

SUNNY MINI CENTRAL 4600A / 5000A / 6000A

SMC 4600A-11 / SMC 5000A-11 / SMC 6000A-11



Powerful

- OptiCool active temperature management
- The best tracking efficiency with OptiTrac MPP tracking

Safe

- Galvanic Isolation
- Integrated ESS DC switch-disconnector
- SMA Power Balancer for three-phase grid connection

Flexible

- Suitable for PV array grounding
- Integrated grid management functions with reactive power provision

Simple

- SUNCLIX DC plug-in system

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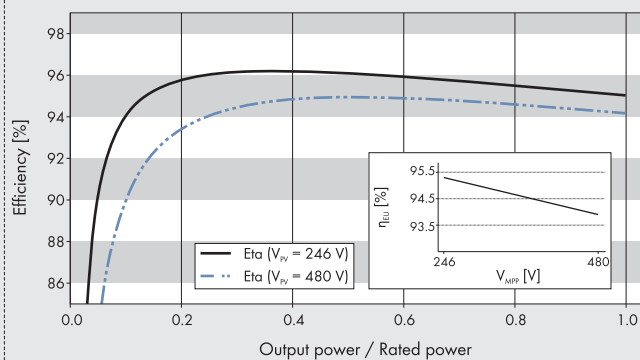
Proven technology for a multitude of applications

The Sunny Mini Central 4600A, 5000A and 6000A are installed wherever galvanic isolation is required. This means they can be universally used for many different types of connections. The SMCs can be implemented with crystalline cells, as well as with thin-film modules. The Sunny Mini Central 5000A and 6000A are ideal for three-phase systems in combination with the SMA Power Balancer, while the Sunny Mini Central 4600A is designed for single-phase PV plants. Thanks to reactive power provision, they support grid stability, and they are flexible and can be applied to different plant sizes.

SUNNY MINI CENTRAL 4600A / 5000A / 6000A

Technical data	Sunny Mini Central 4600A	Sunny Mini Central 5000A
Input (DC)		
Max. DC power (@ $\cos \varphi = 1$)	5250 W ¹⁾	5750 W
Max. input voltage	600 V	600 V
MPP voltage range / rated input voltage	246 V - 480 V / 246 V	246 V - 480 V / 246 V
Min. input voltage / start input voltage	211 V / 300 V	211 V / 300 V
Max. input current	26 A	26 A
Max. input current per string	26 A	26 A
Number of independent MPP inputs / strings per MPP input	1 / 4	1 / 4
Output (AC)		
Rated power (@ 230 V, 50 Hz)	4600 W	5000 W
Max. apparent AC power	5000 VA ²⁾	5500 VA
Nominal AC voltage / range	220 V, 230 V, 240 V / 160 V - 265 V	220 V, 230 V, 240 V / 160 V - 265 V
AC power frequency / range	50 Hz, 60 Hz / -6 Hz ... +5 Hz	50 Hz, 60 Hz / -6 Hz ... +5 Hz
Rated power frequency / rated grid voltage	50 Hz / 230 V	50 Hz / 230 V
Max. output current	26 A	26 A
Power factor at rated power	1	1
Displacement power factor, adjustable	0.8 overexcited ... 0.8 underexcited	0.8 overexcited ... 0.8 underexcited
Feed-in phases / connection phases	1 / 1	1 / 1
Power balancing	●	●
Efficiency		
Max. efficiency / European efficiency	96.1% / 95.3%	96.1% / 95.3%
Protective devices		
Reverse current protection / input-side disconnection device	- / ●	- / ●
Ground fault monitoring / grid monitoring	● / ●	● / ●
DC reverse polarity protection/AC short-circuit current capability / galvanically isolated	● / ● / ●	● / ● / ●
All-pole sensitive residual-current monitoring unit	-	-
Protection class (as per IEC 62103) / overvoltage category (as per IEC 60664-1)	I / III	I / III
General data		
Dimensions (W / H / D)	468 / 613 / 242 mm (18.4 / 24.1 / 9.5 inches)	468 / 613 / 242 mm (18.4 / 24.1 / 9.5 inches)
Weight	62 kg / 136.69 lb	62 kg / 136.69 lb
Operating temperature range	-25 °C...+60 °C / -13 °F...+140 °F	-25 °C...+60 °C / -13 °F...+140 °F
Noise emission (typical)	42 dB(A)	42 dB(A)
Self-consumption (at night)	0.25 W	0.25 W
Topology	LF transformer	LF transformer
Cooling concept	OptiCool	OptiCool
Degree of protection (as per IEC 60529)	IP65	IP65
Climatic category (as per IEC 60721-3-4)	4K4H	4K4H
Maximum permissible value for relative humidity (non-condensing)	100%	100%
Features		
DC connection	SUNCLIX	SUNCLIX
AC connection	Screw terminal	Screw terminal
Display	Text line	Text line
Interface: RS485 / Bluetooth®	○ / ○	○ / ○
Warranty: 5 / 10 / 15 / 20 / 25 years	● / ○ / ○ / ○ / ○	● / ○ / ○ / ○ / ○
Certificates and approvals (more available on request)	CE, VDE0126-1-1, VDE-AR-N 4105, RD 661/2007, RD 1699, PPC, AS4777 ⁴⁾ , EN 50438 ³⁾ , PPDS, IEC 61727 ⁴⁾ , UTE C15712-1, G59/2, C10/11	
Certificates and approvals (planned)	AS4777, IEC 61727	
● Standard features ○ Optional features - Not available		
Type designation	SMC 4600A-11	SMC 5000A-11

