

# CHS2 All In One Hybrid Energy Storage System

## Better Performance

- String current 22.5A, matching high power (210) PV panel
- 6 MPPT, support 200% oversizing
- Adopting C&I 280Ah cell, good performance and higher energy density



## Ultimate Safety

- AFCI as standard to prevent fire
- Support core health warning, CO, fire detection, cabinet-level fire protection
- AC and DC type II SPD



## Highly Integrated

- pre-installed in the factory, no need for on-site installation and debugging
- Accessing to DG(diesel generator), no need for additional equipment
- AC coupling available



## Higher Revenue

- PV and Battery are dc coupled with high efficiency
- Wide environmental adaptability improves VPP revenue
- Intelligent scheduling, and multiple scheduling modes



CHS2-29.9K-T4-X | CHS2-30K-T4-X  
CHS2-50K-T6-X

MODEL	CHS2-29.9K-T4-X	CHS2-50K-T6-X
<b>DC Input</b>		
Max. PV Array Power [Wp]@STC	60000	100000
Max. DC Voltage [V]		1000
MPPT Voltage Range [V]		180 ~ 850
Rated DC Voltage [V]		600
Start Voltage [V]		200
Max. DC Input Current [A]	4*45	6*45
Max. DC Short Circuit Current [A]	4*55	6*55
Number of Strings per MPPT	2	2
<b>Battery Parameters</b>		
Battery Type		LiFePO4
Rated Energy [kWh]		100.3
Max. Charging/Discharging Current [A]		140
<b>AC Output [On-grid]</b>		
Rated AC Power [W]	30000	50000
Max. Apparent Power [VA]	33000	55000
Rated Output Current [A]@230V	43.5	72.5
Max. Output Current [A]@230V	47.9	79.8
Rated AC Voltage [V]		3+N+PE,380/ 400
Rated Output Frequency/Range [Hz]		50,60/45 ~ 55,55 ~ 65
Power Factor [cos φ]		0i - 1 - 0c
Total Harmonic Distortion [THDi]		<3%
<b>AC input [On-grid]</b>		
Rated AC Voltage/Range [V]		3+N+PE,380/ 400
Rated Output Frequency [Hz]		50,60
Max. Input Current [A]		150
<b>AC Output [Back-up]</b>		
Max. Output Power [VA]	33000	55000
Peak Output Apparent Power [VA]	45000,5s	75000,5s
Rated AC Voltage [V]		3+N+PE,380/ 400
Rated Output Frequency/Range [Hz]		50,60/45 ~ 55,55 ~ 65
Output THDv (@ Liner Load)		<3%
<b>AC Input [Generator]</b>		
Max. Input Power [W]	30000	50000
Max. Input Current [A]@230V	43.5	72.5
Rated Input Voltage [V]		3+N+PE,380/ 400
Rated Input Frequency/Range [Hz]		50,60/45 ~ 55,55 ~ 65
<b>Efficiency</b>		
Max. Efficiency		98%
Euro Efficiency		97.3%
Max. Battery to AC Efficiency		96.0%
<b>Protection</b>		
PV Reverse Polarity Protection		Integrated
Anti-islanding Protection		Integrated
AC Overcurrent Protection		Integrated
AC Short Circuit Protection		Integrated
AC Overvoltage Protection		Integrated
DC switch		Integrated
DC Surge Protection		II
AC Surge Protection		II
AFCI		Integrated
RSD		Optional
<b>General Parameters</b>		
Communication		Wi-Fi/Ethernet/CAN/RS485
Topology		Transformerless
Operating Temperature Range		-30°C to +50°C (45°C to 50°C with derating)
Cooling Method		Air Conditioner
Ambient Humidity		5~95%(No Condensing)
Altitude [m]		2000
Ingress Protection		IP55, IP66(Inverter)
Dimensions [H*W*D] [mm]		1980*988*1065
Weight [kg]		1050(57.3kWh)/1150(71.6kWh)/1250(85.9kWh)/1350(100.3kWh)
Warranty [Year]		5/10
Standard		VDE4105, IEC61727/62116, VDE0126, AS4777.2, CEI 0-21, EN50549-1, G98, G99, C10-11, UNE217002, NBR16149/NBR16150, IEC62109-1/-2, NBT32004-2018, EN61000-6-1,EN61000-6-2,EN61000-6-3, EN61000-6-4

