

## EV-Charger FAQ

## Quick start SHRT with AC-Charger

Applicable to: AC011E-01

See below picture to understand the implementation of an ACOIIE-OI (AC-Charger) in a SUNGROW 3-phase SHRT-VII inverter system.

PLEASE NOTE: To ensure proper communication functionality, only use WiNet-S as communication device.



## Commissioning steps:

- Connect power line.
- Connect RS 485 between AC-Charger and SHxxRT inverter. (No WiFi)
- Update all SUNGROW devices to latest firmware. (SHxxRT; SBR, WiNet-S)
- Make sure, you installed the latest version of iSolarCloud on your mobile device.
- After previous steps were successful, the AC-Charger visualization appears automatically in iSolarCloud.

**BE AWARE**: Only the end customer iSolarCloud account has full access to the AC-Charger visualization and allowed start and change the charging modes.



To connect the AC-Charger to the power network, use the connection area on the back of the device.





To connect the AC-Charger to the SHRT RS485 interface, it is recommended to use the RJ45 male connector (included in ACOIIE-OII delivery) and plug it in the communication terminal of the AC-Charger. Please use dedicated COM terminal on the SHRT as shown below.



	Me	eter	BMS	(CAN	DI/	DRM		DO
0000 🔘 🚃 🛱 🎮 🖉	A2	B2	н	L	D1/5	D3/7	R	NO
10000 0	A1	B1	EN_H	EN_G	D2/6	D4/8	с	сом
	RS	485	Ena	able				

If you use SHRT V112 Hardware or later Version:

After installation and proper wired RS485-Communication, please set the **Charger** Access Port parameter in **Energy Management Parameters** in the **Advanced Settings** of the SHRT according to the used RS485 port.

ystem Para	meters Protection Parameters	Power Control Energy Management Pa	rameters Battery Parameters			Q Inverter Parameter Query Task List
No.	Parameter Name	Latest Value Update Time:2023-04-12 11:53:24	Numerical Term	Degree of accuracy	Unit	Remarks
1	Charger Access Port	Off	Please Select ^	-		
2	AC Source Type	Genset or Weak Grid	Please Select			
3	Energy Management Mode	Self-Consumption	Off			
4	Charging Start Power	0	RS485-2 A1 - B1 A2 - B2	0.01	kW	0~10
5	Discharging Start Power	0		0.01	kW	0~10
6	Genset Start/Stop Control	Forced Stop	Please Select V			
7	Max. Permitted Charging Power from AC	30		0.01	kW	0~500
8	Nominal Power of Genset	50		1	kW	0~500
9	Lower Limit of SOC to Start Genset	20		0.1	96	0-99.9 Lower Limit of SOC to Star Genset < Upper Limit of SOC to Stop Genset
10	Upper Limit of SOC to Stop Genset	90		0.1	96	0.1-100
11	External EMS Heartbeat	0		1	s	1-1,000

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**BE AWARE**: All SUNGROW equipment, including SHRT, SBR, WiNet-S and iSolarCloud App, must be updated to the latest firmware version.

When the AC-Charger is connected to the inverter and all devices are powered up (latest firmware on all devices required), the AC-Charger appears on iSolarCloud in the middle circle (1.). To see the AC-Charger details, press either the grey dot or grey arrow  $\bigcirc$  (2.).



This overview shows you some details about the last or current charging cycle with the connected vehicle. (If an EV or PHEV is connected)

EV Charger1 (	O Unplugged		Too	day Car Cloudy 0~6°C					
(<)	0 0 Mileage Added Until Now (Mr) Fast: Charging								
	1.893 Last Charge (KWh)	96.538 Total Energy Charged (KWh)	00:00:00 0 W						
••									

**BE AWARE**: Only the end customer iSolarCloud account has full access to the AC-Charger visualization and allowed start and change the charging modes. For installers, these options are greyed out, as shown on the picture above.



In iSolarCloud-App, you can find the AC-Charger in the **Device and Plant Overview**. To view general information, Faulty history and charging record, select **EV Charger** in the **Device Overview**.

11:14	at II LTE 🔳)	11:48	all 🗢	
< BACK	Q	< BACK		
Overview Device	Fault	EV CHARGER1	I	
All(5) Inverter(1) Energy Storag	e Syste Filter 🏹	General Information	Active Fault Fault History	Char
		Data Upd	late Time: 2022-12-09 11:45:00	
Energy Storage System SIN:		Device Status 📀		
Total Active Power: 1,12 kW	٩	Parameters		
Total DC Power: 1,12 kW		Other Information		
Associated Communication Device S/N:		Total Delivered Energy	0,351	kW
WiNet-S 001 247		Phase A Charging Voltage	233,6	
Communication Module S/N:		Phase A		
WLAN Signal Strength:		Charging Current	6	
WiNet-S_002_247		Phase B Charging Voltage	234,1	
Communication Module S/N: WLAN Signal Strength:		Phase B Charging Current	6,1	
EV Charger1		Phase C Charging Voltage	233,3	
P Charge: 0 W	<sup>O</sup>	Phase C	6	
Energy Charged Until Now:		Current	Ŷ	
Associated Communication Device		P Chargo	4,272	k
S/N:		Energy Charged Until Now	0,976	kW
		Charging		

To set the charging mode or see some information about the last charge or total Energy charged, use the grey arrow (2) in the Plant Overview.



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This is an overview of the different charging modes the AC-charger provides in a Hybrid inverter system:

**Green Power Charging**: This mode is the most economical charging mode in which the charger take priority to use PV energy to charge the vehicle while not affecting the power consumption of other household appliances. If the PV power is lower than the minimum charging power of the charger, the battery and the power grid shall supplement the power.

**Fast Charging**: The charger can charge the vehicle with the maximum available power in this mode while not affecting the power consumption of other household appliances. In this case, the charging power may come from PV modules, batteries, power grid or all. Users can choose this mode when they need to charge the vehicle urgently.

**Pre-set Charging**: In this mode, after the user inputs the planned charge amount and pickup time, the system will intelligently switch between in the smart charging mode and fast charging mode, so that the vehicle can be charged at the lowest cost before it is picked up by the user.

Customized Charging: In this mode, users set the appointment time and charging current to charge the EV. The charging power may come from PV modules, batteries, power grid or all.

For further information, please download the user manual <u>here</u>.



iSolarCloud



This manual is intended for professional technicians who are responsible for installation, operation, maintenance and troubleshooting of inverters, and users who need to check inverter parameters. The inverter must only be installed by professional technicians.

The professional technician is required to meet the following requirements:

- Know electronic, electrical wiring and mechanical expertise, and be familiar with electrical and mechanical schematics.
- Have received professional training related to the installation, commissioning and troubleshooting of electrical equipment.
- Be able to quickly respond to hazards or emergencies that occur during installation, commissioning and troubleshooting.
- Be familiar with local standards and relevant safety regulations of electrical systems.
- Read this manual thoroughly and understand the safety instructions related to operations.