



Economic

- More efficiency per cubic meter
- Economical transportation of as many as four inverters in a standard shipping container
- Capable of over dimensioning up to 150 %

Robust

- Proven and intelligent precision air-cooling technology
- Durably built for outdoor installation in harsh environmental conditions

Flexible

- Available as 1000 V and 1500 V version on one platform
- Fulfillment of all known worldwide grid codes
- Q on demand

Comfortable

- Improved DC connection area
- Area for customer installation equipment
- Integrated convenience power supply transformer

SUNNY CENTRAL 2200 / 2475

The new Sunny Central: maximum power density and integration

The Sunny Central inverter with 2475 kVA efficiency at 1500 Volt DC voltage and 2200 kVA at 1000 Volt DC voltage enables even more efficient PV power plant design. The deployment is possible with even more module types. The integrated power supply transformer and an installation area enable the ideal integration of customer equipment. The new Sunny Central is suitable for global outdoor installation with the proven air-cooling technology, OptiCool, ensuring smooth operation even under extreme environmental conditions because dust and sand particles are effectively kept off.

SUNNY CENTRAL 2200 / 2475

Technical Data	SC 2200
Input (DC)	
MPP voltage range V_{DC}	570 V to 1,000 V
Max. input voltage $V_{DC, max}$	1,000 V (1100 IEC)
Max. input current $I_{DC, max}$ (@ 25°C / @ 50°C)	4,110 A / 3,960 A
Max. short-circuit current per DC input $I_{SC, max}$	404 A
Max. MPP input current per DC input	409 A
Number of DC inputs	24
Max. number of DC cables per DC input (for each polarity)	2 x 800 kcmil, 2 x 400 mm ²
Integrated zone monitoring ($\pm 0.5\%$ shunt resistors)	○
Available DC fuse sizes (per input)	200 A, 250 A, 315 A, 350 A, 400 A, 450 A, 500 A, 630 A
Output (AC)	
Nominal AC power at $\cos \phi = 1$ (@ 25°C / @ 40°C / @ 50°C)	2,200 kVA / 2,080 kVA / 2,000 kVA
Nominal AC power at $\cos \phi = 0.9$ (@ 25°C / @ 40°C / @ 50°C)	1,980 kVA / 1,872 kVA / 1,800 kVA
Max. output current $I_{AC, max}$	3,528 A
Nominal AC current $I_{AC, nom}$	3,208 A
Max. total harmonic distortion	< 3% at nominal power
Nominal AC voltage / nominal AC voltage range	360 V / 324 V to 396 V
AC power frequency	50 Hz, 60 Hz
Power factor at rated power / displacement power factor adjustable	1 / 0.8 leading to 0.8 lagging
Efficiency ^{1,2}	
Max. efficiency / European weighted efficiency / CEC weighted efficiency	98.3% / 98.1% / 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 II
Ground-fault monitoring / remote ground-fault monitoring	○ / ○
Insulation monitoring	○
Degree of protection (as per IEC 60529)	IP54
Degree of protection (as per NEMA)	3R
General Data	
Dimensions (W / H / D)	2,761 mm / 2,300 mm / 1,668 mm (108.7 inch / 90.5 inch / 65.7 inch)
Weight	< 4,000 kg / < 8,819 lb
Max. self-consumption (operation) ³ / self-consumption (stand-by)	< 5,000 W / < 300 W
Internal auxiliary power supply	Integrated 5.6 kVA transformer
Operating temperature range	-25°C to 60°C / -13°F to 140°F
Extended operating temperature range	○ [-40°C to 60°C / -40°F to 140°F]
Temperature range (stand-by)	-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)	0% to 100%
Maximum operating altitude above MSL 2,000 m / 4,000 m	● / ○ (with power reduction)
Fresh air consumption	5,500 m ³ /h
Features	
DC connection	Terminal lug on each input or one busbar (without fuse)
AC connection	with busbar system (three busbars, one per line conductor)
Communication	Ethernet, Ethernet/IP, Modbus Master, Modbus Slave
Communication with SMA String-Monitor	Ethernet (optical fiber), Modbus
Enclosure / roof color	RAL 9016 / RAL 7004
Display	HMI touchscreen (10.1")
Convenience power supply transformer	○ (2.5 kVA)
Certificates and approvals	BDEW, EMC FCC Part 15 Class A, UL 1741, UL 1998, UL 840 Category IV, IEEE 1547, CE
<p>● Standard feature ○ Optional feature</p>	
Type designation	SC-2200-10

