Efficient

- More power per cubic meter
- Up to 4 inverters can be transported in one standard shipping container
- Over-dimensioning up to 150%

Robust

- Proven high-precision air-cooling system for intelligent, effective cooling
- Can be installed outdoors anywhere in the world in any ambient condition

Flexible

- Conforms to all known grid requirements worldwide
- Provides Q on demand
- Available as a stand-alone or turnkey solution with medium-voltage block

Easy to Use

- Improved DC connection area
- Bay for connecting customer equipment
- Integrated voltage supply for internal consumption and external loads

SUNNY CENTRAL 2200

The new Sunny Central: maximum power density and integration

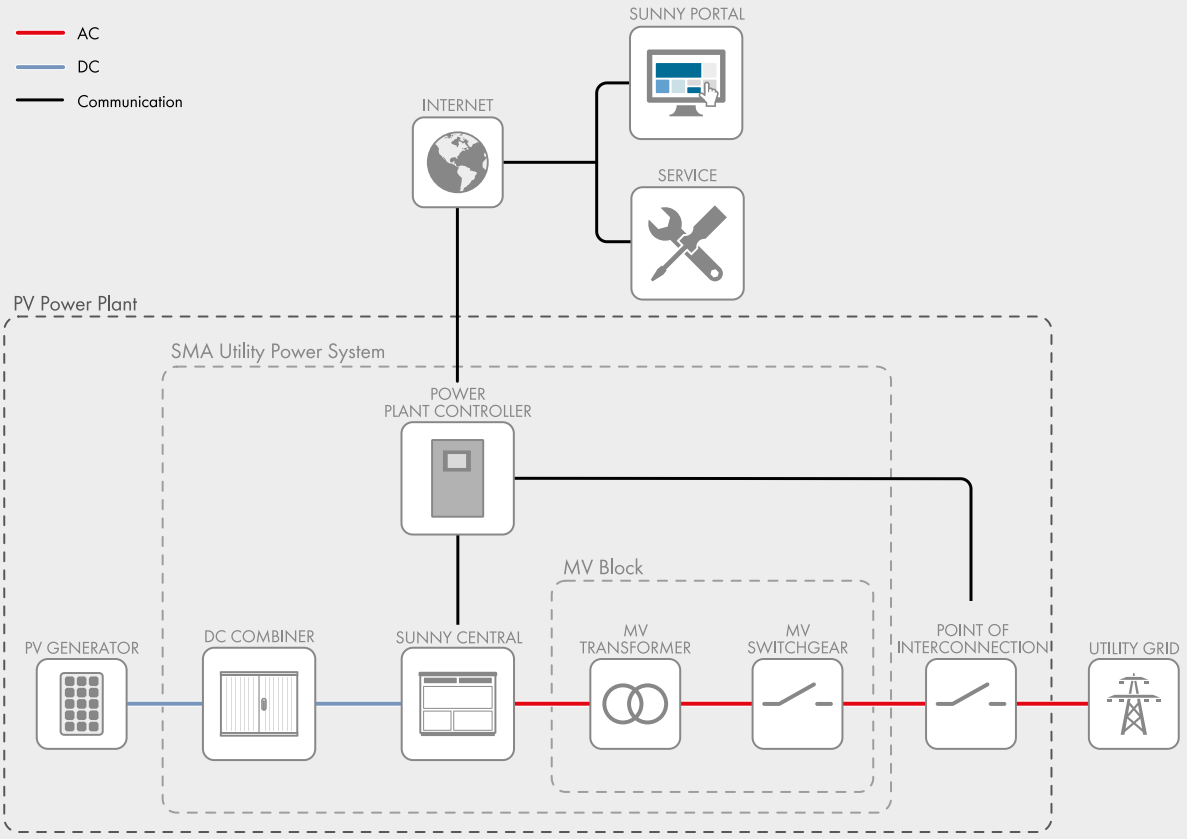
The Sunny Central 2200 inverter produces 2200 kVA from 1000 V DC and allows for more efficient system design as it now works with an even broader range of module types. It has an integrated transformer and additional space available for installation of customer equipment, and has been optimized for outdoor installation. The air cooling system OptiCool™ keeps this central inverter running smoothly, even in extreme ambient temperatures. Sand and dust particles are effectively kept away. The Sunny Central 2200 is the central component of SMA Utility Power Systems. In conjunction with the medium-voltage block, DC technology, power plant controlling system and SMA Service, it is also available as compact platform solution.

