SUNGROW

Clean power for all

AC011E-01 Commissioning & Troubleshooting

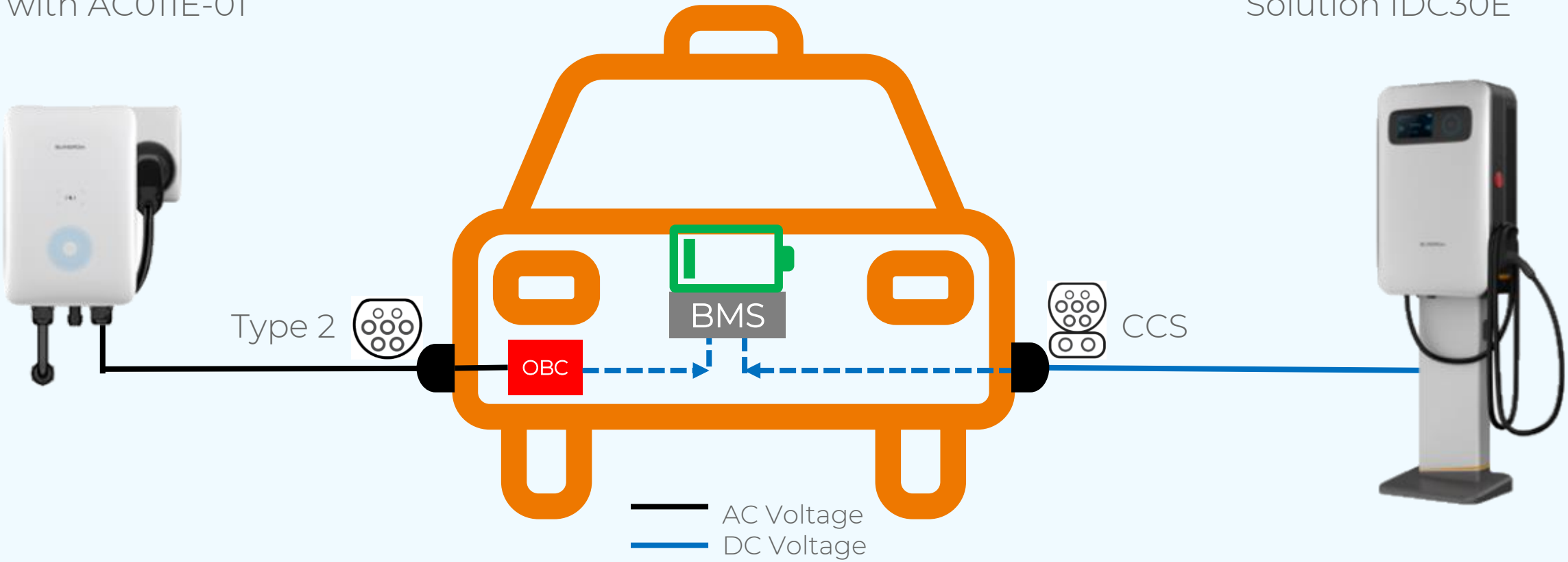
THE 3-PHASE SOLUTION

NOW WITH AC-CHARGER

EV-CHARGING BASICS

AC-Charging
with AC011E-01

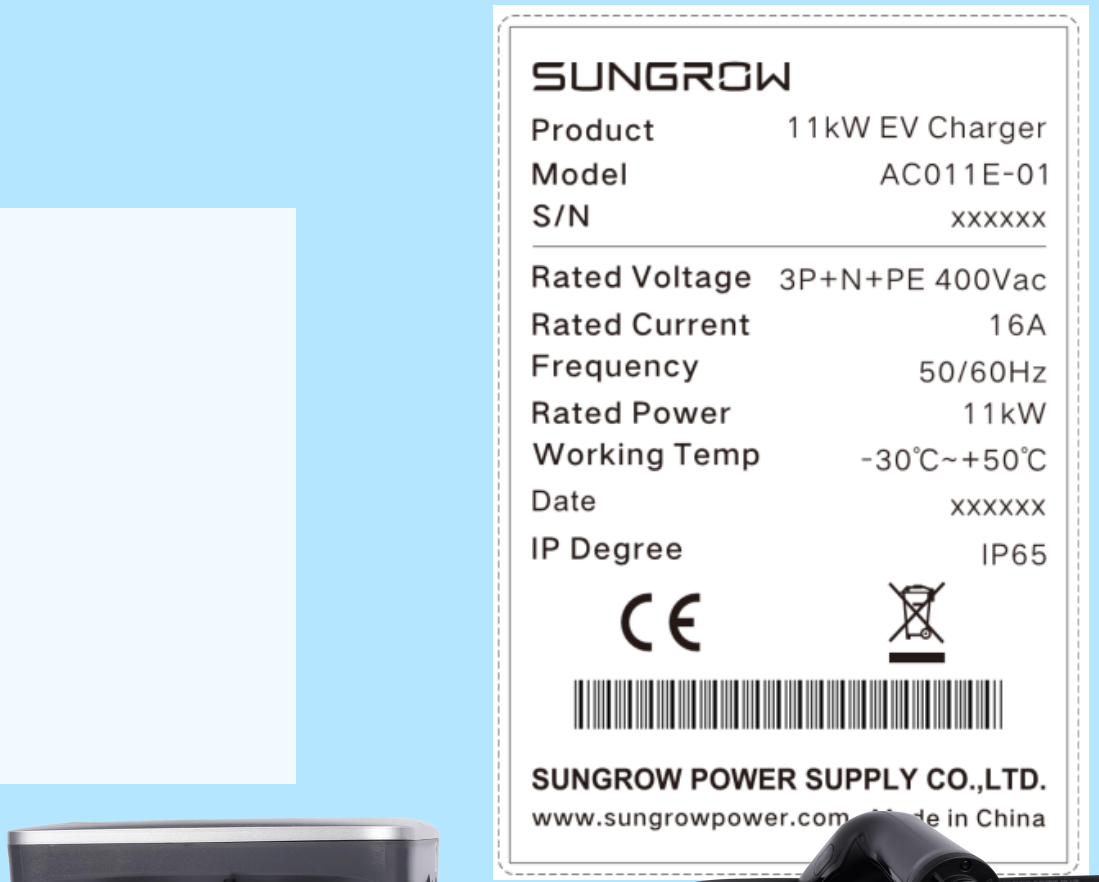
DC-Charging
Solution IDC30E



PRODUCT INTRODUCTION

AC011E-01

AC AC-Charging
011 Output power 11kW
E acc. to EU-Regulations
-
0 without Display
1 with RFID function



