

Medium irradiation efficiency: **97.1%**
 High irradiation efficiency: **97.4%**
 Maximum conversion efficiency: **98.1%**



Chint Power Quality, PHOTON Lab Identify!

CPS SC20kW Received AA Rating by PHOTON Laboratory

The CPS SC20kW inverter of Chint Power Systems received AA rating in the latest test conducted by the authoritative magazine PHOTON in the global PV industry. The conversion efficiency has reached 97.4% at high radiation condition and 97.1% at medium radiation condition, both have met Level A ranking standard. The performance has ranked among the best in the global products tested by PHOTON.

CPS SC20kW inverter has introduced its proprietary 3-level technology and IGBT/MOSFET shunt technology that greatly elevates the full range of its conversion efficiency. In addition, fully reliable digital control technology, 2-way dual MPPT tracking, advanced thermal design and smart fan speed regulation etc. are also advantageously applied. This product is certified by German VDE, Italian ENEL2010, Spanish RD1663, British G59, Belgium C10/11 and Chinese Golden Sun to meet the application requirements in most countries worldwide.



RD1663 G59 ENEL C10/11 VDE-AR-N 4105 VDE0126-1-1/A1



reddot design award
honourable mention 2011

Chint Power Quality, reddot Recognition!

The first red dot award winner of inverter manufacturers in China.

Chint Power Won the reddot Design Award 2011

March 2011, Chint Power SC Series inverters won the German top industrial design award "reddot design award". Approximately 1,700 companies from 60 countries have taken part with 4,433 entries in total; only the very best products managed to convince the expert jury.

The industrial design of the award-winning products of Chint Power combine concise straight lines and high-quality aluminum plate, which conveys to the client meaning of "technology, reliability, user friendliness", fully embodying Chint Power's brand culture of Chint Power.

red dot Design Award - the "Oscar" Awards in the Design Field

red dot design award was founded by the famous German Association of Design "Zentrum Nordrhein Westfalen". With more than 50 years of history, it is the world's largest and most renowned design award, joining the "iF Award" German, "IDEA Award" the United States to be called the world's three major design awards, which is known as the design world's "Oscar".

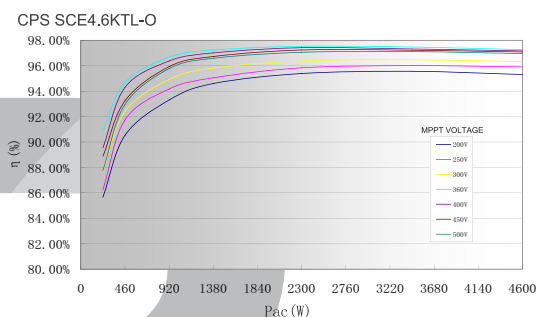
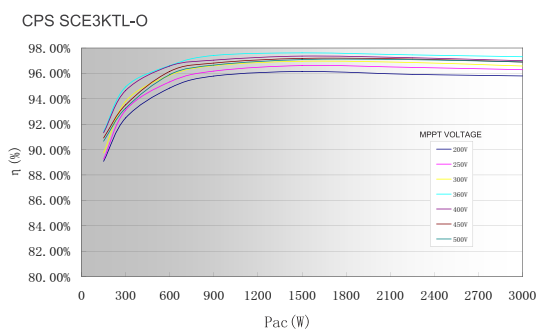


1.5-4.6kW Single Phase Grid-tied PV Inverters

Chint Power has been long dedicated to the research and development of PV inverters with a growing reputation from the domestic to the international markets. As a result of our continuous improvement efforts, Chint Power introduces the new generation of single-phase PV inverters: the SCE series.

SCE series PV inverters are suitable for various residential and commercial rooftop PV systems. With the features of concise design and high reliability of the former generation, SCE series PV inverters offer an improved performance on the conversion efficiency reaching up to 97.5%. The internal design offering now standard embedded DC switch and RS485 communication making of the SCE series a safe and flexible product for customers.

Efficiency Curve



G83 G59 VDE-AR-N 4105
VDE0126-1-1/A1

High Efficiency

- Max. efficiency up to 97.5%, Euro efficiency up to 97.0%
- $\geq 99.9\%$ MPPT efficiency
- Transformerless design

High Reliability

- Designed for reliability and derating guide lines
- Comprehensive protection functions
- Real-time monitoring
- Anti-islanding protection
- 5 years standard warranty

Broad Adaptability

- Wide MPPT range enables flexible stringing
- Multi-language interface menus
- DC switch embedded
- Easy operation
- 3rd Party Monitoring



Model Name	CPS SCE1.5KTL	CPS SCE2KTL	CPS SCE3KTL-O	CPS SCE4KTL-O	CPS SCE4.6KTL-O
DC Input					
Nominal DC Input Power	1.5kW	2kW	3kW	4kW	4.6kW
Max. DC Input Power	1.7kW	2.3kW	3.45kW	4.6kW	3.4kW/MPPT
Max. DC Input Voltage	550Vdc	550Vdc	600Vdc	600Vdc	600Vdc
Operating DC Input Voltage Range	100-550Vdc	100-550Vdc	100-500Vdc	100-500Vdc	100-500Vdc
Start-up DC Input Voltage	150Vdc				
Nominal DC Input Voltage	360Vdc				
MPPT Voltage Range	175-500Vdc	200-500Vdc	200-500Vdc	225-500Vdc	200-500Vdc
Number of MPP Trackers	1	1	1	1	2
Number of DC Inputs (strings)	1	1	2	2	1x2
Max. Input Current	9.1A	11A	17.5A	20A	17A/MPPT
Max. Input Current per String	9.1A	11A	17.5A	20A	17Ax2
DC Disconnection Type	Embedded switch				
PV Array Configuration	Floating				
AC Output					
Rated AC Output Power	1.5kW	2kW	3kW	4kW	4.6kW
Max. AC Output Power	1.65kW	2.2kW	3.3kW	4.4kW	5kW [#]
Rated Output Voltage	230Vac				
Output Voltage Range	-				
Grid Connection Type	1Φ				
Max AC Output Current	7.2A	9.6A	14.4A	19.2A	22.1A
Rated Output Frequency	50Hz				
Output Frequency Range	47.5-51.5Hz*				
Power Factor	>0.99 (±0.9 adjustable)				
Current THD	<3%				
AC Disconnection Type	-				
System					
Topology	Transformerless				
Max. Efficiency	96.5%	96.8%	97.2%	97.5%	97.5%
Euro Efficiency	95.2%	95.8%	96.5%	97.0%	97.0%
Stand-by / Night Consumption	<7W / <0.1W				
Environment					
Protection Degree	IP43	IP43	IP65	IP65	IP65
Cooling	Convection	Convection	Convection	Convection	Force air cooling
Operating Temperature Range	-20°C to +60°C				
Operating Humidity	0-95%, non condensing		0-100%, condensing		
Operating Altitude	2000m				
Display and Communication					
Display	LCD+LED				
Communication	USB B port & RS485				
Mechanical Data					
Dimensions (WxHxD) (mm)	355x365x156	355x365x156	431x453x158	431x453x158	434x597x228
Weight (kg)	12.1	12.9	15	16.5	30.9
Safety					
Safety and EMC Standards	LVD: 2006/95/EC EMC: 2004/108/EC EN61000-6-2: 2005/EN61000-6-2: 2007+A1: 2011 EN62109-1: 2010/EN62109-2: 2011 (IEC62109-1, IEC62109-2)				
Grid Standards	VDE AR-N-4105/VDE 0126-1-1/A1; RD1699; CEI-021; G83/1/1; G59/2				