- 1) Preliminary values
- 2) Efficiency measured without internal power supply
- 3) Self-consumption at rated operation

Technical Data	SC 2475
Input (DC)	
MPP voltage range V_{DC}	840 V to 1,500 V
Max. input voltage $V_{DC, max}$	1,500 V
Max. input current $I_{DC, max}$ (@ 25 °C / @ 50 °C)	3,000 A / 3,000 A
Max. short-circuit current per DC input $I_{SC, max}$	288 A
Max. MPP input current per DC input	292 A
Number of DC inputs	24
Max. number of DC cables per DC input (for each polarity)	2 x 800 kcmil, 2 x 400 mm ²
Integrated zone monitoring ($\pm 0.5\%$ shunt resistors)	○
Available DC fuse sizes (per input)	200 A, 250 A, 315 A, 350 A, 400 A, 450 A
Output (AC)	
Nominal AC power at $\cos \phi = 1$ (@ 25 °C / @ 40 °C / @ 50 °C)	2,475 kVA / 2,340 kVA / 2,250 kVA
Nominal AC power at $\cos \phi = 0.9$ (@ 25 °C / @ 40 °C / @ 50 °C)	2,227 kVA / 2,106 kVA / 2,025 kVA
Max. output current $I_{AC, max}$	2,645 A
Nominal AC current $I_{AC, nom}$	2,406 A
Max. total harmonic distortion	< 3% at nominal power
Nominal AC voltage / nominal AC voltage range	540 V / 486 V to 594 V
AC power frequency	50 Hz, 60 Hz
Power factor at rated power/displacement power factor adjustable	1 / 0.8 leading to 0.8 lagging
Efficiency ^{1,2}	
Max. efficiency / European weighted efficiency / CEC weighted efficiency	98.4% / 98.1% / 98.2%
Protective Devices	
Input-side disconnection point	DC load-break switch
Output-side disconnection point	AC circuit breaker
DC overvoltage protection	Surge arrester, type II
Ground-fault monitoring / remote ground-fault monitoring	○ / ○
Insulation monitoring	○
Degree of protection (as per IEC 60529)	IP54
Degree of protection (as per NEMA)	3R
General Data	
Dimensions (W / H / D)	2,761 mm / 2,300 mm / 1,668 mm (108.7 inch / 90.5 inch / 65.7 inch)
Weight	< 4,000 kg / < 8,819 lb
Max. self-consumption (operation) ³ / self-consumption (stand-by)	< 5,000 W / < 300 W
Internal auxiliary power supply	Integrated 5.6 kVA transformer
Operating temperature range	-25 °C to 60 °C / -13 °F to 140 °F
Extended operating temperature range	○ [-40 °C to 60 °C / -40 °F to 140 °F]
Temperature range (stand-by)	-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)	0% to 100%
Maximum operating altitude above MSL 2,000 m / 4,000 m	● / ○ (with power reduction)
Fresh air consumption	5,500 m ³ /h
Features	
DC connection	Terminal lug on each input or one busbar (without fuse)
AC connection	with busbar system (three busbars, one per line conductor)
Communication	Ethernet, Ethernet/IP, Modbus Master, Modbus Slave
Communication with SMA String-Monitor	Ethernet (optical fiber), Modbus
Enclosure / roof color	RAL 9016 / RAL 7004
Display	HMI touchscreen (10.1")
Convenience power supply transformer	○ (2.5 kVA)
Certificates and approvals	BDEW, EMC FCC Part 15 Class A, IEEE 1547, CE, UL 840 Category IV
● Standard feature ○ Optional feature	
Type designation	SC-2475-EV-10

PLANT DIAGRAM

- AC
- DC
- Communication