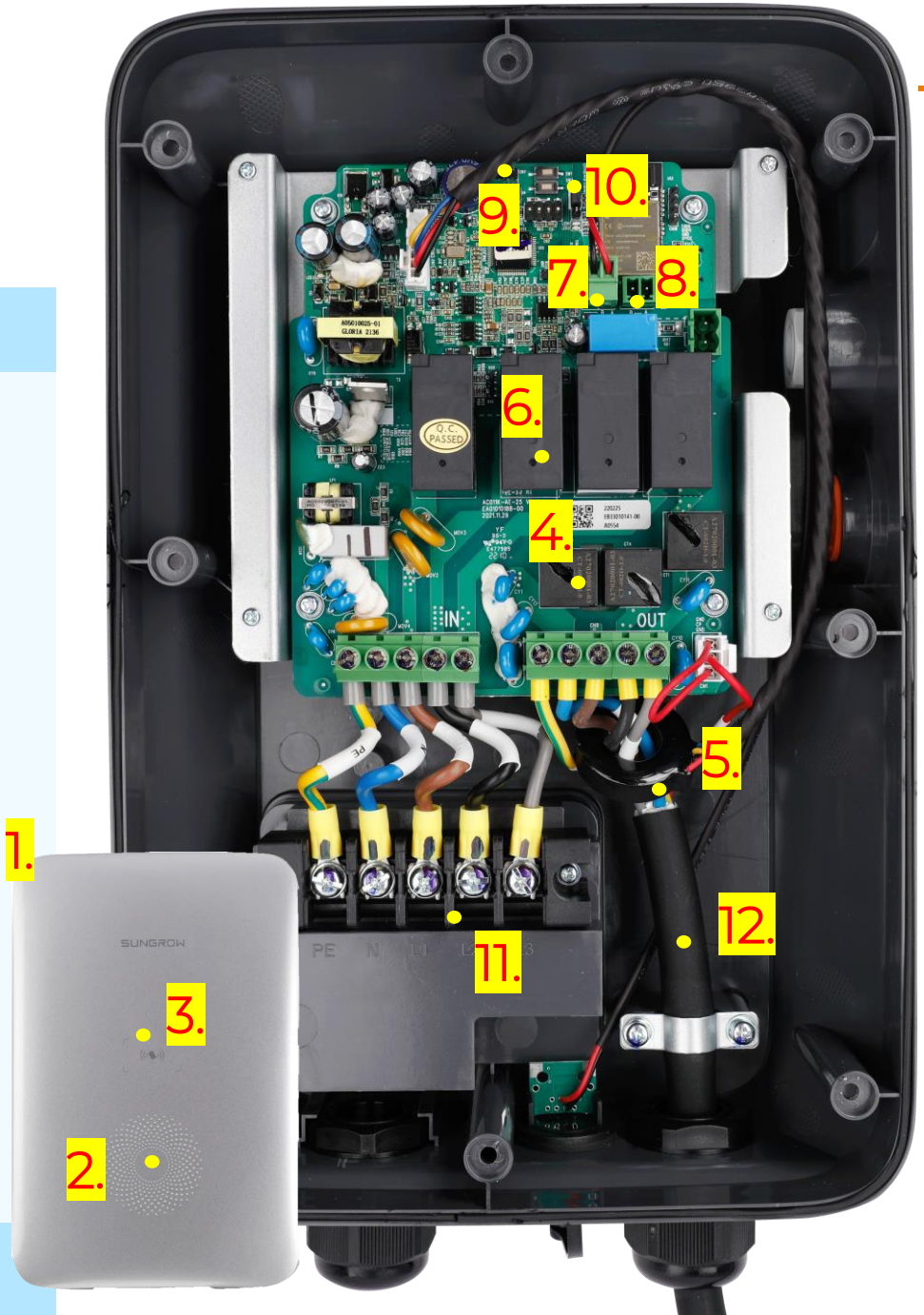
PRODUCT INTRODUCTION

Type designation	AC011E-01
AC Input and Output	
Max. charge power	11 kW
Nominal Voltage	400 V
Nominal grid frequency	50 / 60 Hz
Max. current	16 A three-phase
Charge connector	Plug Type 2
Cable cross-section	5*2.5 mm²
Cable Length	7 m

Sungrow Article number: A-CH-00015

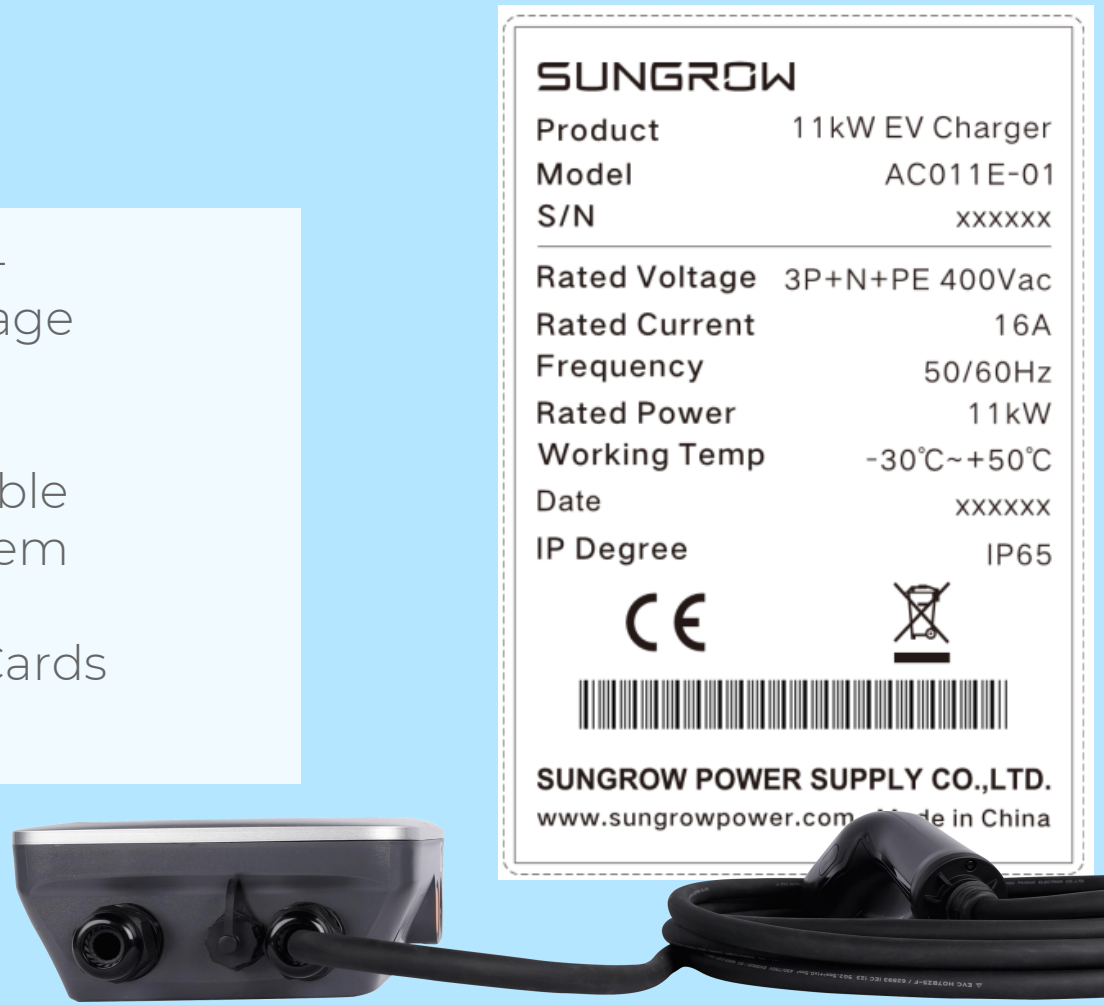
PRODUCT INTRODUCTION

1. Front Cover
2. LED (Status Display)
3. **RFID-Reader**
4. CT – for input current measurement
5. CT – for current leakage measurement (RCD)
6. Relay L1, L2, L3 & N
7. **RS485 terminal**
8. Load-Balance-Meter terminal (not used)
9. **Jumper/Switch (EMS or Plug&Play)**
10. ESP32 module (Bluetooth/Wi-Fi)
11. **AC-Input terminal**
12. Preinstalled AC-Charger cable