[#] Max. AC Output Power is 4.6kW under VDE4105 regulation.

* The Output Frequency Range value may change according to different grid codes.

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1.5-10kW Grid-tied PV Inverters



CPS SC series grid-tied PV inverters can be flexibly utilized in different types of residential rooftops, commercial rooftops and some utility systems. Efficiency levels up to 96.5% grant customers high returns of power production.

Convection cooling design (except SC10KTL-O), comprehensive protection functions and advanced thermal design provide the whole system high reliability. The friendly interface and plug & play features make the installation and maintenance easy and fast.

Robust

- Convection, no fan required (except SC10KTL-O)
- Internal GFCI
- Comprehensive protection functions
- 5 years standard warranty; optional additional 15 years

Flexible

- Transformerless design
- Plug & Play
- 1 to 3 MPP Trackers
- Easy operation
- Wide MPPT range

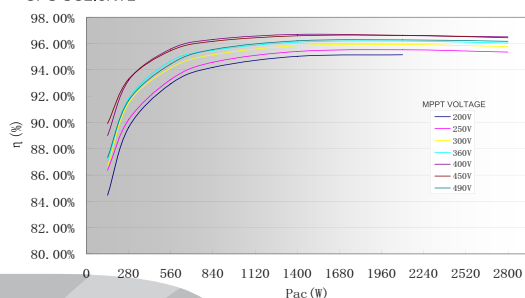
Smart

- Local / Remote monitoring access
- Integrated datalogger (SC10KTL-O)
- Multi-language
- 3rd Party Monitoring

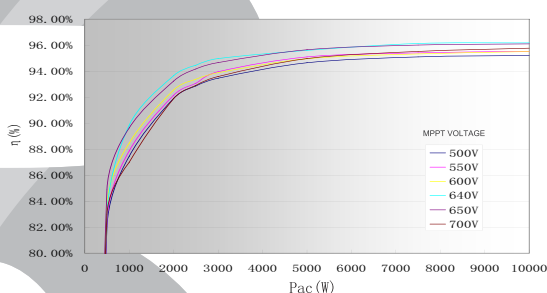


Efficiency Curve

CPS SC2.8KTL



CPS SC10KTL-O



reddot design award
honourable mention 2011



G83 G59 ENEL

Model Name	CPS SC1.5KTL	CPS SC2KTL	CPS SC2.8KTL	CPS SC4KTL	CPS SC4KTL-O	CPS SC4.6KTL-O	CPS SC10KTL-O
DC Input							
Nominal DC Input Power	1.5kW	2kW	2.8kW	4kW	4kW	4.6kW	10kW
Max. DC Input Power	1.74kW	2.29kW	3.12kW	4.58kW	4.58kW	3.95kW/MPPT	5.5kW/MPPT
Max. DC Input Voltage	450Vdc	500Vdc	500Vdc	500Vdc	500Vdc	750Vdc	800Vdc
Operating DC Input Voltage Range	100-450Vdc	100-500Vdc	100-500Vdc	100-500Vdc	100-500Vdc	100-750Vdc	245-720Vdc
Start-up DC Input Voltage	120Vdc						260Vdc
Nominal DC Input Voltage	360Vdc	400Vdc	400Vdc	400Vdc	400Vdc	600Vdc	640Vdc
MPPT Voltage Range	200-405Vdc	250-450Vdc	250-450Vdc	250-450Vdc	250-450Vdc	450-750Vdc	320-720Vdc
Number of MPP Trackers	1	1	1	1	1	3	3
Number of DC Inputs (strings)	1	1	1	2	3	1x3	1x3
Max. Input Current	8.9A	10A	13A	20A	20A	8.5A/MPPT	13A/MPPT
Max. Input Current per String	8.9A	10A	13A	20A	20A	8.5Ax3	13Ax3
DC Disconnection Type	-						
PV Array Configuration	Floating						
AC Output							
Rated AC Output Power	1.5kW	2kW	2.8kW	4kW	4kW	4.6kW	10kW
Max. AC Output Power	1.65kW	2.2kW	3kW	4.4kW	4.4kW	5kW	11kW
Rated Output Voltage	230Vac						400Vac
Output Voltage Range	-						
Grid Connection Type	1Φ						3Φ
Max AC Output Current	7.9A	10.5A	14.3A	20A	20A	25.5A	17.5A
Rated Output Frequency	50Hz						
Output Frequency Range	47.5-50.2Hz*						
Power Factor	>0.99						
Current THD	<3%						
AC Disconnection Type	-						
System							
Topology	Transformerless						
Max. Efficiency	95%	96%	96%	96%	96%	96%	96.5%
Euro Efficiency	94%	95%	95%	95%	95%	94%	95%
Stand-by / Night Consumption	<7W / <0.1W						
Environment							
Protection Degree	IP43	IP43	IP43	IP43	IP65	IP65	Classis: IP65 Fan: IP55
Cooling	Convection						Force air cooling, variable fan speed
Operating Temperature Range	-20°C to +55°C						
Operating Humidity	0-95%, non condensing				0-100%, condensing		0-95%, non condensing
Operating Altitude	2000m						
Display and Communication							
Display	LCD+LED						Graphic Display
Communication	Standard: RS232 / Optional: RS485						
Mechanical Data							
Dimensions (WxHxD) (mm)	320x271x126	355x304x125	355x304x135	429x367x126	440x390x137	436x535x133	453x583x155
Weight (kg)	9.7	12.7	13.4	17.7	19.7	27.95	37
Safety							
Safety and EMC Standards	DIN EN 50178 (4.98) (VDE0160) (IEC62103) EN 61000-6-(2005) / EN61000-6-3 (2007) LVD: 2006/95/EC EMC: 2004/108/EC						
Grid Standards	VDE0126-1-1, ENEL, DK5940, G83, G59						

* The Output Frequency Range value may change according to different grid codes.

