FusionCharge PV+ESS+Charger AC Solution

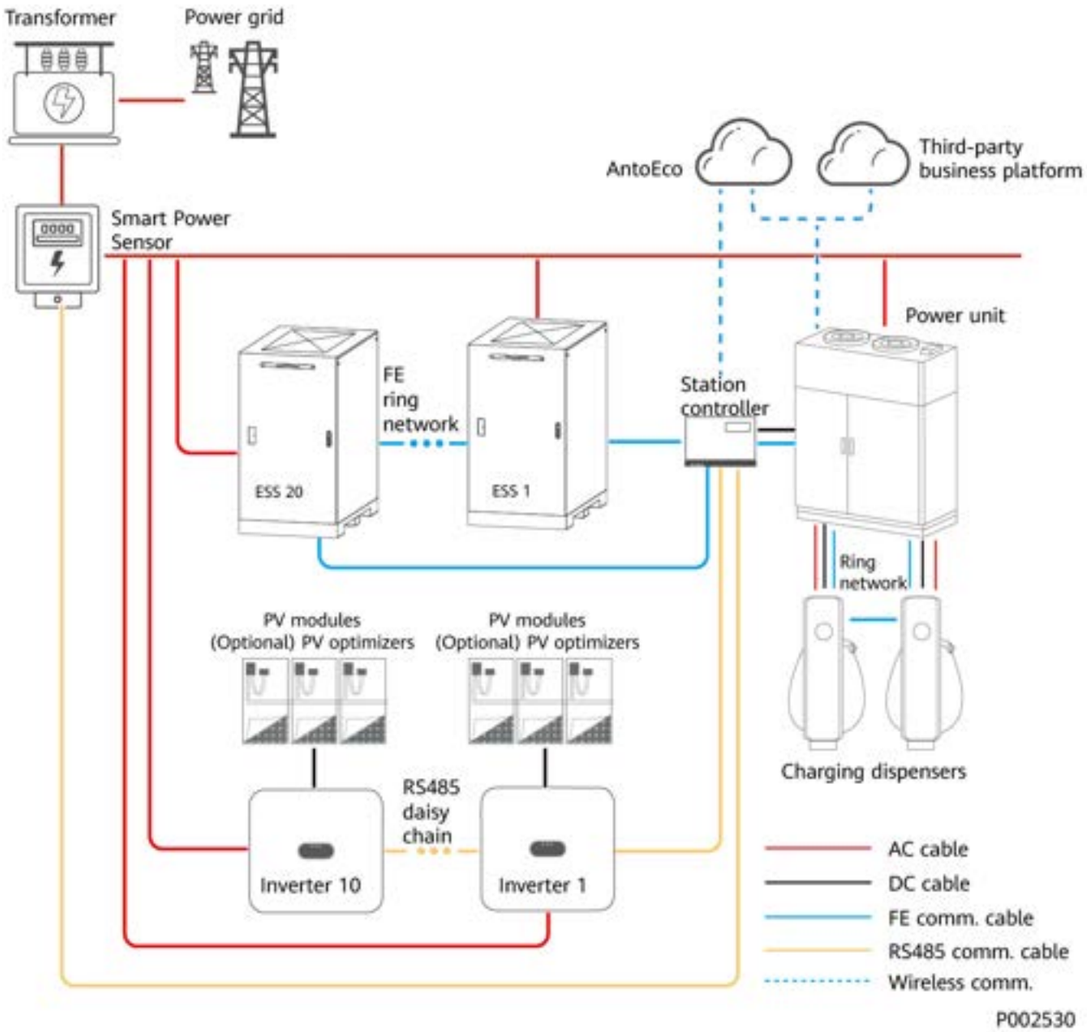
Quick Guide (EU Series Charging System)

