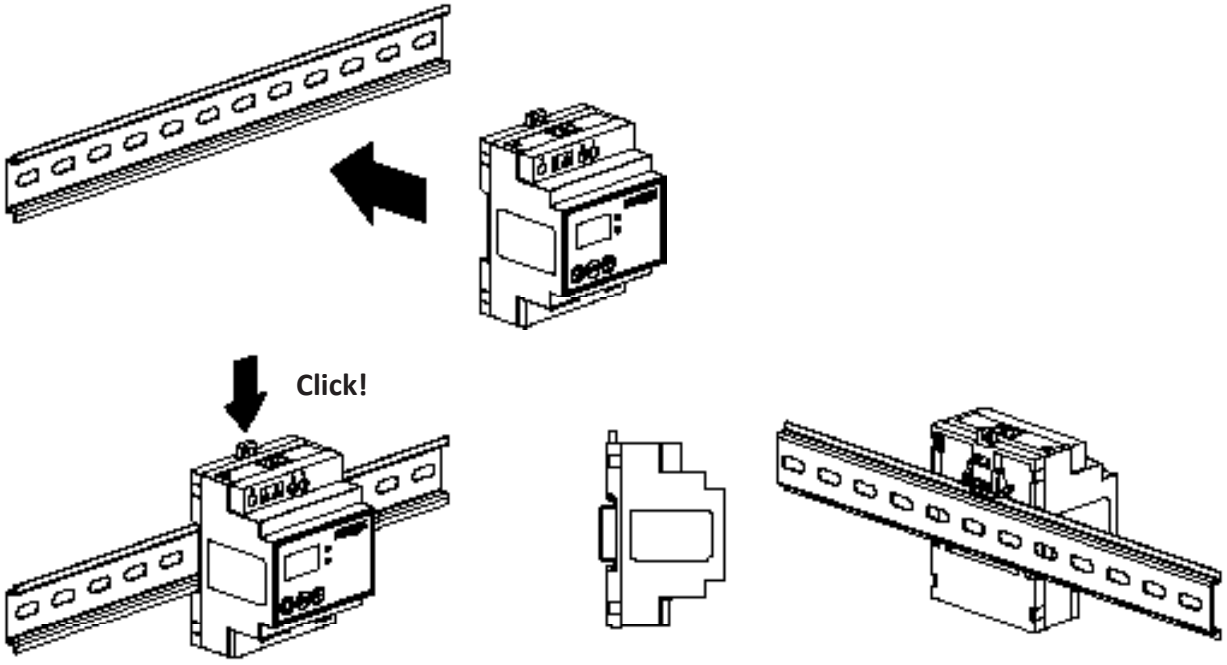
Risk of fatal injury from improper installation!
Failure to observe the installation instructions and the surrounding conditions may result in dangerous situations when working with electricity.



6.2 Install the Smart Charge Controller on the DIN rail

Install the device in a suitable meter cupboard.
Mount the device in a DIN rail cabinet and click it on to a DIN rail.

PLEASE NOTE! Do not drill any mounting holes in the device.



6.3 Electrical connections to the Smart Charge Controller

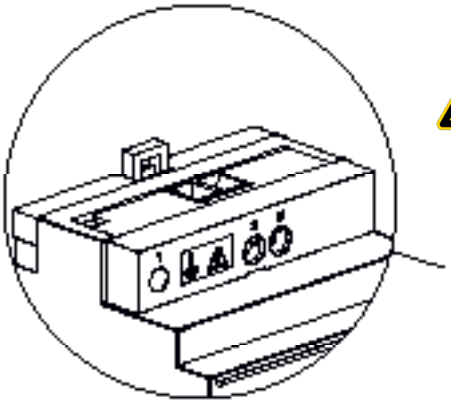
PLEASE NOTE! The voltage connection (N and L) must **ALWAYS** be made on phase L1, otherwise the current direction will be indicated incorrectly!

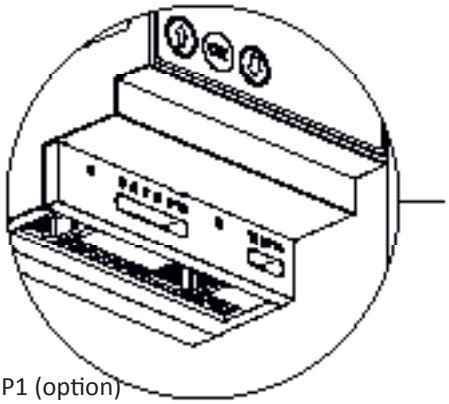
1. Connect the power supply cable by attaching PE (1) functional earth, N (2) and L1 (3) using screw terminal connectors.
2. Connect up to 3 current transformers (CTs) to CT1 on (5 and 6), CT2 on (7 and 8) and CT3 on (9 and 10) using screw terminal connectors.
3. Or optionally connect the P1 cable with RJ11 connector to P1 output (4) and to the smart meter.

PLEASE NOTE! Use current transformers (CTs) with built-in TVS (= transient voltage suppressor) with a dielectric strength of 3.5KV 50Hz 1min and an operating voltage of 660V. Do not use current output (ratio) CTs such as 1 amp or 5 amp CTs: they may irreversibly damage the Smart Charge Controller. Ensure that the current transformers are placed behind fuses or circuit breakers.

