
### Efficient

- More power per cubic meter
- Up to 4 inverters can be transported in one standard shipping container
- DC/AC Over-dimensioning up to 200%

### 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

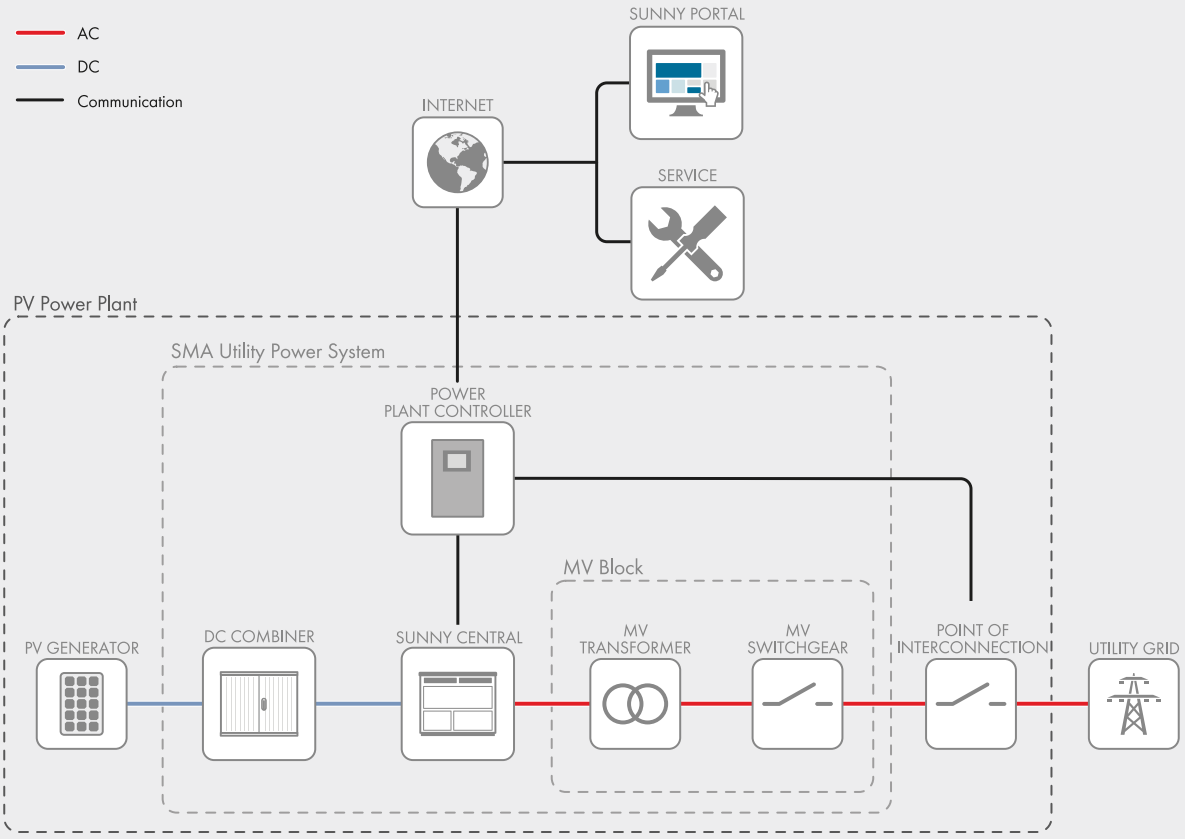
The Sunny Central 2200 inverter produces 2200 kVA from 1000 V DC and allows for more efficient system design as it now works with an even broader range of module types. It has an integrated transformer and additional space available for installation of customer equipment, and has been optimized for outdoor 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

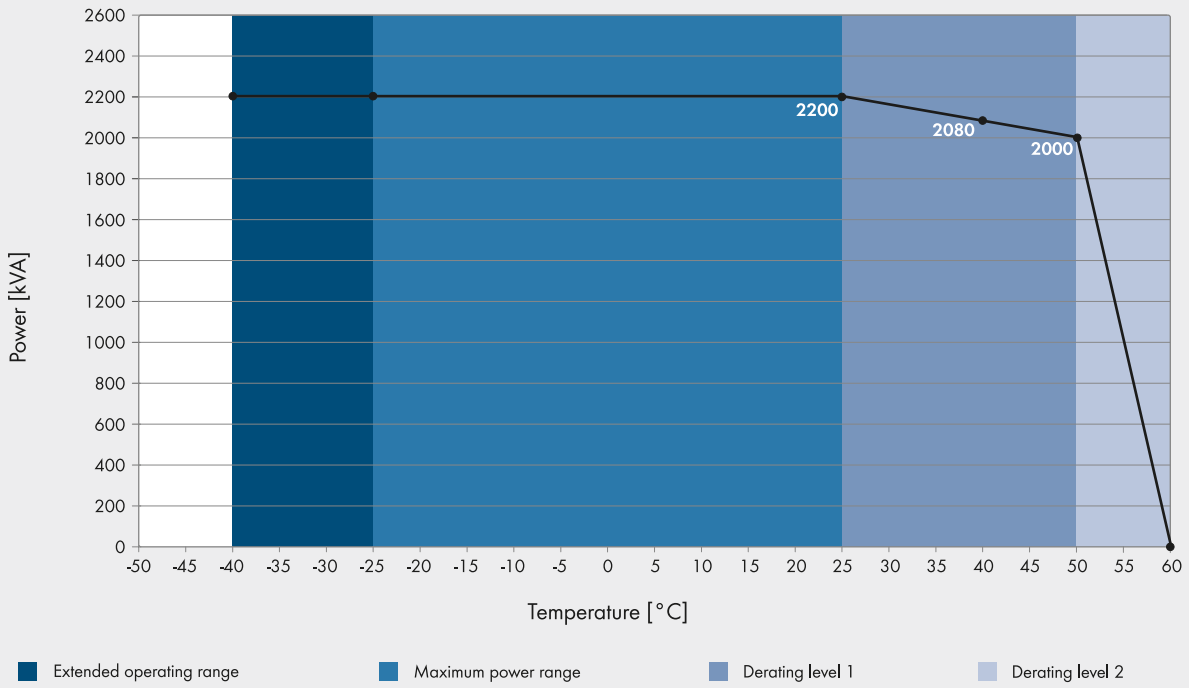
| Technical Data | SC 2200 |
|---|---|
| **Input (DC)** | |
| MPP voltage range $V_{DC}$ (at 25 °C / at 50 °C) | 570 to 950 V / 850 V |
| Min. input voltage $V_{DC, min}$ / Start voltage $V_{DC, Start}$ | 545 V / 645 V |
| Max. input voltage $V_{DC, max}$ | 1100 V |
| Max. input current $I_{DC, max}$ (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 | ○ |
| 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<br>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[7] | 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 | < 3400 kg / < 7496 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[7] | −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[7] 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
7) Values apply only to inverters. Permissible values for SMA MV solutions from SMA can be found in the corresponding data sheets.

## SYSTEM DIAGRAM




## TEMPERATURE BEHAVIOR SC 2200



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