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Date: 2025-10-13

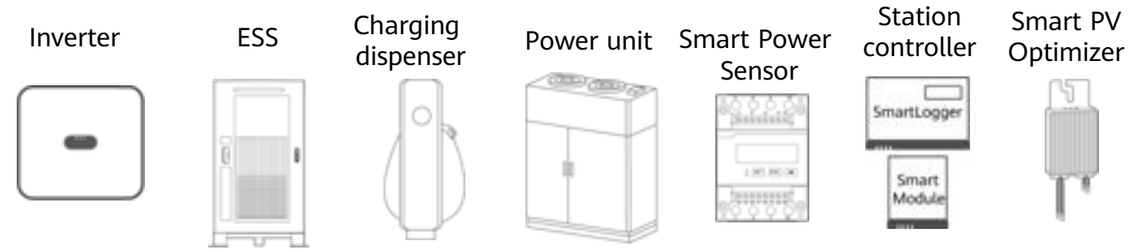
1 Networking

NOTE

- The information in this document is subject to change without notice. Every effort has been made in the preparation of this document to ensure accuracy of the contents, but all statements, information, and recommendations in this document do not constitute a warranty of any kind, express or implied.
- For details about the solution components, installation, and cable connections, see the corresponding user manuals and quick guides.
- The cable colors involved in this document are for reference only. Select cables in accordance with local cable specifications.
- The station controller consists of the SmartLogger and SmartModule.
- For details about the cable specifications for the AC ESS and PV inverter, see the PV+ESS+Charger AC Solution User Manual.



2 Product Overview



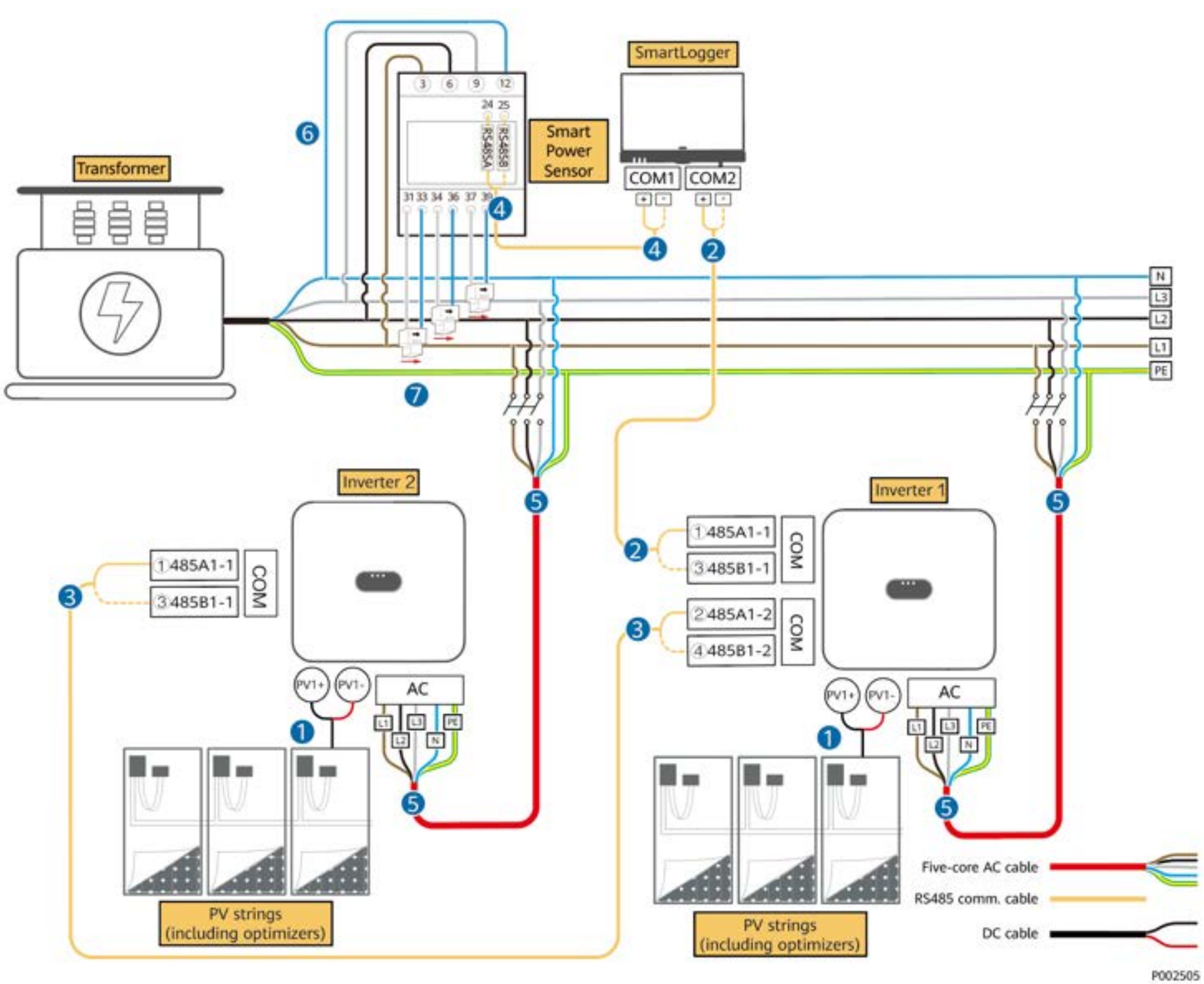
Device	Model	Description
Inverter	SUN2000-40KTL-M3 SUN2000-100KTL-M2	• Inverters of different specifications can be connected to the same transformer. • The SUN2000-40KTL-M3 inverter software shall be upgraded to SUN2000MA V100R001C20SPC138 or later. • The SUN2000-100KTL-M2 inverter software shall be upgraded to SUN2000ME V500R023C00SPC145 or later.
ESS	FusionCharge AES-215-2S10 FusionCharge AES-215-2S12	• A maximum of 20 ESSs can be connected to each transformer. • The ESS communicates with the station controller in an FE ring network. • The ESS software shall be upgraded to LUNA2000B V200R024C00SPC100 or later.
Charging dispenser	DT500L1-EUA1 DT500N2-EUA1	Plan the number of charging dispensers based on the requirements of the charging station.
Power unit	DS720-720LEUA1 DS720-720LEUA2 DS720-720LEUA3	• A maximum of one power unit can be connected to each transformer. • For details about the number of charging dispensers that can be connected to each power unit, see the power unit user manual. • The power unit software shall be upgraded to FusionCharge V100R024C10 or later.
Smart Power Sensor	DTSU666-HW YDS60-80	RS485 communication is adopted for backflow prevention and electricity measurement.
Station controller	SmartLogger3000A01EU SmartModule1000A01	• If Huawei's power unit is used, the station controller is installed in the power unit. • The station controller software shall be upgraded to SmartLogger V300R024C00SPC150 or later.
Smart PV Optimizer	MERC-1300W-P	For details about the mapping between inverters and optimizers, see: • SUN2000 Smart PV Optimizer User Manual • MERC-600W-PA0 Smart PV Optimizer User Manual • MERC-(1300W, 1100W)-P Smart PV Optimizer User Manual
Software platform	AntoEco Antohill app FusionSolar app	• The AntoEco shall be upgraded to iCloud FusionCharge 24.4.0 or later. • The Antohill app shall be upgraded to 24.9.100 or later. • The FusionSolar app shall be upgraded to 24.7.7 or later.