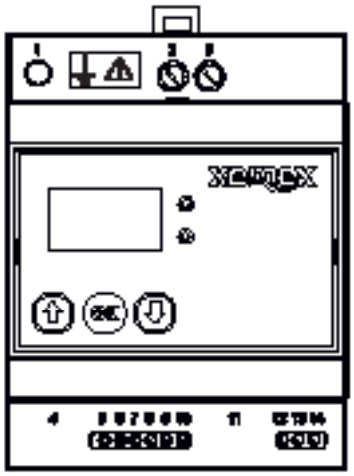
4. Connect LAN cable with RJ45 Connector to Ethernet/LAN port (11) and to EV charger.
5. Or connect the Modbus RTU with RS485 cable by mounting B(-) (12), A(+) (13) and GND (14) via screw terminal connectors and to the EV charger.

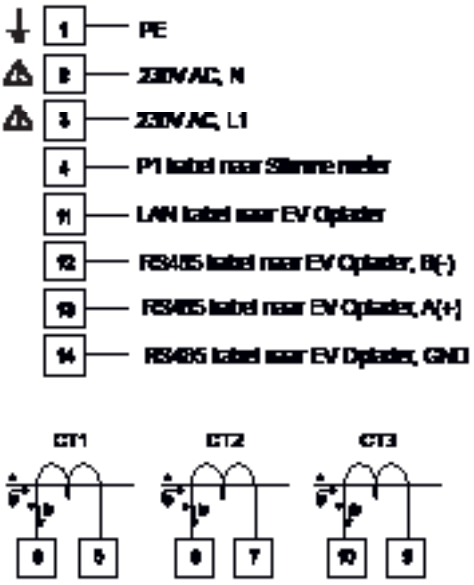
The electrical connections and the positions of the connectors on the Smart Charge Controller are shown below.

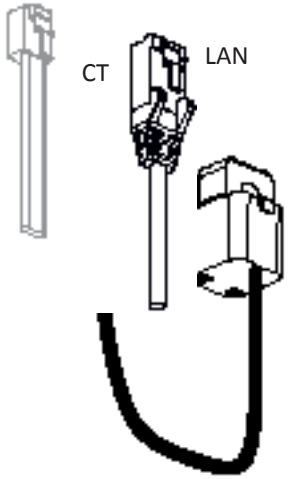




P1 (option)







PLEASE NOTE! See chapter 6.4 for Important notes on electrical connections!

6.4 Important notes concerning the electrical connections

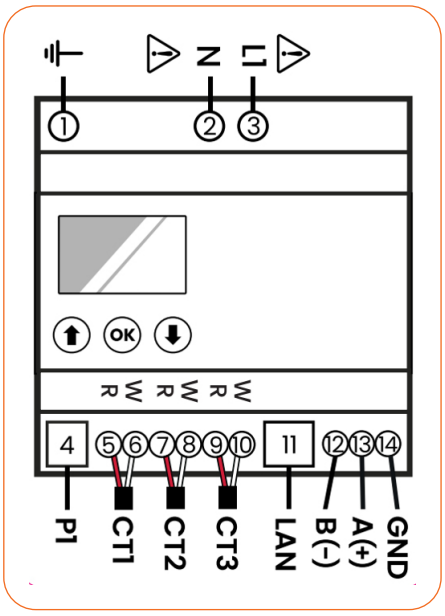
6.4.1 AC connections

PLEASE NOTE! Do not interchange N (terminal 2) with L (terminal 3). The current direction (import vs. export) is derived from the
AC connection. If the AC connection is reversed, the device will not measure the current direction correctly.

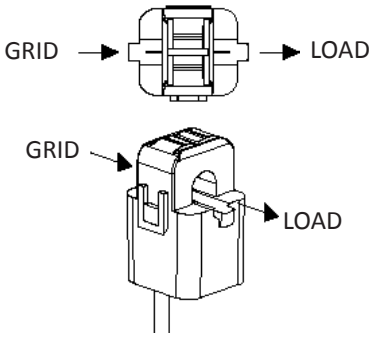
PLEASE NOTE! The voltage connection (N and L) must **ALWAYS** be made on phase L1, otherwise the current direction will be indicated incorrectly!

6.4.2 CT connections

CT transformers must be installed as follows:

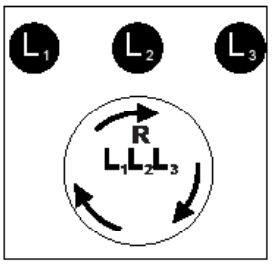


This label is located on the side of the Smart Charge Controller.

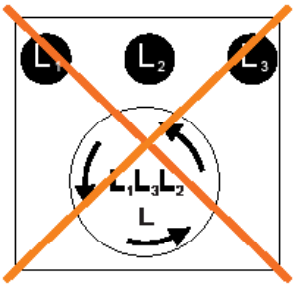


PLEASE NOTE! Mount the CT terminals
correctly on the mains connection. If the CT terminals are
reversed, the device will not measure the current direction correctly.

PLEASE NOTE! Do not reverse the polarity of the CT wires. If the CT connections
are reversed, the device will not measure the current direction correctly.



3 phase situation clockwise L1 L2 L3



3 phase situation anti-clockwise L1 L3 L2

PLEASE NOTE! The CT connection sequence is shown for a clockwise mains connection.
For an anti-clockwise mains connection, swap CT2 and CT3.
Ensure that the phase sequence matches the EV charger connections.

6.4.3 Requirements for Modbus RTU connection

PLEASE NOTE! The shielding of the Modbus wiring must only be connected to the Smart Charge Controller side and not to the Modbus master side.

PLEASE NOTE! The shielding of the Modbus wiring must also be connected to the building's protective earth.

