

SUNNY CENTRAL 800CP XT / 850CP XT / 900CP XT



SC 800CP-10 / SC 850CP-10 / SC 900CP-10



Profitable

- Up to 1 megawatt system power as standard
- Significantly reduced specific price thanks to increased power
- Maximum yields with low system costs

Durable

- Full nominal power in continuous operation at ambient temperatures up to 50 °C
- Optimized for extreme climatic conditions between -40 °C and 62 °C
- Intelligent power management with OptiCool™

Flexible

- Wide DC input voltage range for flexible use of various module configurations
- Perfectly adjusted for the temperature dependent behavior of PV generators

Versatile

- All grid management functions are included, prepared for "Q-on-demand" including pure reactive power operation
- Customized computer platform for optimal monitoring and control of inverters

SUNNY CENTRAL 800CP XT / 850CP XT / 900CP XT

The extended CP XT: peak output up to 1 megawatt

More power: With its extended functions, the new Sunny Central CP XT series is now even more efficient. The reduced specific price, mean that maximum yields are achieved with lower system costs. The Sunny Central CP XT is also optimized for cold temperatures down to -40 °C and with full nominal power in continuous operation up to 50 °C. The inverter includes all grid management functions and is prepared for Q-on-demand. The customized computer platform allows for optimal monitoring and control.

