Device Config (SMA)

2025 MARSHALL

MARSHAL



Supplied by ZECO Energy



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for Commissioning





1.0 Device Configuration

Part A

SMA CORE2 Inverters

- 1. SMA CORE2 inverters do not have a built-in Wi-Fi access point. To enable network connectivity, connect the inverter to a router, Wi-Fi repeater, or network switch using a LAN cable.
- 2. Connect your phone or laptop to the same network, then use an IP scanner to detect and identify the inverter's IP address.
- 3. Open a web browser on your phone or laptop, enter the IP address obtained in Step 2, and access the SMA inverter's web interface.
- 4. Click the "Login" button in the top right corner of the inverter's web interface. Use the default password 'pw8888' to log in.

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🖉 Sunny Tripower	× +			~
← → C ▲ Not secure	10.67.66.100			or < ☆ 🛊 🖬 🛎 i
Sunny Tripower	Ξ			😚 English 🔒 Login
A Overview	Status values			
General Information	Daily Yield	81. Real-til	.510 kW me Active Power	
Device Monitoring	117.4 kWh Total Yield	User Login	×	
Communication -		Password		
About	Inverter Realtime Values	pw8888	(1)	
	Device Name	Login	us	Communication status
	STP 110-60(COM1-001)	1 mm	grid Operation	0

5. Ignore the "System time abnormal" prompt, as the inverter does not support daylight saving time. This does not affect functionality.



SMA Sunny Tripower	Ξ			8	English	Service Provider
A Overview	Status values					
General Information	Daily Yield		81.280 kW Real-time Active Power			
Device Monitoring	120.3 kWh		0.060 kvar			
Device	Total Yield	Prompt				
Communication -	Inverter Realtime Val	System time is abnormal. time.	Please calibrate it in			
About	Device Name		Proceed to Set	Com	munication sta	tus
	STP 110-60(COM1-001)	STP 110-60	On-grid Operation	0		

Before interfacing the inverter with the Marshall gateway device, change the inverter configuration to the following. Failure to change the inverter configuration may result in loss of communication between the Marshall device and the inverter.

a. Inverter MODBUS Control

1. Switch Enable/Disable of Local Ports.

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SMA Sunny Tripower	Ξ		🕞 English 🔹 Service Provider
Device 🔻	MODBUS		
Communication	Local Port	Switch	
Run Information	502		
System Maintenance			
System Time			
MODBUS			
Port Parameter			
Ethernet			
About			



b. Grid Code Settings

- 1. Open the Device Manager tab from the navigation bar.
- 2. Under the Initialization tab, select the appropriate Grid Code setting. This is the default view when you access the Device Monitoring tab. Click "Save Settings"

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← → C ▲ Not secure	10.67.66.100/#/devicemanager/deviceManager	07 <	🖈 🗰 👗 i
Sunny Tripower	Ξ	🛞 English	Service Provider
A Overview	Initialization Parameters Device Instruction Device Information		
Device Monitoring	Grid Code Settings		
Device 👻	AS/NZS 4777.2:2020 A 👻		
Communication	Save Settings		

c. PreWLimit

- 1. In the Device Monitoring tab, navigate to the Parameters section. Use the arrow keys to browse through the available settings.
- 2. Use the arrow keys to navigate to "Extended Model 2-1 RW."
- 3. Scroll vertically to locate "PreWLimit", then set the parameter based on the grid requirements. This defines the fallback percentage for active power. Click "Save Settings"

SMA Sunny Tripower	Ξ		English & Service Provider	
♠ Overview	Initialization Parameters Device Instruction	Device Information		
Device Monitoring	< Underfreq. trip. Overfreq. trip. PV inst.	Values Extended Model 1 RO Extended Mo	del 2-1 RW Extended Model 2-2 RW	>
Device 🔻			Save Settings	
Communication	Parameter Name	Current Value	Illustrate	
Dup Information	ComPailDetect time	180	[I~30000] S	^
Run mornauon	ComFailRecEna	Off 👻		
System Maintenance	ComFailRecTime	1	[1~36000] s	
System Time	PreWLimit	100.0	[0.0~100.0] %	I,



d. Timeout for active commands

- 1. In the Device Monitoring tab, navigate to the Parameters section. Use the arrow keys to browse through the available settings.
- 2. Use the arrow keys to navigate to "Ext. Control"
- 3. Scroll vertically to find "Timeout for Active Commands", then adjust the parameter according to the grid requirements. This setting determines the time, in seconds, before the fallback behavior for active power is triggered.
- 4. Click "Save Settings"

