

Technical sheet · photovoltaic installation

Book 1, chapter 7.112 (domestic photovoltaic installations up to 10 kVA) and section 9.1.2: the dossier also contains the operating instructions, the safety instructions and the references and technical characteristics of the installed equipment.

Characteristic	Value	RGIE
Photovoltaic modules		
Manufacturer and model	Jinko Solar JKM435N-54HL4R-V	9.1.2
Datasheet	https://jinkosolar.eu/wp-content/uploads/JKM425-450N-54HL4R-V-F2C1-EN-BF-2.pdf	9.1.2
Module dimensions	1,762 × 1,134 mm	
Modules	18 × 435 Wp = 7.83 kWc	7.112.4
Strings	2 × 9 modules in series	
DC cable	H1Z2Z2-K · 6 mm² · 18 m	
Earthing of the frames	Yes · 6 mm² · without mechanical protection	7.112.2
Inverter		
Manufacturer and model (type)	SMA Sunny Tripower 8.0 (STP8.0-3AV-40)	7.112.4
Number	1	7.112.4
Serial number	3012345678	7.112.4
Datasheet	https://files.sma.de/downloads/STP8-10-3AV-40-DS-en-41.pdf	9.1.2
Maximum AC power	8 kVA · three-phase	7.112.4
Automatic disconnection (within 5 s)	Yes	5.3.3.1 a.4 ; 7.112.3
DC isolator	Yes	5.3.3.1 a.2
Connection to the board		
Circuit	Circuit A · Main board	
Overcurrent protection	Circuit breaker C16 4P (A)	
RCD	40 A 4P 300 mA type A	5.3.5.3 f
Cable	XVB 5G1.5 · In the wall	

INSTALLER	INSPECTION	CLIENT	SITE	
ElectroSmart — ESCS BV VAT No.: BE0692.916.332 Date:	Organisation Name Date	Name Street Town The Example family Rue de l'Exemple 12 1300 Wavre	Name Street Town The Example family Rue de l'Exemple 12 1300 Wavre	Voltage EAN Revision Sheet 3N400 V 541448820000000000 0 1
Signature	Signature	Signature	Signature	

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Characteristic	Value	RGIE
Signs and documents		
Signs “Do not disconnect under load” and “Electrical installation always live”	Yes	7.112.2
Marking of the DC and AC conductors	Yes	7.112.2
Instructions, safety instructions and equipment characteristics	Yes	9.1.2
Network		
Network	3N400 V · TT	
Service connection (A)	—	
Earth resistance	—	4.2.3.2

Checks			
Check	Result	Details	RGIE
Inverter · position	To fix	Place the device on the layout plan of an existing floor.	3.1.2.3 a
Main RCD · origin of the installation	To check	If it is placed in the main board rather than at the origin of the installation, the RCD of 300 mA at most () is only allowed there if the wiring supplying this board is class II or of equivalent insulation, without a conductive covering (sheath, armour or other). In both cases, its input terminals are made inaccessible by a seal fitted at the conformity inspection.	4.2.4.3 b
A · design current	To check	15830 W of sources delivers up to 22.8 A for a 16 A circuit breaker: check the diversity or the power limitation of the appliances.	4.4.3.2
Concealed wiring without conduit	To check	Concealed cables without stated conduit (A): embedded without conduit in room walls, horizontal or vertical routes only, horizontal between 25 and 35 cm from the floor or ceiling (or above the underside of the window lintels, at least 25 cm below the ceiling), vertical as close as possible to a corner or between 10 and 20 cm from door frames, otherwise vertically in line with a visible device, under at least 0.4 cm of plaster; in concrete or cement, under at least 3 cm.	5.2.9.10
Sources in parallel	To check	The installation can be supplied by the network and by an independent source (inverter, battery): protection against indirect contact is ensured with each source alone as well as with the sources in parallel, and the DC components of the converters do not impair the operation of the RCDs (type chosen according to the inverter manufacturer).	4.2.3.1; 5.3.5.3 f
A · board	Verified	The circuit must refer to an existing board.	Model consistency

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Check	Result	Details	RGIE
A · protection	Verified	A protection of the same board must be defined.	Model consistency
A · wiring	Verified	Wiring XVB, 5 × 1.5 mm², installed “In the wall”.	3.1.2.2 a
A · devices	Verified	The circuit must not refer to a missing device.	Model consistency
PV panel · position	Verified	Device placed on the layout plan.	3.1.2.3 a
RCD · hierarchy	Verified	Check the parent protections and that there is no loop.	Model consistency
A · hierarchy	Verified	Check the parent protections and that there is no loop.	Model consistency
· maximum current	Verified	Current limited to 16 A by the sum of the downstream ratings: it does not exceed its rated current of 40 A.	4.4.1.1
A · cross-section and protection	Verified	1.5 mm² protected by a 16 A circuit breaker (at most 16 A).	4.4.1.4, table 4.11
Photovoltaic installation	Verified	Domestic installation of at most 10 kVA: signs, conductor marking, frame earthing, automatic disconnection and dossier documents in place.	7.112.2; 7.112.3; 7.112.4; 9.1.2; 5.3.3.1 a.4
Isolation of the photovoltaic source	Verified	Isolation on the DC side between the modules and the inverter, built in or separate.	5.3.3.1 a.2

“Not specified”: to be completed in the studio or checked on site. This dossier is not an inspection report of the installation.

