

# SUNNY CENTRAL 1000CP-JP

SC 1000CP-JP-10



## Outdoor

- Compact and weatherproof enclosure for outdoor installation
- OptiCool™ cooling system for ambient temperatures of up to 62 °C

## Efficient

- Peak efficiency of 98.6 %
- Higher profit thanks to low self-consumption

## Durable

- Resistant to salt corrosion
- Resists sand and dust
- Suitable for all climate zones

## Reliable

- High operational safety and easy to maintain
- Powerful grid management functions (including FRT)

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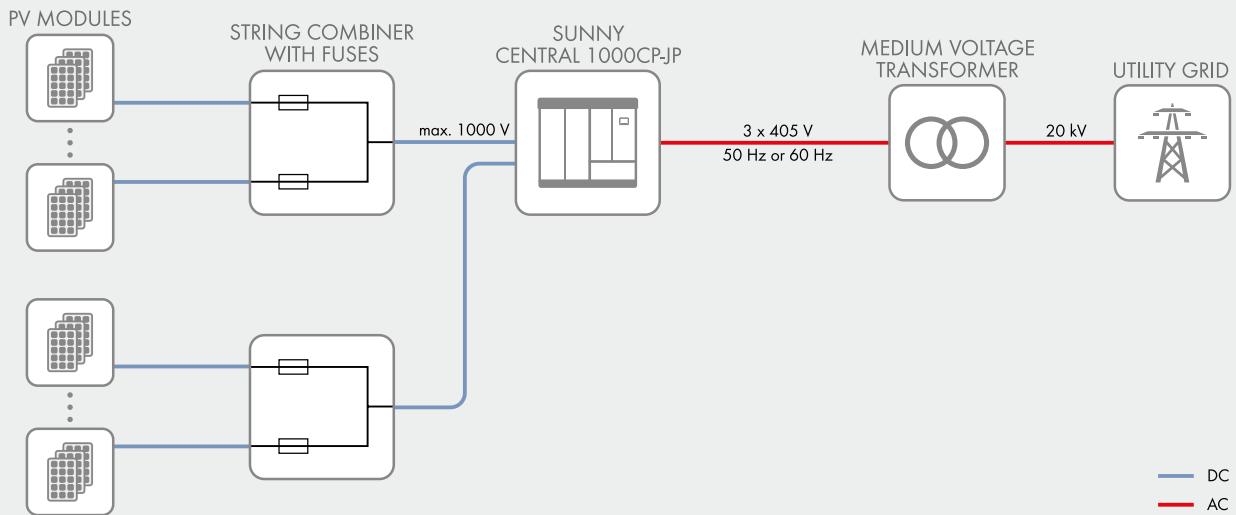
The perfect solution for PV power plants in Japan

The durable and high-performance Sunny Central 1000CP-JP guarantees maximum yields in all climate zones. This has been clearly demonstrated in numerous stress tests. With the integrated OptiCool™ cooling system, the Sunny Central 1000CP-JP can continue to feed solar power into the power distribution grid even at ambient temperatures up to 62 °C. The compact and durable enclosure for the equipment allows easy and uncomplicated outdoor installation – without complex enclosures and external cooling systems. This significantly reduces costs and self-consumption. With its comprehensive grid management functions, the Sunny Central 1000CP-JP already fulfills future requirements for grid operators.