SMA Sunny Tripower	Œ		🕄 English	Service Provider
A Overview	Initialization Parameters Device Instruction	Device Information		
Device Monitoring	K Nameplate Instant. values Electr. Rati	ngs Power settings Feed-in status	Ext. controls React. power Q(V)	Active power P(f)
Device				Save Settings
Firmware Update	Parameter Name Activate fixed power factor control	Current Value u	اllustrate ل ^{ال~} لا]	
Inverter Log	Normalized reactive power limitation	0.0	[-100.0~100.0] VArMax	
Fault Recorder	Activation of normalized reactive power limitation	0	[0-1]	
Communication •	Timeout for active commands	120	[0~36000]	
 About 	Timeout for cos(phi) commands	0	[0-36000]	
	Timeout for reactive power commands	0	[0~36000]	*

e. Active Power Gradient

- 1. In the Device Monitoring tab, navigate to the Parameters section. Use the arrow keys to browse through the available settings.
- 2. Use the arrow keys to navigate to "Power Settings"
- 3. Scroll vertically to find "Active Power Gradient", then adjust the parameter according to the grid requirements.
- 4. Click "Save Settings"

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SMA Sunny Tripower	Ξ		🚱 English	Service Provider
♠ Overview	Initialization Parameters Device Instruction	Device Information		
Device Monitoring	K Nameplate Instant. values Electr. Rational Control Contro	ngs Power settings Feed-in status	Ext. controls React. power Q(V)	Active power P(f)
Device				Save Settings
Firmware Update	Parameter Name	Current Value	Illustrate	
	Reference voltage, PV system control	400	[ο~τοοο] ν	•
Inverter Log	Reference correction voltage, PV system control	0	[-50~50] V	
Fault Recorder	Currently set apparent power limit	110000	[55000~110000] VA	
Communication •	Active power gradient	20	[0.0~100.0] %WMax/sec	
 About 	Active power gradient in feeding operation	10000	[1~10000] WGra	
	Nominal frequency	50	[1~65] Hz	



Sunny Portal Login

2. Follow the process as below to set up limiting of the active power feed-in.

(Sunny Portal Login is only needed if they have a SMA Data Manager on the site.)

	SUNNY PORTAL US-English ~
Clive Hume	
System Overview	
ystem Profile	
ent Status and Forecast	PV System Selection > Y PV System Data String configuration Operator/Installer Parameters Data releases
gy Balance	
ual Comparison	
ystem Monitoring	
ystem Logbook: 161	(1) Go to PV System Properties.
ysis	
ort (2)	
ces (3)	
Configuration v	
ystem Properties	
stem Presentation	2, Select the Parameters rap.
ce Overview	Scroll down and select the
Overview and Planning	edit button to enable
rt Configuration	editing
Management	
ny Portal products	
According to requirements of you	power reed-in Ir grid operator, the Sunny Home Manager can ensure that surplus PV energy is fed into the utility grid only up to a defined limit.
A fixed value of the nom A percentage of the nom External setpoints	inai system power
A fixed value of the nom A percentage of the nom External setpoints Zero Export	inai system power
A fixed value of the nom A percentage of the nom External setpoints Zero Export	inai system power
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2.0 Device Configuration

Part B

SB STP STP50-41

1. Follow the process as below to set up SB STP STP50-41.





Sunny Portal Login

2. Follow the process as below to set up limiting of the active power feed-in.

(Sunny Portal Login is only needed if they have a SMA Home Manager on the site.)

