

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
- 4~6 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

Model	CHS2-29.9K-T4- 204.8V/280Ah/ 51.5kWh	CHS2-29.9K-T4- 256.0V/280Ah/ 64.4kWh	CHS2-29.9K-T4- 307.2V/280Ah/ 77.3kWh	CHS2-29.9K-T4- 358.4V/280Ah/ 90.2kWh
DC Input				
Max. PV Array Power [Wp]@STC	59998			
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			
Max. DC Short Circuit Current [A]	4*56.5			
Backfeed Current [A]	0			
Number of Strings per MPPT	2			
Battery Parameters				
Battery Type	LiFePO4			
Rated Energy [kWh]	57.3	71.6	85.9	100.3
Rated Capacity [Ah]	280			
Battery Voltage Range [V]	179.2-230.4	224-288	268.8-345.6	313.6-403.2
Max. Charging/Discharging Current [A]	140			
Max. DC Short Circuit Current [A]	250			
Depth of Discharge (%)	90			
Usable Energy [kWh]	51.5	64.4	77.3	90.2
AC Output [On-grid]				
Rated AC Power [W]	29999			
Rated Apparent Power [VA]	29999			
Max. Apparent Power [VA]	29999			
Rated Output Current [A]@230V AC	43.3			
Max. AC Output Current to Utility Grid [A]	43.3			
Current Inrush[A]	192			
Max. AC Fault Current [A]	182.6			
Max. AC Over Current Protection [A]	86.6			
Backfeed Current [A]	0			
Rated AC Voltage [V]	3L+N+PE, 400			
Rated Input/Output Voltage/Range [V]	230/400V 0.85Un-1.1Un			
Rated Output Frequency/Range [Hz]	50: 45-55; 60: 55-65			
Power Factor [cos φ]	0i - 1 - 0c			
Total Harmonic Distortion [THDi]	<3%			
AC Input [On-grid]				
Rated AC Voltage [V]	3L+N+PE, 400			
Rated Input Frequency [Hz]	50, 60			
Max. Input Current [A]	150			
Max. Short Circuit Current [A]	150			
AC Input [Generator]				
Max. Input Power [W]	29999			
Max. Input Current [A]@230V	43.3			
Rated Input Voltage [v]	3L+N+PE, 400			
Rated Input Frequency/Range [Hz]	50: 45-55; 60: 55-65			
Max. Short Circuit Current [A]	43.3			
AC Output [Back-up]				
Max. Apparent Power [VA]	29999			
Peak Output Apparent Power [VA]	29999			
Rated AC Voltage [V]	3L+N+PE, 400			
Rated Output Frequency/Range [Hz]	50: 45-55; 60: 55-65			
Backfeed Current [A]	0			
Output THDv (@ Linear Load)	<3%			
Efficiency				
Max. Efficiency	≥98.0%			
Euro Efficiency	97.3%			
Max. Battery to AC Efficiency	96.0%			

Protection				
PV String Current Monitoring	Integrated			
PV Insulation Resistance Detection	Integrated			
Residual Current Monitoring	Integrated			
PV Reverse Polarity Protection	Integrated			
Anti-islanding Protection	AFD			
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	Non-isolated			
Over Voltage Category	OVC II (DC), OVC III (AC)			
Operating Temperature Range	-30°C to +50°C (45°C to 50°C with derating)			
Cooling Method	Air conditioner			
Ambient Humidity	0-100% Non-condensing			
Altitude [m]	2000			
Ingress Protection	IP55			
Protective Class	I			
Dimensions [H*W*D] [mm]	1980*988*1065			
Weight [kg]	1050	1150	1250	1350
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, EN61000-6-1, EN61000-6-2, EN61000-6-3, EN61000-6-4			

CHS2-50K-T6-X

Model	CHS2-50K-T6- 204.8V/280Ah/ 51.5kWh	CHS2-50K-T6- 256.0V/280Ah/ 64.4kWh	CHS2-50K-T6- 307.2V/280Ah/ 77.3kWh	CHS2-50K-T6- 358.4V/280Ah/ 90.2kWh
DC Input				
Max. PV Array Power [Wp]@STC	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]	6*45			
Max. DC Short Circuit Current [A]	6*56.5			
Backfeed Current [A]	0			
Number of Strings per MPPT	2			
Battery Parameters				
Battery Type	LiFePO4			
Rated Energy [kWh]	57.3	71.6	85.9	100.3
Rated Capacity [Ah]	280			
Battery Voltage Range [V]	179.2-230.4	224-288	268.8-345.6	313.6-403.2
Max. Charging/Discharging Current [A]	140			
Max. DC Short Circuit Current [A]	250			
Depth of Discharge (%)	90			
Usable Energy [kWh]	51.5	64.4	77.3	90.2
AC Output [On-grid]				
Rated AC Power [W]	50000			
Rated Apparent Power [VA]	50000			
Max. Apparent Power [VA]	55000			
Rated Output Current [A]@230V AC	72.5			
Max. AC Output Current to Utility Grid [A]	79.8			

