Outdoor

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

Efficient

- Peak efficiency of 98.7 %
- 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)

SUNNY CENTRAL 630CP-JP

The perfect solution for PV power plants in Japan

The durable and high-performance Sunny Central 630CP-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 630CP-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 630 CP-JP already fulfills future requirements for grid operators. The Sunny Central 630CP-JP is also available with the option noise reduction.

SUNNY CENTRAL 630CP-JP

WITH OPTION NOISE REDUCTION

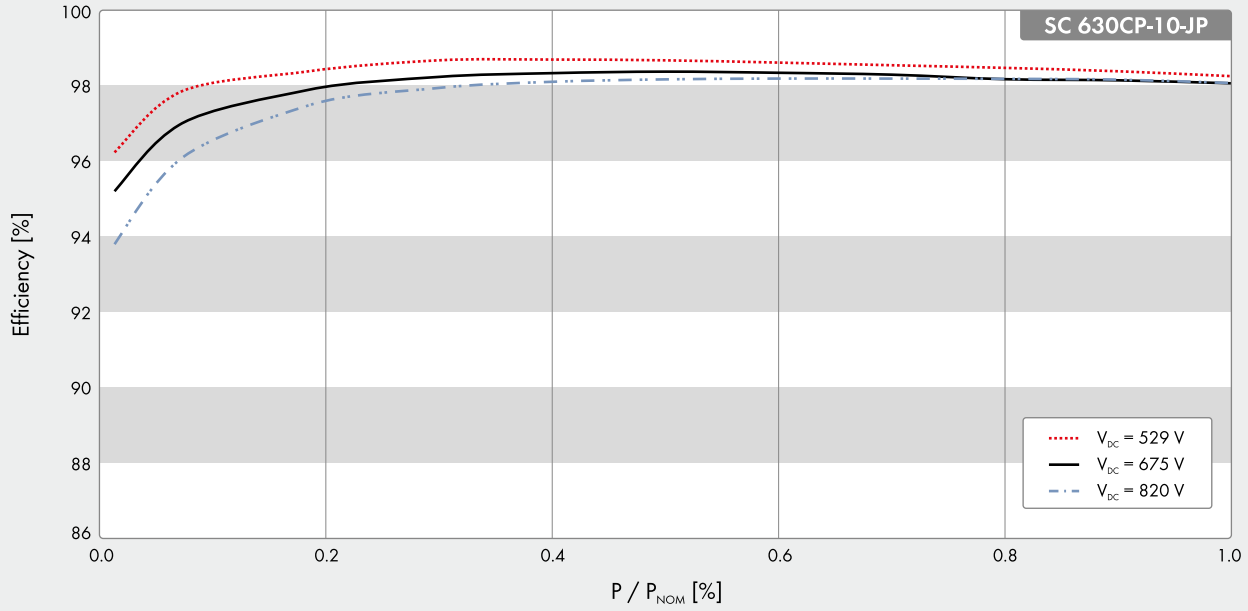
Technical data	Sunny Central 630CP-JP
Input (DC)	
Max. DC power (at cos φ = 1)	713 kW
Max. input voltage	1000 V
MPP voltage range (50 Hz) / MPP voltage range (60 Hz)	500 V to 850 V[1] / 505 V to 850 V[1]
DC voltage range (50 Hz) / DC voltage range (60 Hz)	500 V to 850 V / 500 V to 850 V
Rated input voltage	529 V
Max. input current	1350 A
Max. short-circuit current	2500 A
V_{MPPmin} at $I_{MPP} < I_{DCmax}$	500 V (50 Hz) / 500 V (60 Hz)
Number of independent MPP inputs	1
Number of DC inputs	9
Output (AC)	
Rated power (at 25 °C) / Nominal AC power (at 50 °C)	700 kVA / 473 kVA
AC nominal voltage / range	315 V / 284 V to 362 V
AC frequency / range	50 Hz, 60 Hz / 47 Hz to 63 Hz
Rated frequency / rated grid voltage	50 Hz / 315 V
Max. output current	1283 A / 1350 A[6]
Max. THD	< 3 %
Power factor at rated power/adjustable shift factor	1 / 0.9 leading to 0.9 lagging
Feed-in phases / connection phases	3 / 3
Efficiency[2]	
Max. efficiency / European weighted efficiency / CEC efficiency	98.1 % / 97.8 % / 98.0 %
Protective devices	
Input-side disconnection device	Motor-driven DC switch disconnector
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
General data	
Dimensions (W / H / D)	2562 / 2272 / 1210 mm
Weight	1822 kg
Operating temperature range	−25 °C to +62 °C
Noise emission[3]	53 db(A)
Max. self-consumption (operation)[4] / consumption (night)	1900 W / < 100 W
External auxiliary supply voltage	230 / 400 V (3/N/PE)
Cooling concept	Opticool
Degree of protection: electronics / connection area (according to IEC 60529 / to IEC 60721-3-4)	IP54 / IP43 / 4C2, 4S2
Application	In unprotected outdoor environments
Max. permissible value for relative humidity (non-condensing)	15 % to 95 %
Max. operating altitude above MSL	2000 m
Fresh-air consumption	3000 m³/h
Features	
DC connection / AC connection	Ring terminal lug / Ring terminal lug
Display	HMI touchscreen
Communication protocols	Ethernet (optical fiber optional), Modbus
DC current monitoring (Zone monitoring / String monitoring)	○ / ○
Color enclosure, door, base, roof, silencer	RAL 9016 / 9016 / 7004 / 7004 / 7035
Configurable grid management functions	Power reduction, reactive power setpoint, dynamic grid support (e.g. FRT)
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)[5], Arrêté du 23/04/08, R.D. 1663 / 2000, R.D. 661 / 2007
● Standard feature ○ Optional feature – Not available	
Type designation	SC 630CP-10-JP