7. Commissioning

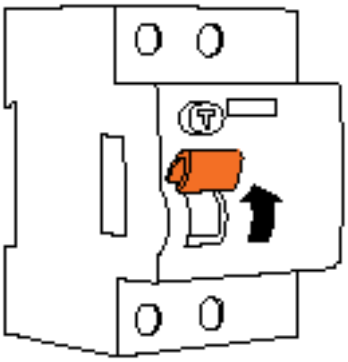
7.1 Switch on the main switch in the meter cupboard

WARNING: Before turning on the current / mains power, check that the circuit voltages and currents are within the correct range for the Smart Charge Controller.

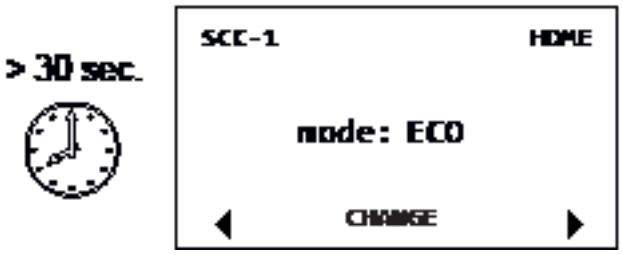
Before turning on the power, check that all wires are connected according to the electrical diagram.

Before switching on the power, check that all wires are securely fastened by pulling on each wire.

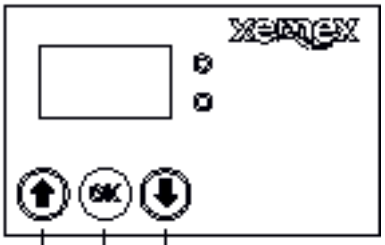
If the Smart Charge Controller is not installed correctly, the safety features may be compromised.



After switching on the current, the Smart Charge Controller's start screen
will appear automatically after approx. 30 sec.



7.2 Overview of the controls / buttons



I navigate you down to the next screen.

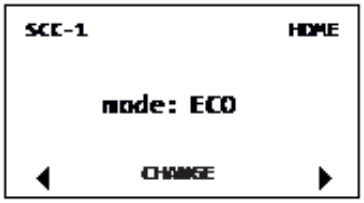
Pressing OK selects/confirms an item and returns to the home screen.

Pressing ⇧ will navigate you upwards to the previous screen.

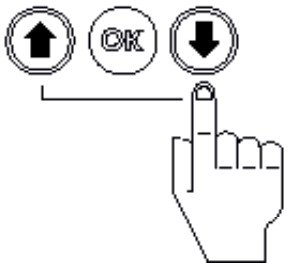
7.3 Menu functions and navigation

Warning: Use the Smart Charge Controller only as described below. If the Smart Charge Controller is not used as specified in this manual, the protection provided by the Smart Charge Controller may be impaired.

The device can be operated via the LCD and keypad.
By default, the LCD displays the current operating mode (= start-up screen), e.g.:

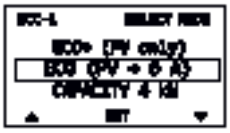


You can scroll through the menu structure using the forward and backward buttons.



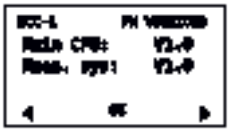
Menu functions / top-level screens are:

Charging mode



Current measurements

Software versions



Settings

Commissioning mode

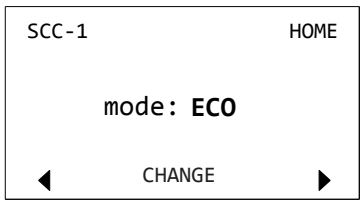
Firmware update

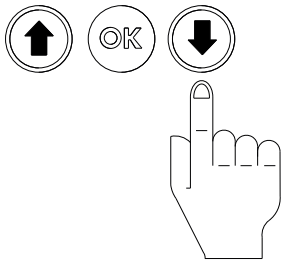
Factory settings

Each time that no button is pressed for 1 minute (except in the commissioning mode), the device exits the current menu (sub) item and displays its home screen.

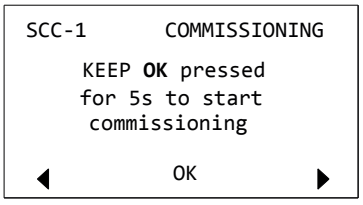
7.4 Commissioning

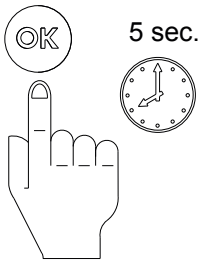
The buttons and the LCD menu can be used to set the device to commissioning mode.
In commissioning mode, the device will act as a Wi-Fi access point.





1. From the home screen, press ⇩ until you get to the Commissioning screen.





2. Press the **OK** button for 5 seconds to start the commissioning.

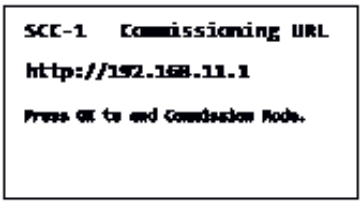
3. The name and password of the access point are displayed on the LCD:

Example:

The Wi-Fi SSID is the character string "SCC-" followed by the last 8 digits of the LDN of the device.
The Wi-Fi code is a random 6-digit number generated when the device started its commissioning function.

If no Wi-Fi station connects within 5 minutes, the device returns to the home screen. The Wi-Fi access point will then be disabled.

4. Once a Wi-Fi station is connected, the URL of the commissioning site is displayed on the LCD:



5. Only one Wi-Fi station can connect at a time. It receives the fixed ip address 192.168.11.2

The connected Wi-Fi station, e.g. a smartphone, can now access the local website of the device with a number of forms to get the device up and running.

Fill in these forms on the website as described in chapter 7.5

After the settings have been entered, the commissioning mode can be exited.