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FusionCharge PV+ESS+Charger AC Solution

Quick Guide (EU Series Charging System)

3 PV System Cable Connections (Two Inverters)



DANGER

Before connecting cables, ensure that all switches are OFF. Otherwise, electric shocks may occur.

NOTICE

Communications cables shall be outdoor shielded twisted pair cables.

Cable Type	No.	One End		The Other End	
		Device	Port	Port	Device
DC power cable	1	Inverter *n*	PV1+	Positive	PV string
			PV1–	Negative	
RS485 comm. cables	2	Inverter 1	485A	COM2(+)	SmartLogger
			485B	COM2(–)	
	3	Inverter 2	485A	485A	Inverter 1
			485B	485B	
	4	Smart Power Sensor	24	COM1(+)	SmartLogger
			25	COM1(–)	
AC power cable	5	Inverter *n*	AC-L1	L1	Power grid circuit breaker
			AC-L2	L2	
			AC-L3	L3	
			AC-N	N	
			AC-PE	PE	
	6	Smart Power Sensor	3	L1	Power grid
			6	L2	
			9	L3	
			12	N	
	7	Smart Power Sensor	31	L1	Current transformer
			33		
			34	L2	
			36		
			37	L3	
			39		

FusionCharge PV+ESS+Charger AC Solution

Quick Guide (EU Series Charging System)