PV System Selection	
Clive Hume	
System Overview	r>
system Profile	PV System Selection > < PV System Data String configuration Operator/Installer Parameters Data release
ent Status and Forecast	
gy balance	
ual Comparison	
ystem Monitoring	(1) Coto DV Sustana Dranouting
ystem Logbook: 161	Go to PV System Properties.
ysis	
ort (2)	
ces (3)	
Configuration v	
stem Properties	(a) Soloct the Decemptors Tab
stem Presentation	(2) Select the Parameters rap.
e Overview	Scroll down and select the
Overview and Planning	edit button to enable
t Configuration	
rt Comigai adon	oditing
Management	editing.
Management ny Portal products	editing.
Limiting of the active	editing.
Management ny Portal products	editing.
Management ny Portal products Limiting of the active According to requirements of y	e diting. e power feed-in our grid operator, the Sunny Home Manager can ensure that surplus PV energy is fed into the utility grid only up to a defined limit.
Limiting to requirements of y	e diting. e power feed-in our grid operator, the Sunny Home Manager can ensure that surplus PV energy is fed into the utility grid only up to a defined limit.
Management Ny Portal products Limiting of the active According to requirements of your Limiting to:	e diting. e power feed-in our grid operator, the Sunny Home Manager can ensure that surplus PV energy is fed into the utility grid only up to a defined limit.
Management Management Approved products Limiting of the active According to requirements of y Limiting to: • A fixed value of the no • A percentage of the no	e diting. e power feed-in our grid operator, the Sunny Home Manager can ensure that surplus PV energy is fed into the utility grid only up to a defined limit.
Management y Portal products Limiting of the active According to requirements of yu Limiting to: A fixed value of the no A percentage of the no External setpoints	e diting. e power feed-in our grid operator, the Sunny Home Manager can ensure that surplus PV energy is fed into the utility grid only up to a defined limit. minal system power in kW () ominal system power ()
Management y Portal products Limiting of the active According to requirements of y Limiting to: A fixed value of the no A percentage of the no External setpoints Zero Export	e diting. e power feed-in our grid operator, the Sunny Home Manager can ensure that surplus PV energy is fed into the utility grid only up to a defined limit. (minal system power in kW () primal system power ()
Management y Portal products Limiting of the active According to requirements of y Limiting to: A fixed value of the no A percentage of the no External setpoints Zero Export	e power feed-in our grid operator, the Sunny Home Manager can ensure that surplus PV energy is fed into the utility grid only up to a defined limit.
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3.0 Device Configuration

Part C

Sunny Tri Power x 12 15 20 25

1. Follow the process as below to set up Sunny Tri Power x 12 15 20 25.

My plant STP X			
CONFIGURATION	My plant System System User administration Device administration Parameter Device parameter adjustment Grid management service Meter configuration		Modbus server The Modbus protocol is an industrial data communication protocol for use in the PV system communication, for example. Active
	Modbus server The Modbus protocol is an industrexample. Information Activate the Modbus server Activate the Modbus server You can change the standard port	al data communication r only if it is used by oth ss. address of the Madbus	protocol for use in the PV system communication, for ner devices or applications. Secure your network a server if required. Only use free ports.
	Modbus server Information Activate the Modbus serv against unauthorized acc You can change the standard por Port* 502	er only if it is used by oth 255. t address of the Modbus	rer devices or applications. Secure your network 3 server if required. Only use free ports.



Grid Management Service

- 2. Follow the process as below to set up Grid Management Service.
- 1. Navigate to Grid Management Service
- 2. Select Active and Reactive Power
- 3. Click on Configuration & Activation

Grid management service			
Active and reactive power	Configuration & activation		
Recording of setpoints	Configuration & activation		
Country data set	Configuration & activation		

4. Properly configure the grid settings to ensure optimal performance and alignment with system requirements.

active and re	active power setpoin	its
art with the information our applicable connecti	about the state of your utility grid and the on conditions.	power of your system. Then you can configure the active power and reactive power setpoir
irid settings		
Overview	Summary	
Grid settings		
Nominal grid volt	oge	230 V
Phase reference		Phase voltage
Phase reference	ower	Phase voltage Manual specification total AC power 15 kW



