CHS2 All-in-One Hybrid Energy Storage System

CHS2 is suitable for various scenarios such as large residential areas, supermarkets, farms, and small factories. It integrates functions including power generation, conversion, storage, and utilization. With its high-end hardware configuration and intelligent IoT software, CHS2 supports various application modes such as self-consumption, time-of-use , and backup mode. It meets daily usage scenarios and can also connect with other devices such as diesel generators, helping owners achieve more stable, secure, and economical electricity needs.



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
- Built-in STS function, on-off grid switch in 20ms

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	CHS2-30K-T4-X	CHS2-50K-T6-X
DC Input			
Max. PV Array Power [Wp]@STC	59998	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	4*45	6*45
Max.DC Short Circuit Current [A]	4*55	4*55	6*55
Number of Strings per MPPT	2	2	2
Battery Parameters			
Battery Type		LiFePO4	
Rated Energy [kWh]		100.3	
Max.Charging/Discharging Current [A]		150	
AC Output [On-grid]			
Rated AC Power [W]	29999	30000	50000
Max.Apparent Power[VA]	29999	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 [V]		3+N+PE, 380/ 400	
Rated Output Frequency/Range [Hz]		50,45 ~ 55	
Power Factor [cos ϕ]		0i - 1 - 0c	
Total Harmonic Distortion [THDi]		<3%	
AC input [On-grid]			
Rated AC Voltage/Range [V]		3+N+PE, 380/ 400	
Rated Output Frequency [Hz]		50	
Max. Input Current [A]		200	
AC Output [Back-up]			
Max.Output Power [VA]	29999	33000	55000
Peak Output Apparent Power [VA]	29999	45000,5s	75000,5s
Rated AC Voltage [V]		3+N+PE, 380/ 400	
Rated Output Frequency/Range [Hz]		50,45 ~ 55	
Output THDv (@ Liner Load)		<3%	
AC Input [Generator]			
Max. Input Power [W]	29999	30000	50000
Max. Input Current [A]@230V		200	
Rated Input Voltage [V]		3+N+PE, 380/ 400	
Rated Input Frequency/Range [Hz]		50,45 ~ 55	
Efficiency			
Max. Efficiency		98%	
Euro Efficiency		97.3%	
Max. Battery to AC Efficiency		96.0%	
Protection			
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	
General Parameters			
Communication		Wi-Fi/Ethernet/RS485	
Topology		Transformerless	
Operating Temperature Range		-30℃ to +50℃ (45℃ to 50℃ 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]		1035(57.3kWh)/1145(71.6kWh)/1255(85.9kWh)/1365(100.3kWh)	
Warranty [Year]		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
DC Input			
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*55		6*55
Number of Strings per MPPT	2		2
Battery Parameters			
Battery Type		LiFePO4	
Battery Voltage Range[V]		180 ~ 800	
Max.Charging/Discharging Current [A]		150	
AC Output [On-grid]			
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%	
AC input [On-grid]			
Rated AC Voltage [V]		3+N+PE,380/400	
Rated Output Frequency [Hz]		50,60	
Max. Input Current [A]		200	
AC Output [Back-up]			
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%	
AC Input [Generator]			
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	
Efficiency			
Max. Efficiency		≥98.0%	
Euro Efficiency		97.3%	
Max. Battery to AC Efficiency		96.0%	
Protection			
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	
General Parameters			
Communication		Wi-Fi/Ethernet/CAN/RS485	
Topology		Transformerless	
Operating Temperature Range		-30℃ to +60℃ (45℃ to 60℃ 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]	150	150	150	150
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 [℃]	-30~50			
Cooling Method	Air Conditioner			
Relative Humidity	5~95% (No Condensing)			
Altitude [m]	2000			
Ingress Protection	IP55			
Mounting	Ground-Mounted			
Control Module	**CBC2-HV5**			
Weight [kg]	28			
Dimension [H*W*D] [mm]	225*483*610			
Battery Module	**CBU2-14.33-HV5**			
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			