PRODUCT INTRODUCTION

- The current product version can be used for 3-phase combo solution and for stand-alone usage (iSolarCloud / iEnergyCharge)
- Within 3-phase combo solution it is only possible to use only 1 pc. of AC011E-01 in the whole system
- The scope of delivery provides 2 pcs. of RFID-Cards which are possible to use in both scenarios

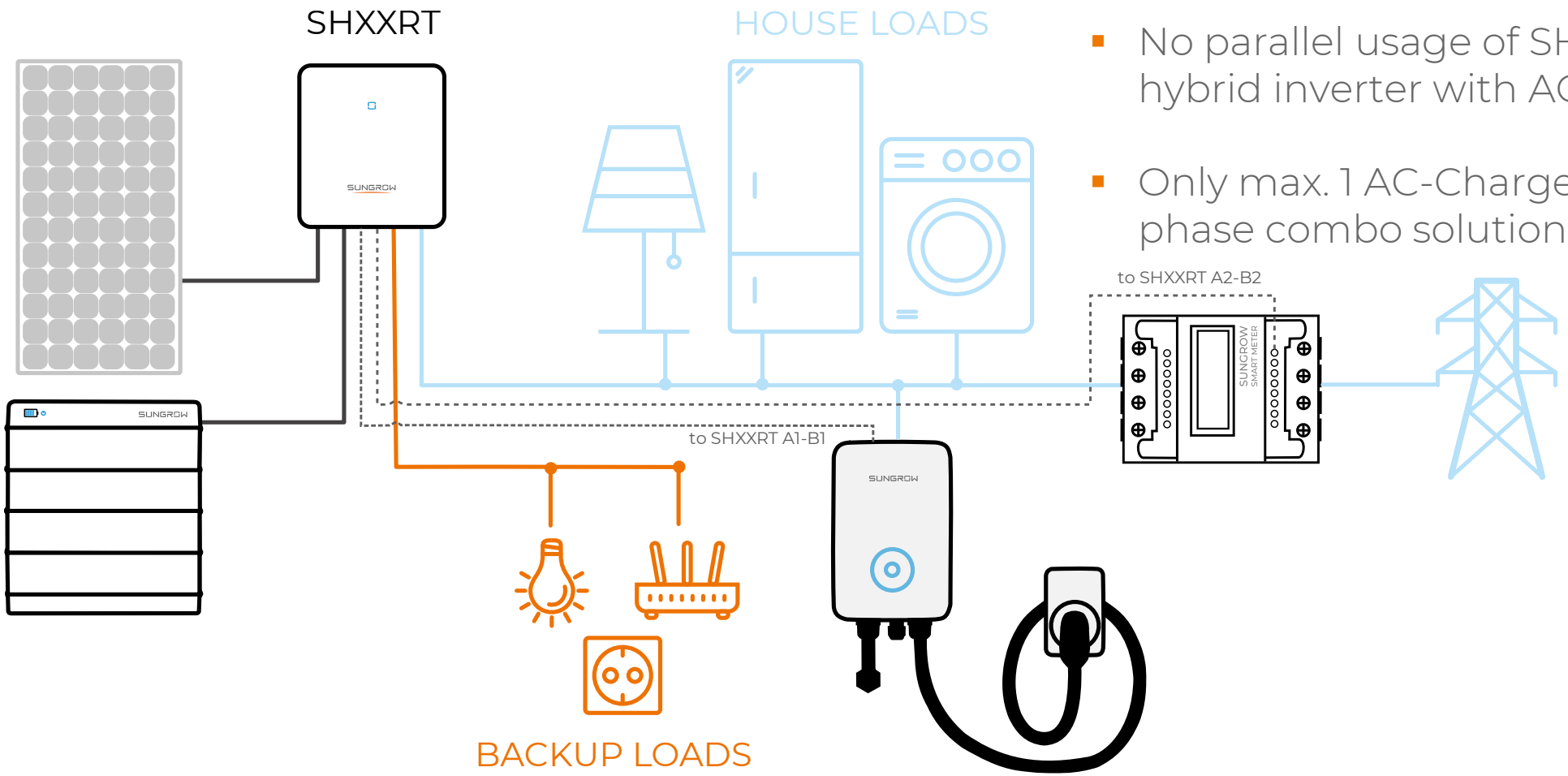


SCOPE OF DELIVERY

- AC011E-01 AC-Charger
- Cable bracket (1x)
- Mounting plate (1x)
- Upper hanging plate (1x)
- Lower hanging plate (2x)
- L-shaped wrench (1x)
- RFID-Cards (2x)
- Various screws for mounting & installation

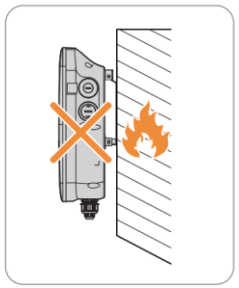
- The column is only optional available and is not included in the scope of supply

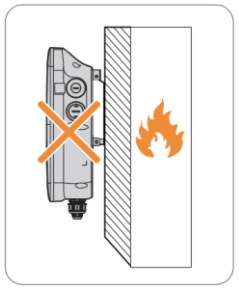
INSTALLATION & WIRING

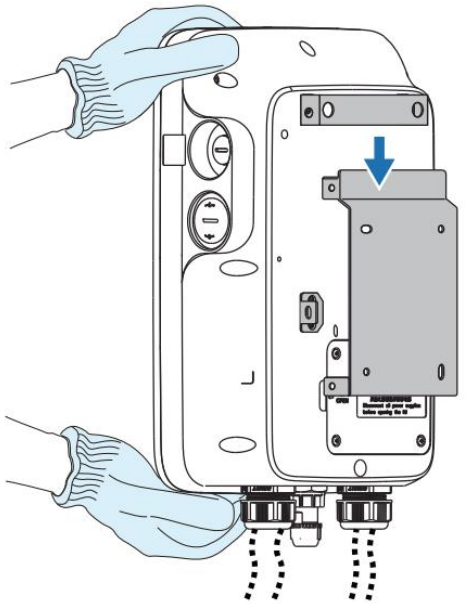


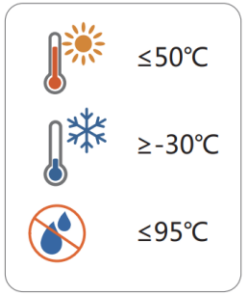
- No parallel usage of SHRT hybrid inverter with AC011E-01
- Only max. 1 AC-Charger per 3-phase combo solution