6. Press the **OK** button to end the commissioning and return to the return to the home screen.

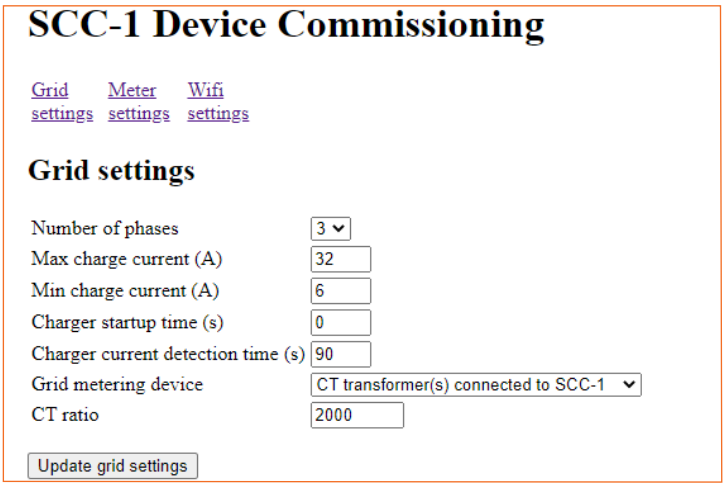
7.5 Commissioning internet pages

Each commissioning page contains:
• A title
• A top menu (=links) to the subpages
• A form with settings for this subpage

7.5.1 Mains connection settings

The mains connection settings page contains the following parameters:

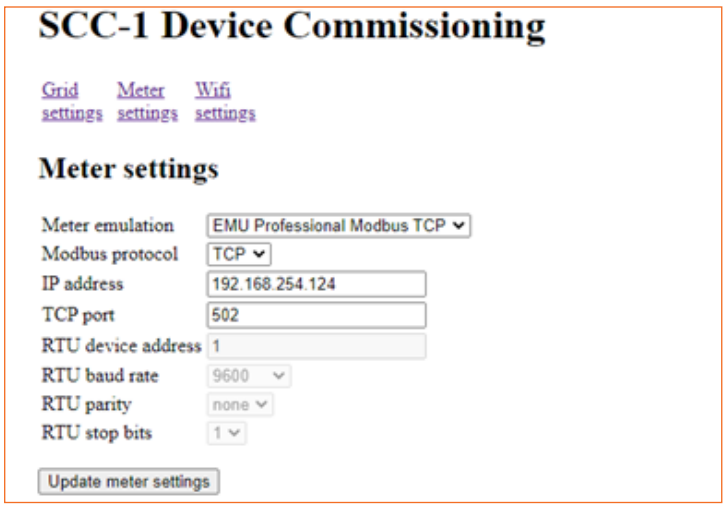
• Number of phases (1 / 3)
• Max. charging current (must be the same as setting in EV charger)
• Min. charging current (Minimum current at which the car can charge, used in ECO mode)
• Time before increased start-up current takes the effect in case of avialable charging capacity
• Time that the increased charging current remains available before reverting to the set grid capacity
• The method used to measure the mains current (Current transformers / P1)
• CT ratio



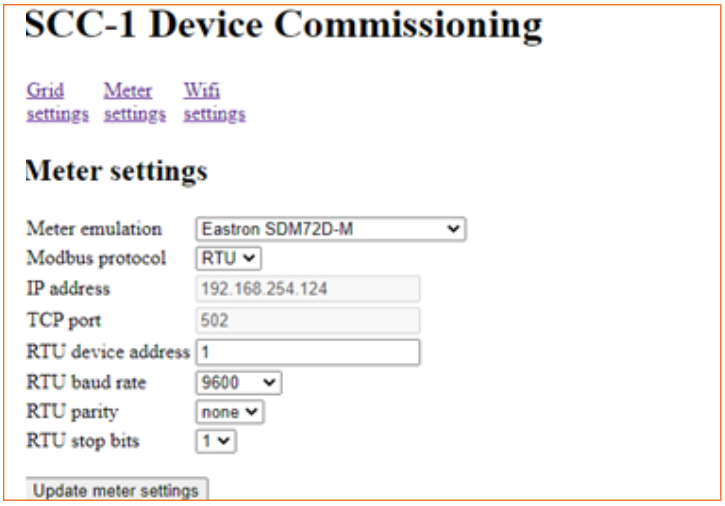
7.5.2 Meter settings

The Meter settings page contains the following parameters:

• Meter to emulate: drop down with supported meter types:
  o Eastron SDM72D-M, with Modbbus prodotcol RTU
  o EMU Professional Modbus TCP
• If TCP is chosen for Modbus protocol, the following must be entered:
  o IP address
  o TCP port

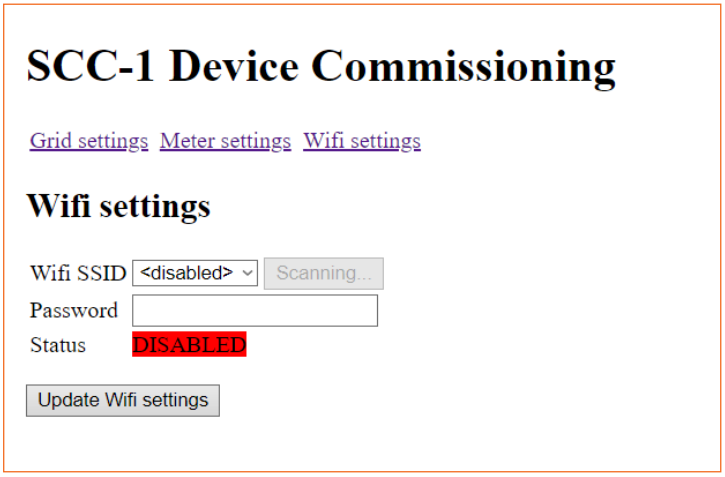


• If RTU is selected for Modbus protocol, the following must be entered:
    - o RTU device address
    - o RTU baud rate
    - o RTU parity
    - o RTU stop bits