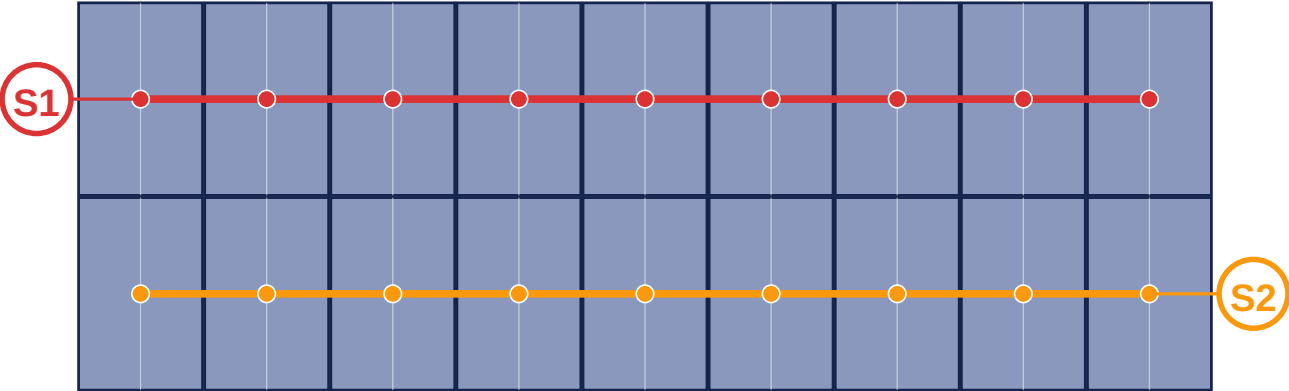
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Layout plan · Ground floor

1 m = 17.2 mm on this sheet · print at 100%

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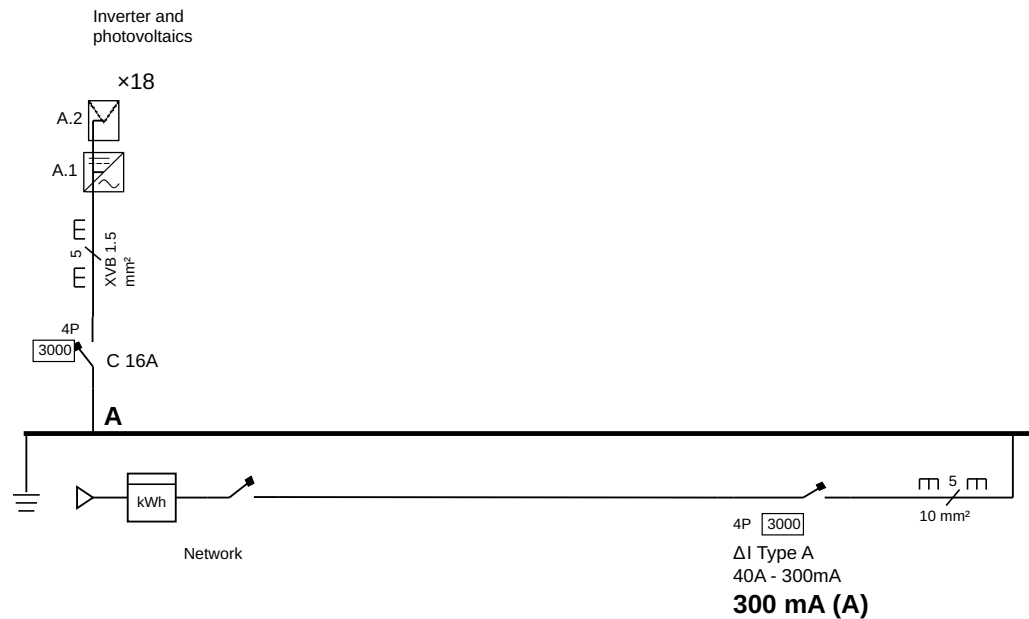
Layout plan · Roof



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Main board



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Circuit list · Main board

Circuit	Description
A	Inverter and photovoltaics

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Legend of the symbols used



DC to AC inverter



PV panel

Electrical symbols used in this dossier.

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