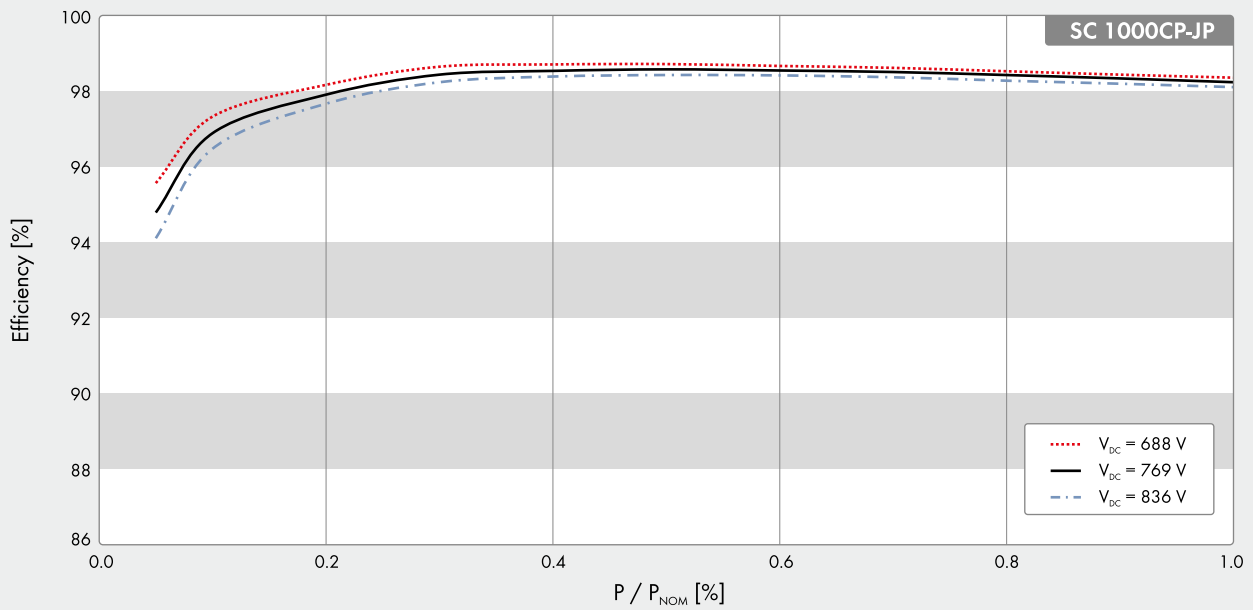
# SUNNY CENTRAL 1000CP-JP

| Technical Data  | Sunny Central 1000CP-JP*  |
|---|---|
| <b>Input (DC)</b>   |   |
| Max. convertible DC power (at $\cos \varphi = 1$ )  | 1122 kW   |
| Max. input voltage  | 1000 V  |
| MPP voltage range (50 Hz) / MPP voltage range (60 Hz)   | 625 V to 850 V <sup>1)</sup> / 625 V to 850 V <sup>1)</sup>   |
| DC voltage range (50 Hz) / DC voltage range (60 Hz)   | 596 V to 850 V / 596 V to 850 V   |
| Rated input voltage   | 688 V   |
| Max. input current  | 1635 A  |
| Max. DC short-circuit current   | 2500 A  |
| $V_{MPPmin}$ at $I_{MPP} < I_{DCmax}$   | 596 V (50 Hz) / 596 V (60 Hz)   |
| Number of independent MPP inputs  | 1   |
| Number of DC inputs   | 9   |
| <b>Output (AC)</b>  |   |
| Rated power (at 25 °C / at 50 °C)   |   |
| AC power (at 25 °C / at 40 °C / at 50 °C)   | 1100 kVA / 1000 kVA / 900 kVA   |
| AC nominal voltage / AC nominal voltage range   | 405 V / 365 V to 465 V  |
| AC frequency / AC frequency range   | 50 Hz, 60 Hz / 47 Hz to 63 Hz   |
| Rated frequency / rated grid voltage  | 50 Hz / 405 V   |
| Max. output current   | 1568 A  |
| Max. THD  | < 3 %   |
| Power factor at rated power / adjustable shift factor   | 1 / 0.9 overexcited to 0.9 underexcited   |
| Feed-in phases / connection phases  | 3 / 3   |
| <b>Efficiency<sup>2)</sup></b>  |   |
| Max. efficiency / European efficiency / CEC efficiency  | 98.7% / 98.4% / 98.5%   |
| <b>Protective devices</b>   |   |
| Input-side disconnection device   | Motor-driven load-break switch  |
| Output-side disconnection device  | AC circuit breaker  |
| DC overvoltage protection   | Type I surge arrester   |
| Lightning protection (according to IEC 62305-1)   | Lightning protection level III  |
| Grid monitoring   | ●   |
| Stand-alone grid detection active / passive   | ● / ●   |
| Ground fault monitoring / remote-controlled ground-fault monitoring                                       | ○ / ○   |
| Insulation monitoring   | ○   |
| Surge arrester for communication interface / string current monitoring                                    | ○ / ○   |
| Surge arrester for auxiliary supply   | Type I and type II surge arrester   |
| Protection class (according to IEC 62109-1) / overvoltage category (according to IEC 60664-1)             | I / III   |
| <b>General data</b>   |   |
| Dimensions (W / H / D)  | 2562 / 2272 / 956 mm (101 / 89 / 38 inches)   |
| Weight  | approx. 1800 kg   |
| Operating temperature range   | -25 °C to 62 °C / -13 °F to 144 °F  |
| Extended operating temperature range  | ○ (-40 °C to 62 °C / -40 °F to 144 °F)  |
| Noise emission <sup>3)</sup>  | 67 db(A)  |
| Max. self-consumption (operation) <sup>4)</sup> / self-consumption (night)                                | 1950 W / < 100 W  |
| External auxiliary supply voltage   | 230 V / 400 V (3 / N / PE)  |
| Cooling concept   | OptiCool  |
| Degree of protection: electronics / connection area (according to IEC 60529) / according to IEC 60721-3-4 | IP54 / IP43 / 4C2, 4S2  |
| Application   | In unprotected outdoor environments   |
| Maximum permissible value for relative humidity (non-condensing)  | 15% to 95%  |
| Maximum operating altitude above MSL  | 2000 m  |
| Fresh air consumption (inverter)  | 3000 m <sup>3</sup> /h  |
| <b>Features</b>   |   |
| DC connection / AC connection   | Ring terminal lug / ring terminal lug   |
| Display   | HMI touch display   |
| Communication / protocols   | Ethernet (optical fiber optional), Modbus   |
| DC current monitoring (Zone monitoring / String monitoring)   | ○ / ○   |
| Color enclosure / door / base / roof  | RAL 9016 / 9016 / 7004 / 7004   |
| Configurable grid management functions  | Power reduction, reactive power setpoint, dynamic grid support (e.g. LVRT)  |
| Certificates and approvals (additional on request)  | EN 61000-6-2, EN 61000-6-4, CE-conformity, Renewable Energy Source Act-compliant, BDEW-MSRL / JETGR0002-1-2.0 (2011) / JETGR0003-1-2.0 (2011) <sup>5)</sup> , Arrêté du 23/04/08, R.D. 1663 / 2000, R.D. 661 / 2007 |
| ● Standard features   ○ Optional features   – Not available   |   |
| * all the data for SC 1000 CPJP are provisional   |   |
| Type designation  | SC 1000CP-10JP  |

## PLANT DIAGRAM



## EFFICIENCY CURVE



- 1) At  $1.05 V_{AC, nom}$  and  $\cos \phi = 1$  and Nominal power  $P_{nom}$
- 2) Efficiency measured without internal power supply
- 3) Sound pressure level at a distance of 10 m
- 4) Self-consumption at rated operation
- 5) Type-tested by the manufacturer in accordance with JET (Japan Electrical Safety & Environment Technology Laboratories Foundation)