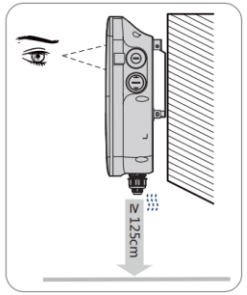
INSTALLATION & WIRING

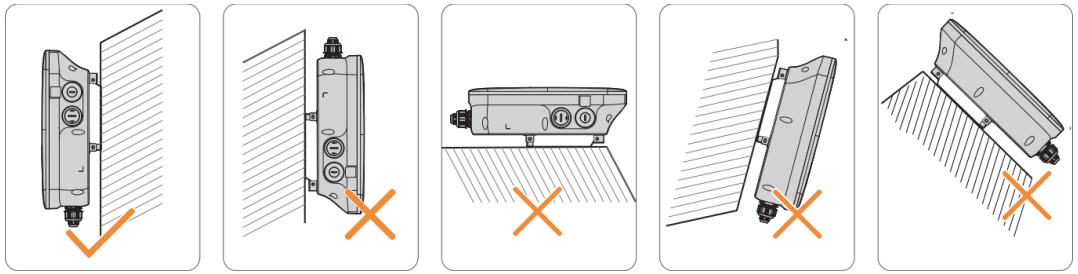






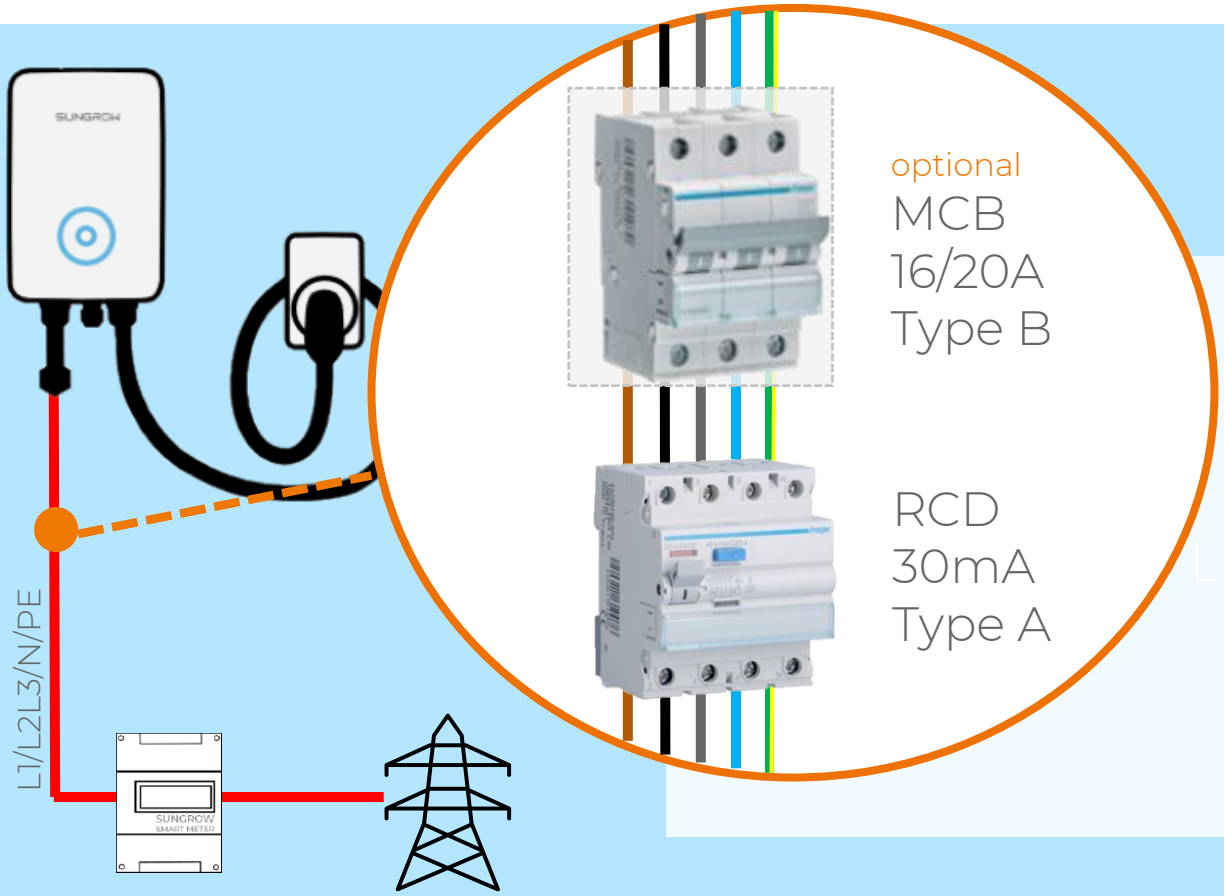






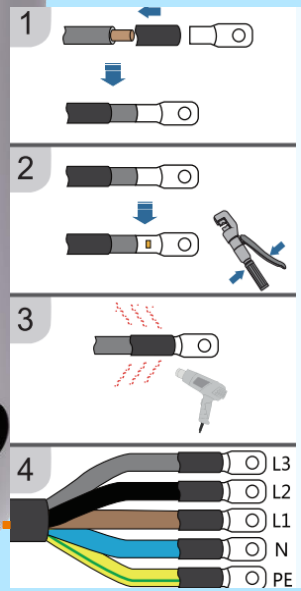
- To ensure the life time of the AC-Charger make sure to chose a place for installation that is not exposed from harsh weather conditions (IP 65)
- Please make sure that the AC-Charger is fully accessible at any time

INSTALLATION & WIRING



- AC011E-01 is already equipped with 6mA DC fault detection
- Therefore it is necessary to install **external 30mA Type A** FI-circuit breaker into the AC power supply
- Recommended to also install miniature circuit breaker or combined solution

INSTALLATION & WIRING

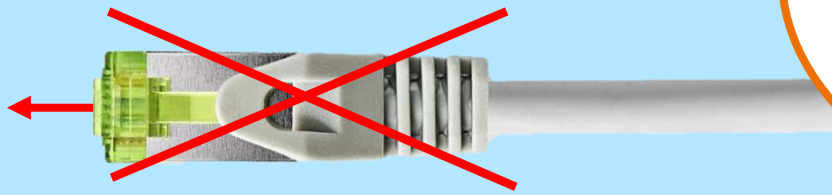


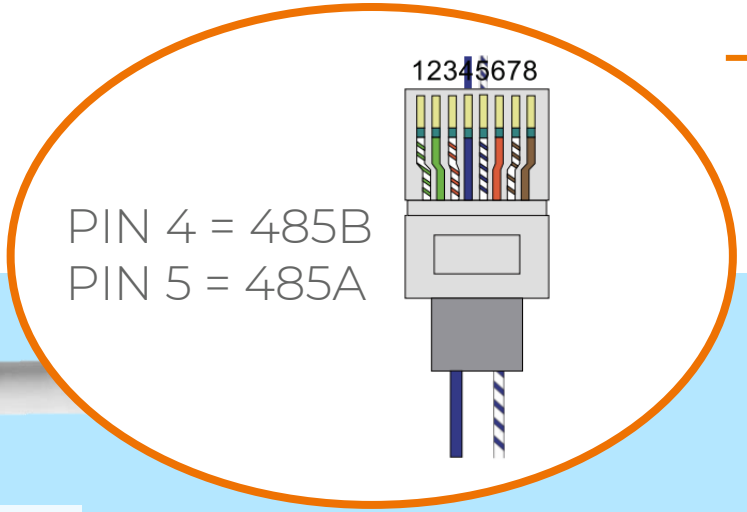
- For the AC-Supply cable 11kW (16A):