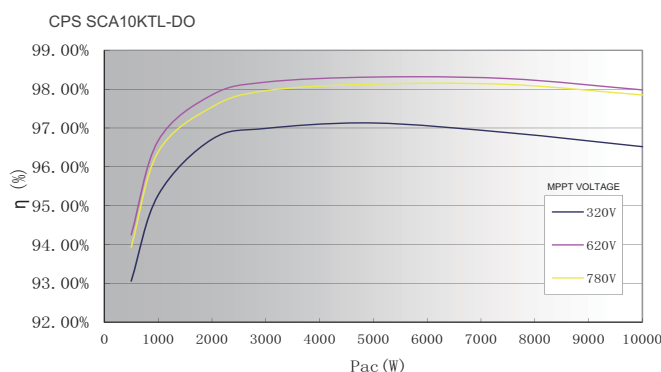
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8/10/12kW Three Phase Grid-tied PV Inverters

Chint Power has been long dedicated to the research and development of PV inverters with a growing reputation from the domestic to the international markets. As a result of our continuous improvement efforts, Chint Power introduces the new range of three-phase units: 8kW, 10kW, 12kW PV inverters!

This inverter series is suitable for a variety of applications, from large residential to commercial rooftops and utility scale PV systems. With the features of concise design and high reliability of the former generation, these inverters offer an improved performance on the conversion efficiency of reaching up to 98.3%. The internal DC switch further improves the safety and reliability of the products.

Efficiency Curve



High Efficiency

- Max. efficiency of 98.3%
- Euro efficiency of 97.7%
- $\geq 99.9\%$ MPPT efficiency
- Space vector PWM


High Reliability

- Integrated DC switch
- GFCI embedded
- Comprehensive protection functions
- Design for reliability
- 5 years standard warranty; optional additional 15 years



CPS SCA8KTL-DO
CPS SCA10KTL-DO
CPS SCA12KTL-DO

Broad Adaptability

- Wide MPPT range
- 2 MPP Trackers
- Multiple communication interface
- IP65 protection degree, outdoor application
- Multi-language
- 3rd Party Monitoring 



Dimensions

Model Name	CPS SCA8KTL-DO	CPS SCA10KTL-DO	CPS SCA12KTL-DO
DC Input			
Nominal DC Input Power	8.2kW	10.3kW	12.3kW
Max. DC Input Power	8.8kW	11kW	13.2kW
Max. DC Input Voltage	1000Vdc		
Operating DC Input Voltage Range	250-860Vdc		
Start-up DC Input Voltage / Power	320V/150W		
Nominal DC Input Voltage	600V		
MPPT Voltage Range	320-800Vdc	320-800Vdc	380-800Vdc
Number of MPP Trackers	2		
Number of DC Inputs (strings)	2x2		
Max. Input Current	17A/MPPT		
Max. Input Current per string	17A		
DC Disconnection Type	Embedded switch		
PV Array Configuration	Floating		
AC Output			
Rated AC Output Power	8kW	10kW	12kW
Max. AC Output Power	8kW	10kW	12kW
Rated Output Voltage	400Vac		
Output Frequency Range	-		
Output Voltage Range	320-460Vac*		
Grid Connection Type	3Φ/N/PE		
Max AC Output Current	12.2A	15.2A	18.2A
Rated Output Frequency	50Hz/60Hz		
Power Factor	>0.99 (±0.9 adjustable)		
Current THD	<3%		
AC Disconnection Type	-		
System			
Topology	Transformerless		
Max. Efficiency	98.3%		
Euro Efficiency	97.7%	97.7%	97.7%
Stand-by / Night Consumption	<7W / <0.3W		
Environment			
Protection Degree	IP65		
Cooling	Variable speed cooling fans		
Operating Temperature Range	-25°C to +60°C		-25°C to +60°C
Operating Humidity	0-95%, non-condensing		
Operating Altitude	4000m		
Display and Communication			
Display	LCD+LED		
Communication	Standard: RS485, USB; Option: Ethernet, Zigbee		
Mechanical Data			
Dimensions (WxHxD) (mm)	500x660x200		
Weight (kg)	38	40	40
Safety			
Safety and EMC Standards (In progress)	LVD: 2006/95/EC EMC: 2004/108/EC, IEC/EN 62109-1: 2010, IEC/EN 62109-2: 2011; IEC/EN61000-6-2: 2005, IEC/EN61000-6-3: 2007		
Grid Standards (In progress)	VDE AR-N-4105/VDE 0126-1-1/A1; RD1699;CEI-021; G83/1/1; G59/2		

* The Output Voltage Range value may change according to different grid codes.

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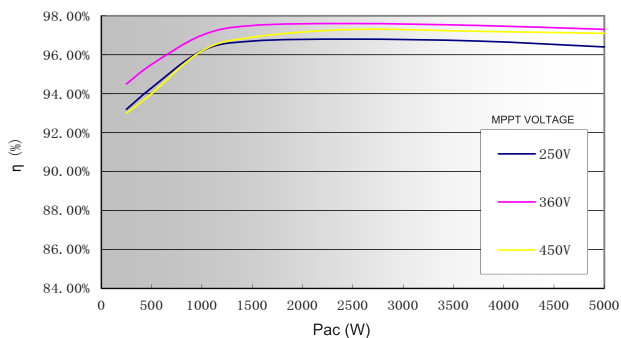
4/5/6/7kW Grid-tied PV Inverter for North America

The CPS SCE series PV inverters are designed for the North America market and are compliant with UL and CSA standards. With advanced transformerless technology, the products reach a 97.5% maximum efficiency, providing competitive, long-term electricity generation benefits.

The enclosures are NEMA 3R rated for general outdoor application. Designed for high reliability and easy installation, CPS SCE series are the ideal choice for residential rooftop applications.