SUNNY CENTRAL

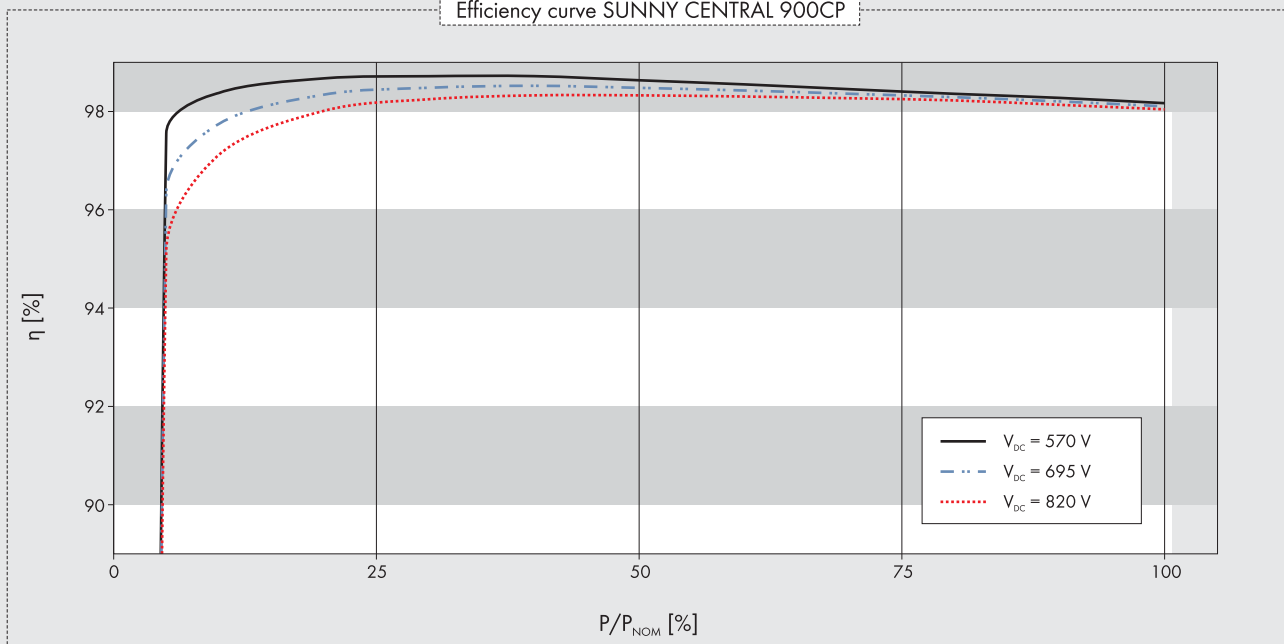
800CP XT / 850CP XT / 900CP XT

Technical data	Sunny Central 800CP XT	Sunny Central 850CP XT
Input (DC)		
Max. DC power (@ cos φ=1)	898 kW	954 kW
Max. input voltage ¹	1000 V / 1100 V optional	1000 V / 1100 V optional
Minimum input voltage / $U_{MPP,min}$ at $I_{MPP} < I_{DC,max}$	535 V / 535 V	570 V / 570 V
MPP voltage range (@ 25 °C / @ 50 °C at 50 Hz)	641 V - 850 V / 583 V - 850 V ^{2,3}	681 V - 850 V / 620 V - 850 V ²
MPP voltage range (@ 25 °C / @ 50 °C at 60 Hz)	641 V - 850 V / 583 V - 850 V ^{2,3}	681 V - 850 V / 620 V - 850 V ²
Rated input voltage	620 V	620 V
Max. input current	1400 A	1400 A
Number of independent MPP inputs	1	1
Number of DC inputs	9 / 32 (Optiprotect)	9 / 32 (Optiprotect)
Output (AC)		
Rated power (@ 25 °C) / nominal AC power (@ 50 °C)	880 kVA / 800 kVA	935 kVA / 850 kVA
Nominal AC voltage / nominal AC voltage range	360 V / 324 V - 396 V ³	386 V / 348 V - 425 V
AC frequency / range	50 Hz, 60 Hz / 47 Hz ... 63 Hz	50 Hz, 60 Hz / 47 Hz ... 63 Hz
Rated frequency / rated grid voltage	50 Hz / 360 V	50 Hz / 386 V
Max. output current	1411 A	1411 A
Max. THD	< 3 %	< 3 %
Power factor at rated power / adjustable shift factor	1 / 0.9 leading ... 0.9 lagging	
Feed-in phases / connection phases	3 / 3	3 / 3
Efficiency⁷		
Max. efficiency / European efficiency / CEC efficiency	98.6 % / 98.4 % / 98.5 %	98.6 % / 98.4 % / 98.5 %
Protective devices		
Input-side disconnection device	Motor-driven DC switch-disconnector / circuit breaker (Optiprotect)	
Output-side disconnection device	AC circuit breaker	
DC overvoltage protection	Type I surge arrester	
Lightning protection (according to IEC 62305-1)	Lightning protection level III	Lightning protection level III
Grid monitoring	●	●
Ground-fault monitoring / remote-controlled ground-fault monitoring	○ / ○	○ / ○
Insulation monitoring	○	○
Surge arrester for auxiliary power supply	●	●
Protection class (according to IEC 62103) / overvoltage category (according to IEC 60664-1)	I / III	I / III
General data		
Dimensions (W / H / D)	2562 / 2279 / 956 mm (101 / 90 / 38 inch)	
Weight	1800 kg / 4000 lb	1800 kg / 4000 lb
Operating temperature range	-25 °C ... +62 °C / -13 °F ... +144 °F	-25 °C ... +62 °C / -13 °F ... +144 °F
Noise emission ⁵	61 dB(A)	61 dB(A)
Max. self-consumption (operation) / self-consumption (night)	1700 W ⁴ / < 100 W	1700 W ⁴ / < 100 W
External auxiliary supply voltage	230 / 400 V (3/N/PE)	230 / 400 V (3/N/PE)
Cooling concept	OptiCool	OptiCool
Electronics degree of protection / connection area (according to IEC 60529)	IP54 / IP43	IP54 / IP43
Degree of protection (according to IEC 60721-3-4)	4C2, 4S2	4C2, 4S2
Application	In unprotected outdoor environments	In unprotected outdoor environments
Maximum permissible value for relative humidity (non-condensing)	15 % ... 95 %	15 % ... 95 %
Maximum operating altitude above MSL	2000 m	2000 m
Fresh air consumption (inverter)	3000 m ³ /h	3000 m ³ /h
Features		
DC connection	Ring terminal lug / cage clamp (Optiprotect)	
AC connection	Ring terminal lug	Ring terminal lug
Display	HMI touchscreen	HMI touchscreen
Communication / protocols	Ethernet (OF optional), Modbus	Ethernet (OF optional), Modbus
Sunny String-Monitor communication	RS485 / none (Optiprotect)	RS485 / none (Optiprotect)
SC Com	●	●
Color enclosure, door, base, roof	RAL 9016 / 9016 / 7005 / 7004	
Warranty: 5 / 10 / 15 / 20 / 25 years	● / ○ / ○ / ○ / ○	● / ○ / ○ / ○ / ○
Certificates and approvals (more available on request)	EN 61000-6-2, EN 61000-6-4, CE conformity, EEG conformity, BDEW-MSRL / FGW / TR8 ⁶ , Arrêté du 23/04/08, R.D. 1663 / 2000, R.D. 661 / 2007	
● Standard features ○ Optional features – Not available		
Type designation	SC 800CP-10	SC 850CP-10

