

**Safe**

- > Motorized circuit breaker on the DC side
- > Overvoltage protection on the DC and AC side

**Communicative**

- > Simple remote querying using remote access is possible
- > Error and status messages can be sent via e-mail or SMS

**Optional**

- > String current monitoring
- > Yield increases using Sunny Team
- > Power factor compensation
- > Extended DC input voltage range up to 1000 V



# SUNNY CENTRAL

The specialist for ground-mounted or large roof PV systems

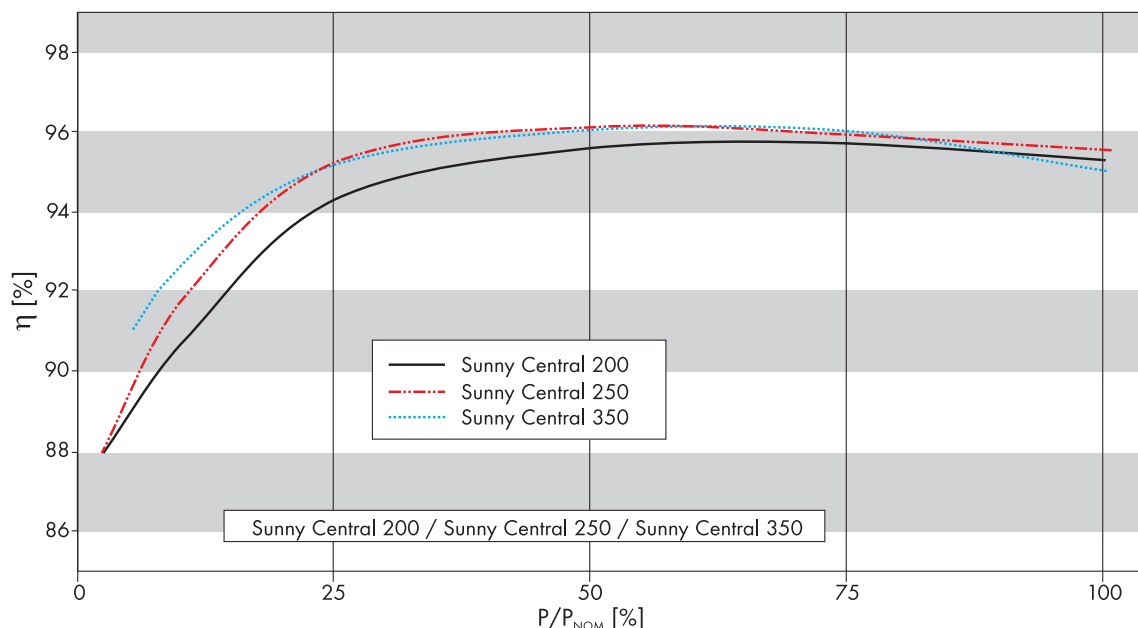
First choice for the usage in medium sized and large scale PV power plants: especially in large ground mounted systems or very large roof systems with homogeneous structure the Sunny Centrals 200, 250 and 350 allow very good power yields. The different power classes let the operator select the optimal inverter for his system. The Sunny Centrals 200 to 350 are equipped with 5, 8 or 12 input ports with fuses for the connection of the DC distribution boxes. On the AC side several Sunny central can be connected in parallel. This makes output powers in the megawatt range possible.

