

# SOFAR PowerIn

C&I Energy Storage System Solution



**ENERGY TO  
POWER  
YOUR LIFE**



# ABOUT SOFAR

SOFAR is a global leading provider of all-scenario solar PV and energy storage solutions and committed to be the leader of digital energy solutions. SOFAR supports the transition to renewable energy through a comprehensive portfolio including PV inverters range from 1 kW to 350 kW, hybrid inverters range from 3 kW to 20 kW, battery storage systems, C&I and utility ESS solutions and SOFAR Monitor for residential, commercial & industrial, and utility-scale applications.

Founded in 2013, SOFAR has always insisted on independent innovation, established a global R&D network with three R&D centers and over 31% of its workforce assigned to R&D, thus gradually establishing the holistic technology and product R&D system.

SOFAR always insists on globalization thinking and localization action since its establishment and now has two global manufacturing bases of 16 inverter production lines and 4 battery production lines, with an annual production capacity of 14GW PV & storage inverters & 1 GWh batteries. It has built an extensive service network of over 20 branch offices worldwide, such as the United Kingdom, Poland, Germany, South Korea, Pakistan, Australia, and so on. By the end of 2024, SOFAR had shipped over 37 GW inverters to more than 100 countries and regions around the world.

As the world's fastest-growing solar energy brand, SOFAR stands firmly among the mainstream solar energy brands with a compound annual growth rate of over 100% from 2020 till 2022. Due to the abilities in cutting-edge solar technologies, SOFAR has achieved China "CQC" certification, Chinese Top 5 String Inverter Brand, TOP5 Global Hybrid Inverter Provider and entitled by EuPD as TOP Brand PV Inverter in India, Poland, Australia, the U.K., Italy and Brazil.

Looking forward, SOFAR will adhere to its mission of "Technology Drives Green Energy" and its value of Virtue & Integrity, Collaboration & Effectiveness to build its core competitiveness in independent innovation in Net-Zero era, expecting to accelerate the global clean energy transition, leveraging its leading solar and energy storage products and solutions.

Learn more about SOFAR by visiting: <https://www.sofarsolar.com/>.

 **100+**  
Countries

 **20+**  
Global Offices

# Milestones

## | Stable and Sustainable Development

**37 GW+**

Inverters Shipped Globally

**56 Billion +**

kg of CO2 Offset per year

**100%+**

GAGR

**31%+**

R&D Team

**100+**

Countries with system installed

**2019**

First Energy Storage Battery Launched  
Introduction of the Next-Generation Residential Energy Storage Solution

**2018**

Dongguan Smart Manufacturing Base Completed and Operational

**2017**

Top5 String Inverter Enterprise in China

**2014**

FIRST PV inverter launched

**2016**

FIRST energy storage inverter launched  
Sales and Service Center Established in Europe

**2013**

SOFAR established



**2020**

Annual sales of inverter exceed EUR 140 Million

**2021**

Top 5 Global Hybrid Inverter Supplier

**2022**

All New Brand Reveal

**2023**

Huizhou Smart Manufacturing Base Completed and Put into Operation

Full-Spectrum Integration of Solar + Storage Solutions for Residential, C&I, and Utility Applications Completed

**2024**

Top Brand by EUPD from 2019 to 2024

Honored with LinkedIn's 2024 Emerging Brand Influence Award

**2025**

SOFAR Officially Listed on the Shenzhen Stock Exchange (Stock Code: 301658)