- 1) Start-up at DC voltage < 1000 V
- 2) At 1.05 $U_{AC, nom}$ and $\cos \varphi = 1$
- 3) Further AC voltages, DC voltages and power classes can be configured
- 4) Self-consumption at rated operation
- 5) Sound pressure level at a distance of 10 m
- 6) With complete dynamic grid support, approval for SC850CP and SC900CP from 08/2012
- 7) Efficiency measured without internal power supply

Technical data	Sunny Central 900CP XT	
Input (DC)		
Max. DC power (@ $\cos \varphi = 1$)	1010 kW	
Max. input voltage ¹	1000 V / 1100 V optional	
Minimum input voltage / $U_{MPP, min}$ at $I_{MPP} < I_{DCmax}$	600 V / 600 V	
MPP voltage range (@ 25 °C / @ 50 °C at 50 Hz)	722 V - 850 V / 656 V - 850 V ²	
MPP voltage range (@ 25 °C / @ 50 °C at 60 Hz)	722 V - 850 V / 656 V - 850 V ²	
Rated input voltage	620 V	
Max. input current	1400 A	
Number of independent MPP inputs	1	
Number of DC inputs	9 / 32 (Optiprotect)	
Output (AC)		
Rated power (@ 25 °C) / nominal AC power (@ 50 °C)	990 kVA / 900 kVA	
Nominal AC voltage / nominal AC voltage range	405 V / 364 V - 446 V	
AC frequency / range	50 Hz, 60 Hz / 47 Hz ... 63 Hz	
Rated frequency / rated grid voltage	50 Hz / 405 V	
Max. output current	1411 A	
Max. THD	< 3 %	
Power factor at rated power / adjustable shift factor	1 / 0.9 leading ... 0.9 lagging	
Feed-in phases / connection phases	3 / 3	
Efficiency⁷		
Max. efficiency / European efficiency / CEC efficiency	98.6 % / 98.4 % / 98.5 %	
Protective devices		
Input-side disconnection device	Motor-driven DC switch-disconnector / circuit breaker (Optiprotect)	
Output-side disconnection device	AC circuit breaker	
DC overvoltage protection	Type I surge arrester	
Lightning protection (according to IEC 62305-1)	Lightning protection level III	
Grid monitoring	●	
Ground-fault monitoring / remote-controlled ground-fault monitoring	○ / ○	
Insulation monitoring	○	
Surge arrester for auxiliary power supply	●	
Protection class (according to IEC 62103) / overvoltage category (according to IEC 60664-1)	I / III	
General data		
Dimensions (W / H / D)	2562 / 2279 / 956 mm (101 / 90 / 38 inch)	
Weight	1800 kg / 4000 lb	
Operating temperature range	-25 °C ... +62 °C / -13 °F ... +144 °F	
Noise emission ⁵	61 dB(A)	
Max. self-consumption (operation) / self-consumption (night)	1700 W ⁴ / < 100 W	
External auxiliary supply voltage	230 / 400 V (3/N/PE)	
Cooling concept	OptiCool	
Electronics degree of protection / connection area (according to IEC 60529)	IP54 / IP43	
Degree of protection (according to IEC 60721-3-4)	4C2, 4S2	
Application	In unprotected outdoor environments	
Maximum permissible value for relative humidity (non-condensing)	15 % ... 95 %	
Maximum operating altitude above MSL	2000 m	
Fresh air consumption (inverter)	3000 m ³ /h	
Features		
DC connection	Ring terminal lug / cage clamp (Optiprotect)	
AC connection	Ring terminal lug	
Display	HMI touchscreen	
Communication / protocols	Ethernet (OF optional), Modbus	
Sunny String-Monitor communication	RS485 / none (Optiprotect)	
SC Com	●	
Color enclosure, door, base, roof	RAL 9016 / 9016 / 7005 / 7004	
Warranty: 5 / 10 / 15 / 20 / 25 years	● / ○ / ○ / ○ / ○	
Certificates and approvals (more available on request)	EN 61000-6-2, EN 61000-6-4, CE conformity, EEG conformity, BDEW-MSRL / FGW / TR8 ⁶ , Arrêté du 23/04/08, R.D. 1663 / 2000, R.D. 661 / 2007	
● Standard features ○ Optional features – Not available		
Type designation	SC 900CP-10	

Efficiency curve SUNNY CENTRAL 900CP



PLANT DIAGRAM