# Technical Data

## SUNNY CENTRAL 200 / 250 / 350

	SC200	SC250	SC350
<b>Input data</b>			
Max. PV power (recommended), ( $P_{PV}$ )	235 kWp <sup>1)</sup>	295 kWp <sup>1)</sup>	410 kWp <sup>1)</sup>
DC voltage range, MPPT ( $U_{DC}$ )	450 V – 820 V	450 V – 820 V	450 V – 820 V
Max. permissible DC voltage ( $U_{DC, max}$ )	880 V	880 V	880 V
Max. permissible DC voltage ( $U_{DC, EVR}$ )	1000 V (optional)	1000 V (optional)	1000 V (optional)
Max. permissible DC current Max. ( $I_{DC, max}$ )	472 A	591 A	800 A
Number of DC inputs / terminal	5 / DC fuse	8 / DC fuse	12 / DC fuse
<b>Output data</b>			
Nominal AC output power ( $P_{AC}$ )	200 kW	250 kW	350 kW
Operating grid voltage +/- 10 % ( $U_{AC}$ )	400 V	400 V	400 V
Nominal AC current ( $I_{AC, nom}$ )	289 A	361 A	505 A
Grid structure	TT, TN-S, TN-C grid	TT, TN-S, TN-C grid	TT, TN-S, TN-C grid
Operating range, grid frequency ( $f_{AC}$ )	50 Hz – 60 Hz	50 Hz – 60 Hz	50 Hz – 60 Hz
Voltage ripple, PV voltage ( $U_{pp}$ )	< 3 %	< 3 %	< 3 %
Harmonic distortion of grid current ( $K_{IAC}$ )	< 3 % at nominal power	< 3 % at nominal power	< 3 % at nominal power
Power factor ( $\cos \phi$ )	$\geq 0.99$ at nominal power	$\geq 0.99$ at nominal power	$\geq 0.99$ at nominal power
<b>Efficiency <sup>2)</sup></b>			
Max. efficiency $P_{AC, max}$ ( $\eta$ )	95.7 %	96.1 %	96.0 %
Euroeta ( $\eta$ )	94.5 %	95.2 %	95.2 %
<b>Dimensions and weight</b>			
Width / Height / Depth in mm (W / H / D) <sup>4)</sup>	800 + 1200 / 2120 / 850	1200 + 1200 / 2120 / 850	1600 + 1200 / 2120 / 850
Weight approx. (m)	1600 kg	2060 kg	2800 kg
<b>Power consumption</b>			
Own consumption in operation ( $P_{day}$ )	< 1 % of $P_{AC, nom}$	< 1 % of $P_{AC, nom}$	< 1 % of $P_{AC, nom}$
Standby operating consumption ( $P_{night}$ )	< approx. 50 W	< approx. 50 W	< approx. 50 W
External auxiliary voltage / grid structure	230 V, 50 / 60 Hz / TN-S-grid	3 x 400 V, 50 / 60 Hz / TN-S-grid	3 x 400 V, 50 / 60 Hz / TN-S-grid
External back-up fuse for auxiliary supply	B 20 A, 1-pole	B 20 A, 3-pole	B 20 A, 3-pole
<b>SCC (Sunny Central Control) interfaces</b>			
Communication (NET Piggy Back, optional)	Analog, ISDN, Ethernet, GSM	Analog, ISDN, Ethernet, GSM	Analog, ISDN, Ethernet, GSM
Analog inputs	1 x PT 100, 2 x $A_{in}$ <sup>3)</sup>	1 x PT 100, 2 x $A_{in}$ <sup>3)</sup>	1 x PT 100, 2 x $A_{in}$ <sup>3)</sup>
Overvoltage protection for analog inputs	Optional	Optional	Optional
Sunny String Monitor interface (COM1)	RS485	RS485	RS485
PC interface (COM3)	RS232	RS232	RS232
Electrically separated relay (ext. signal)	1	1	1