Efficiency curve SUNNY MINI CENTRAL 6000A



Accessories



RS485 interface
485PB-SMC-NR



Bluetooth Piggy-Back
BTPBINV-NR



SMA Power Balancer plug-in system
PBL-SMC-10-NR



Grounding set "positive"
ESHV-P-NR



Grounding set "negative"
ESHV-N-NR



- 1) 4830 W with VDE-AR-N 4105
- 2) 4600 VA with VDE-AR-N 4105
- 3) Does not apply to all national appendices of EN 50438
- 4) Does not apply to SMC 4600A-11

Data at nominal conditions

Technical data

Input (DC)

Max. DC power (@ $\cos \varphi = 1$)
Max. input voltage
MPP voltage range / rated input voltage
Min. input voltage / start input voltage
Max. input current
Max. input current per string
Number of independent MPP inputs / strings per MPP input

Output (AC)

Rated power (@ 230 V, 50 Hz)
Max. apparent AC power
Nominal AC voltage / range
AC power frequency / range
Rated power frequency / rated grid voltage
Max. output current
Power factor at rated power
Displacement power factor, adjustable
Feed-in phases / connection phases
Power balancing

Efficiency

Max. efficiency / European efficiency

Protective devices

Reverse current protection / input-side disconnection device
Ground fault monitoring / grid monitoring
DC reverse polarity protection/AC short-circuit current capability / galvanically isolated
All-pole sensitive residual-current monitoring unit
Protection class (as per IEC 62103) / overvoltage category (as per IEC 60664-1)

General data

Dimensions (W / H / D)
Weight
Operating temperature range
Noise emission (typical)
Self-consumption (at night)
Topology
Cooling concept
Degree of protection (as per IEC 60529)
Climatic category (as per IEC 60721-3-4)
Maximum permissible value for relative humidity (non-condensing)

Features

DC connection
AC connection
Display
Interface: RS485 / Bluetooth®
Warranty: 5 / 10 / 15 / 20 / 25 years
Certificates and approvals (more available on request)
Certificates and approvals (planned)

Certificates and approvals (planned)

● Standard features ○ Optional features – Not available

Type designation

Sunny Mini Central 6000A

6300 W
600 V
246 V – 480 V / 246 V
211 V / 300 V
26 A
26 A
1 / 4
6000 W
6000 VA
220 V, 230 V, 240 V / 160 V – 265 V
50 Hz, 60 Hz / –6 Hz ... +5 Hz
50 Hz / 230 V
26 A
1
0.8 overexcited ... 0.8 underexcited
1/1
●
96.1% / 95.3%
– / ●
● / ●
● / ● / ●
–
I / III
468 / 613 / 242 mm (18.4 / 24.1 / 9.5 inches)
63 kg / 138.69 lb
–25 °C...+60 °C / –13 °F...+140 °F
42 dB(A)
0.25 W
LF transformer
OptiCool
IP65
4K4H
100%
SUNCLIX
Screw terminal
Text line
○ / ○
● / ○ / ○ / ○ / ○
CE, VDE0126-1-1, VDE-AR-N 4105
RD 1663 / 2000, RD 661 / 2007, PPC, AS4777, EN 50438, PPDS, IEC 61727, UTE C15712-1, G59/2

SMC 6000A-11

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Professional management, monitoring and presentation of PV plants