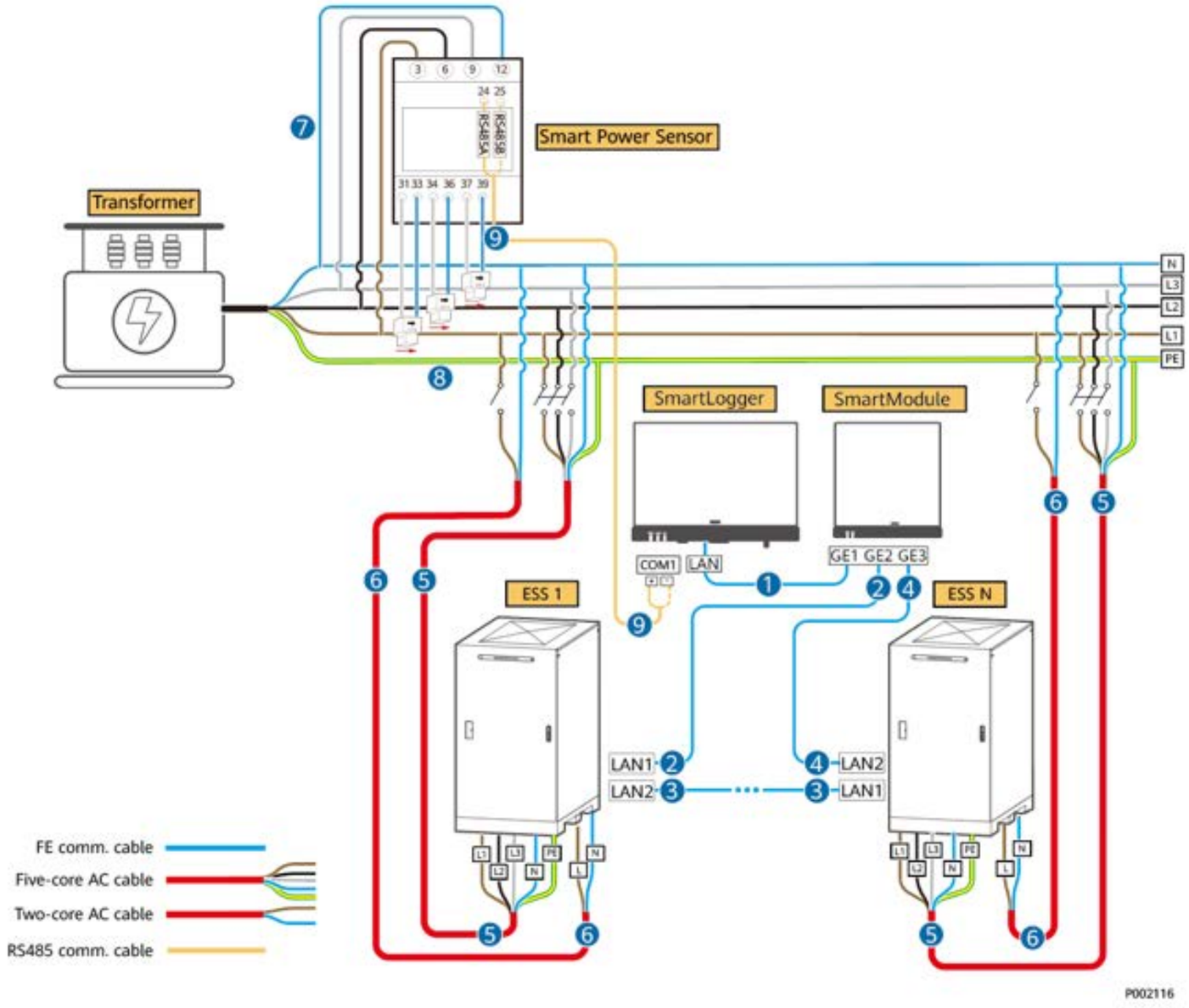
4 ESS Cable Connections

DANGER

Before connecting cables, ensure that all switches are OFF. Otherwise, electric shocks may occur.

NOTICE

Communications cables shall be outdoor shielded twisted pair cables.



NOTE

The auxiliary power supply can be obtained from the mains or the PCS terminal. Connect auxiliary power supply cables as required.

Cable Type	No.	One End		The Other End	
		Device	Port	Port	Device
FE comm. cable	1	SmartLogger	LAN	GE1	SmarModule
	2	ESS 1	CMU-LAN1	GE2	
	3		CMU-LAN2	CMU-LAN1	ESS N
	4	SmartModule	GE3	CMU-LAN2	
AC power cable	5	ESS N	PCS-L1	L1	Power grid three-phase circuit breaker
			PCS-L2	L2	
			PCS-L3	L3	
			PCS-N	N	
			PCS-PE	PE	
	6 Mains		CMU-MAINS(L)	L	Power grid single-phase circuit breaker
			CMU-MAINS(N)	N	
	6 PCS power supply		CMU-MAINS(L)	L	PCS-L3
			CMU-MAINS(N)	N	PCS-N
	7	Smart Power Sensor	3	L1	Power grid
			6	L2	
			9	L3	
			12	N	
	8	Smart Power Sensor	31	L1	Current transformer
			33		
			34	L2	
			36		
			37	L3	
			39		
RS485 comm. cable	9	Smart Power Sensor	24	COM1(+)	SmartLogger
			25	COM1(–)	