# SOFAR C&I Energy Solution

**200%**

Max PV input

**Max 40/48A**

Mppt current

**Max 200%**

Overload capability

**AFCI**

Support

**4ms**

Switching time

**7 layers**

Battery protection

**896 kWh**

Extension capacity

**314 Ah**

Battery cell

## Wide selection flexible combinations perfect for all C&I scenarios



HYD-15-30K-T1  
Hybrid Inverter



HYD-40-60K-T1  
Hybrid Inverter



HYD-75-125K-T1  
Hybrid Inverter



SOFAR 80-125KTLX-G4-ESS  
Hybrid Inverter



Modular & Flexible



Plug & Play



Ultimate Safety



Robustness



CBS5000-H4-H12  
Battery



CBS8000-H4-H12  
Battery



CBS8000-64-96KWH  
Battery Cabinet

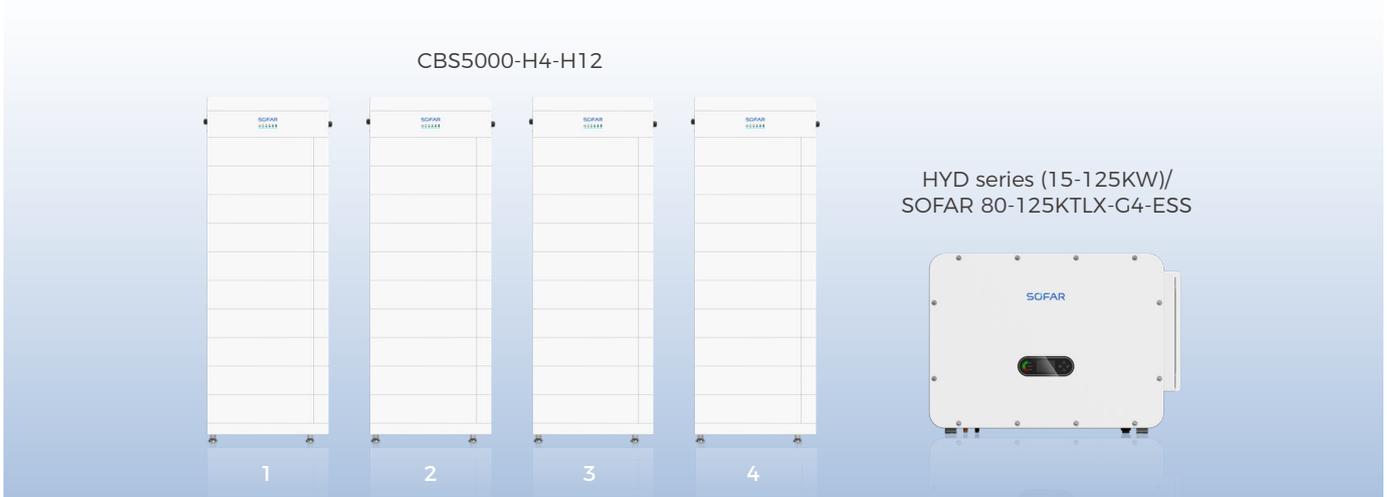


CBS8000-128-224KWH  
Battery Cabinet

# Typical system scenarios

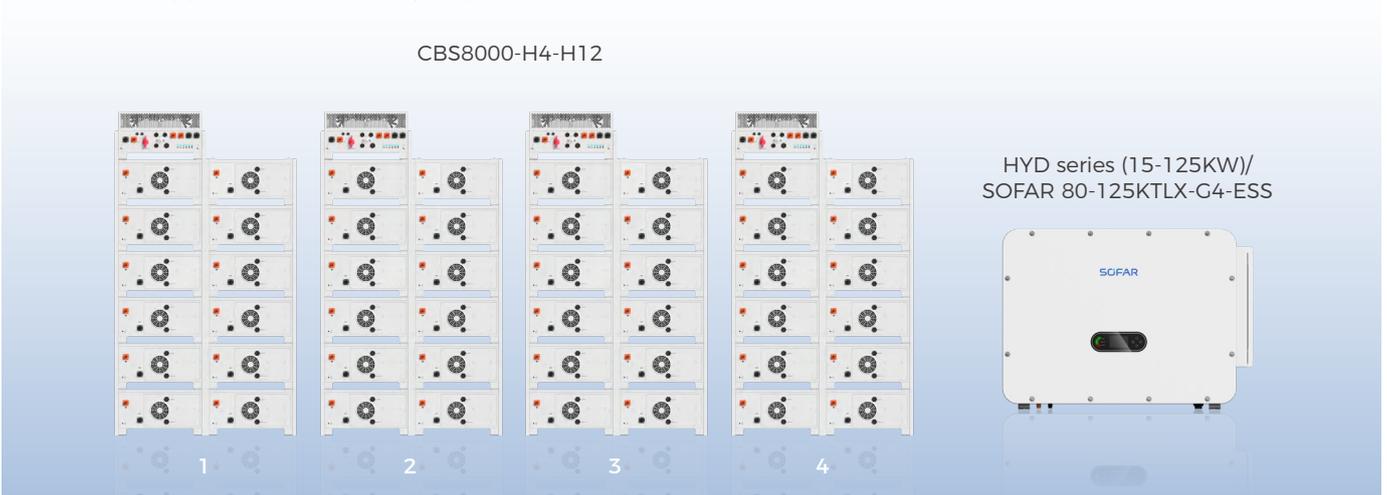
Inverter model	HYD series (15-125KW) / SOFAR 80-125KTLX-G4-ESS
Battery model	CBS5000-H4-H12
Battery controller	1
Battery	4-12
Capacity (kWh)	20-60
Set of Battery	1-4