Efficiency Curve

CPS SCE5KTL-O/US @ 240Vac



■ High Efficiency

- Max. efficiency of 97.5%, CEC efficiency of 97%
- High speed and precise MPPT algorithm

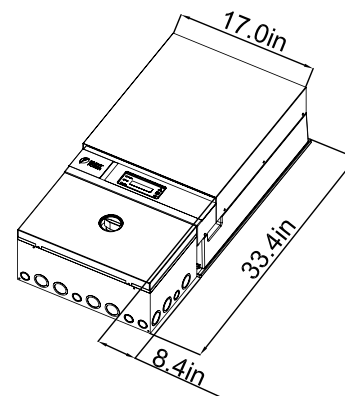
■ High Reliability

- Standard warranty: 10 years
- Design for reliability
- Comprehensive protection functions
- GFCI embedded
- Comply with UL1741(2010), CSA C22.2 No.107.1-01, IEEE1547(2003), IEEE1547.1(2005)



■ Broad Adaptability

- Wide MPPT range enables flexible stringing
- NEMA 3R, outdoor application
- Quick installation and easy maintenance
- Lead-free, RoHS complied
- Integrated DC and AC disconnect
- Internal DC and AC fuse



Dimensions



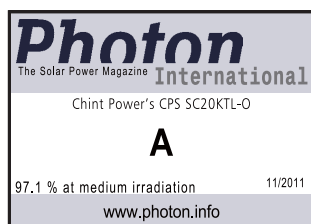
Conforms to UL Std. 1741
Cert. to CSA Std. C22.2 No.107.1-01



This device complies with
part 15 of the FCC Rules

Model Name	CPS SCE4KTL-O/US	CPS SCE5KTL-O/US	CPS SCE6KTL-O/US	CPS SCE7KTL-O/US
DC Input				
Max. PV Power	4.8kW	6kW	7.2kW	8.4kW
Nominal DC Input Power	4kW	5kW	6kW	7kW
Max. DC Input Voltage	600Vdc			
Operating DC Input Voltage Range	100-515Vdc			
Start-up DC Input Voltage	150Vdc			
Nominal DC Input Voltage	360Vdc			
Number of MPP Trackers	1			
Number of DC Input Pairs	4			
MPPT Voltage Range	225-500Vdc	200-500Vdc	200-500Vdc	200-500Vdc
Max. Input Current	19A	26A	32A	37A
Max. Input Current per String	20A			
DC Disconnection Type	Switch			
AC Output				
Nominal AC Power @ 240Vac & 277Vac	4kW	5kW	6kW	7kW
Nominal AC Power @ 208Vac	3.8kW	4.6kW	6kW	7kW
Max. AC Power @ 240Vac & 277Vac	4kW	5kW	6kW	7kW
Max. AC Power @ 208Vac	3.8kW	4.6kW	6kW	7kW
Rated Output Voltage	240V / Split phase			
Output Voltage Range @ 208Vac	186-225Vac			
Output Voltage Range @ 240Vac	215-260Vac			
Output Voltage Range @ 277Vac	248-300Vac			
Grid Connection Type	Single phase / 240V Split phase			
Nominal AC Current @ 208Vac	18.3A	22.1A	28.9A	33.7A
Nominal AC Current @ 240Vac	16.7A	20.8A	25 A	29.2A
Nominal AC Current @ 277Vac	14.4A	18.1A	21.7A	25.3A
Max. AC Current @ 208Vac System	18.5A	22.5A	30A	35A
Max. AC Current @ 240Vac System	18.5A	22.5A	28.5A	33.2A
Max. AC Current @ 277Vac System	16.4A	20.5A	24.6A	28.7A
Rated Output Frequency	60Hz			
Output Frequency Range	59.3-60.5Hz			
Power Factor	>0.99			
Current THD	<3%			
AC Disconnection Type	Switch			
System				
Topology	Transformerless			
Max. Efficiency	97.5%			
CEC Efficiency	97.0%			
Stand-by / Night Consumption	<7W / <0.2W			
Environment				
Protection Degree	NEMA 3R			
Cooling	Variable speed cooling fans			
Operating Temperature Range	-13°F to +122°F / -25°C to +50°C			
Operating Humidity	0-95%, non-condensing			
Operating Altitude	6562ft / 2000m without derating			
Display and Communication				
Display	LCD + LED			
Communication	RS232, RS485			
Mechanical Data				
Dimensions (WxHxD)	17.0x33.4x8.4in / 434x850x213mm			
Weight	86lbs / 39kg	90lbs / 41kg	101lbs / 46kg	101lbs / 46kg
Safety				
Safety and EMC Standard	UL1741: 2010, CSA C22.2 No.107.1-01, FCC PART15 Class B			
Grid Standard	IEEE1547: 2003, IEEE1547.1: 2005			

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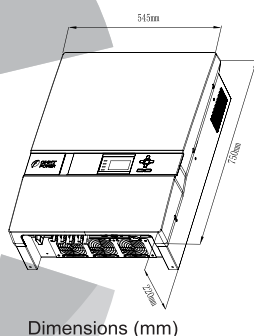
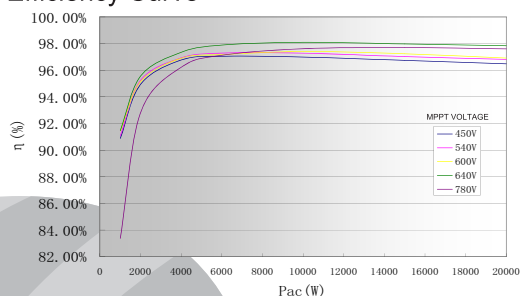
CPS SC20KTL-DO

20kW Three Phase Grid-tied PV Inverter

The CPS SC20KTL-DO grid-tied PV inverter is designed for flexible use in different types of commercial rooftops and utility applications. 3-level technology, parallel switched MOSFET with IGBT and bypass strategy minimize power loss to achieve high efficiency at all load levels.

CPS SC20KTL-DO features small size, light weight and high power density. Flexible mounting modes make installation and maintenance easy and quick. IP65 protection degree allows versatile outdoor applications to save indoor installation space and cables. Enhanced DSP control, comprehensive protection functions and advanced thermal design enable the whole system with high reliability.

Efficiency Curve



Dimensions (mm)

■ High Efficiency

- Max. efficiency of 98.1%, Euro efficiency of 97.5%
- $\geq 99.9\%$ MPPT efficiency
- 3-level technology and enhanced control mechanism to achieve overall load efficiency

■ High Reliability

- Designed for reliability and derating guide lines
- Comprehensive protection functions
- Enhanced DSP system
- Advanced thermal design, fan speed control
- Anti-islanding protection
- Embedded ground-fault circuit & interrupters
- Double MCU ensures multiple protection
- 5 years standard warranty; optional additional 15 years

■ Broad Adaptability

- IP65 protection degree, outdoor application
- Multiple mounting modes, easy and quick installation
- High altitude application
- Reactive power adjusting, active power derating (Optional)
- 3rd Party Monitoring