Grid settings
tart with the information about the state of your utility grid and the power of your system. Then you can configure the active power and reactive power setpoint sur applicable connection conditions.
lominal grid voltage
se nominal grid voltage is the target voltage at the point of interconnection. This voltage varies depending on the region and type of utility grid (high, medium o
Vhat nominal voltage is the utility grid designed tor?
230 Vhich phase reference should the nominal arid voltage have?
) Outer conductor voltage
Phase voltage
lominal system power
re nominal power of your system is the maximum total power your system can generate. Both the sum of all AC powers and the sum of all PV modules (DC) ca urpose.
Total AC power
Sum of all AC power in the system" 15 kW
Tetal DC annual
Information Please note that in some utility grids and, depending on the specification by the grid operator, the total DC power must be specified (e.g., with an active power specification of i
lominal values
aicate me nominal values of your system for active, reactive and apparent power or have mem automatically calculated from me nominal system power. Addit an limit the reactive power modes.
Nominal reactive power Automatic
Nominal active power Automatic
Nominal apparent power Automatic
Nominal cos phi Disabled
Nominal cos phi Disabled
Nominal cos phi Disabled



5. Navigate to Operating Mode, select Open Loop Control, and click Continue.

ve power Active		Disable
Overview Summary		
) Operating mode		\rightarrow
Operating mode	Open-loop control	
Operating mode	e for active power	
You can specify how the device	implements the active power setpoints into the system.	
Open-loop control (Open-loop)	oop control circuit)	
The implementation of the	specifications from the System Manager at the point of interconnection will not be checked.	
Closed-loop control (Close The text loop control (Close	d-loop control circuit)	
Manager corrects non-defe	setpoints from the System Manager at the point of interconnection will be checked. It necessary, the System sult values. This requires using the mensuring device at the point of interconnection.	
 Optimized closed-loop cor Inverters receive individual set Uinked settings: also appl 	ntrol/open-loop control points lies to Reactive power	
Limitation		
Disable the optimized closed-loc	sp control/apen-loop control if the following devices are in your system:	
Inverters connected via Date Sunny Tripower CORE2 inve	1 (also applies to subordinate devices) Inter	
< Previous	Go to overview Continue >	



6. In the Grid Operator Specifications, enable the Source for External Setpoint and check the Modbus option.

Grid operator specifications	
re setpoint for the active power setpoint can be specified manually or externally by a communication device. If several options are active simultaneou etpoint is used from all specifications.	isly
O Note that external generators in the plant do not receive control values from the System Manager and are therefore not reduced in their active power.	
Aanual setpoint for active power limitation 💴	
ource for external setpoint	
/ith the external setpoints, you must configure the sources for the calculation of active power setpoints.	
Modbus	
Analogue inputs	
] Digital inputs	
allback behavior for missing setpoints	
fhat should I do if the setpoint specification is missing, e.g., in the event of a communication failure?	
) Keep values Automatic acceptance of the setpoints last received	
Apply fallback values Manual entry of setpoints which are to be applied in case of a missing setpoint	
Pallbock value O %	
How long should I wait for the setpoint to take effect before the fallback value should be adopted?	
Time without setpoints 60 s	
ehavior in case of setpoint change 💭	
corresponding behavior can be defined in order to prolong jumps in the setpoints. This is helpful to avoid large load changes within a short period o	of ti
If no dynamic behavior is configured, jumps can occur.	
< Previous 🗮 Go to over	rvie
	1



'. When prompted to access Direct Seller Settings, ensure that the Source for External Setpoint is disabled.				
Direct seller settings				
You can configure the setpoint for the active power setpoints of the direct seller.				
Note that external generators in the plant do not receive control values from the standard	System Manager and are therefore not reduced in their active power.			
Source for external setpoint 🌑				
Here you can activate receipt of setpoints of your direct seller and select a comm	unication channel.			
< Previous	Go to overview Continue >			

8. Click Save



Active	e power Active		
c	Overview Summary		
\odot	Operating mode		
	~~~~	Orace laws seemal	
	Operating mode	Оренноор солно	
$\odot$	Grid operator specifications		
	Manual setpoint		
	Source external setpoint	Modbus	
	Fallback behavior for missing setpoints	Fallback value 0% $\left  \right.$ Time without communication &0s	
	Behavior in case of setpoint change	8	
$\odot$	Direct seller settings		
	Source external setpoint		
leact	Dverview Summary		
0	Operating mode		
	Operating mode	Open-loop control	
0	When active power is fed in		
	Calculation via	đ	
0	In case of zero active power		
	Calculation via	*	
0	When active power is supplied by grid		
	Calculation via		
0	Reference value		
	Nominal power	Nominal active power	
() II	Insaved changes		Г



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