



Profitable

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

Durable

- Optimized for extreme climatic conditions between $-40\text{ }^{\circ}\text{C}$ and $62\text{ }^{\circ}\text{C}$
- Active temperature 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 arrays

Versatile

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

SUNNY CENTRAL 990CP-KR

The extended CP: peak output up to 1 megawatt

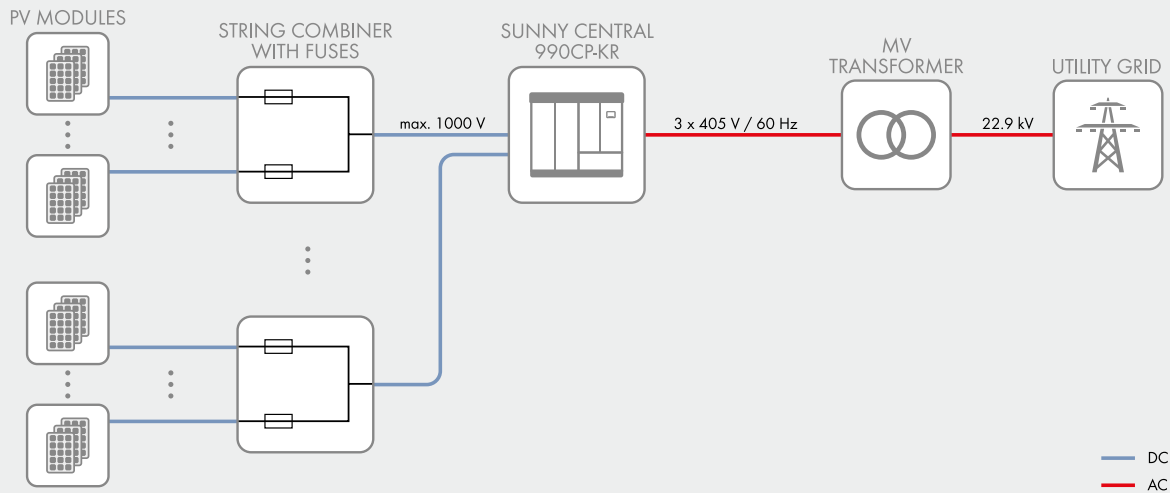
For even more power: With its extended functions, the new Sunny Central CP series is now even more powerful. The reduced specific price, meaning that maximum yields are achieved with lower system costs. The Sunny Central CP is also optimized for cold temperatures down to $-40\text{ }^{\circ}\text{C}$ and continuous operation up to $62\text{ }^{\circ}\text{C}$. The inverter includes all grid management functions and is prepared for Q at Night. The tailor-made computer platform allows for optimal monitoring and control.

SUNNY CENTRAL

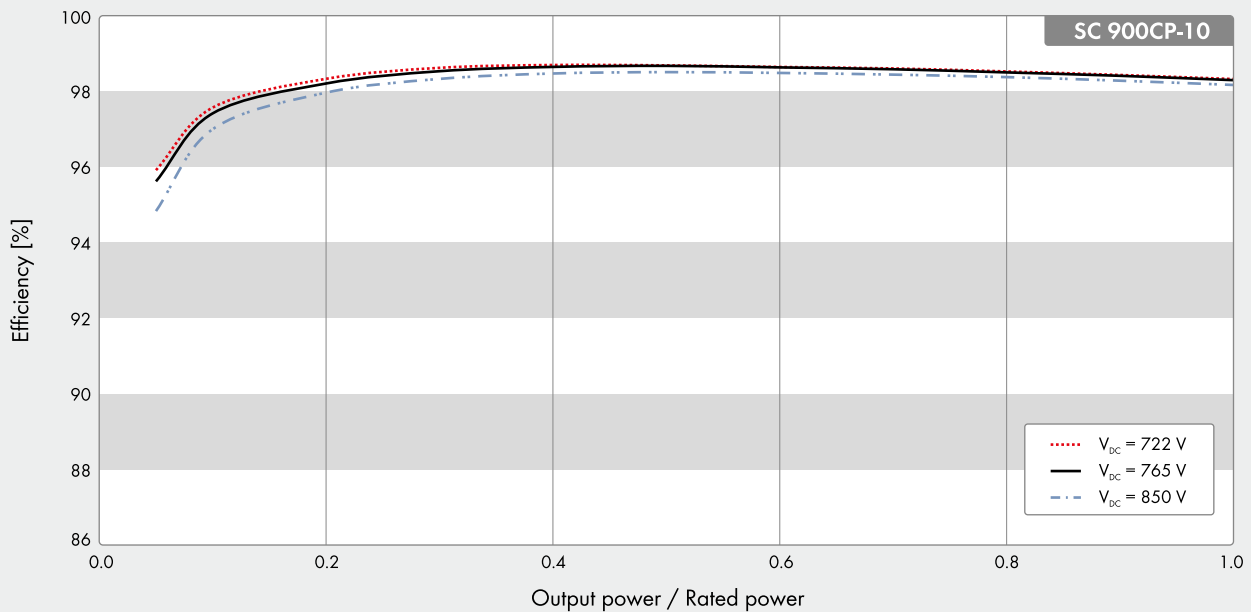
990CP-KR

Technical Data	Sunny Central 990CP-KR
Input (DC)	
Max. DC power (at $\cos \phi = 1$)	1010 kW
Max. input voltage	1000 V
$V_{MPP, min}$ at $I_{MPP} < I_{DC, max}$	596 V
MPP voltage range (at 25 °C / at 50 °C at 50 Hz) ^{1), 2)}	722 V to 850 V ³⁾ / 656 V to 850 V ³⁾
MPP voltage range (at 25 °C / at 50 °C at 60 Hz) ^{1), 2)}	722 V to 850 V ³⁾ / 656 V to 850 V ³⁾
Rated input voltage	722 V
Max. input current	1400 A
Max. DC short-circuit current	2500 A
Number of independent MPP inputs	1
Number of DC inputs	9
Output (AC)	
Rated power (at 25 °C)	990 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	1411 A / 0,03
Power factor at rated power / displacement power factor adjustable	1 / 0.9 leading to 0.9 lagging
Feed-in phases / connection phases	3 / 3
Efficiency⁴⁾	
Max. efficiency / European efficiency / CEC efficiency	98.6% / 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 / remote-controlled ground fault monitoring	○ / ○
Insulation monitoring	○
Surge arrester for auxiliary power supply	●
Protection class (according to IEC 62109-1) / overvoltage category (according to IEC 60664-1)	I / III
General data	
Dimensions (W / H / D)	2562 / 2272 / 956 mm (101 / 89 / 38 inches)
Weight in kg	1900 kg / 4200 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⁾	64 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% to 95%
Maximum operating altitude above MSL 2,000 m / 4,000 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, 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 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. 1663 / 2000, R.D. 661 / 2007, P.O. 12.3 / IEEE 1547 ⁷⁾
● Standard features ○ Optional features – Not available	
Type designation	SC 900CP-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 950 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 optional available