RD1663 G59 ENEL C10/11
VDE-AR-N 4105 VDE0126-1-1/A1

Model Name	CPS SC20KTL-O/CN	CPS SC20KTL-DO
DC Input		
Nominal DC Input Power	20.5kW	20.5kW
Max. DC Input Power	22kW	22kW
Max. DC Input Voltage	850Vdc	850Vdc
Operating DC Input Voltage Range	430-800Vdc	430-800Vdc
Start-up DC Input Voltage / Power	485V/200W	485V/200W
Nominal DC Input Voltage	650V	650V
MPPT Voltage Range	500-800Vdc	500-800Vdc
Number of MPP Trackers	1	2
Number of DC Inputs (strings)	5	2x3
Max. Input Current	42A	2x21A
Max. Input Current per String	14A	14A
DC Disconnection Type	NA	Embedded switch
PV Array Configuration	Floating	
AC Output		
Rated AC Output Power	20kW	20kW
Max. AC Output Power	20kW	20kW
Rated Output Voltage	380Vac	400Vac
Output Frequency Range	-	
Output Voltage Range	320-460Vac*	
Grid Connection Type	3Φ/N/PE	
Max AC Output Current	30A	
Rated Output Frequency	50Hz	50Hz/60Hz
Power Factor	>0.99 (±0.9 adjustable)	
Current THD	<2%	
AC Disconnection Type	-	
System		
Topology	Transformerless	
Max. Efficiency	98.1%	
Euro Efficiency	97.5%	
Stand-by / Night Consumption	<20W	
Environment		
Protection Degree	IP65	
Cooling	Variable speed cooling fans	
Operating Temperature Range	-20°C to +60°C	
Operating Humidity	0-95%, non-condensing	
Operating Altitude	4000m	
Display and Communication		
Display	LCD+LED	
Communication	RS485	
Mechanical Data		
Dimensions (WxHxD) (mm)	543x750x220	
Weight (kg)	50	
Safety		
Safety and EMC Standards	CNCA/CTS 0004-2009A, CNCA/CTS 0006-2010	LVD: 2006/95/EC EMC: 2004/108/EC, IEC/EN 62109-1: 2010, IEC/EN 62109-2: 2011; IEC/EN61000-6-1/2: 2005, IEC/EN61000-6-3/4: 2007
Grid Standards	CNCA/CTS 0004-2009A	VDE-AR-N_4105: 2011, VDE 0126-1-1/A1, CEI-021, G59/2

* The Output Voltage Range value may change according to different grid codes.

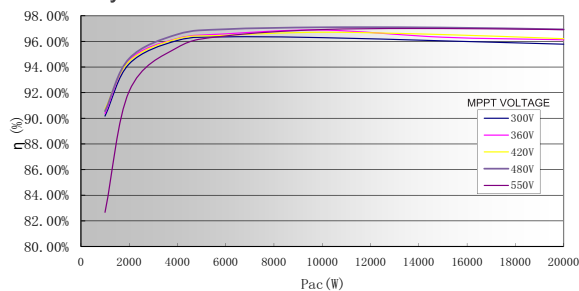
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20kW Grid-tied PV Inverter for North America

The CPS SC20KTL-DO/US-480 grid-tied PV inverter is a transformerless, three phase product designed for the North America market in compliance with UL and CSA standards. Patented 3-level control algorithm and thermal design provide 97.3% maximum efficiency.

CPS SC20KTL-DO/US-480 features small size, light weight and high power density. Multi flexible mounting modes make installation and maintenance easy and quick. The enclosure of the inverter is rated NEMA 3R (IP65) for general purpose outdoor applications. Enhanced DSP control, comprehensive protection functions and advanced thermal design enable a high reliability product with optional warranties up to 20 years.

Efficiency Curve



CPS SC20KTL-DO/US-480

High Efficiency

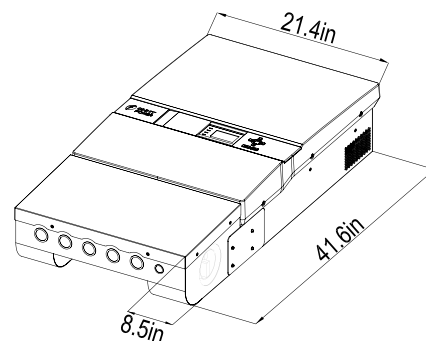
- Maximum efficiency of 97.3%, CEC efficiency of 96.5%
- 3-level technology and enhanced control mechanism to achieve high efficiency over wide load range
- High speed and precise MPPT algorithm
- 2 MPP trackers to achieve higher system efficiency
- Transformerless design

High Reliability

- Standard warranty: 5 years, extension up to 20 years
- Design for reliability
- Comprehensive protection functions
- Enhanced DSP system
- Advanced thermal design, with variable speed fans
- Anti-Islanding protection
- Ground-fault detection and interruption circuit
- Redundant controller for system protection

Broad Adaptability

- NEMA 3R (IP65), outdoor application
- Multi mounting modes, quick installation and easy maintenance
- High altitude application
- Integrated DC (+, -) and AC disconnect
- Wide MPPT range enables flexible stringing
- Light weight, compact design for commercial rooftops



Dimensions



Intertek
4004522

Conforms to UL Std. 1741
Cert. to CSA Std. C22.2 No. 107.1-01



This device complies with
part 15 of the FCC Rules

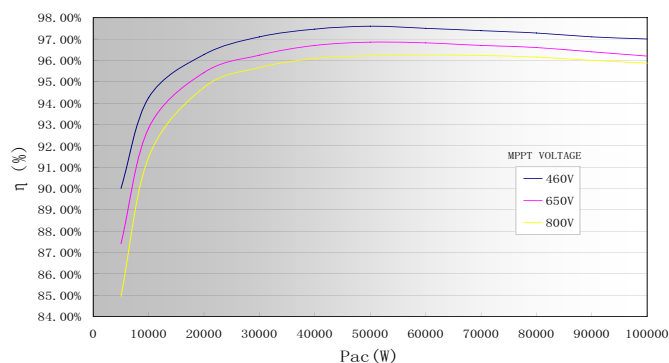
Model Name	CPS SC20KTL-DO/US-480
DC Input	
Max. PV Power	27kW
Nominal DC Input Power	21kW
Max. DC Input Voltage	600Vdc
Operating DC Input Voltage Range	260-580Vdc
Start-up DC Input Voltage / Power	300V / 200W
Nominal DC Input Voltage	500Vdc
Number of MPP Trackers	2
MPPT Voltage Range	300-550Vdc
Max. Input Current	35Ax2
Number of DC Inputs and Fuses	4 conductors with fuse per each of two MPPT inputs
DC Disconnection Type	Switch
AC Output	
Rated AC Output Power	20kW
Max. AC Output Power	20kW
Rated Output Voltage	480Vac
Output Voltage Range	422-528Vac
Grid Connection Type	3Φ/ N / PE
Max AC Output Current	27.3A
Rated Output Frequency	60Hz
Output Frequency Range	59.3-60.5Hz
Power Factor	>0.99
Current THD	<3%
AC Disconnection Type	Switch
System	
Topology	Transformerless
Max. Efficiency	97.3%
CEC Efficiency	96.5%
Stand-by / Night Consumption	<20W / <2W
Environment	
Protection Degree	NEMA 3R
Cooling	Variable speed cooling fans
Operating Temperature Range	-13°F to +140°F / - 25°C to +60°C (derating from +55°C / +131°F)
Operating Humidity	0-95%, non-condensing
Operating Altitude	6562ft / 2000m (derating from 4921ft / 1500m)
Display and Communication	
Display	LCD + LED
Communication	RS485
Mechanical Data	
Dimensions (WxHxD)	21.4x41.6x8.5in / 544x1058x215mm
Weight	132lbs / 63kg
Safety	
Safety and EMC Standard	UL1741:2010, CSA-C22.2 NO.107.1-01, IEEE1547; FCC PART15
Grid Standard	IEEE1547: 2003, IEEE1547.1: 2005