Maximum support 4 racks of battery in parallel



Inverter model	HYD series (15-125KW) / SOFAR 80-125KTLX-G4-ESS
Battery model	CBS8000-H4-H12
Battery controller	1
Battery	4-12
Capacity (kWh)	64-192
Set of Battery	1-4

Maximum support 4 racks of battery in parallel



# Typical system scenarios

Inverter model	HYD series (15-125KW) / SOFAR 80-125KTLX-G4-ESS
Battery model	CBS8000-64-96KWH
Battery controller	1
Battery	4-6
Capacity (kWh)	64-96
Set of Battery	1-4

Maximum support 4 cabinets in parallel

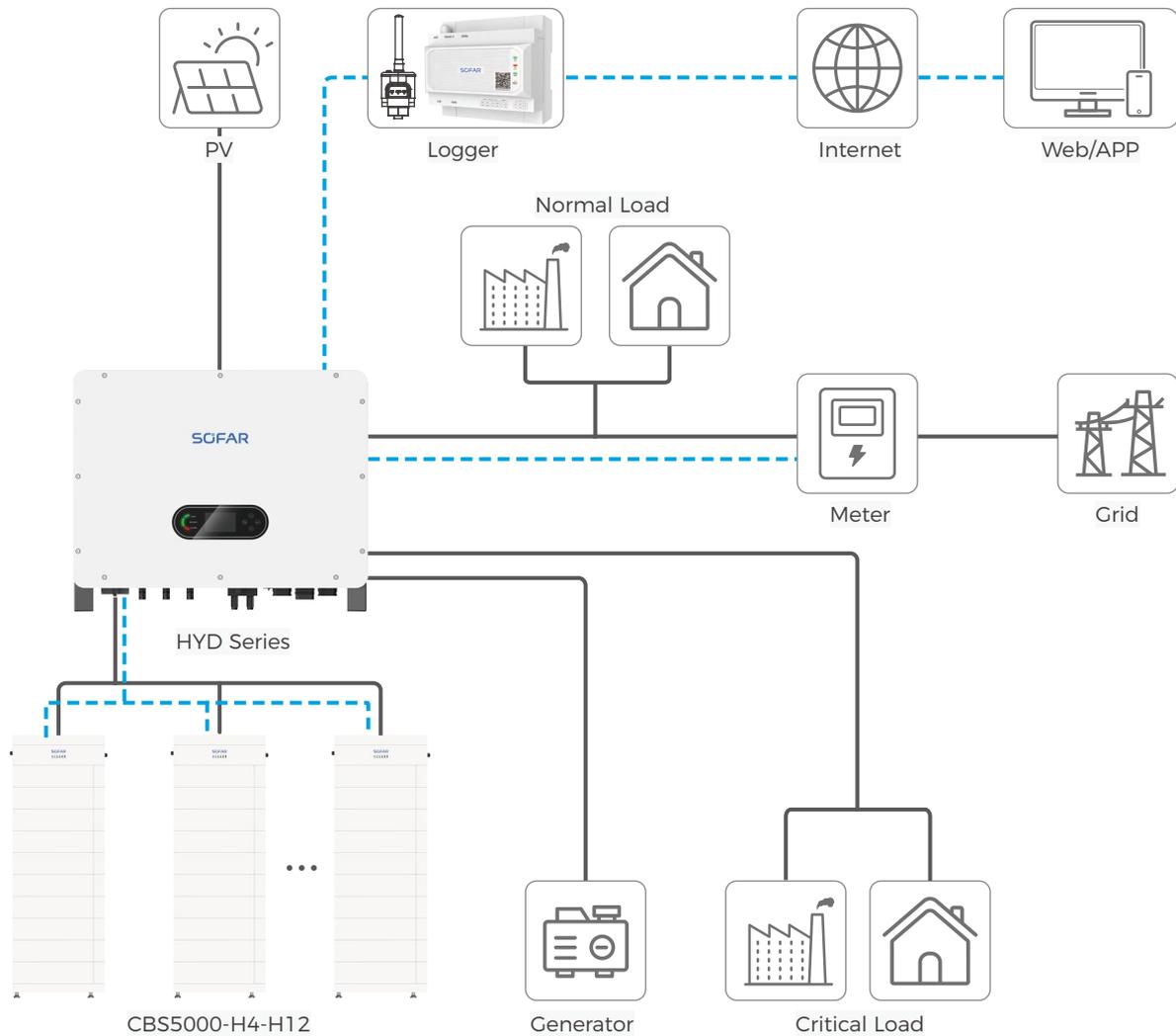


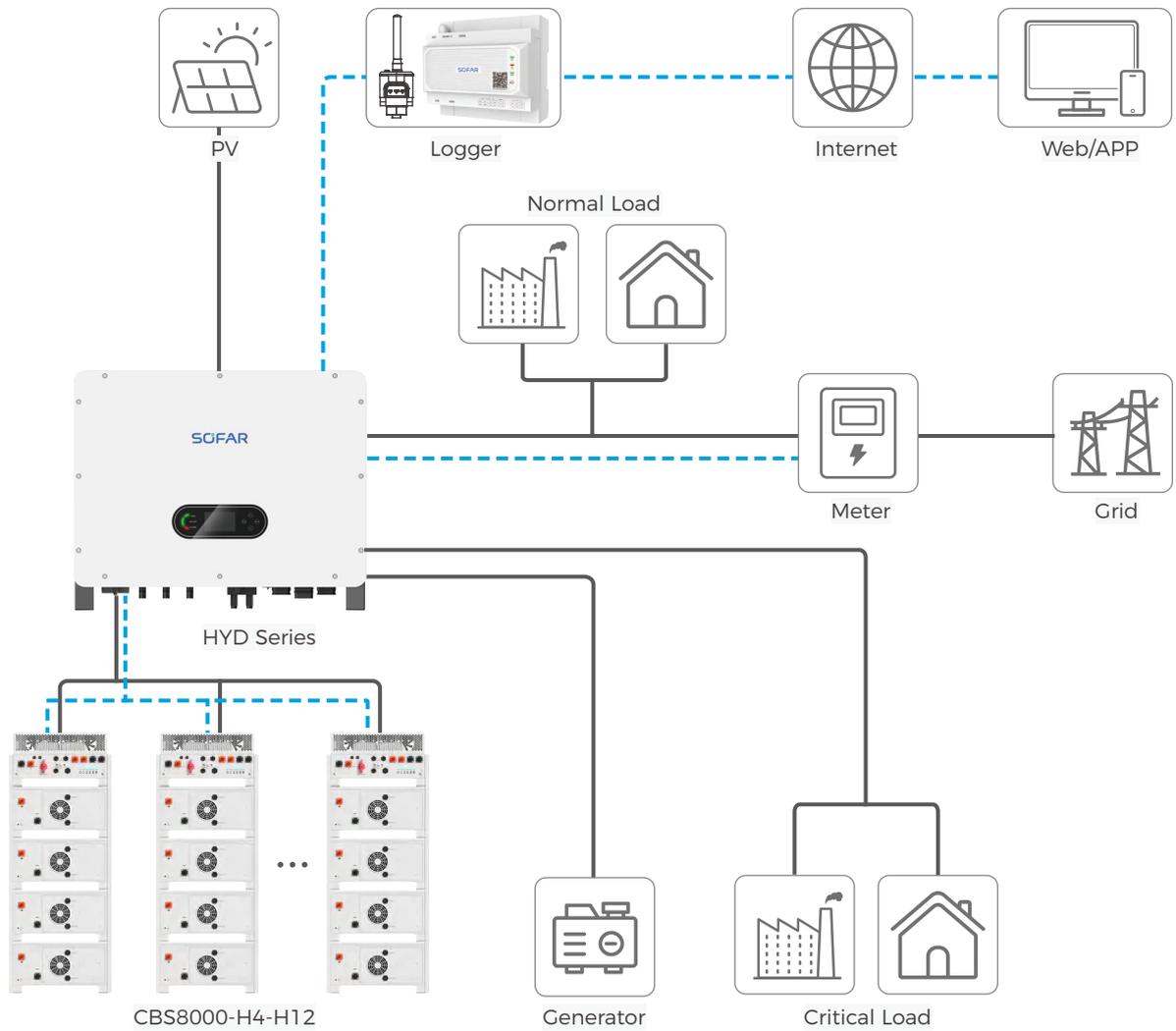
Inverter model	HYD series (15-125KW) / SOFAR 80-125KTLX-G4-ESS
Battery model	CBS8000-128-224KWH
Battery controller	1
Battery	8-14
Capacity (kWh)	128-224
Set of Battery	1-4