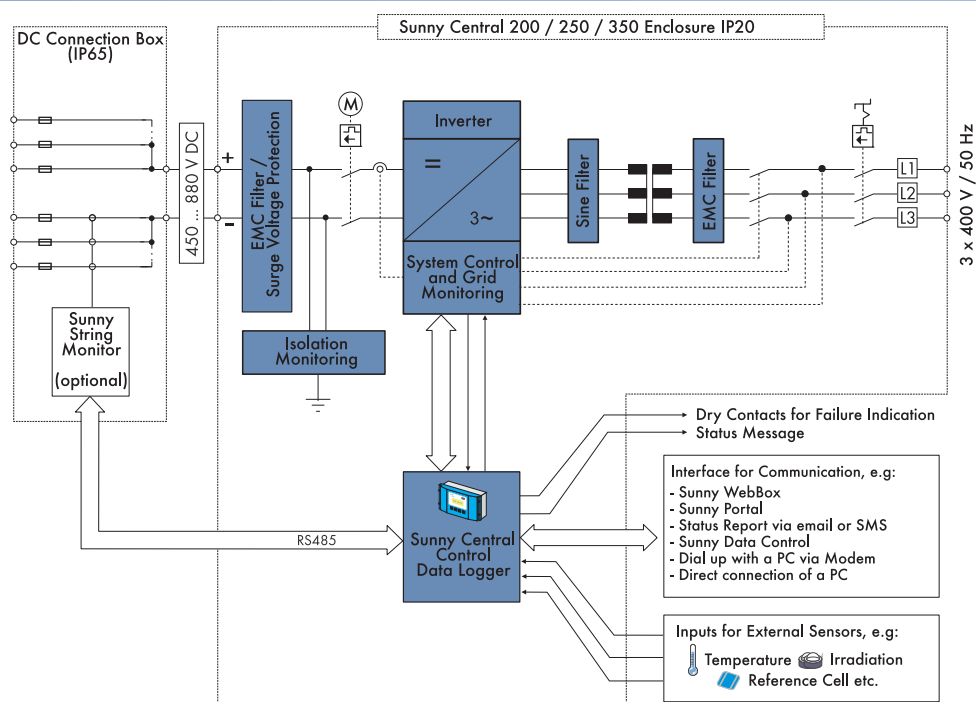
Efficiency curve



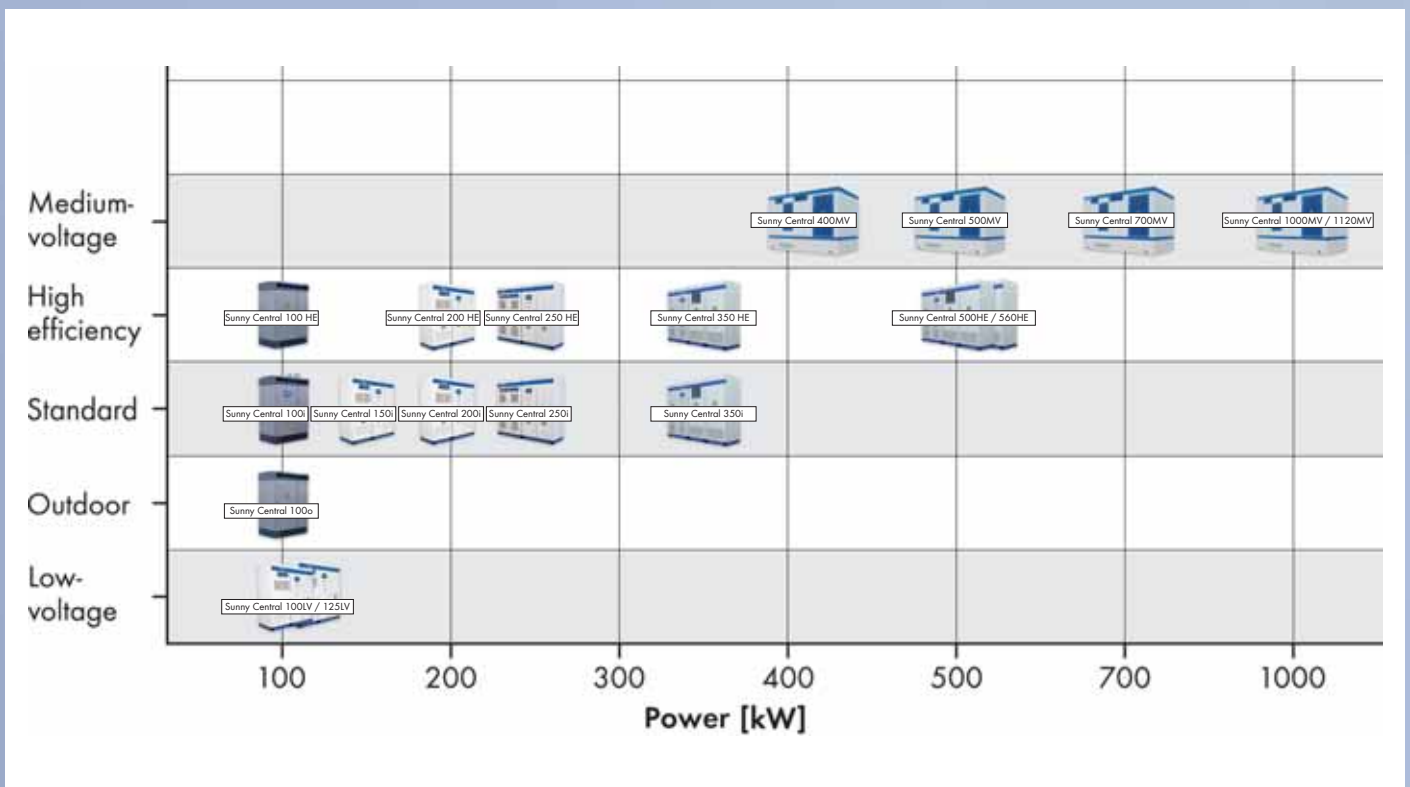
	SC200	SC250	SC350
<b>Features</b>			
Display (SCC)	Yes	Yes	Yes
Ground fault monitoring	Yes	Yes	Yes
Heating	Yes	Yes	Yes
Emergency stop	Yes	Yes	Yes
Power switch AC side	Yes	Yes	Yes
Power switch DC side	motor-driven	motor-driven	motor-driven
Monitored overvoltage protectors AC	Yes (not for TT-grid)	Yes (not for TT-grid)	Yes (not for TT-grid)
Monitored overvoltage protectors DC	Yes	Yes	Yes
Monitored overvoltage protectors	Yes (not for TT-grid)	Yes (not for TT-grid)	Yes (not for TT-grid)
Auxiliary supply			
<b>Standards</b>			
EMC	EN 61000-6-2, EN 61000-6-4	EN 61000-6-2, EN 61000-6-4	EN 61000-6-2, EN 61000-6-4
Grid monitoring	as per VDEW regulations	as per VDEW regulations	as per VDEW regulations
CE conformity	Yes	Yes	Yes
<b>Protection rating and ambient conditions</b>			
Protection rating as per EN 60529	IP20	IP20	IP20
Protection rating per EN 60721-3-3, Ambient Conditions: fixed location, with protection against wind and weather.	Classification of • chemically active substances: 3C1L • mechanically active substances: 3S2	Classification of • chemically active substances: 3C1L • mechanically active substances: 3S2	Classification of • chemically active substances: 3C1L • mechanically active substances: 3S2
Permissible ambient temperature (T)	-20 °C ... +40 °C	-20 °C ... +40 °C	-20 °C ... +40 °C
Relative humidity, not condensing (U <sub>AIR</sub> )	15 % ... 95 %	15 % ... 95 %	15 % ... 95 %
Max. altitude (above sea level)	1000 m	1000 m	1000 m
Fresh air consumption (V <sub>AIR</sub> )	3300 m <sup>3</sup> /h	4200 m <sup>3</sup> /h	6500 m <sup>3</sup> /h

