SUNNY CENTRAL 500HE-US





High Yields

- 98% CEC efficiency
- Suitable for ambient temperatures of up to 60 °C (140 °F)
- OptiCoolTM intelligent temperature management

Low System Costs

- Outdoor-rated enclosure
- Couples to medium-voltage external transformer
- Available as integrated solution

Strong Peripherals

- Optional DC & AC disconnects
- Optional combiner boxes with string monitoring
- Sunny WebBox, Modbus® & OPC compatible

UL Certified

• UL 1741 / IEEE-1547 compliant

SUNNY CENTRAL 500HE-US

The ideal solution for large-scale North American solar power plants

The Sunny Central 500HE-US couples to an external medium-voltage transformer to accommodate long distance power feeds to distribution substations and delivers the highest efficiency available for large PV inverters. An updated user interface features a large LCD that provides a graphical view of the daily plant production as well as the status of the inverter and the utility grid. Flexible plant monitoring is available through various communications solutions such as Ethernet, Modbus, RS485 and OPC. Designed for easy installation, operation and performance monitoring, the UL-certified Sunny Central 500HE-US is the ideal choice for large-scale PV projects.

Technical data	Sunny Central 500HE-US
Input data	
Max. DC power	565 kWp ¹⁾
MPP voltage range	330 V - 600 V
Max. DC voltage	600 V
Feed starting at [U] / [P]	380 V / 5000 W
Max. DC current	1600 A
Number of DC inputs	6 - 9
Output data	
Nominal AC power	500 kVA @ 45 °C (113 °F)
Max. AC current	1470 A @ 200 V
AC grid frequency	60 Hz
AC voltage range	180 V - 220 V
AC voltage range, full active power	196 V - 210 V
Power factor (cos φ)	> 0.99
Max. THD	< 5%
Efficiency 2)	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \
Max. efficiency	98.6%
CEC efficiency	98.0%
,	97.9%
Euro-eta	97.9%
Ambient conditions	-25 °C +60 °C (-13 °F +140 °F)
Operating temperature range	·
Max. temperature for nominal conditions	+45 °C (+113 °F)
Protection rating	NEMA 3R
Installation indoors / outdoors	•/• 150/ 050/
Rel. humidity	15% 95%
Fresh air consumption	3000 m³/h
Internal consumption at nominal power	< 1600 W
Standby consumption (P _{night})	< 110 W
Dimensions and weight	
Height	2277 mm (90 in)
Width	2562 mm (101 in)
Depth	956 mm (38 in)
Weight	< 1800 kg (3970 lb)
Certificates / listings	
Certificates	UL 1741, UL 1998, IEEE 1547
EMC conformity	FCC, Part 15, Class A
Interfaces	
RS485 / Ethernet / analog	0/0/0
Display: text line / graphic	-/●
Communication protocols	Modbus / TCP
SSM-US connection	RS485
Plant monitoring	Sunny Portal
● Standard features ○ Optional features ─ Not available	
Type designation	SC 500HE-US

- 1) Specifications apply to irradiation values below STC 2) Measured without an internal power supply at U_{DC} = 330 V