Maximum support 4 cabinets in parallel

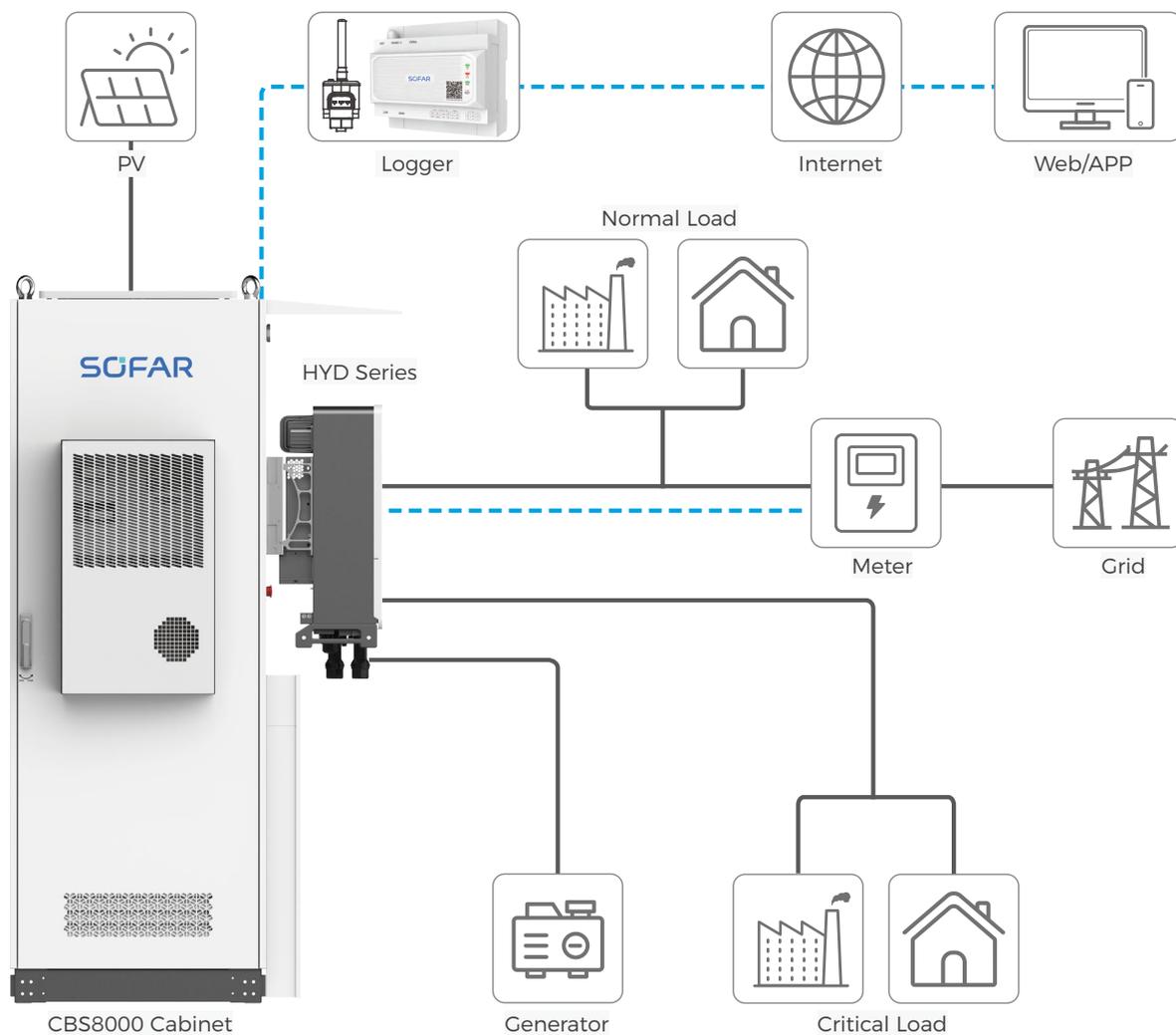


# System Solution Diagram





# System Solution Diagram





# HYD-15-30K-T1

14.9 / 15 / 20 / 25 / 29.9 / 30 kW

*Three-phase hybrid inverter*



## Simplicity

- Light weight and convenient transportation
- LCD and App for easy commissioning



## Safety

- IP66 protection rating
- DC SPD type I+II, AC SPD type II
- AI based AFCI protection



## Flexibility

- Multiple inverters in parallel connection
- Supports intelligent control of non critical loads



## Robustness

- Maximum 200% PV input, and 40A per MPPT
- Supports 100% unbalanced loads
- 150% overload capability for 10 seconds
- Integration of generators to extend backup duration

