

CPS SCE4.6~6KTL-120/EU

Single Phase Residential Hybrid PCS



High Return

- Max efficiency 96.6%, Battery efficiency 93%
- Convenient to retrofit existing grid-connected systems increase the proportion of spontaneous use

High Protection

- With BMS system to ensure high battery life
- Natural cooling design

High Flexibility

- Compatible with lead-acid batteries and lithium battery
- Compatible with 500W+ modules

Model	CPS SCE4.6KTL-120EU	CPS SCE5KTL-120EU	CPS SCE6KTL-120EU
Efficiency			
Max. Efficiency (PV to Grid)		96.6%	
Eur. Efficiency (PV to Grid)		95.1%	
Max. Efficiency (Battery to Load)		93.0%	
PV			
Rated Input Voltage		360V	
Max. Input Voltage		550V	
Max. Input Power	9.0kW	9.0kW	9.0kW
Max. Input Current per MPPT		15A/15A	
Max. Short Circuit Current per MPPT		20A/20A	
No. of MPPTs		2	
No. of Strings per MPPT		1	
Start Input Voltage		90V	
PV Operating Voltage Range		70-520V	
Battery			
Battery Type		Lithium-ion/Lead-Acid	
Battery Voltage Range		40-60V	
Max. Charge/Discharge Current	120A/120A	120A/120A	120A/120A
Max. Charge/Discharge Power	6.0kW/4.6kW	6.0kW/5.0kW	6.0kW/6.0kW
Grid			
Max. Input Current	41.0A	41.0A	41.0A
Rated Output Apparent Power	4.6kVA	5.0kVA	6.0kVA
Max. Output Apparent Power	4.6kVA	5.5kVA	6.0kVA
Rated Output Voltage		220V/230V	
Rated Grid Frequency		50Hz/60Hz	
THDI		<3%(Rated Power)	
Power Factor		> 0.99 Rated power (Adjustable 0.8 Leading - 0.8Lagging)	
Backup			
Max. Output Current (On Grid)	22.0A	23.9A	28.6A
Rated Output Apparent Power (Off Grid)	4.6kVA	5.0kVA	6.0kVA
Max. Output Apparent Power (Off Grid)	4.6kVA	5.0kVA	6.0kVA
Peak Output Apparent Power	6.9kVA@1s	7.5kVA@1s	9kVA@1s
Rated Output Voltage		220V/230V	
Rated Output Frequency		50Hz/60Hz	
Max. Output Single Phase Apparent Power		/	
THDV		<3%(Rated Power)	
Switching Time		10ms	
Protection			
DC Switch		Support	
Anti-islanding Protection		Support	
AC Overcurrent Protection		Support	
AC Short Circuit Protection		Support	
PV String Reverse Protection		Support	
Surge Arrester		AC Type III, DC Type III	
Insulation Detection		Support	
Leakage Current Protection		Support	
General			
Topology		High Frequency Isolation (Battery)	
IP Rating		IP65	
Cooling		Natural cooling	
Operating Temperature Range		-25°C-60°C	
Relative Humidity Range		0-100%	
Max. Operating Altitude		4000m	
Noise (Typical)		<35dB	
Dimensions (W*H*D)		515*485*175mm	
Weight		25kg	
Display		LED&APP	
Communication		RS485,CAN, WIFI/4G(optional)	
Certification			
Safety		IEC/EN 62109-1/2, IEC/EN 61000-6-1/2/3/4, IEC 62477, IEC 62040-1	
Grid Code		VDE4105,EN 50549-1,CEI 0-21,NTS Version 2.1,UNE 217001:2020,UNE 217002:202,G99,AS4777.2,SAA,NRS 097-2-1	

* The certificates are for reference only. Please consult the local sales staff for detailed certification.

CPS SCE5~10K-TH-EU

Three Phase Residential Hybrid PCS



Strong Ability

- 100% unbalance ability
- 50% max power for one phase supported

High Protection

- With BMS system to ensure high battery life
- Natural cooling design

High Flexibility

- Compatible with lead-acid batteries and lithium battery
- Compatible with 500W+ modules