FusionCharge PV+ESS+Charger AC Solution

Quick Guide (EU Series Charging System)

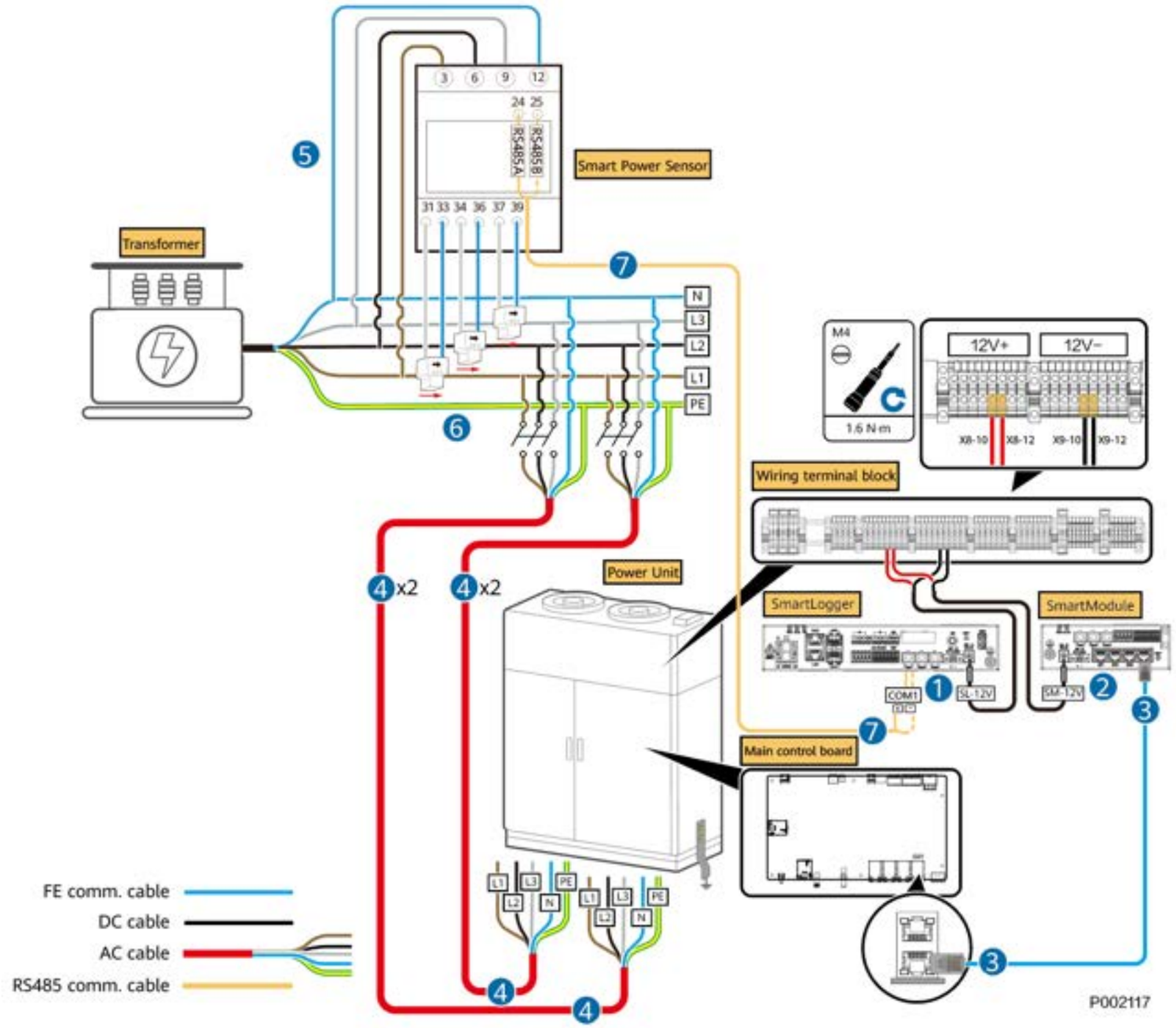
5 Charging System Cable Connections (Non-subrack-based power unit)

DANGER

Before connecting cables, ensure that all switches are OFF. Otherwise, electric shocks may occur.

NOTICE

Communications cables shall be outdoor shielded twisted pair cables.