7.5.3 Wifi settings

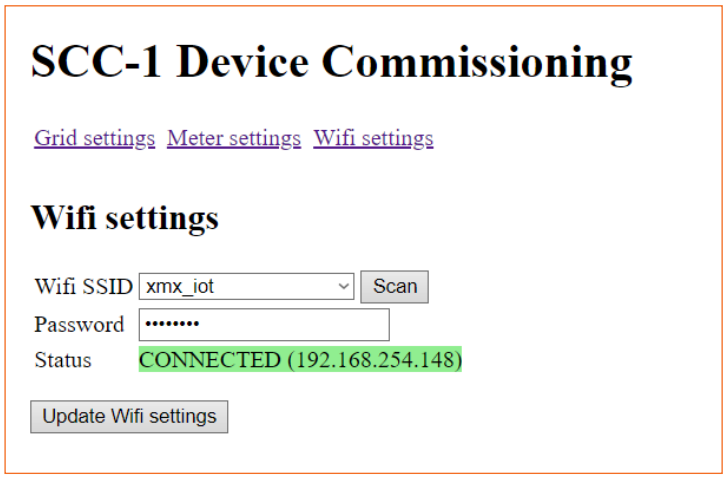
The Wi-Fi settings page is used to connect the Smart Charge Controller to the home router. This is used for SW updates and remote control. (= future functionality)



1. Select the SSID of the Wifi network.
2. Enter the password.
3. Press the "Update Wifi Settings" button.

The status shows the condition of the connection. Once connected, the IP address is also displayed.


SCC-1 Device Commissioning
Grid settings Meter settings Wifi settings
Wifi settings
Wifi SSID xmx_iot Scanning...
Password ••••••••
Status WAITING FOR CONNECTION.....
Update Wifi settings


SCC-1 Device Commissioning
Grid settings Meter settings Wifi settings
Wifi settings
Wifi SSID xmx_iot Scan
Password ••••••••
Status CONNECTED (192.168.254.148)
Update Wifi settings

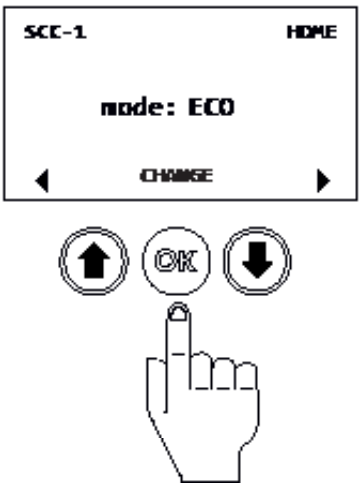
8. Use / operation

8.1 Charging mode

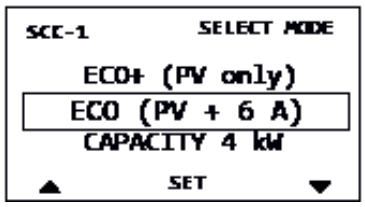
In charging mode, the desired charging mode or capacity of the EV charge point can be selected from 4 kW to 22 kW. However, the maximum power displayed in the menu depends on the max. capacity of the EV charge point, this is a device setting (see operating instructions EV charge point).

There are charging modes:

- ECO+ (PV only) = charging only with power that is fed into the grid
- ECO (PV + 6 A) = charging with fed-in power + 6 A
- Capacity = charging with set maximum capacity between 4-22kW*, adjustable in steps of 1kW.
  (*) Maximum adjustable capacity depends on the grid setting "Max charge current" at commissioning



1. From the home screen, press **OK**.
You are now in the charging mode.

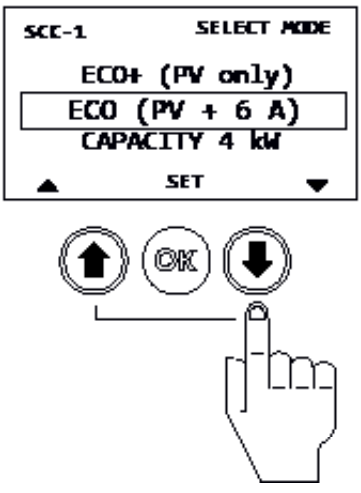


2. The selected mode is displayed.

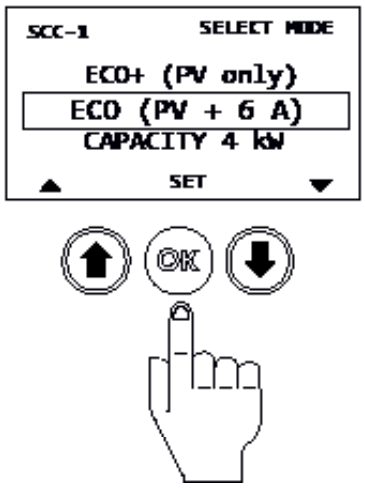
You can select the following modes:

- ECO+ (PV only)
- ECO (PV + 6 A)
- CAPACITY 4 kW
- CAPACITY 5 kW
- CAPACITY 6 kW
- CAPACITY 7 kW

..... 22 kW



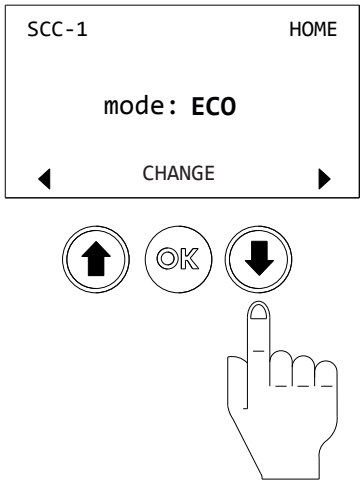
3. Press ⇧ or the ⇩ button to select the desired charging mode / CAPACITY.
appears in the Commissioning screen.



