

SUNNY CENTRAL 1000CP XT

SC 1000CP-10



Profitable

- 1 MW system power as standard
- High power density for reduced transportation costs
- Maximum yields with low system costs

Robust

- Full nominal power in continuous operation at ambient temperatures up to 40 °C
- Direct installation on-site, optimized for extreme climatic conditions of between -40°C and 62°C
- OptiCool for active temperature management

Flexible

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

Versatile

- All grid management functions included, prepared for Q at Night
- Optimal monitoring and control thanks to customized computing platform

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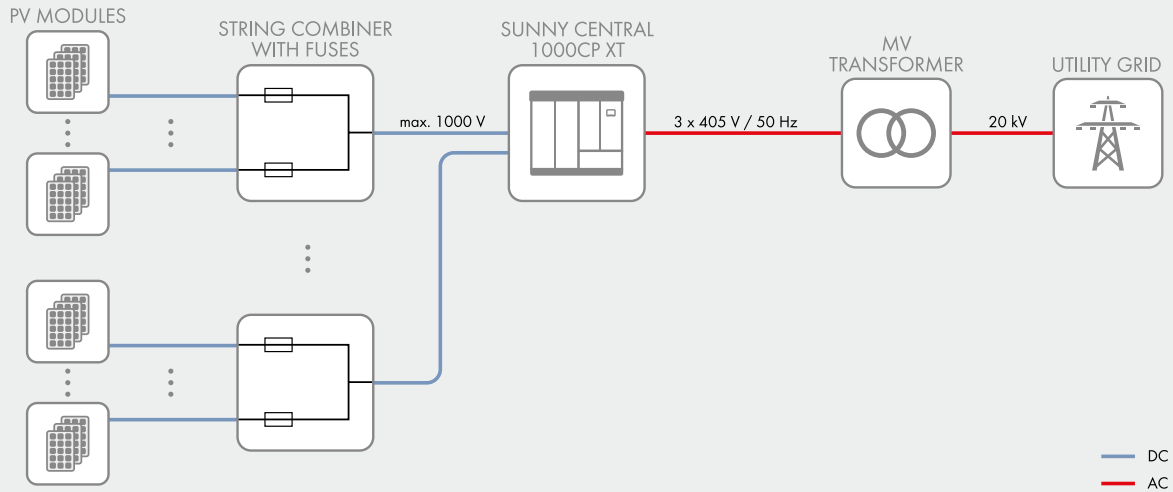
The most powerful CP with an output of 1 megawatt

For increased power: With its expanded functions and a peak power of 1100 kVA, the new Sunny Central 1000CP XT is now even more powerful. With its proven technology and high power density, the SC 1000CP XT completes the worldwide most successful Sunny Central CP inverter family for PV. The central inverter for outdoor use is optimized for both full nominal power in continuous operation up to 40 °C and cold temperatures as low as -40 °C. The inverter includes all grid management functions and is prepared for Q at Night, including pure reactive power management. The customized computing platform allows optimal monitoring and control.