NOTE

Only the cable connections between the power unit and the station controller are displayed. For details about the cable connections between the power unit and the charging dispensers, see the documents related to the charging system.

Cable Type	No.	One End		The Other End	
		Device	Port	Port	Device
DC power cable	1	SmartLogger	DC IN 12V 1A	12V+:X8-10, 12V–:X9-10	Wiring terminal block of the power unit
	2	SmartModule	DC IN 12V 1A	12V+:X8-12, 12V–:X9-12	
Comm. cable	3	SmartModule	GE4	J331-lower	Main control board of the power unit
AC power cable	4	AC input copper bar of the power unit	L1	L1	Power grid three-phase circuit breaker
			L2	L2	
			L3	L3	
			N	N	
			PE	PE	
	5	Smart Power Sensor	3	L1	Power grid
			6	L2	
			9	L3	
			12	N	
	6	Smart Power Sensor	31	L1	Current transformer
			33		
			34	L2	
			36		
			37	L3	
			39		
RS485 comm. cable	7	Smart Power Sensor	24	COM1(+)	SmartLogger
			25	COM1(–)	

FusionCharge PV+ESS+Charger AC Solution

Quick Guide (EU Series Charging System)

6 Charging System Cable Connections (Subrack-based power unit)

DANGER

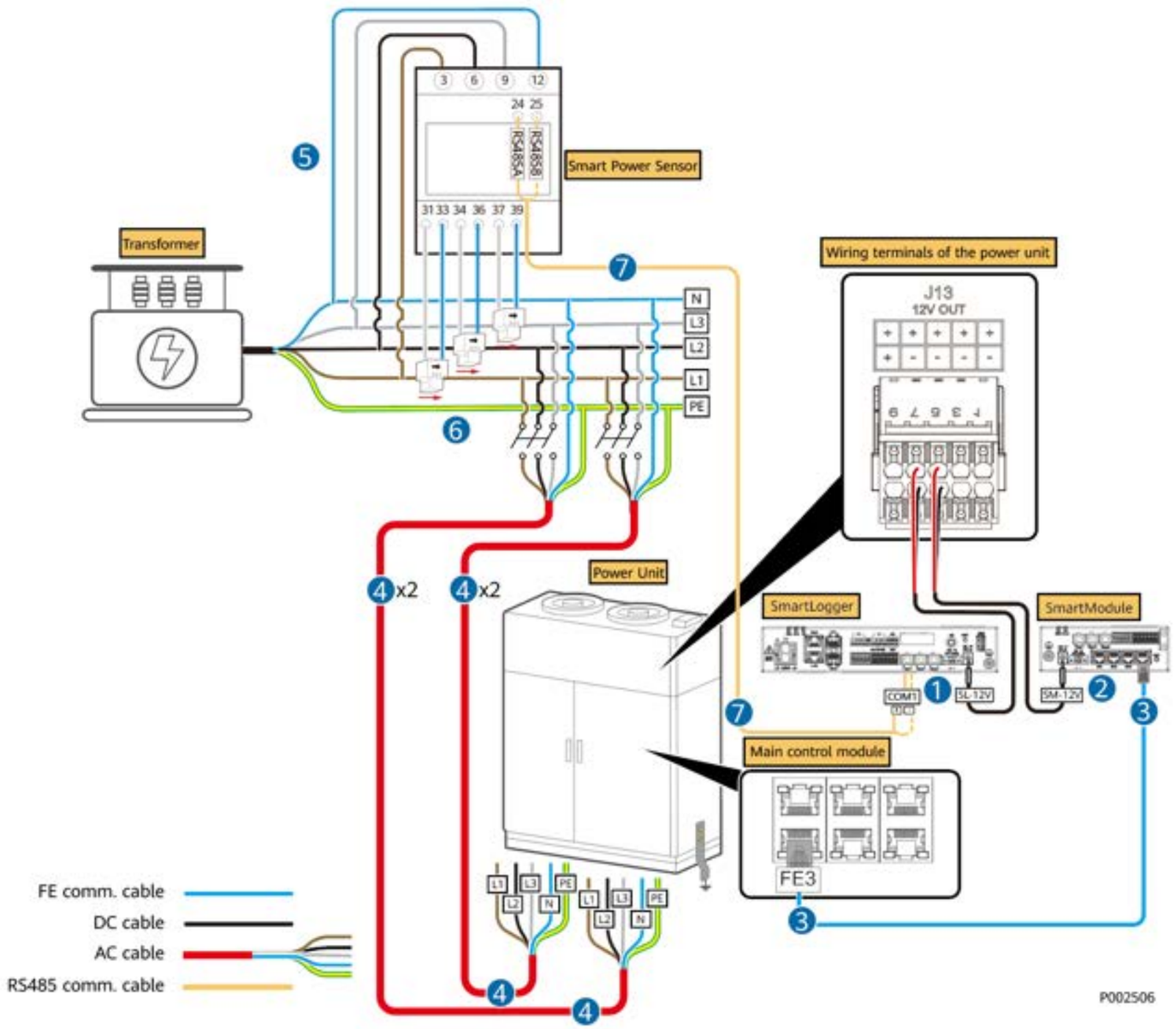
Before connecting cables, ensure that all switches are OFF. Otherwise, electric shocks may occur.