Model	SCE5K-TH-EU	SCE6K-TH-EU	SCE8K-TH-EU	SCE10K-TH-EU
Efficiency				
Max. Efficiency (PV to Grid)	97.1%		97.4%	
Eur. Efficiency (PV to Grid)	95.6%		96.2%	
Max. Efficiency (Battery to Load)	96.5%	96.6%	96.8%	96.8%
PV				
Rated Input Voltage	650V			
Max. Input Voltage	1000V			
Max. Input Power	9.0kW	9.0kW	15.0kW	15.0kW
Max. Input Current per MPPT	15A/15A		20A/30A	
Max. Short Circuit Current per MPPT	20A/20A		30A/40A	
No. of MPPTs	2			
No. of Strings per MPPT	1/1		1/2	
Start Input Voltage	150V			
PV Operating Voltage Range	160-950V			
Battery				
Battery Type	Lithium-ion/Lead-Acid			
Battery Voltage Range	150-600V			
Max. Charge/Discharge Current	25A/25A		50A/50A	
Max. Charge/Discharge Power	9.0kW/5.0kW	9.0kW/6.0kW	15kW/8.0kW	15kW/10kW
Grid				
Max. Input Current	25.0A	25.0A	25.0A	25.0A
Rated Output Apparent Power	5.0kVA	6.0kVA	8.0kVA	10.0kVA
Max. Output Apparent Power	5.5kVA	6.6kVA	8.8kVA	11.0kVA
Rated Output Voltage	380V/400V/415V, 3W+N+PE			
Rated Grid Frequency	50Hz/60Hz			
THDI	<3%(Rated Power)			
Power Factor	> 0.99 Rated power (Adjustable 0.8 Leading - 0.8Lagging)			
Backup Port				
Max. Output Current (On Grid)	25.0A	25.0A	25.0A	25.0A
Rated Output Apparent Power (On Grid)	15.8kVA	15.8kVA	15.8kVA	15.8kVA
Max. Output Apparent Power (Off Grid)	5.0kVA	6.0kVA	8.0kVA	10.0kVA
Peak Output Apparent Power	6kVA@5min/7.5kVA@10s	7.2kVA@5min/9kVA@10s	9.6kVA@5min/12kVA@10s	12kVA@5min/15kVA@10s
Rated Output Voltage	380V/400V/415V, 3W+N+PE			
Rated Output Frequency	50Hz/60Hz			
Max. Output Single Phase Apparent Power	2.5kVA	3.0kVA	4.0kVA	5.0kVA
THDV	<3%(Rated Power)			
Switching Time	10ms			
Protection				
DC Switch	Support			
Anti-islanding Protection	Support			
AC Overcurrent Protection	Support			
AC Short Circuit Protection	Support			
PV String Reverse Protection	Support			
Surge Arrester	AC Type III, DC Type II			
AFCI	Option			
General				
Topology	Transformerless			
IP Rating	IP65			
Cooling	Natural cooling			
Operating Temperature Range	-25°C~60°C(>45°C derating)			
Relative Humidity Range	0-100%			
Max. Operating Altitude	4000m(>2000m derating)			
Noise (Typical)	<30dB			
Dimensions (W*H*D)	530*550*212mm			
Weight (kg)	30kg		32kg	
Display	LED&APP			
Communication	RS485,CAN, WIFI/4G(optional)			
Certification				
Safety	IEC 62109-1/2, IEC/EN 61000-6-1/2/3/4			
Grid Code	EN 50549-1, VDE4105, NC RfG, NTS 2.1, UNE 217001, UNE 217002			

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CPS ESSR-05/10/15/20KL1

Low Voltage Residential Battery



Flexible

- Standard packs and control modules reduce inventory and design difficulties

Safe

- Adapt to different installation environments with IP65 protection
- VDE 2510-50, IEC 63056