SUNNY CENTRAL 630CP-JP

Technical data	Sunny Central 630CP-JP
Input (DC)	
Max. DC power (at cos φ = 1)	713 kW
Max. input voltage	1000 V
MPP voltage range (50 Hz) / MPP voltage range (60 Hz)	500 V to 850 V[1] / 505 V to 850 V[1]
DC voltage range (50 Hz) / DC voltage range (60 Hz)	500 V to 850 V / 500 V to 850 V
Rated input voltage	529 V
Max. input current	1350 A
Max. short-circuit current	2500 A
V_{MPPmin} at $I_{MPP} < I_{DCmax}$	500 V (50 Hz) / 500 V (60 Hz)
Number of independent MPP inputs	1
Number of DC inputs	9
Output (AC)	
Rated power (at 25°C) / Nominal AC power (at 50°C)	700 kVA / 630 kVA
AC nominal voltage / range	315 V / 284 V to 362 V
AC frequency / range	50 Hz, 60 Hz / 47 Hz to 63 Hz
Rated frequency / rated grid voltage	50 Hz / 315 V
Max. output current	1283 A / 1350 A[6]
Max. THD	< 3 %
Power factor at rated power/adjustable shift factor	1 / 0.9 leading to 0.9 lagging
Feed-in phases / connection phases	3 / 3
Efficiency[2]	
Max. efficiency / European weighted efficiency / CEC efficiency	98.7 % / 98.5 % / 98.5 %
Protective devices	
Input-side disconnection device	Motor-driven DC switch disconnector
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 62103) / overvoltage category (according to IEC 60664-1)	I / III
General data	
Dimensions (W / H / D)	2562 / 2272 / 956 mm
Weight	approx. 1800 kg
Operating temperature range	−25°C to +62°C
Noise emission[3]	64 db(A)
Max. self-consumption (operation)[4] / consumption (night)	1900 W / < 100 W
External auxiliary supply voltage	230 / 400 V (3/N/PE)
Cooling concept	Opticool
Degree of protection: electronics / connection area (according to IEC 60529 / to IEC 60721-3-4)	IP54 / IP43 / 4C2, 4S2
Application	In unprotected outdoor environments
Max. permissible value for relative humidity (non-condensing)	15 % to 95 %
Max. operating altitude above MSL	2000 m
Fresh-air consumption	3000 m³/h
Features	
DC connection / AC connection	Ring terminal lug / Ring terminal lug
Display	HMI touchscreen
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. FRT)
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)[5], Arrêté du 23/04/08, R.D. 1663 / 2000, R.D. 661 / 2007
● Standard feature ○ Optional feature – Not available	
Type designation	SC 630CP-10-JP

1) At 1.05 $V_{AC, nom}$ and cos φ = 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)
6) Up to +5 % max. output current possible if $V_{AC} < V_{AC, nom}$

EFFICIENCY CURVE [without noise reduction]



PLANT DIAGRAM