NOTICE

Communications cables shall be outdoor shielded twisted pair cables.

NOTE

Only the cable connections between the power unit and the station controller are displayed. For details about the cable connections between the power unit and the charging dispensers, see the documents related to the charging system.



Cable Type	No.	One End		The Other End	
		Device	Port	Port	Device
DC power cable	1	SmartLogger	DC IN 12V 1A	12V+:X8-10, 12V–:X9-10	Wiring terminal block of the power unit
	2	SmartModule	DC IN 12V 1A	12V+:X8-12, 12V–:X9-12	
Comm. cable	3	SmartModule	GE4	J331-lower	Main control board of the power unit
AC power cable	4	AC input copper bar of the power unit	L1	L1	Power grid three-phase circuit breaker
			L2	L2	
			L3	L3	
			N	N	
			PE	PE	
	5	Smart Power Sensor	3	L1	Power grid
			6	L2	
			9	L3	
			12	N	
	6	Smart Power Sensor	31	L1	Current transformer
			33		
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			36		
			37	L3	
			39		
RS485 comm. cable	7	Smart Power Sensor	24	COM1(+)	SmartLogger
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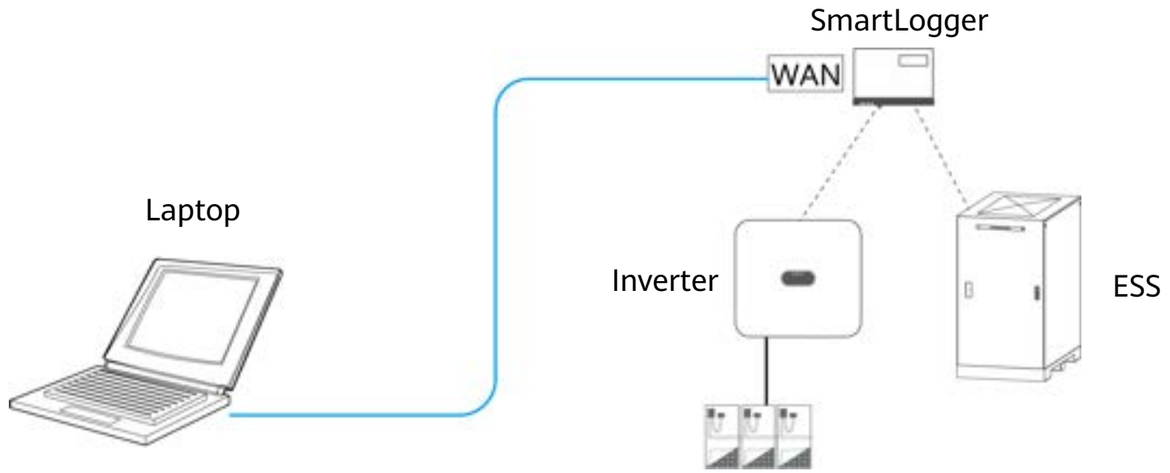
FusionCharge PV+ESS+Charger AC Solution

Quick Guide (EU Series Charging System)

7 PV+ESS System Commissioning

Web mode

1. Connect the PC to the SmartLogger.
2. Log in to the SmartLogger WebUI.
3. Complete the commissioning according to the deployment wizard.