  - **min. 2.5 mm²** (max. 20m)
  - min. 4.0 mm² (up to 40m)
  - min. 6.0 mm² (more than 60m)

- It is recommended to use ring cable lug for connection to AC011E-01

INSTALLATION & WIRING





- For 3-phase combo solution with SHRT it is **only** possible with wired communication **via RS485** (for example standard CAT5 cable)
- **Please note**, if the customer will not use this RJ45 port he needs to open the front cover which is not recommended.
- **Please note,** the maximum distance between AC-Charger and SHRT should not exceed 20 meters in order to avoid RS485 communication failure

INSTALLATION & WIRING

- On the SHRT Hybrid inverter please use the **COM-port** with **RS485 A1/B1**
- **Please note**, if the AC011E-01 is connected it is not possible to use LG Battery or Remote shutdown for Italy

COMMISSIONING COMPATIBILITY

- Please note, at the moment we have **only** the FW compatibility with **SHRT V11**
- FW Update for SHRT **V112** as well as **SHRT V20** will be expected **for Q1/2023**

COMMISSIONING COMPATIBILITY

SHRT

WiNet-S

AC011E-01

COMMISSIONING iSolarCloud

- Make sure that the **wired RS485 communication** is done properly
- For proper communication in 3-phase combo solution **SHRT** and **WiNet-S** Dongle are mandatory with the latest FW updates
- The new visualization window and icon for EV-Charging appears automatically