Current Inrush[A]	192			
Max. AC Fault Current[A]	182.6			
Max. AC Over Current Protection[A]	145			
Backfeed Current [A]	0			
Rated AC Voltage [V]	3L+N+PE, 400			
Rated Input/Output Voltage/Range(V)	230/400V 0.85Un-1.1Un			
Rated Output Frequency/Range [Hz]	50: 45-55; 60: 55-65			
Power Factor [cos φ]	0i - 1 - 0c			
Total Harmonic Distortion [THDi]	<3%			
AC Input [On-grid]				
Rated AC Voltage [V]	3L+N+PE, 400			
Rated Input Frequency [Hz]	50, 60			
Max. Input Current [A]	150			
Max. Short Circuit Current [A]	150			
AC Input [Generator]				
Max. Input Power [W]	50000			
Max. Input Current [A]@230V	72.5			
Rated Input Voltage [v]	3L+N+PE, 400			
Rated Input Frequency/Range [Hz]	50: 45-55; 60: 55-65			
Max. Short Circuit Current [A]	72.5			
AC Output [Back-up]				
Max. Apparent Power [VA]	55000			
Peak Output Apparent Power [VA]	75000, 5s			
Rated AC Voltage [V]	3L+N+PE, 400			
Rated Output Frequency/Range [Hz]	50: 45-55; 60: 55-65			
Backfeed Current [A]	0			
Output THDv (@ Linear Load)	<3%			
Efficiency				
Max. Efficiency	≥98.0%			
Euro Efficiency	97.3%			
Max. Battery to AC Efficiency	96.0%			
Protection				
PV String Current Monitoring	Integrated			
PV Insulation Resistance Detection	Integrated			
Residual Current Monitoring	Integrated			
PV Reverse Polarity Protection	Integrated			
Anti-islanding Protection	AFD			
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	Non-isolated			
Over Voltage Category	OVC II (DC), OVC III (AC)			
Operating Temperature Range	-30°C to +50°C (45°C to 50°C with derating)			
Cooling Method	Air Conditioner			
Ambient Humidity	0-100% Non-condensing			
Altitude [m]	2000			
Ingress Protection	IP55			
Protective Class	I			
Dimensions [H*W*D] [mm]	1980*988*1065			
Weight (kg)	1050	1150	1250	1350
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, EN61000-6-1, EN61000-6-2, EN61000-6-3, EN61000-6-4			

CHS2-50K-T6-X

Model	CHS2-50K-T6- 307.2V/280Ah/ 154.6kWh	CHS2-50K-T6- 358.4V/280Ah/ 180.4kWh
DC Input		
Max. PV Array Power [Wp]@STC	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]	6*45	
Max. DC Short Circuit Current [A]	6*56.5	
Backfeed Current [A]	0	
Number of Strings per MPPT	2	
Battery Parameters		
Battery Type	LiFePO4	
Rated Energy [kWh]	171.8	200.6
Rated Capacity [Ah]	280	
Battery Voltage Range [V]	268.8-345.6	313.6-403.2
Max. Charging/Discharging Current [A]	140	
Max. DC Short Circuit Current [A]	250	
Depth of Discharge (%)	90	
Usable Energy [kWh]	154.6	180.4
AC Output [On-grid]		
Rated AC Power [W]	50000	
Rated Apparent Power [VA]	50000	
Max. Apparent Power [VA]	55000	
Rated Output Current [A]@230V AC	72.5	
Max. AC Output Current to Utility Grid [A]	79.8	
Current Inrush[A]	192	
Max. AC Fault Current[A]	182.6	
Max. AC Over Current Protection[A]	145	
Backfeed Current [A]	0	
Rated AC Voltage [V]	3L+N+PE, 400	
Rated Input/Output Voltage/Range(V)	230/400V 0.85Un-1.1Un	
Rated Output Frequency/Range [Hz]	50: 45-55; 60: 55-65	
Power Factor [cos φ]	0i - 1 - 0c	
Total Harmonic Distortion [THDi]	<3%	
AC Input [On-grid]		
Rated AC Voltage [V]	3L+N+PE, 400	
Rated Input Frequency [Hz]	50, 60	
Max. Input Current [A]	150	
Max. Short Circuit Current [A]	150	
AC Input [Generator]		
Max. Input Power [W]	50000	
Max. Input Current [A]@230V	72.5	
Rated Input Voltage [v]	3L+N+PE, 400	
Rated Input Frequency/Range [Hz]	50: 45-55; 60: 55-65	
Max. Short Circuit Current [A]	72.5	
AC Output [Back-up]		
Max. Apparent Power [VA]	55000	
Peak Output Apparent Power [VA]	75000, 5s	
Rated AC Voltage [V]	3L+N+PE,400	
Rated Output Frequency/Range [Hz]	50: 45-55; 60: 55-65	
Backfeed Current [A]	0	
Output THDv (@ Linear Load)	<3%	
Efficiency		
Max. Efficiency	≥98.0%	
Euro Efficiency	97.3%	
Max. Battery to AC Efficiency	96.0%	

Protection		
PV String Current Monitoring	Integrated	
PV Insulation Resistance Detection	Integrated	
Residual Current Monitoring	Integrated	
PV Reverse Polarity Protection	Integrated	
Anti-islanding Protection	AFD	
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	Non-isolated	
Over Voltage Category	OVC II (DC), OVC III (AC)	
Operating Temperature Range	-30°C to +50°C (45°C to 50°C with derating)	
Cooling Method	Air Conditioner	
Ambient Humidity	0-100% Non-condensing	
Altitude [m]	2000	
Ingress Protection	IP55	
Protective Class	I	
Dimensions [H*W*D] [mm]	1980*988*1065	
Weight (kg)	2410	2610
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, EN61000-6-1, EN61000-6-2, EN61000-6-3, EN61000-6-4	