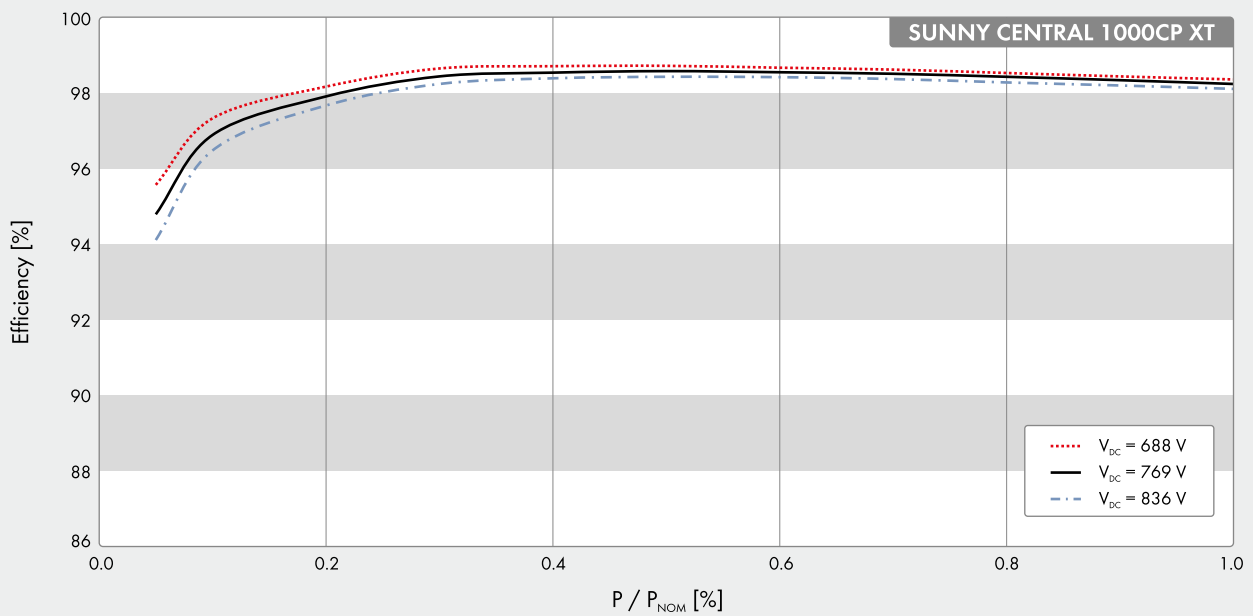
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Technical Data	Sunny Central 1000CP XT
Input (DC)	
Max. DC power (@ cos φ = 1)	1,122 kW
Max. input voltage	1,000 V
$V_{MPP_{min}}$ at $I_{MPP} < I_{DCmax}$	596 V
MPP voltage range (@ 25 °C / @ 40 °C / @ 50 °C) ^{1,2}	688 to 850 V ³ / 625 to 850 V ³ / 596 to 850 V ³
Rated input voltage	688 V
Max. input current	1,635 A
Max. DC short-circuit current	2,500 A
Number of independent MPP inputs	1
Number of DC inputs	9
Output (AC)	
AC power (@ 25 °C / @ 40 °C / @ 50 °C)	1,100 kVA / 1,000 kVA / 900 kVA
Nominal AC voltage / nominal AC voltage range	405 V / 365 V to 465 V
AC power frequency / range	50 Hz, 60 Hz / 47 Hz to 63 Hz
Rated power frequency / rated grid voltage	50 Hz / 405 V
Max. output current / max. total harmonic distortion	1,568 A / 0,03
Power factor at rated power / displacement power factor adjustable	1 / 0.9 overexcited to 0.9 underexcited
Feed-in phases / connection phases	3 / 3
Efficiency⁴	
Max. efficiency / European efficiency / CEC efficiency	98.7% / 98.4% / 98.5%
Protective devices	
Input-side disconnection device	Motor-driven load-break switch
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
Stand-alone grid detection active / passive	● / –
Grid monitoring	●
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)	2,562 / 2,272 / 956 mm (101 / 89 / 38 inches)
Weight	1900 kg / 4300 lb
Operating temperature range	–25 °C to 62 °C / –13 °F to 144 °F
Extended operating temperature range	○ (–40 °C to 62 °C / –40 °F to 144 °F)
Noise emission ⁵	68 db(A)
Max. self-consumption (operation) ⁶ / self-consumption (night)	1950 W / < 100 W
External auxiliary supply voltage	230 V / 400 V (3 / N / PE)
Cooling concept	OptiCool
Degree of protection: electronics / connection area (according to IEC 60529) / according to IEC 60721-3-4	IP54 / IP43 / 4C2, 4S2
Application in unprotected outdoor environments / indoor	● / ○
Maximum permissible value for relative humidity (non-condensing)	15% ... 95%
Maximum operating altitude above MSL 2,000 m / 4000 m	● / ○
Fresh air consumption (inverter)	3000 m ³ /h
Features	
DC connection / AC connection	Ring terminal lug / ring terminal lug
Display	HMI touch display
Communication / protocols	Ethernet (optical fiber optional), Modbus
DC current monitoring (Zone monitoring / String monitoring)	○ / ○
SC-COM / Plant monitoring	● / ○ (via Sunny Portal)
Color enclosure / door / base / roof	RAL 9016 / 9016 / 7004 / 7004
Guarantee: 5 / 10 / 15 / 20 / 25 years	● / ○ / ○ / ○ / ○
Configurable grid management functions	Power reduction, reactive power setpoint, dynamic grid support (e.g. LVRT)
Certificates and approvals (more available on request)	EN 61000-6-2, EN 61000-6-4, EMC-conformity, CE-conformity, BDEW-MSRL / FGW / TR8, Arrêté du 23/04/08, R.D. 1.663 / 2000, R.D. 661 / 2007, P.O. 12.3 / IEEE 1547 ⁷
● Standard features ○ Optional features – Not available	
Type designation	SC 1000CP-10

PLANT DIAGRAM



EFFICIENCY CURVE



- 1) At $1.05 U_{AC, nom}$ and $\cos \varphi = 1$
- 2) Further AC voltages, DC voltages and power classes can be configured (for more detailed information, see technical information at www.SMA.de)
- 3) up to 900 V on request
- 4) Efficiency measured without internal power supply
- 5) Sound pressure level at a distance of 10 m
- 6) Self-consumption at rated operation
- 7) Designed and type-tested in accordance with IEEE 1547, serial tests are possible on an optional basis