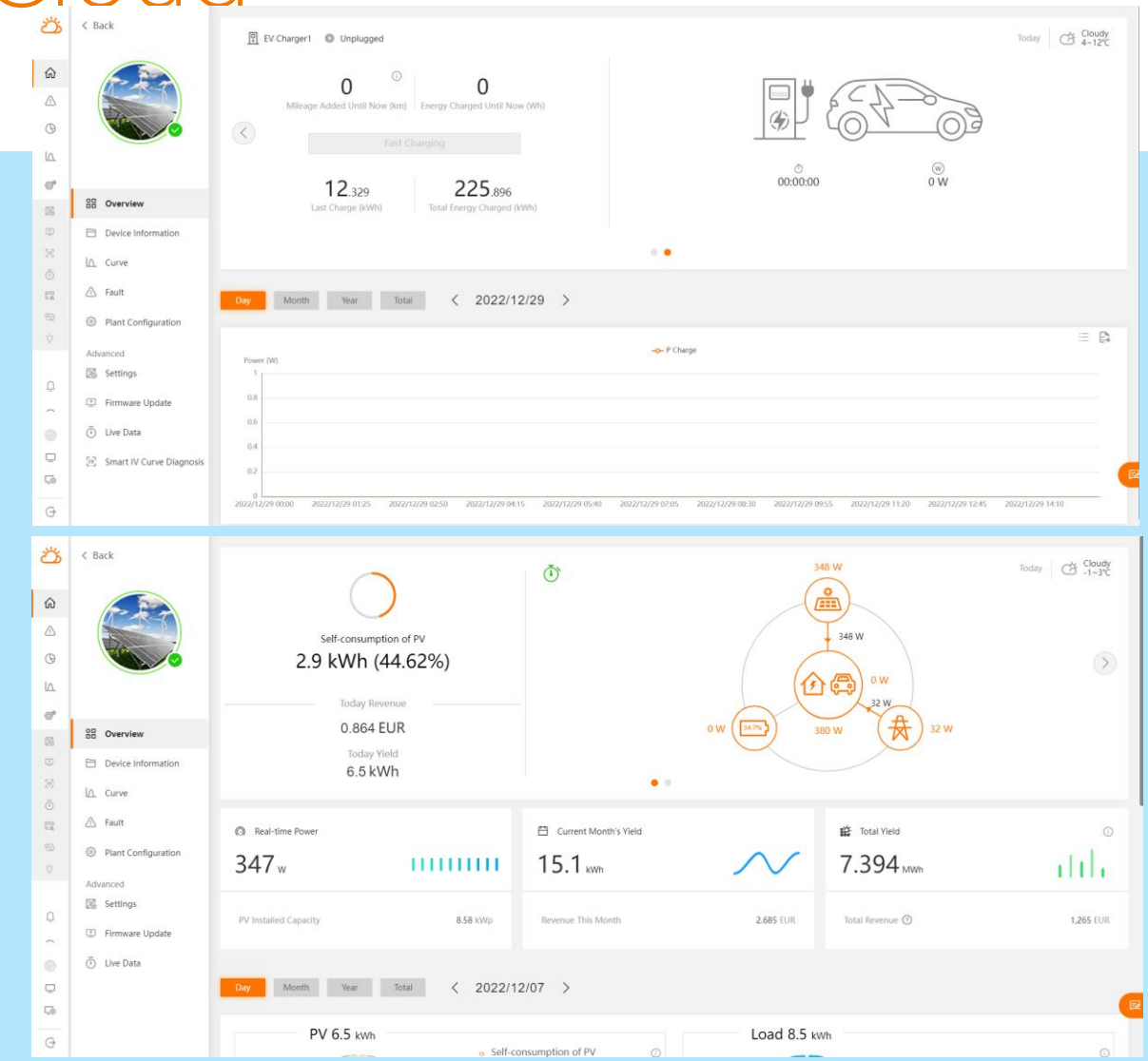
Firmware Update

Firmware Update

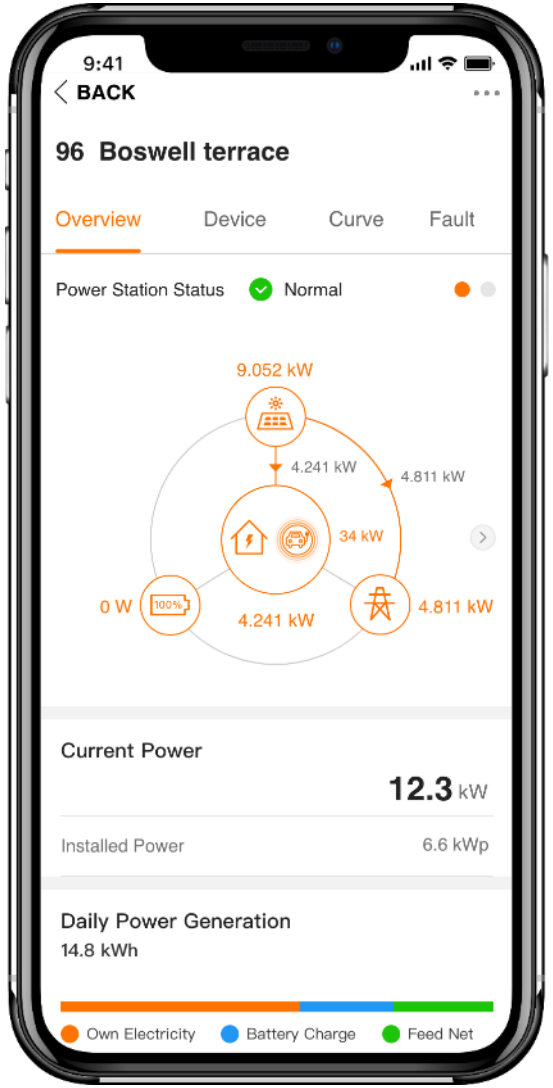
Firmware Update

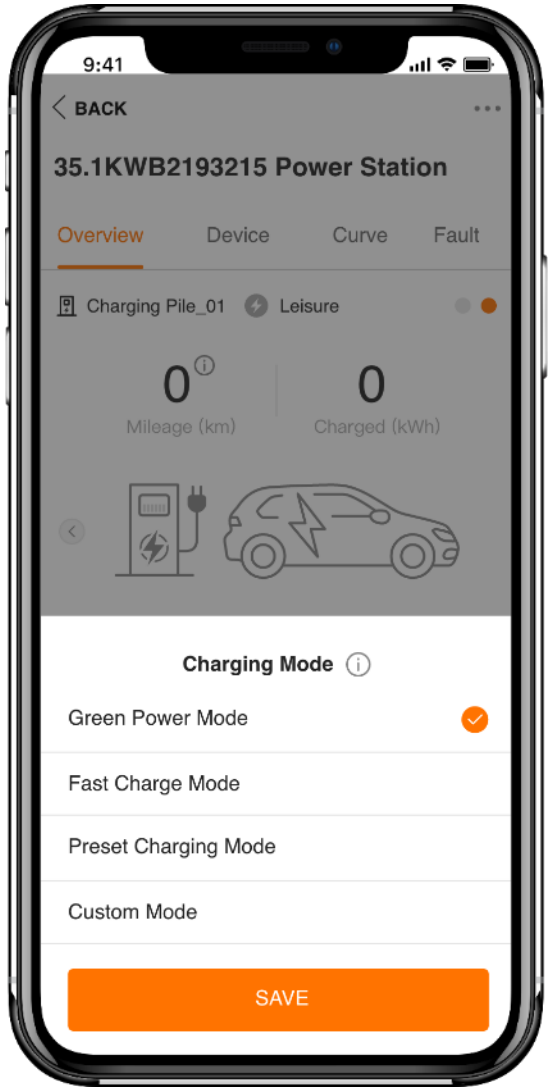
COMMISSIONING iSolarCloud

- This mentioned process also applies to the remote access via iSolarCloud, with the **Web-Browser Version**
- Please note, that **only the end-customer account** has **full access** to the AC-Charger visualization on iSolarCloud