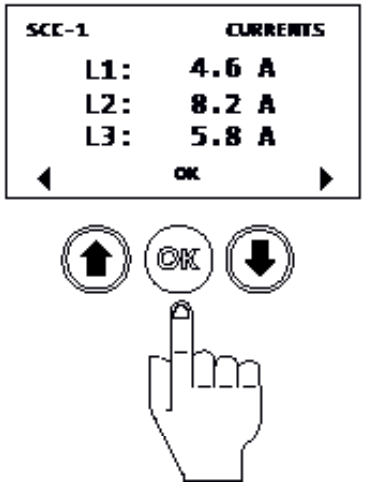
4. Press **OK** to confirm the selected mode.
You return to the home screen.

8.2 Current measurements

This screen displays the current measurements (in Amperes). The measured currents are visible in real time (i.e. an update every second).



1. From the home screen, press ⇩ until you Get to the Current Measurements screen.

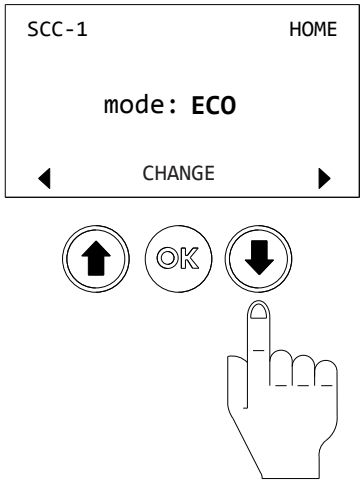


2. The current measurements are displayed. Press **OK** to return to the home screen.

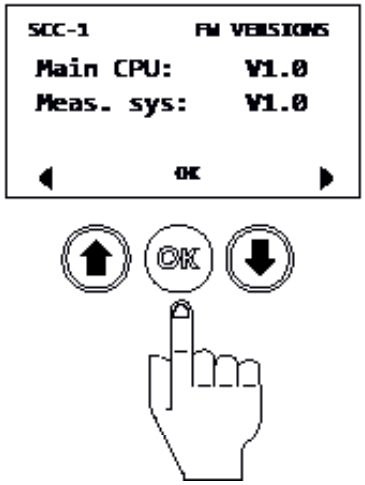
Press ⇧ or ⇩ to navigate to a previous/next menu screen.

8.3 Software versions

This screen shows the Software versions.



1. From the home screen, press ⇩ until you get to the FW versions screen.

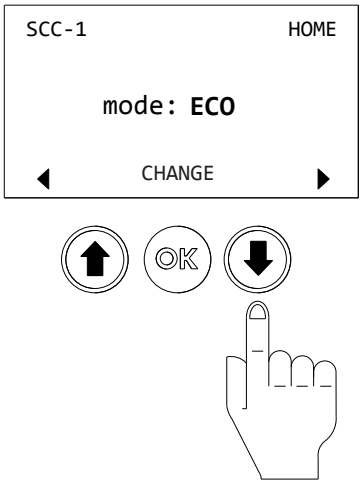


2. The Software versions are displayed. Press **OK** to return to the home screen.

Press ⇧ or ⇩ to navigate to a previous/next menu screen.

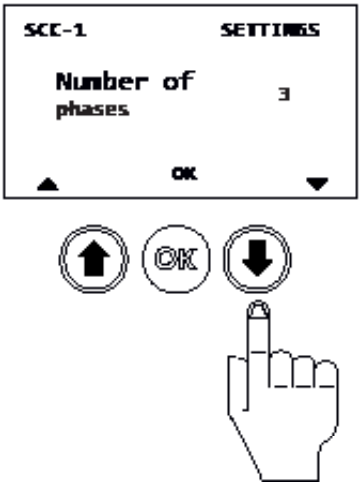
8.4 Settings

This screen displays a list of settings.

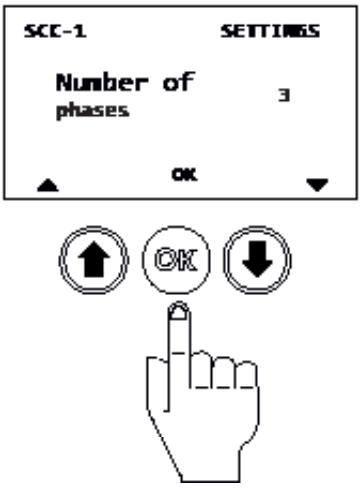


1. From the home screen, press ⇩ until you
get to the Setting screen.

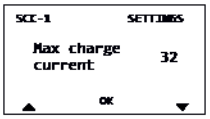
2. Press **OK** to display the list with settings.

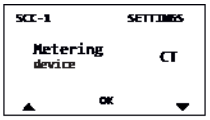


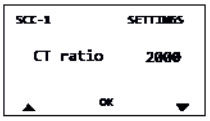
3. Press ⇧ or ⇩ to navigate to a previous/next setting. See below for the list of settings.

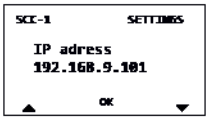


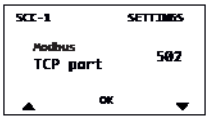
4. Press OK to return to the home screen.