- 1) Specifications apply to irradiation values = 1,000 (kWh/(kWp x year))
- 2) Efficiency measured without an internal power supply at U<sub>DC</sub> = 600 V, SC 250 at U<sub>DC</sub> = 500 V
- 3) Terminal for an analog sensor provided by the customer in two-wire and four-wire version
- 4) The EVR option increases the cabinet size by 210 mm

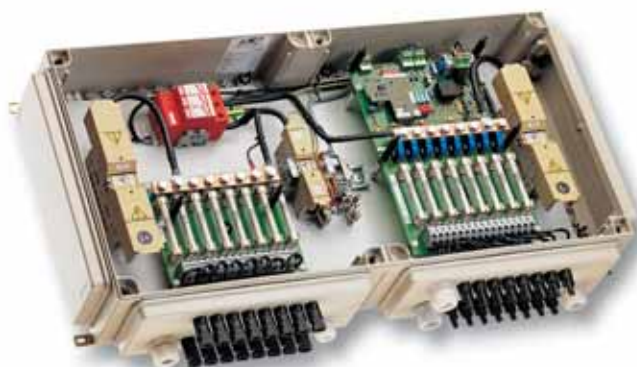
**Please also read:** Transport instructions for Sunny Central and the Sunny Central installation guide



# SUNNY CENTRAL Product Overview



## Accessories



Sunny String Monitor