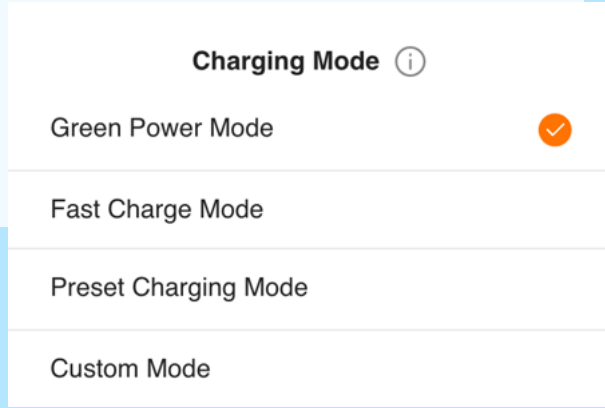
COMMISSIONING iSolarCloud

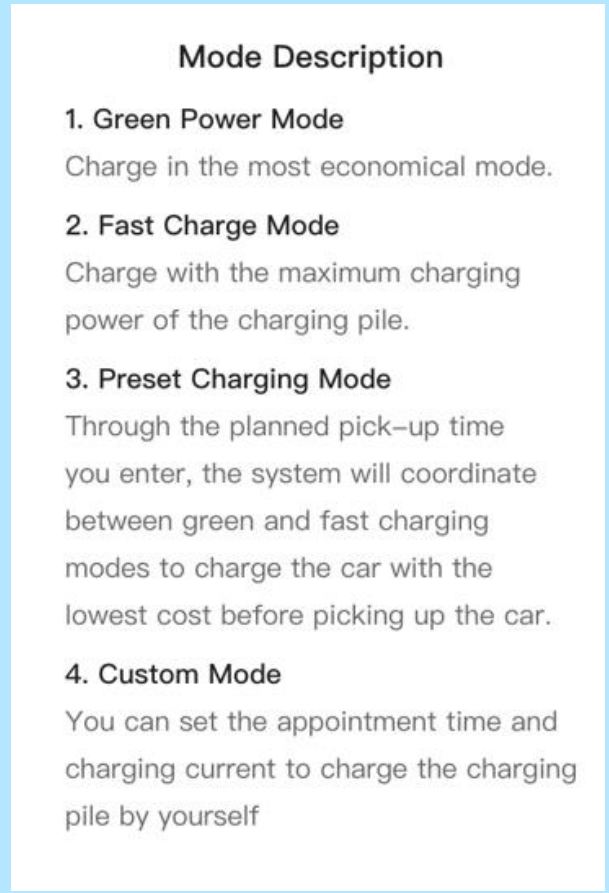




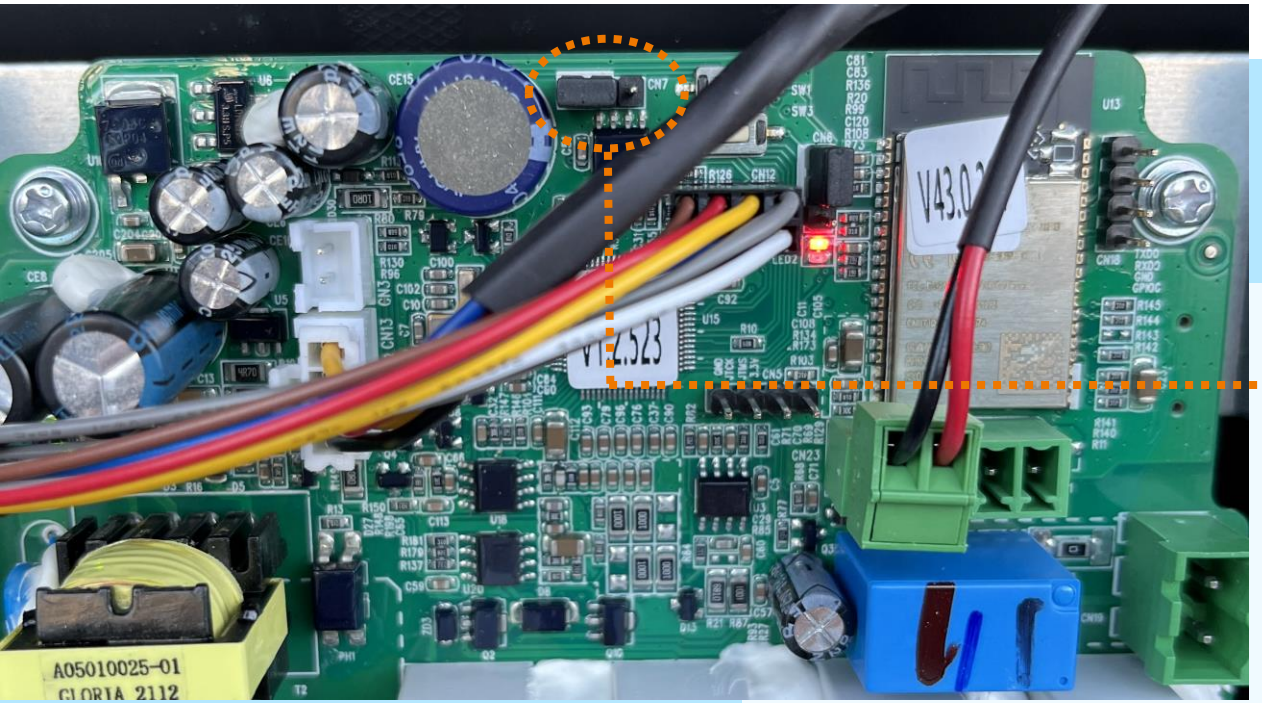
COMMISSIONING CHARGING MODES

- GREEN POWER MODE
  - 1st priority is PV surplus & 2nd priority is battery power
  - If PV < 4,14 kW - the grid and/or battery will supply the charger
  - Possibly limited depending on the EV/PHEV
- FAST CHARGE MODE
  - The AC-Charger will charge with full power
  - Possibly limited depending on the EV/PHEV





TROUBLESHOOTING PCB



- Please note, the position of the jumper/switch with function:

  Correct, if set on with both pins on the left side (same as picture)

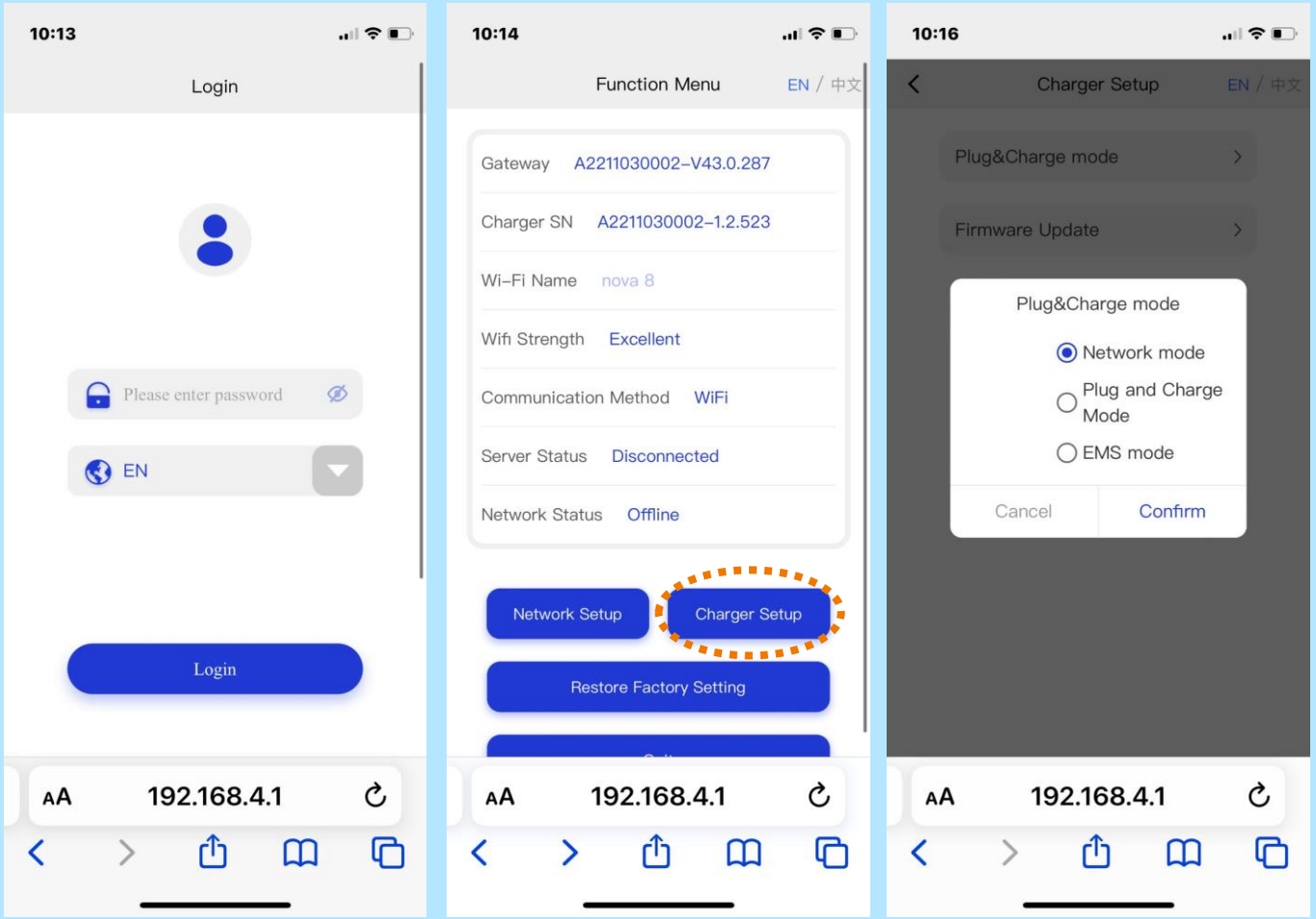
  False, if set on both pins from the right side. Activates Plug & Play mode directly and no control and monitoring via iSolarCloud/ iEnergyCharge is possible

pdf

TROUBLESHOOTING RFID-CARD

- Within 3-phase combo solution in iSolarCloud the charging cycle can be start/stop via App or RFID-Card (AC-Charger & RFID-Cards are pre-matched ex-works)
- Please note, do not mix both charging cards for start and stop one charging cycle → malfunction can occur
- RFID-Card starts only in FAST CHARGING MODE, even if setting beforehand any other mode via iSolarCloud