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100kW Grid-tied PV Inverter

The CPS SC100KT grid-tied PV inverter is designed for flexible use in different types of commercial rooftops and utility. It features isolation output transformer, low loss magnetic materials, advanced MPPT control and variable structure SVPWM control to minimize power loss and achieve high efficiency at all load levels. Enhanced DSP control, comprehensive protection functions and advanced thermal design enable the whole system with high reliability.

Efficiency Curve



CPS SC100KT

■ High Efficiency

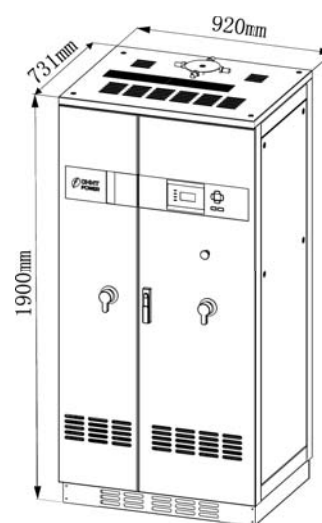
- Max. efficiency of 97.6%, Euro efficiency of 97.0%.
- $\geq 99.9\%$ MPPT efficiency
- Sliding mode variable structure SVPWM control to achieve full load efficiency

■ Broad Adaptability

- Multi-language display
- High altitude application
- Reactive power adjusting, active power derating (Optional)
- Negative grounded mode (Optional)

■ High Reliability

- Designed for reliability
- Comprehensive protection functions
- Enhanced DSP control system
- Advanced thermal design, fan speed control
- Anti-islanding protection
- Embedded ground-fault circuit & interrupter
- Low frequency transformer
- Double MCU ensures multiple protection
- 3rd Party Monitoring
- 5 years standard warranty; optional additional 15 years



Dimensions (mm)



RD1663 ENEL

Model Name	CPS SC100KT
DC Input	
Nominal DC Input Power	103kW
Max. DC Input Power	110kW
Max. DC Input Voltage	880Vdc
Operating DC Input Voltage Range	430-820Vdc
Start-up DC Input Voltage / Power	470V/700W
Nominal DC Input Voltage	600V
Number of MPP Trackers	1
MPPT Voltage Range	450-820Vdc
Number of DC Inputs (strings)	4
Max. Input Current	250A
DC Disconnection Type	Integrated Breaker
PV Array Configuration	Standard: Floating; Optional: Negative grounded
AC Output	
Rated AC Output Power	100kW
Max. AC Output Power	100kW
Rated Output Voltage	400Vac
Output Frequency Range	-
Output Voltage Range	320-460Vac
Grid Connection Type	3Φ/PE
Max AC Output Current	152A
Rated Output Frequency	50Hz/60Hz
Power Factor	>0.99 (±0.9 adjustable)
Current THD	<3%
AC Disconnection Type	Breaker
System	
Topology	Transformer
Max. Efficiency	97.6%*
Euro Efficiency	97.0%
Stand-by / Night Consumption	<50W
Environment	
Protection Degree	IP20
Cooling	Variable speed cooling fans
Operating Temperature Range	-20°C to +60°C
Operating Humidity	0-95%, non-condensing
Operating Altitude	4000m
Display and Communication	
Display	LCD+LED
Communication	RS485
Mechanical Data	
Dimensions (WxHxD) (mm)	920x1900x736
Weight (kg)	880
Safety	
Safety and EMC Standards	LVD: 2006/95/EC, EMC: 2004/108/EC; IEC/EN 62109-1: 2010, IEC/EN 62109-2: 2011; IEC/EN61000-6-2: 2005, IEC/EN61000-6-4: 2007
Grid Standards	VDE-AR-N_4105: 2011, VDE 0126-1-1/A1

* Efficiency measured without an internal power supply at $U_{DC} = 450\text{ V}$

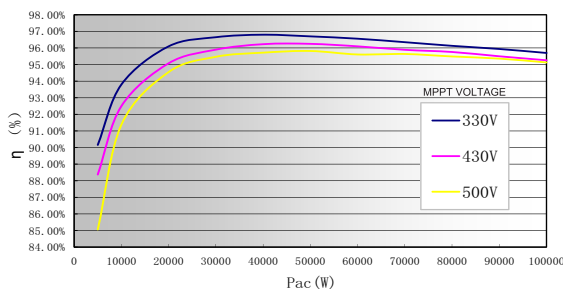
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100kW Grid-tied PV Inverter for North America

The CPS SC100KT-O/US-480 grid-tied PV inverter is designed for the North America market. The output is designed with a built-in transformer to allow direct connection to low voltage grid. The inverter achieves a 96.8% max efficiency with low loss magnetic materials, advanced MPPT control and variable structure SVPWM controls to minimize the power loss.

The inverter enclosure is rated NEMA 3R for outdoor applications and its compact design minimizes the space required for installation. It also features film-type capacitors, enhanced DSP control, comprehensive protection functions and advance thermal design to make the whole system highly reliable.