Model	HYD-14.9K-T1-A	HYD-15K-T1	HYD-20K-T1	HYD-25K-T1	HYD-29.9K-T1-A-PLUS	HYD-30K-T1-PLUS
<b>PV Input</b>						
Recommended Max. PV Power	30 kWp	30 kWp	40 kWp	50 kWp	60 kWp	60 kWp
Max. Input Voltage	1000 Vd.c.					
Start-up Voltage <sup>[1]</sup>	200 Vd.c.					
Rated Input Voltage	600 Vd.c.					
MPP Voltage Range	160-950 Vd.c.					
Number of MPPT	3					
Max. Number of Input Strings per MPPT	2/2/2					
Max. Input Current	40/40/40 A					
Max. Isc	50/50/50 A					
<b>Battery</b>						
Voltage Range	600-1000 Vd.c.					
Number of Battery Input Channels	1					
Max. Charging Power	30 kW					
Max. Discharging Power	14.9 kW	15 kW	20 kW	25 kW	29.9 kW	30 kW
Max. Charging Current	50 A					
Max. Discharging Current	23.8 A	24 A	32 A	40 A	47.8 A	50 A
Battery Type <sup>[2]</sup>	Lithium-ion					
BMS Communication	CAN					
<b>AC Backup</b>						
Rated Output Voltage	3N++PE, 380/400/415 Va.c.					
Rated Output Frequency	50/60 Hz					
Rated Output Power	14.9 kW	15 kW	20 kW	25 kW	29.9 kW	30 kW
Rated Output Current	22.6/21.5/20.7 A	22.8/21.7/20.9 A	30.4/28.9/27.8 A	38.0/36.1/34.8 A	45.4/43.2/41.6 A	45.6/43.3/41.7 A
Rated Apparent Power	14.9 kVA	15 kVA	20 kVA	25 kVA	29.9 kVA	30 kVA
Max. Apparent Power	14.9 kVA	16.5 kVA	22 kVA	27.5 kVA	29.9 kVA	33 kVA
Max. Output Current	22.6/21.5/20.7 A	25.1/23.8/23.0 A	33.4/31.8/30.6 A	41.8/39.7/38.3 A	45.4/43.2/41.6 A	50.0/47.6/45.9 A
Peak Output Apparent Power <sup>[3]</sup>	1.5 times of rated power, 10s					
THDv(@ linear load)	< 3%					
Switching Time	10 ms default					
Asymmetric load	Yes. Supports 100% three-phase unbalanced load					
<b>AC Generator</b>						
Rated Input Voltage	3N++PE, 380/400/415 Va.c.					
Rated Input Frequency	50/60 Hz					
Rated Input Power	14.9 kW	15 kW	20 kW	25 kW	29.9 kW	30 kW
Rated Input Current	22.6/21.5/20.7 A	22.8/21.7/20.9 A	30.4/28.9/27.8 A	38.0/36.1/34.8 A	45.4/43.2/41.6 A	45.6/43.3/41.7 A
Rated Apparent Power	14.9 kVA	15 kVA	20 kVA	25 kVA	29.9 kVA	30 kVA
Max. Apparent Power	14.9 kVA	16.5 kVA	22 kVA	27.5 kVA	29.9 kVA	33 kVA
Max. Input Current	22.6/21.5/20.7 A	25.1/23.8/23.0 A	33.4/31.8/30.6 A	41.8/39.7/38.3 A	45.4/43.2/41.6 A	50.0/47.6/45.9 A
<b>AC Grid</b>						
Rated Voltage	3(N)+PE, 380/400/415 Va.c.					