SUNNY CENTRAL 2200

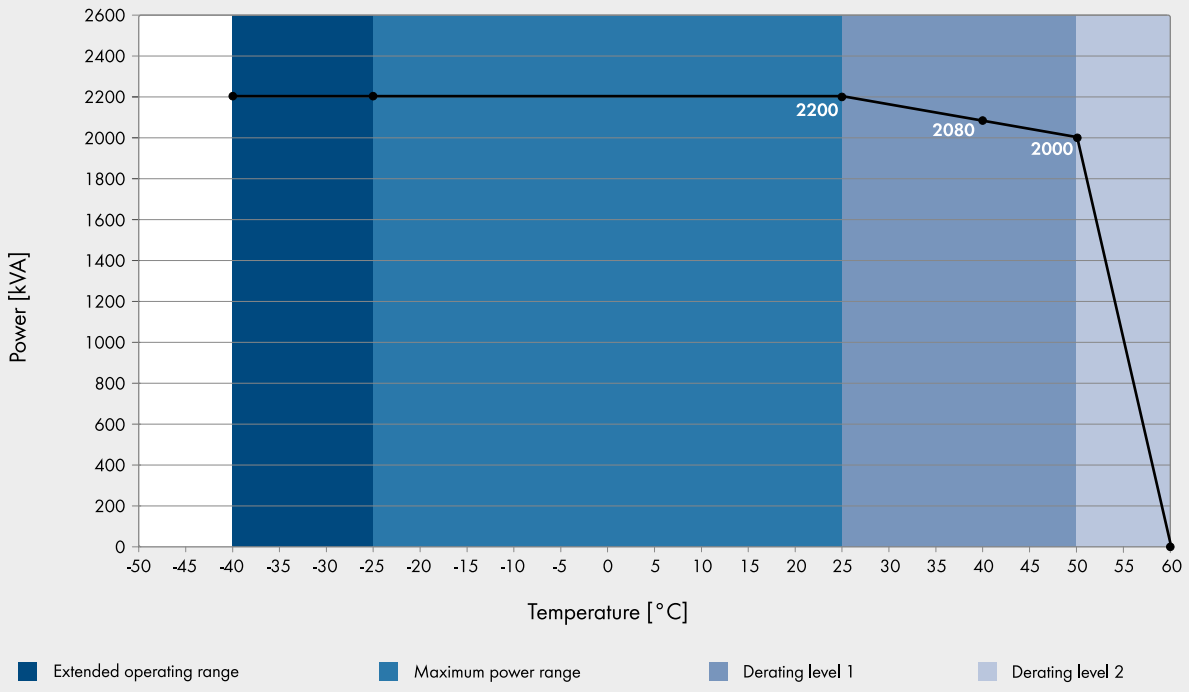
Technical Data	SC 2200
Input (DC)	
MPP voltage range V_{DC} (at 25 °C / at 50 °C)	570 to 950 V / 850 V
Min. input voltage $V_{DC, min}$ / Start voltage $V_{DC, Start}$	545 V / 645 V
Max. input voltage $V_{DC, max}$	1100 V
Max. input current $I_{DC, max}$ (at 25°C / at 50°C)	3960 A / 3600 A
Max. short-circuit current $I_{DC, sc}$	6400 A
Number of DC inputs	24
Max. number of DC cables per DC input (for each polarity)	2 x 800 kcmil, 2 x 400 mm²
Integrated zone monitoring (via shunt resistors)	○
Available DC fuse sizes (per input)	200 A, 250 A, 315 A, 350 A, 400 A, 450 A, 500 A
Output (AC)	
Nominal AC power at cos φ =1 (at 25°C / at 40°C / at 50°C)	2200 kVA / 2080 kVA / 2000 kVA
Nominal AC power at cos φ =0.8 (at 25°C / at 40°C / at 50°C)	1760 kW / 1664 kW / 1600 kW
Nominal AC current $I_{AC, nom}$ = Max. output current $I_{AC, max}$	3300 A
Max. total harmonic distortion	< 3% at nominal power
Nominal AC voltage / nominal AC voltage range[1]	385 V / 308 V to 462 V
AC power frequency / range	50 Hz / 47 Hz to 53 Hz 60 Hz / 57 Hz to 63 Hz
Min. short-circuit ratio at the AC terminals	> 2
Power factor at rated power / displacement power factor adjustable	1 / 0.8 overexcited to 0.8 underexcited
Efficiency	
Max. efficiency / European efficiency / CEC efficiency[2]	98.6% / 98.4% / 98.0%
Protective Devices	
Input-side disconnection point	DC load break switch
Output-side disconnection point	AC circuit breaker
DC overvoltage protection	Surge arrester, type I
AC overvoltage protection (optional)	Surge arrester, class I
Lightning protection (according to IEC 62305-1)	Lightning Protection Level III
Ground-fault monitoring / remote ground-fault monitoring	○ / ○
Insulation monitoring	○
Degree of protection: electronics / air duct / connection area (as per IEC 60529)	IP65 / IP34 / IP34
General Data	