Efficiency Curve



High Efficiency

- Max. efficiency of 96.8%, CEC efficiency of 96%
- High speed and precise MPPT algorithm
- Patented SVPWM control technique with precise thermal design to achieve high efficiency over wide load range

Broad Adaptability

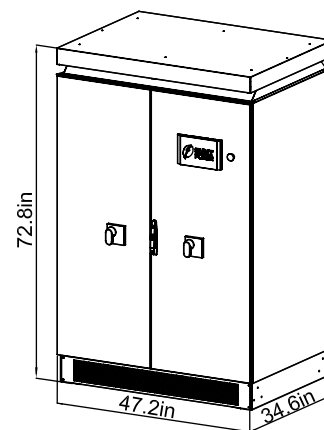
- NEMA 3R (IP44) Rain proof & Ice/Sleet proof enables indoor/outdoor application
- High altitude application
- Multi communication interface: RS485, Ethernet
- Reactive power adjusting and active power derating (optional)
- Integrated ground fault detector interrupt
- Integrated AC/DC surge protection
- Negative grounded (positive grounded as an option)
- Wide MPPT range enables flexible stringing



CPS SC100KT-O/US-480

High Reliability

- Standard warranty: 5 years, extension up to 20 years
- Design for reliability
- Comprehensive protection functions
- Enhanced DSP control system
- Advanced thermal design, with variable speed fans
- Anti-Islanding protection
- Innovative integrated inductors & transformer
- Redundant controller for system protection
- Ground-fault detection and interruption circuit



Dimensions



Model Name	CPS SC100KT-O/US-480	CPS SC100KT-OPG/US-480
DC Input		
Max. PV Power	135kW	
Nominal DC Input Power	105kW	
Max. DC Input Voltage	600Vdc	
Operating DC Input Voltage Range	300-600Vdc	
Start-up DC Input Voltage / Power	330Vdc/700W	
Nominal DC Input Voltage	430Vdc	
Number of MPP Trackers	1	
MPPT Voltage Range	330-500Vdc	
Max. Input Current	350A	
Number of DC Inputs and Fuses	4	
Grounding	Negative	Positive
DC Disconnection Type	Breaker	
AC Output		
Rated AC Output Power	100kW	
Max. AC Output Power	100kW	
Rated Output Voltage	480Vac	
Output Voltage Range	422-528Vac	
Grid Connection Type	3Φ/PE	
Max AC Output Current	120A	
Rated Output Frequency	60Hz	
Output Frequency Range	59.3-60.5Hz	
Power Factor	>0.99	
Current THD	<3%	
AC Disconnection Type	Breaker	
System		
Topology	Transformer	
Max. Efficiency	96.8%	
CEC Efficiency	96.0%	
Stand-by / Night Consumption	<50W / <40W	
Environment		
Protection Degree	NEMA 3R	
Cooling	Variable speed cooling fans	
Operating Temperature Range	-4°F to +140°F / - 20°C to +60°C (derating from +50°C / +122°F)	
Operating Humidity	0-95%, non-condensing	
Operating Altitude	6562ft / 2000m (derating from 4921.3ft / 1500m)	
Display and Communication		
Display	LCD + LED	
Communication	RS485	
Mechanical Data		
Dimensions (WxHxD)	47.2x72.8x34.6in / 1200x1850x880mm	
Weight	1984lbs / 900kg	
Safety		
Safety and EMC Standard	UL1741:2010, CSA-C22.2 NO.107.1-01, IEEE1547; FCC PART15	
Grid Standard	IEEE1547:2003, IEEE1547.1:2005	

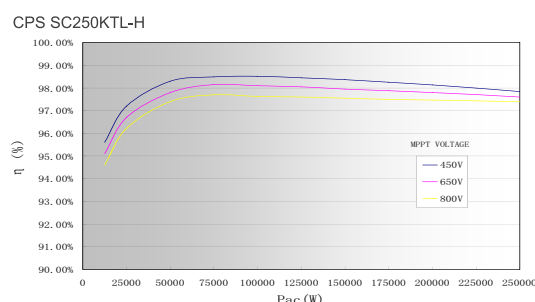
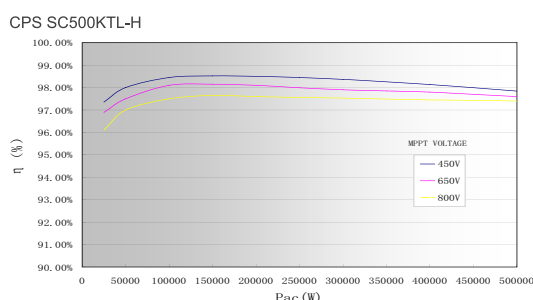
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250kW & 500kW Grid-tied PV Inverter

CPS SC500KTL-H and CPS SC250KTL-H grid-tied PV inverters are TUV certified and are designed to be used in different types of commercial rooftop and utility scale PV systems. The DC input voltage range can reach up to 1000V allowing for more flexible the system configuration. Built using low loss magnetic material and advanced control algorithm, these inverters can reach a maximum efficiency of 98.5%.

Efficiency Curve



■ High Efficiency

- Max. efficiency of 98.5%, Euro efficiency of 98.3%
- $\geq 99.9\%$ MPPT efficiency
- Space vector PWM
- Two paralleled modules topology, to improve light load efficiency and reliability (SC500KTL-H)

■ High Reliability

- Designed for reliability
- Comprehensive protection functions
- Double DSP + Double MCU realize multiple protection
- Advanced thermal design, fan speed control
- Embedded ground-fault circuit & Interrupter
- 5 years standard warranty; optional additional 15 years

■ Broad Adaptability

- Multi-language display & Powerful communication interface
- High altitude application
- LVRT function
- Reactive power adjusting, active power derating
- External low-frequency transformer (Optional)
- Negative grounded mode is optional
- 3rd Party Monitoring



Model Name	CPS SC250KTL-H	CPS SC500KTL-H
DC Input		
Nominal DC Input Power	255kW	510kW
Max. DC Input Power	275kW	550kW
Max. DC Input Voltage	1000Vdc	
Operating DC Input Voltage Range	450-820Vdc	
Start-up DC Input Voltage / Power	470V/3.5kW	
Nominal DC Input Voltage	600V	
MPPT Voltage Range	450-820Vdc	
Number of MPP Trackers	1	1
Number of DC Inputs (strings)	4	8
Max. Input Current	600A	1200A
DC Disconnection Type	Integrated Breaker	
PV Array Configuration	Standard: Floating; Optional: Negative grounded	
AC Output		
Rated AC Output Power	250kW	500kW
Max. AC Output Power	275kW	550kW
Rated Output Voltage	270Vac	
Output Frequency Range	-	
Output Voltage Range	215-310Vac	
Grid Connection Type	3Φ/PE	
Max AC Output Current	588A	1176A
Rated Output Frequency	50Hz	
Power Factor	>0.99 (±0.9 adjustable)	
Current THD	<3%	
AC Disconnection Type	Integrated Breaker	
System		
Topology	Transformerless	
Max. Efficiency	98.5%	
Euro Efficiency	98.0%	98.3%
Stand-by / Night Consumption	<100W	
Environment		
Protection Degree	IP20	
Cooling	Variable speed cooling fans	
Operating Temperature Range	-20°C to +60°C	
Operating Humidity	0-95%, non-condensing	
Operating Altitude	4000m	
Display and Communication		
Display	LCD+LED	
Communication	RS485	
Mechanical Data		
Dimensions (WxHxD) (mm)	1600x2100x806	2800x2100x806
Weight (kg)	1100	1800
Safety		
Safety and EMC Standards	LVD: 2006/95/EC, EMC: 2004/108/EC, IEC/EN 62109-1: 2010, IEC/EN 62109-2: 2011; IEC/EN61000-6-2: 2005, IEC/EN61000-6-4: 2007	
Grid Standards	IEC61727: 2004	