Rated Frequency	50/60 Hz					
Rated Output Power	14.9 kW	15 kW	20 kW	25 kW	29.9 kW	30 kW
Rated Output Current	22.6/21.5/20.7 A	22.8/21.7/20.9 A	30.4/28.9/27.8 A	38.0/36.1/34.8 A	45.4/43.2/41.6 A	45.6/43.3/41.7 A
Rated Apparent Power	14.9 kVA	15 kVA	20 kVA	25 kVA	29.9 kVA	30 kVA
Max. Apparent Power	14.9 kVA	16.5 kVA	22 kVA	27.5 kVA	29.9 kVA	33 kVA
Max. Output Current	22.6/21.5/20.7 A	25.1/23.8/23.0 A	33.4/31.8/30.6 A	41.8/39.7/38.3 A	45.4/43.2/41.6 A	50.0/47.6/45.9 A
Max. Input Current	80 A					
THDi	< 3%					
Power Factor Range	0.8 lagging - 0.8 leading					
<b>Efficiency</b>						
Max. MPPT Efficiency	99.9%					
Max. Efficiency	98.0%	98.0%	98.2%	98.2%	98.2%	98.2%
European Efficiency	97.0%	97.0%	97.5%	97.5%	97.5%	97.5%
Max. Efficiency of Charging/Discharging <sup>[4]</sup>	98.0%	98.0%	98.2%	98.2%	98.2%	98.2%
<b>Protection</b>						
DC Switch	Yes					
PV Reverse Connection Protection	Yes					
Battery Reverse Connection Protection	Yes					
Output Short Circuit Protection	Yes					
Output Overcurrent Protection	Yes					
Output Overvoltage Protection	Yes					
Insulation Impedance Detection	Yes					
Residual Current Detection	Yes					
Anti-island Protection	Yes					
Surge Protection <sup>[5]</sup>	PV: Type I+II, AC: Type II					
<b>General Parameter</b>						
Inverter Topology	Non-Isolation					
Protective Class	Class I					
IP Rating	IP66					
Overvoltage Category	AC III, DC II					
Operating Temperature Range	-30°C ~ +60°C (derating above +45°C)					
Relative Humidity Range	5%-95%					
Max. Operating Altitude	4000 m (derating above 2000 m)					
Standby Self-consumption <sup>[6]</sup>	<10 W					
Installation Method	Wall Mounted					
Dimensions (W×H×D)	680×525×325 mm					
Cooling Mode	Intelligent Airflow					
Weight	40 kg					
Communication	RS485, Optional: WiFi/4G/LAN					
Display	LCD & APP					

[1] Minimum PV voltage to start MPPT operation. [2] Please refer to document "SOFAR inverter Model compatible battery list". [3] Full sun. [4] Battery-AC maximum efficiency of battery charge and discharge. [5] According to EN/IEC 61643-11. [6] Standby loss at rated input voltage.

\*All specifications are subject to change without notice.