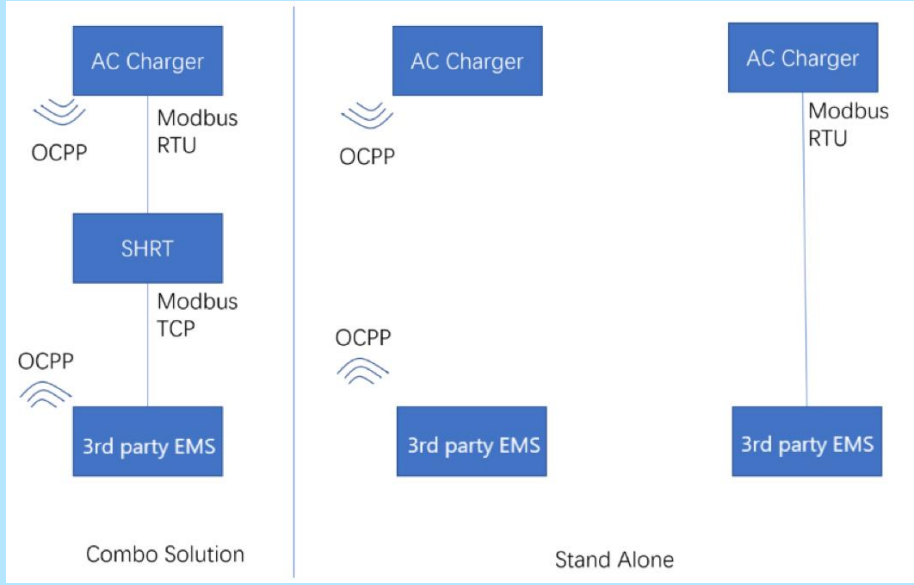
TROUBLESHOOTING WEB-UI



- Built-in Wi-Fi access point allows direct communication
- All current devices are pre-set with EMS mode for usage of the 3-phase combo solution (SHRT)
- EMS mode: iSolarCloud
- Network mode: iEnergyCharge

TROUBLESHOOTING OCPP 1.6 JSON

- The AC011E-01 supports OCPP 1.6 for connection to backend functions or 3rd party devices
- Please note, In EMS mode (3-phase combo solution) with Modbus TCP connection to SHRT some of the datapoints are disabled
- Final Interface communication document for OCPP 1.6 is still under review from HQ



PREVIEW AC011E-01 VERSIONS

- For this product generation will be in the future two different hardware versions:

  - One Version for combo solution
  - One Version for stand-alone usage

- Also applicable later for AC007E-01 Version

- Separate article numbers

iSolarCloud

iEnergyCharge

	AC011E-01	AC011E-01 L1
Firmware	same	Same
Mode by default	**EMS Mode**	**Network Mode**
AP connection	Yes, pwd: admin123	Yes, pwd: admin123
Built-in webpage login	Yes	Yes

DOCUMENTATION AC011E-01

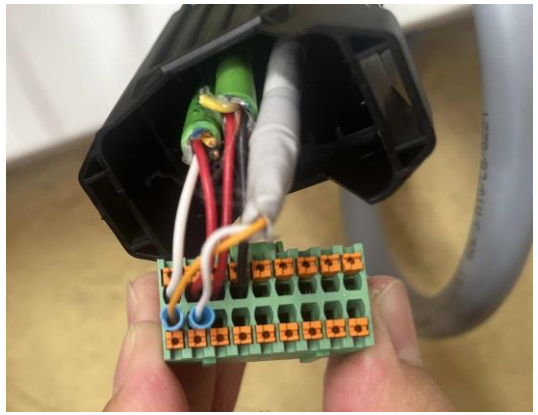
- Sales Suitcase & PowerKit Distributor
  - Datasheet
  - Certificates
  - Manuals
  - HD Pictures

- PowerKit Service Partner (Z:\Shared\EMEA\Distribution\External\PowerKit_Service_Partner)
  - Service & technical product documentation

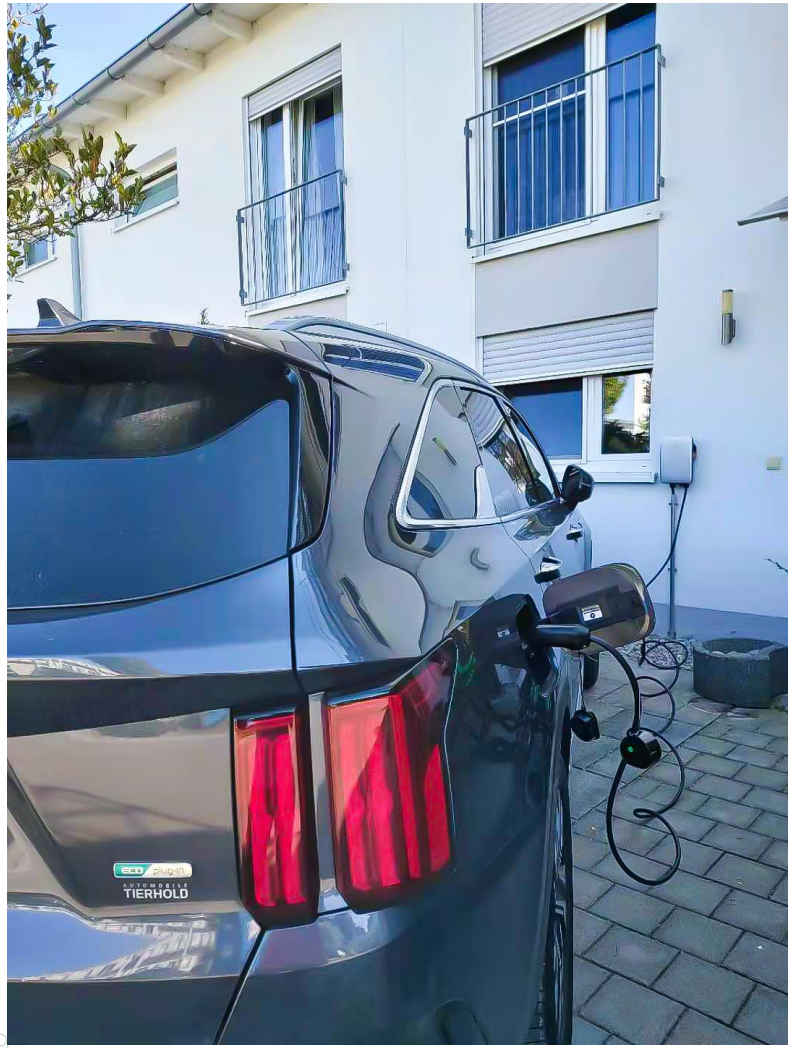
Folders will be updated continuously

TEST-INSTALLATION #1 IBC GERMANY

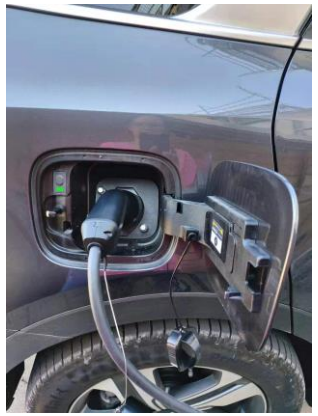
- iSolarCloud: PVA-S Stefan
- System consists of SH8.0RT + BYD HVM 11.0 (SG6.0RT not involved)



TEST-INSTALLATION #1 INTERNAL MUNICH



- iSolarCloud: PV-Anlage-VC
- System consists of SH8.0RT + SBR096



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Thank you!