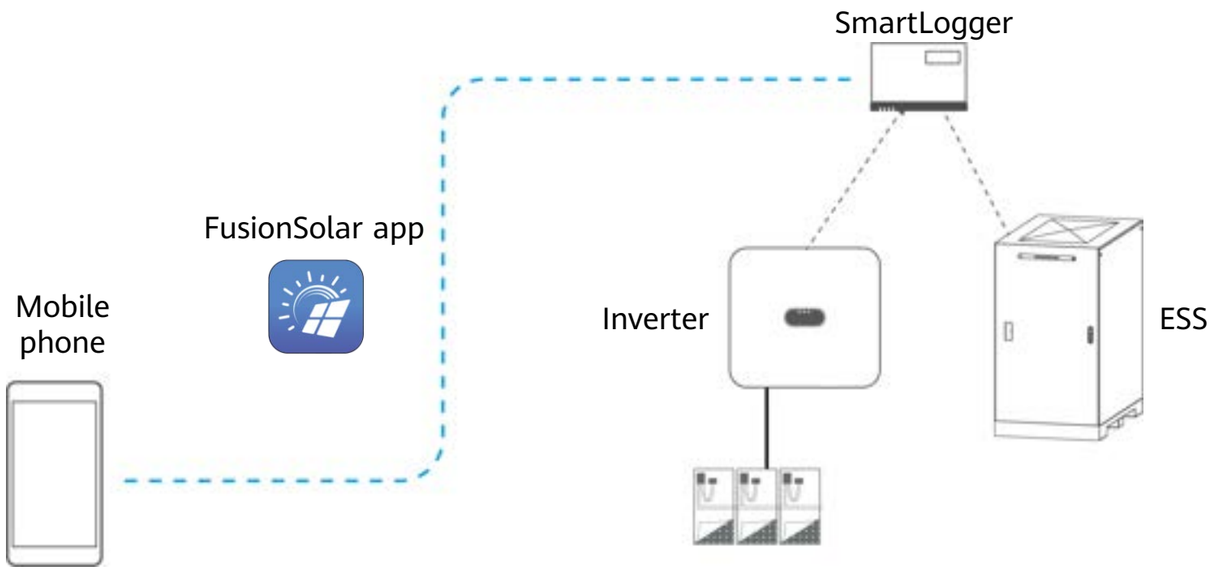


For details about commissioning on the WebUI, scan the following QR code:

PV+ESS+Charger AC Solution User Manual

App mode

1. Download and install the FusionSolar app.
2. Register an installer account (optional, required for initial registration).
3. Scan the QR code on the SmartLogger for connection.
4. Tap **Quick Settings** on the home screen.
5. Complete the commissioning as prompted.



Downloading and installing the FusionSolar app

- Search for the FusionSolar app in the app store and download it.
- Scan the following QR code to download the app.

FusionSolar app

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Quick Guide (EU Series Charging System)

8 Charging System Commissioning

Download and install the Antohill app.

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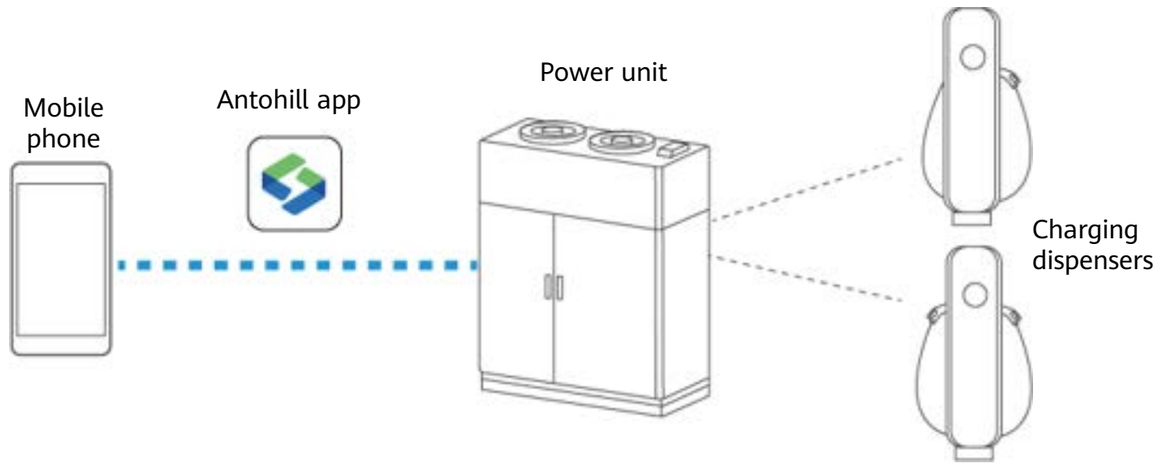
Register an account (optional, required for initial registration).

↓

Scan the O&M QR code on the power unit.

↓

Complete the commissioning as prompted.



Antohill app commissioning guide