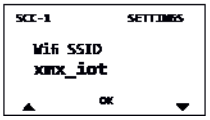






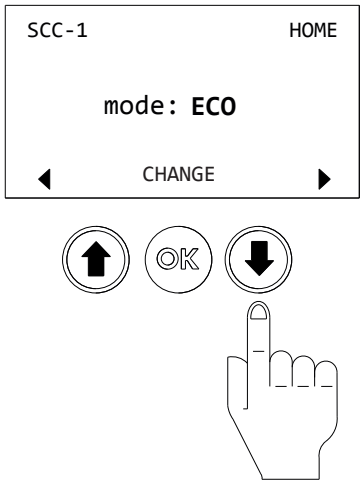




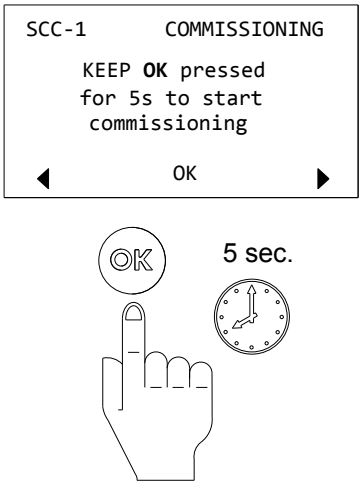


8.5 Commissioning

In this screen, the device can be set in the Commissioning mode.



1. From the home screen, press ⇩ until you get to the Commissioning screen.



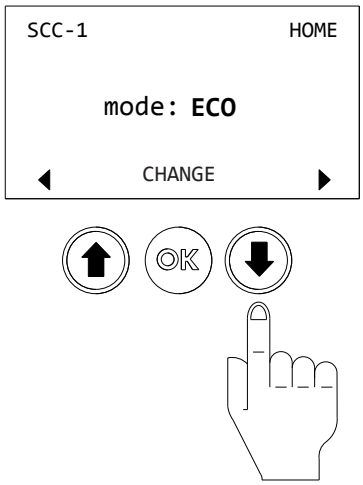
2. Press the **OK** button for 5 seconds to start the commissioning.
see section 7.4 for details.

If you press OK for less than 5 seconds, you will return to the home screen.

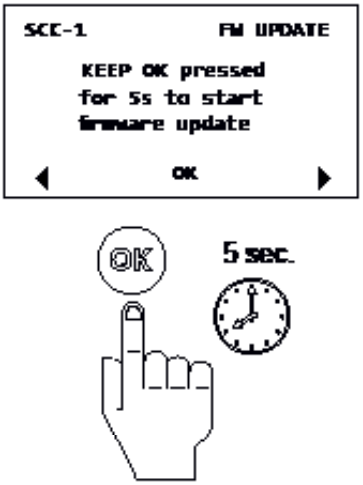
8.6 Firmware update

To enable a firmware update, the Smart Charge Controller must be connected to the home router via Wi-Fi and have Internet access. (see 7.5.3)

This screen shows the software updates.



1. From the home screen, press ⇩ until you get to the Firmware update screen.

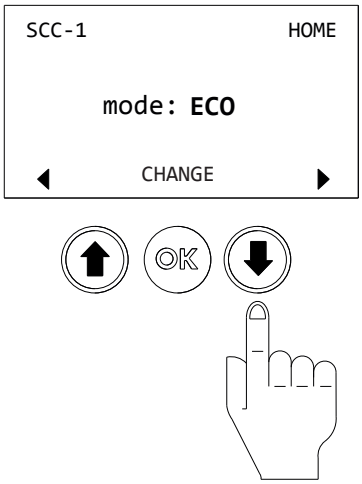


2. Press the **OK** button for 5 seconds to start the Firmware update.

If you press OK for less than 5 seconds, you will return to the home screen.

8.7 Restoring factory settings

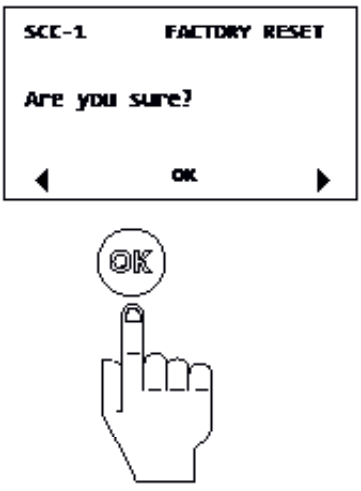
In this screen, the device can be reset to the factory settings



1. From the home screen, press ⇩ until you
get to the Factory reset screen.

2. Press the **OK** button for 10 sec. until the confirmation for reset is requested

If you press OK for less than 10 seconds, you will return to the home screen.



3. Press the OK button to confirm the Factory reset.

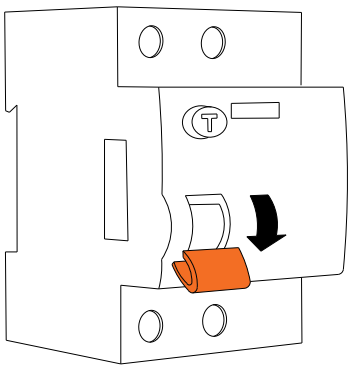
If you want to cancel the reset, press ⇧ or ⇩.

4. The factory reset will be performed. The device will now be reset to the factory settings.

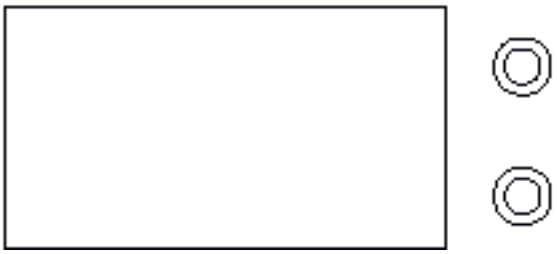
9. Decommissioning

9.1 Switch off the main switch / AC automatic circuit breaker.

PLEASE NOTE! Switch off the main switch / AC automatic circuit breaker.



