

PRELIMINARY

SUNNY CENTRAL 2750 UP-US



Efficient

- Up to 4 inverters can be transported in one standard shipping container
- Overdimensioning up to 150% is possible
- Full power at ambient temperatures of up to 25°C

Robust

- Intelligent air cooling system OptiCool for efficient cooling
- Suitable for outdoor use in all climatic ambient conditions worldwide

Flexible

- Conforms to all known grid requirements worldwide
- Q on demand
- Available as a single device or turn-key solution, including medium-voltage block

Easy to Use

- Improved DC connection area
- Connection area for customer equipment
- Integrated voltage support for internal and external loads

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The new Sunny Central: more power per cubic meter

With an output of up to 2750 kVA and system voltages of 1500 V DC, the SMA central inverter allows for more efficient system design and a reduction in specific costs for PV power plants. A separate voltage supply and additional space are available for the installation of customer equipment. True 1500 V technology and the intelligent cooling system OptiCool ensure smooth operation even in extreme ambient temperature as well as a long service life of 25 years.

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Technical data*	SC 2750 UP-US
Input (DC)	
MPP voltage range V_{DC} (at 25 °C / at 50 °C)	921 to 1325 V / 1100 V
Min. input voltage $V_{DC, min}$ / Start voltage $V_{DC, Start}$	891 V / 1071 V
Max. input voltage $V_{DC, max}$	1500 V
Max. input current $I_{DC, max}$	3110 A
Max. short-circuit current $I_{DC, sc}$	6400 A
Number of DC inputs	24 double pole fused (32 single pole fused)
Max. number of DC cables per DC input (for each polarity)	2 x 800 kcmil, 2 x 400 mm ²
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 $\cos \phi = 1$ (at 25 °C / at 50 °C)	2750 kVA / 2500 kVA
Nominal AC power at $\cos \phi = 0.8$ (at 25 °C / at 50 °C)	2200 kW / 2000 kW
Nominal AC current $I_{AC, nom}$ (at 25 °C / at 50 °C)	2520 A / 2268 A
Max. total harmonic distortion	< 3% at nominal power
Nominal AC voltage / nominal AC voltage range ^{1) 8)}	630 V / 504 V to 756 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 ⁹⁾	> 2
Power factor at rated power / displacement power factor adjustable ^{8) 10)}	1 / 0.8 overexcited to 0.8 underexcited
Efficiency	
Max. efficiency ²⁾ / European efficiency ²⁾ / CEC efficiency ³⁾	98.7%* / 98.6%* / 98.5%*
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	NEMA 3R
General Data	
Dimensions (W / H / D)	2780 / 2318 / 1588 mm (109.4 / 91.3 / 62.5 inch)
Weight	< 4000 kg / < 8818.5 lb
Self-consumption (max. ⁴⁾ / partial load ⁵⁾ / average ⁶⁾	< 8100 W / < 1800 W / < 2000 W
Self-consumption (standby)	< 370 W
Internal auxiliary power supply	○ Integrated 8.4 kVA transformer
Operating temperature range ⁸⁾	-25 °C to 60 °C / -13 °F to 140 °F
Noise emission ⁷⁾	67.0 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 ⁸⁾ 1000 m / 2000 m / 3000 m	● / ○ / ○ (earlier temperature-dependent derating)
Fresh air consumption	6500 m ³ /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
Supply transformer for external loads	○ (2.5 kVA)
Standards and directives complied with	UL 62109-1, UL 1741 (Chapter 31, CDR 61), UL 1741-SA, UL 1998, IEEE 1547, MIL-STD-810G
EMC standards	FCC Part 15 Class A
Quality standards and directives complied with	VDI/VDE 2862 page 2, DIN EN ISO 9001
● Standard features ○ Optional * preliminary	

1) At nominal AC voltage, nominal AC power decreases in the same proportion

2) Efficiency measured without internal power supply

3) Efficiency measured with internal power supply

4) Self-consumption at rated operation

5) Self-consumption at < 75% P_n at 25 °C

6) Self-consumption averaged out from 5% to 100% P_n at 25 °C

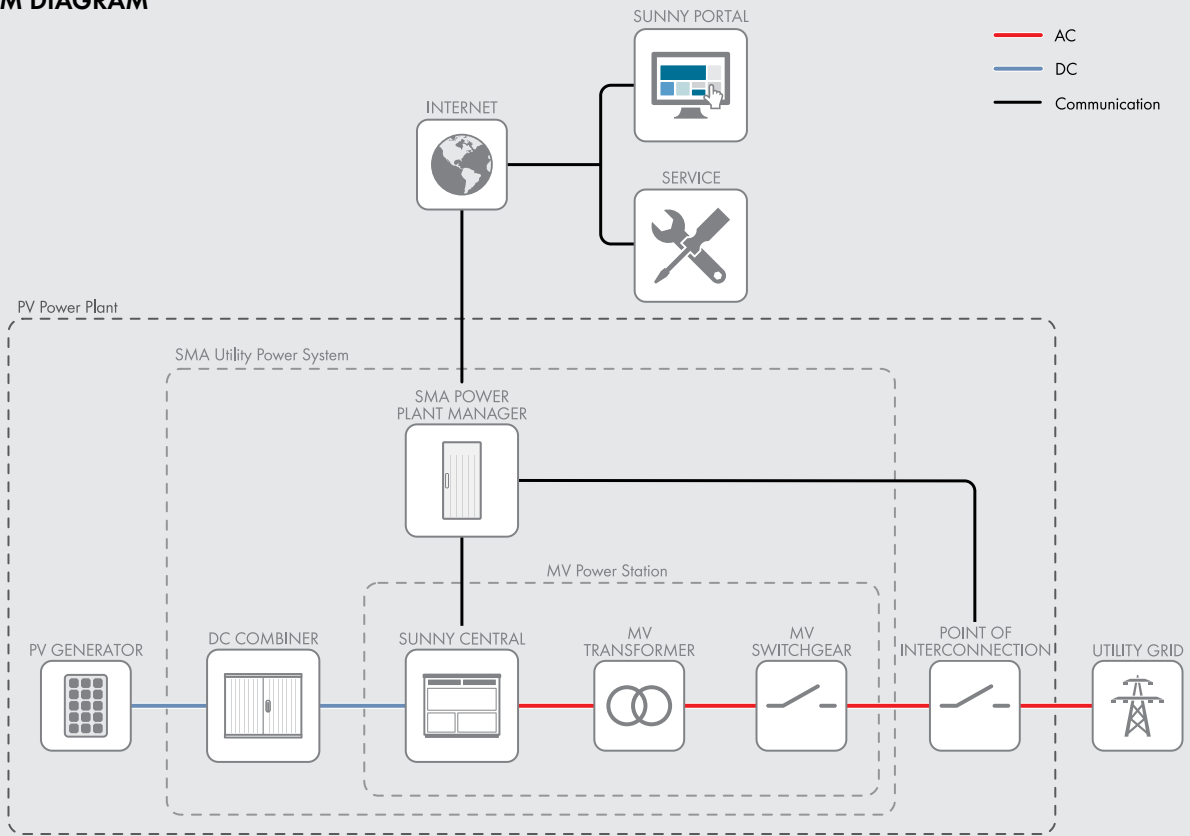
7) Sound pressure level at a distance of 10 m

8) Values apply only to inverters. Permissible values for SMA MV solutions from SMA can be found in the corresponding data sheets.

9) A short-circuit ratio of < 2 requires a special approval from SMA

10) Depending on the DC voltage

SYSTEM DIAGRAM





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