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1MW Integrated PV Power Container

■ Product Introduction

● Superior integration and turn-key design

1MW integrated PV turn-key design system with all equipments in one container, including two 500KW inverters, two smart DC cabinets, two smart AC cabinets, one communication cabinet, and one auxiliary power supply unit

● Professional Integration

Container solution for outdoor use with professional factory integration and differentiated design to meet special customers' needs

● High environmental adaptability and applicability

Standard 20'HQ container design. IP54 protection degree for outdoor use in extreme operational environments. Suitable for locations subject to strong winds, blown sand and/or high altitude

● Remote operation through smart monitoring system

Highly automated and remote controlled integrated SCADA monitoring system compatible with smart grids

● Simple engineering for fast-track station installation

Only DC, AC and communication connections are required after container allocation; No need to build a dedicated shelter or house

● High level safety and reliability

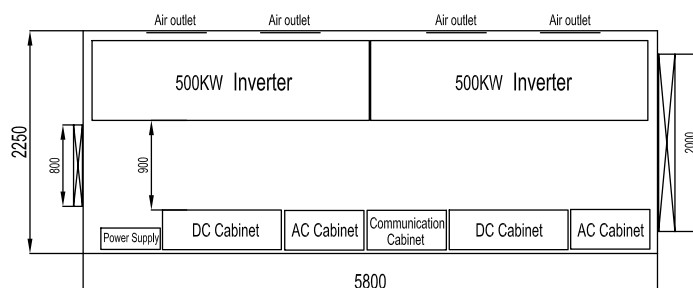
Integrated surveillance camera, intelligent access control system and smoke alarm as well as various kinds of protection measures against fire, rain, dust and small animals ensure the safety of system



■ Product Features

- Standard shipping container type design; Convenient transportation by truck, rail and ship
- Diverse installation methods, including mounting on hard ground, steel mounting bracket or concrete slab
- Inverter heat dissipation design, and integrated DC and AC cabinets to ensure operational safety
- Integrated SCADA monitoring system compatible with smart grids
- Smoke detector, intelligent access control system and 24*7 remote camera monitoring
- Bottom and side wire routing options are available for customers to choose from
- Automatic control of temperature and humidity through forced air ventilation system. Synchronized turning on of the container ventilation and the inverter fans
- The AC output of the power container can match different types of dual secondary winding transformers with various primary winding medium voltage rating
- Convenient access for repair and maintenance to minimize operational cost
- Comply with the latest LVRT certified requirement of Golden Sun in China
- CE certified

■ Internal layout and equipment allocation (internal dimension in mm)



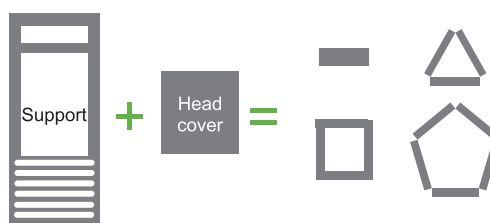
	CPS PSW1M-O
DC Input	
Nominal DC Input Power	1000kW
Max. DC Input Power	1100kW
Max. DC Input Voltage	880Vdc, 1000Vdc (optional)
Operating DC Input Voltage Range	450-820Vdc
Start-up DC Input Voltage/Power	470V/3.5kW
Nominal DC Input Voltage	600V
MPPT Voltage Range	450-820Vdc
Number of MPP Trackers	1x2
Number of DC Inputs (strings)	(6,7,8,9)x2 (customization available)
Max. Input Current	1200Ax2
DC Disconnection Type	Integrated Breaker
PV Array Configuration	Standard: Floating; Optional: Negative grounded
AC Output	
Rated AC Output Power	1000kW
Max. AC Output Power	1100kW
Rated Output Voltage	270Vac
Output Voltage Range	215-310Vac
Grid Connection Type	3 ϕ /PE
Max AC Output Current	1176Ax2
Rated Output Frequency	50Hz
Power Factor	>0.99 (\pm 0.9 adjustable)
Current THD	<3%
AC Disconnection Type	Integrated Breaker
System	
Topology	Transformerless
Max. Efficiency	98.5%
Euro Efficiency	98.3%
Stand-by/Night Consumption	<200W
Protection	
DC Over-Voltage Protection	Available
AC Over-Voltage Protection	Available
Over-Current, Short-Circuit Protection	Available
Ground Fault Detection	Available
Over-Temperature Protection	Available
Insulation Monitoring	Available
Smoke Alarm	Available
Temperature and Humidity Alarm	Available
Emergency Lighting System	Available
PV-UPS Power Supply	Optional
Camera Monitoring System	Optional
Access Control System	Optional
Environment	
Protection Degree	IP54
Cooling	Temperature controlled cooling, air-conditioning (optional)
Operating Temperature Range	-25°C to +60°C
Operating Humidity	0-95%, non-condensing
Operating Altitude	4000m
Display and Communication	
Display	LCD + LED
Communication	RS485, Ethernet (Optional)
Mechanical Data	
Dimensions(WxHxD)	6058x2896x2438mm
Weight	9t

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CPS Matrix



- Unique and modern modular bracket design, flexible assembly
- Small footprint, no extra support needed
- Convenient cable management function
- User-friendly and safe open-door design
- Easy and convenient installation and maintenance
- Indoor and outdoor applications
- Compatible with 1.5kW to 20kW inverters



CPS Matrix provides customers various installation solutions, especially when adequate wall surface or mounting point is not available, such as outdoors, in open areas, unqualified hanging conditions and etc.

Adopting a unique and contemporary modular design, the bracket system allows flexible assembly and modular extension to fit various applications. At the same time, its professional industrial design, convenient cable management function, heat dissipation characteristics and door-open design make installation and maintenance easy and convenient.

Wiring Schematic Diagram



■ Cable input

Cables enter the Matrix interior through the upper window



■ Cable output 1

Cables enter the enters ground wiring slot from the bracket interior when ground wiring slot is available (full veil)



■ Cable output 2

Cables exit from Matrix lower window when ground wiring slot is not available (half veil)

Bracket Module Dimensions