After switching off the power / mains voltage the display of the Smart Charge Controller will automatically turn off.
Both LED's next to the display will also be off.



9.2 Dismantling the device

In the case of decommissioning for disassembly, follow the instructions below:

- Switch off the main switch / AC automatic circuit breaker.
- Check with a suitable voltmeter that the inputs and outputs are voltage free.
- Disconnect the AC cables and any other wiring.
- The Smart Charge Controller can now be dismantled safely.

10. Maintenance & Service

Installation, maintenance and repair of the Smart Charge Controller as well as work on the system may only be performed by qualified persons. The reason for this is the high voltage that is present.
Connections and protective devices must be implemented in accordance with the locally applicable regulations.

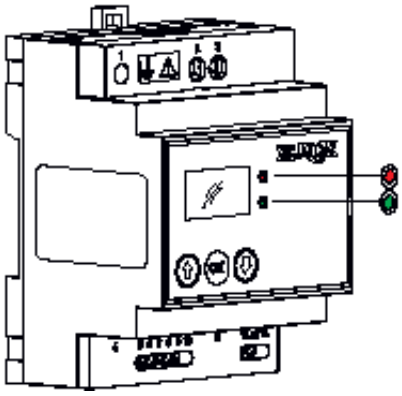
We recommend that you clean the Smart Charge Controller regularly.
- For your own safety, disconnect the device from the power supply by turning off the main switch before cleaning the device.
- Clean the Smart Charge Controller with a soft, dry cloth. Never use liquid, aggressive cleaning agents and/or abrasives.

- Repairs and maintenance on parts of the Smart Charge Controller may only be carried out by qualified skilled personnel/ qualified installers and/or electricians.
- Use only original spare parts.

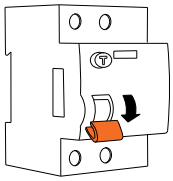
11. Faults

Faults are not indicated on the Smart Charge Controller itself. There are, however, signals from which it can be inferred that a fault is present:

- If the display does not light up.
- If the red or green LED does not flash.
- When the current is not measured correctly.



PLEASE NOTE! If a fault occurs, switch off the power supply immediately and contact a qualified installer.



Fault table

Fault	Possible causes	Possible solution
Display does not light up:	• Module has not yet started. • Power supply connection. • Module is defective.	• Wait at least 30 seconds. • Check that the circuit voltages and currents are within the correct range for the meter model. • Check that all wires (1)(2)(3) are connected correctly according to the electrical diagram. • Check that all wires are securely connected by pulling on each wire.
Red or green LED does not flash:	• Charging station is not configured correctly • Connection between charging station and Smart Charge Controller. • Module is defective.	• Check that all wires (11) or (12)(13) (14) are all correctly connected according to the electrical diagram. • Check that all wires are securely connected by pulling on each wire.
Current is not measured correctly:	• Current transformers (CTs) not connected correctly. • Power supply connection (2)(3) not on L1. • Module is defective.	• Check that all wires (5)(6)(7)(8) (9) (10) are all correctly connected according to the electrical diagram. • Check that all wires are securely connected by pulling on each wire. • Check the direction of the power terminals. • Check that (2)(3) are connected to L1. • See also 6.4.

12. Environment / Waste disposal

Dispose of the product packaging materials in accordance with local laws and regulations.

DISPOSAL OF ELECTRICAL AND ELECTRONIC EQUIPMENT (AEEA/WEEE)
Electrical and electronic equipment (WEEE) contains materials, components and substances which can be hazardous and present a risk to human health and the environment if the disposal of electrical and electronic equipment (WEEE) is not carried out correctly.
Users of electrical and electronic equipment should not dispose of WEEE together with household waste. Users should follow the municipal collection plan to reduce the environmental impact associated with the disposal of electrical and electronic equipment.

13. Declaration of conformity

Manufacturer: XEMEX NV
Metropoolstraat 11a
B-2900 Schoten
Belgium
Tel: +32 201 95 95

declares the conformity of the product:
Smart Charge Controller (SCC)

in accordance with the European directives:
RED 2014/53/EU

Application (harmonisation legislation)
- EN 300 328 v.2.2.2
- EN 301 489-1 v2.2.3
- EN 61000-3-2:2019
- EN 61000-3-3: 2013
- EN 61000-3-3/A1:2019
- EN 62311:2008
- IEC 61010-1:2010 or EN 61010-1:2010
- IEC 61010-1/A1: 2016 or EN 61010-1/A1:2019

The Notified Body Telefication B.V., with Notified Body number 0560, has issued the following under the conformity assessment procedure: Modules: B+C
the certificate of the EU type examination: 212140635/AA/00

Where applicable:
Description of accessories and components, including software, enabling the radio equipment to function as intended and covered by the DoC:

All the products listed carry the CE mark.

Schoten, Belgium, 3 June 2022

14. Warranty

For the duration and conditions of the warranty, we advise you to contact XEMEX NV. We also refer you to our General Terms and Conditions of Sale and Delivery which are available on request.

15. Contact

XEMEX NV

Metropoolstraat 11a
B-2900 Schoten
Belgium
Tel: +32 201 95 95
Email: support@xemex.eu

Scan the QR Code
To view or download all the necessary documents such as product brochures, technical data sheets, installation instructions and legally available documents and certifications.