Easy

- Reduce wiring work during pack install
- Automatically assign of BMS address

Technical parameters



Model	CPS ESSR-05KL1	CPS ESSR-10KL1	CPS ESSR-15KL1	CPS ESSR-20KL1
System Parameters				
Power Control Module	CPS ECD51	CPS ECD51	CPS ECD51	CPS ECD51
Battery Extension Module	CPS EBM016100LF-L	CPS EBM016100LF-L	CPS EBM016100LF-L	CPS EBM016100LF-L
Rated Voltage	51.2V	51.2V	51.2V	51.2V
Operating Voltage Range	44.8~57.6V	44.8~57.6V	44.8~57.6V	44.8~57.6V
Max Charge/Discharge Current	50A	100A	120A	120A
Max Power	2.5kW	5.0kW	6.0kW	6.0kW
Rated Charge/Discharge Energy	5.12kWh	10.24kWh	15.36kWh	20.48kWh
Useable Battery Energy	5.12kWh	10.24kWh	15.36kWh	20.48kWh
DOD	100%	100%	100%	100%
Weight	60kg	104kg	148kg	192kg
Dimension (W*D*H)	670*178*650mm	670*178*1020mm	670*178*1390mm	670*178*1760mm
Product Parallel Extension	Up to 61.44kWh	Up to 61.44kWh	Up to 61.44kWh	Up to 61.44kWh
Operating Temperature	Charge: 0~50°C Discharge: -10~50°C			
Working Humidity	5~95%	5~95%	5~95%	5~95%
Protection	IP65	IP65	IP65	IP65
EOL	70%	70%	70%	70%
Communication	CAN	CAN	CAN	CAN
Certificates	IEC 62619, IEC 63056, IEC62040-1, VDE 2510-50, CE EMC, UKCA, UN 38.3			
Installation	Floor Mount & Wall Mount	Floor Mount & Wall Mount	Floor Mount & Wall Mount	Floor Mount & Wall Mount
Cooling	Natural	Natural	Natural	Natural
Altitude	≤3000m	≤3000m	≤3000m	≤3000m
Battery Extension Module				
Module	CPS EBM016100LF-L			
Rated Charge/Discharge Energy	5.12kWh			
Dimension (W*D*H)	670*178*370mm			
Weight	44kg			
EOL	70%			
Power Control Module				
Model	CPS ECD51			
Operating Voltage Range	44.8~57.6V			
Max Charge/Discharge Current	120A			
Dimension (W*D*H)	670*178*280mm			
Weight	8kg			

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CPS ESSR-05/10/15/20KH1

High Voltage Residential Battery



Flexible

- Standard packs and control modules reduce inventory and design difficulties
- Working below -10°C with self heating

Strong

- C-rate up to 0.8
- 4kW for each pack. Get 10kW power from only 15kWh

Easy

- Reduce wiring work during pack install
- Automatically assign of BMS address

Technical parameters



Model	CPS ESSR-05KH1	CPS ESSR-10KH1	CPS ESSR-15KH1	CPS ESSR-20KH1
System Parameters				
Power Control Module	CPS ECD500	CPS ECD500	CPS ECD500	CPS ECD500
Battery Extension Module	CPS EBM032050LF-H	CPS EBM032050LF-H	CPS EBM032050LF-H	CPS EBM032050LF-H
Rated Voltage	102.4V	204.8V	307.2V	409.6V
Operating Voltage Range	89.6~115.2V	179.2~230.4V	268.8~345.6V	358.4~460.8V
Max Charge/Discharge Current	40A	40A	40A	40A
Max Power	4.0kW	8.1kW	12.2kW	16.3kW
Rated Charge/Discharge Energy	5.12kWh	10.24kWh	15.36kWh	20.48kWh
Useable Battery Energy	5.12kWh	10.24kWh	15.36kWh	20.48kWh
DOD	100%	100%	100%	100%
Weight	75kg	131kg	188kg	244kg
Dimension (W*D*H)	770*178*680mm	≈770*178*1040mm	≈770*178*1400mm	≈770*178*1760mm
Product Parallel Extension	Up to 61.44kWh	Up to 61.44kWh	Up to 61.44kWh	Up to 61.44kWh
Operating Temperature	Charge&Discharge: -10~50°C			
Working Humidity	5~95%	5~95%	5~95%	5~95%
Protection	IP65	IP65	IP65	IP65
EOL	70%	70%	70%	70%
Communication	CAN	CAN	CAN	CAN
Certificates	IEC 62619, IEC 63056, IEC 62040-1, IEC 62477-1, CE EMC, VDE 2510-50, UKCA, UN38.3			
Installation	Floor Mount & Wall Mount	Floor Mount & Wall Mount	Floor Mount & Wall Mount	Floor Mount & Wall Mount
Cooling	Natural	Natural	Natural	Natural
Altitude	≤3000m	≤3000m	≤3000m	≤3000m
Battery Extension Module				
Module	CPS EBM032050LF-H			
Rated Charge/Discharge Energy	5.12kWh			
Dimension (W*D*H)	770*178*410mm			
Weight	56kg			
EOL	70%			
Power Control Module				
Model	CPS ECD500			
Operating Voltage Range	80~500V			
Max Charge/Discharge Current	40A			
Dimension (W*D*H)	770*178*220mm			
Weight	13kg			

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