



SUNNY CENTRAL 250-US / 500-US

SC 250U / SC 500U



Efficient

- 97% CEC weighted efficiency
- Direct connection to the 480 V grid
- Suitable for ambient temperatures of up to 60 °C (140 °F)

Reliable

- Integrated isolation transformer
- Suitable for indoor or outdoor use
- Integrated data logger
- Simple remote query and maintenance

Strong Peripherals

- AC/DC disconnect unit
- Optional combiner boxes
- Sunny Central String-Monitor-US

UL Certified

- UL 1741 / IEEE-1547 compliant

SUNNY CENTRAL 250-US / 500-US

Perfect for commercial systems in North America

The Sunny Central 250-US and 500-US solar inverters are ideally suited for commercial projects in North America. The integrated transformer makes direct connection with the low-voltage grid possible and, thanks to the outdoor-rated enclosure and OptiCool™ temperature management system, the units can be installed practically anywhere. The CEC efficiency of 97 percent is remarkable for transformer based inverters. Monitoring and remote maintenance is performed via the integrated data logger, which is accessible through RS485, Ethernet or OPC interfaces.

Technical data	Sunny Central 250-US	Sunny Central 500-US
Input data		
Max. DC power	285 kWp ¹⁾	570 kWp ¹⁾
MPP voltage range	330 V - 600 V	330 V - 600 V
Max. DC voltage	600 V	600 V
Feed starting at [U]/[P]	380 V / 5000 W	380 V / 5000 W
Max. DC current	800 A	1600 A
Number of DC inputs	4 - 6	6 - 9
Output data		
Nominal AC power	250 kVA @ 45 °C (113 °F)	500 kVA @ 45 °C (113 °F)
Max. AC current	300 A @ 480 V	600 A @ 480 V
AC grid frequency	60 Hz	60 Hz
AC voltage range	422 V - 528 V	422 V - 528 V
AC voltage range, full active power	480 V - 514 V	480 V - 514 V
Power factor (cos φ)	> 0.99	> 0.99
Max. THD	< 3%	< 3%
Efficiency ²⁾		
Max. efficiency	97.5%	97.4%
CEC efficiency	97%	97%
Euro-eta	96.6%	96.9%
Ambient conditions		
Operating temperature range	-25 °C ... +50 °C (-13 °F ... +122 °F)	-25 °C ... +50 °C (-13 °F ... +122 °F)
Max. temperature for nominal conditions	+45 °C (+113 °F)	+45 °C (+113 °F)
Protection rating	NEMA 3R	NEMA 3R
Installation indoors / outdoors	●/●	●/●
Rel. humidity	15% ... 95%	15% ... 95%
Fresh air consumption	4000 m ³ /h	6000 m ³ /h
Internal consumption at nominal power	< 800 W	< 1500 W
Standby consumption (P _{night})	< 69 W	< 80 W
Dimensions and weight		
Height	2027 mm (80 in)	2027 mm (80 in)
Width	2786 mm (110 in)	3536 mm (140 in)
Depth	830 mm (33 in)	930 mm (37 in)
Weight	< 1900 kg (4189 lb)	< 3250 kg (7165 lb)
Certificates / listings		
Certificates	UL 1741, UL 1998, IEEE 1547	UL 1741, UL 1998, IEEE 1547
EMC conformity	FCC, Part 15, Class A	FCC, Part 15, Class A
Interfaces		
RS485 / Ethernet / Analog	○/○/○	○/○/○
Display: text line / graphic	●/-	●/-
Communication protocols	Modbus / TCP	Modbus / TCP
SSM-US connection	RS485	RS485
Plant monitoring	Sunny Portal	Sunny Portal
● Standard features ○ Optional features - Not available Type designation		
	SC 250U	SC 500U

1) Specifications apply to irradiation values below STC

2) Measured without an internal power supply at U_{DC} = 325 V (SC 250-US) or 330 V (SC 500-US)