MODEL	CH2-29.9K-T4	CH2-30K-T4	CH2-50K-T6
<b>DC Input</b>			
Max. PV Array Power [Wp]@STC	59800	60000	100000
Max. DC Voltage [V]		1000	
MPPT Voltage Range [V]		180 ~ 850	
Rated DC Voltage [V]		600	
Start Voltage [V]		200	
Max.DC Input Current [A]	4*45		6*45
Max.DC Short Circuit Current [A]	4*56.5		6*56.5
Number of Strings per MPPT	2		2
<b>Battery Parameters</b>			
Battery Type		LiFePO4	
Battery Voltage Range[V]		180 ~ 800	
Max.Charging/Discharging Current [A]		3*50	
<b>AC Output [On-grid]</b>			
Rated AC Power [W]	29900	30000	50000
Max.Apparent Power[VA]	29900	33000	55000
Rated Output Current[A]@230V	43.3	43.5	72.5
Max. Output Current [A]@230V	43.3	47.9	79.8
Rated AC Voltage/Range [V]		3+N+PE/ 3+PE, 380/ 400	
Rated Output Frequency/Range [Hz]		50,60/45 ~ 55,55 ~ 65	
Power Factor [cos φ]		0i - 1 - 0c	
Total Harmonic Distortion [THDi]		<3%	
<b>AC input [On-grid]</b>			
Rated AC Voltage [V]		3+N+PE,380/400	
Rated Output Frequency [Hz]		50,60	
Max. Input Current [A]		150	
<b>AC Output [Back-up]</b>			
Max.Output Power [VA]	29900	33000	55000
Peak Output Apparent Power [VA]	29900	45000,5s	75000,5s
Rated AC Voltage [V]		3+N+PE,380/400	
Rated Output Frequency/Range [Hz]		50,60/45 ~ 55,55 ~ 65	
Output THDv (@ Liner Load)		<3%	
<b>AC Input [Generator]</b>			
Max. Input Power [W]	29900	30000	50000
Max. Input Current [A]@230V	43.3	43.5	72.5
Rated Input Voltage [V]		3+N+PE,380/400	
Rated Input Frequency/Range [Hz]		50,60/45 ~ 55,55 ~ 65	
<b>Efficiency</b>			
Max. Efficiency		≥98.0%	
Euro Efficiency		97.3%	
Max. Battery to AC Efficiency		96.0%	
<b>Protection</b>			
PV Reverse Polarity Protection		Integrated	
Anti-islanding Protection		Integrated	
AC Overcurrent Protection		Integrated	
AC Short Circuit Protection		Integrated	
AC Overvoltage Protection		Integrated	
DC switch		Integrated	
DC Surge Protection		II	
AC Surge Protection		II	
AFCI		Integrated	
RSD		Optional	
<b>General Parameters</b>			
Communication		Wi-Fi/Ethernet/CAN/RS485	
Topology		Transformerless	
Operating Temperature Range		-30°C to +60°C (45°C to 60°C with derating)	
Cooling Method		Smart Fan Cooling	
Ambient Humidity		0-100% Non-condensing	
Altitude		3000	
Ingress Protection		IP66	
Dimensions [H*W*D] [mm]		630*630*290	
Weight [kg]		76	
Warranty [Year]		5/10	
Standard	VDE4105, IEC61727/62116, VDE0126, AS4777.2, CEI 0 21, EN50549-1, G98, G99, C10-11, UNE217002, NRS097, NBR16149/NBR16150, IEC62109-1/-2, NBT32004-2018, EN61000-6-1,EN61000-6-2,EN61000-6-3, EN61000-6-4		

MODEL	CB2-57.3-HV5	CB2-71.6-HV5	CB2-85.9-HV5	CB2-100.3-HV5
Rated Energy [kWh]	57.3	71.6	85.9	100.3
Usable Energy [kWh]	51.5	64.4	77.3	90.2
Rated Capacity [Ah]	280	280	280	280
No. of Modules	4	5	6	7
Nominal Voltage [V]	204.8	256	307.2	358.4
Voltage Range [V]	179.2~230.4	224~288	268.8~345.6	313.6~403.2
Charge/Discharge Current [A]	140	140	140	140
Rated Power [kW]	28.6	35.6	42.9	50.1
Weight [kg]	960	1060	1160	1260
Dimension [H*W*D] [mm]	1980*988*1065			
Communication	CAN			
Operating Temperature Range [°C]	-30~50			
Cooling Method	Air Conditioner			
Relative Humidity	5~95% (No Condensing)			
Altitude [m]	2000			
Ingress Protection	IP55			
Mounting	Ground-Mounted			
<b>Control Module</b>	<b>CBC2-HV5</b>			
Weight [kg]	28			
Dimension [H*W*D] [mm]	225*483*610			
<b>Battery Module</b>	<b>CBU2-14.33-HV5</b>			
Rated Energy [kWh]	14.33			
Weight [kg]	115			
Dimension [H*W*D] [mm]	231*523*805			
Applicable Standard	IEC62619-2017, UN38.3, IEC61000-6-2/4, IEC62477			