Dimensions (W / H / D)	2780 / 2318 / 1588 mm (109.4 / 91.3 / 62.5 inch)
Weight	< 4000 kg / < 8819 lb
Self-consumption (max.[3] / partial load[4] / average[5])	< 8100 W / < 1800 W / < 2000 W
Self-consumption (standby)	< 300 W
Internal auxiliary power supply	Integrated 8.4 kVA transformer
Operating temperature range	−25°C to 60°C / −13°F to 140°F
Noise emission[6]	66.4 dB(A)
Temperature range (standby)	−40°C to 60°C / −40°F to 140°F
Temperature range (storage)	−40°C to 70°C / −40°F to 158°F
Max. permissible value for relative humidity (condensing / non-condensing)	95% to 100% (2 month/year) / 0% to 95%
Maximum operating altitude above MSL 2000 m / 3000 m / 4000 m	● / ○ / ○ (earlier temperature-dependent de-rating)
Fresh air consumption	6500 m³/h
Features	
DC connection	Terminal lug on each input (without fuse)
AC connection	With busbar system (three busbars, one per line conductor)
Communication	Ethernet, Modbus Master, Modbus Slave
Communication with SMA string monitor (transmission medium)	Modbus TCP / Ethernet (FO MM, Cat-5)
Enclosure / roof color	RAL 9016 / RAL 7004
Display	HMI touchscreen (10.1")
Supply transformer for external loads	○ (2.5 kVA)
Standards and directives complied with	CE, IEC / EN 62109-1, IEC / EN 62109-2, UL1741, BDEW-MSRL, IEEE1547, UL 1998, UL 840 Cat. IV, Arrêté du 23/04/08
EMC standards	IEC / EN 61000-6-4, IEC / EN 61000-6-2, EN 55022, CISPR 22:2008 modified class A, FCC Part 15 Class A
● Standard features ○ Optional	
Type designation	SC-2200-10

1) At nominal AC voltage < 385 V, nominal AC power decreases in the same proportion
2) Efficiency measured with internal power supply
3) Self-consumption at rated operation
4) Self-consumption at < 75% Pn at 25°C
5) Self-consumption averaged out from 5% to 100% Pn at 25°C
6) Sound pressure level at a distance of 10 m

SYSTEM DIAGRAM



TEMPERATURE BEHAVIOR SC 2200



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