# HYD-40-60K-T1

40 / 49.9 / 50 / 60 kW

*Three-phase hybrid inverter*



## Simplicity

- Light weight and convenient transportation
- LCD and App for easy commissioning



## Safety

- IP66 protection rating
- DC SPD type I+II, AC SPD type II
- AI based AFCI protection



## Flexibility

- Multiple inverters in parallel connection
- Supports intelligent control of non critical loads



## Robustness

- Maximum 200% PV input, and 40A per MPPT
- Supports 100% unbalanced loads
- 150% overload capability for 10 seconds
- Integration of generators to extend backup duration

Model	HYD-40K-T1	HYD-49.9K-T1-A	HYD-50K-T1	HYD-60K-T1
<b>PV Input</b>				
Recommended Max. PV Power	80 kWp		100 kWp	120 kWp
Max. Input Voltage			1000 Vd.c	
Start-up Voltage <sup>[1]</sup>			200 Vd.c.	
Rated Input Voltage			600 Vd.c.	
MPP Voltage Range			160-950 Vd.c.	
Number of MPPT			4	
Max. Number of Input Strings per MPPT			2/2/2/2	
Max. Input Current			40/40/40/40 A	
Max. Isc			50/50/50/50 A	
<b>Battery</b>				
Voltage Range			600-1000 Vd.c.	
Number of Battery Input Channels			1	
Max. Charging Power			60 kW	
Max. Discharging Power	40 kW	49.9 kW	50 kW	60 kW
Max. Charging Current			100 A	
Max. Discharging Current	64 A	79.8 A	80 A	100 A
Battery Type <sup>[2]</sup>			Lithium-ion	
BMS Communication			CAN	
<b>AC Backup</b>				
Rated Output Voltage			3N→PE, 380/400/415 Va.c.	
Rated Output Frequency			50/60 Hz	
Rated Output Power	40 kW	49.9 kW	50 kW	60 kW
Rated Output Current	60.8/57.7/55.6 A	75.8/72.0/69.4 A	76.0/72.2/69.6 A	91.2/86.6/83.5 A
Rated Apparent Power	40 kVA	49.9 kVA	50 kVA	60 kVA
Max. Apparent Power	44 kVA	49.9 kVA	55 kVA	66 kVA
Max. Output Current	66.9/63.5/61.2 A	75.8/72.0/69.4 A	83.6/79.4/76.5 A	100/95.3/91.8 A
Peak Output Apparent Power <sup>[3]</sup>			1.5 times of rated power, 10s	
THDv(@ linear load)			< 3%	
Switching Time <sup>[4]</sup>			4 ms	
Asymmetric load			Yes, Supports 100% three-phase unbalanced load	
<b>AC Generator</b>				
Rated Input Voltage			3N→PE, 380/400/415 Va.c.	
Rated Input Frequency			50/60 Hz	
Rated Input Power	40 kW	49.9 kW	50 kW	60 kW
Rated Input Current	60.8/57.7/55.6 A	75.8/72.0/69.4 A	76.0/72.2/69.6 A	91.2/86.6/83.5 A
Rated Apparent Power	40 kVA	49.9 kVA	50 kVA	60 kVA
Max. Apparent Power	44 kVA	49.9 kVA	55 kVA	66 kVA
Max. Output Current	66.9/63.5/61.2 A	75.8/72.0/69.4 A	83.6/79.4/76.5 A	100/95.3/91.8 A
<b>AC Grid</b>				
Rated Voltage			3(N)→PE, 380/400/415 Va.c.	
Rated Frequency			50/60 Hz	
Rated Output Power	40 kW	49.9 kW	50 kW	60 kW
Rated Output Current	60.8/57.7/55.6 A	75.8/72.0/69.4 A	76.0/72.2/69.6 A	91.2/86.6/83.5 A
Rated Apparent Power	40 kVA	49.9 kVA	50 kVA	60 kVA
Max. Apparent Power	44 kVA	49.9 kVA	55 kVA	66 kVA
Max. Output Current	66.9/63.5/61.2 A	75.8/72.0/69.4 A	83.6/79.4/76.5 A	100/95.3/91.8 A
Max. Input Current			100 A	
THDi			< 3%	
Power Factor Range			0.8 lagging - 0.8 leading	
<b>Efficiency</b>				
Max. MPPT Efficiency			99.9%	
Max. Efficiency	98.2%	98.2%	98.2%	98.2%
European Efficiency	97.5%	97.5%	97.5%	97.5%
Max. Efficiency of Charging/Discharging <sup>[5]</sup>	98.2%	98.2%	98.2%	98.2%
<b>Protection</b>				
DC Switch			Yes	
PV Reverse Connection Protection			Yes	
Battery Reverse Connection Protection			Yes	
Output Short Circuit Protection			Yes	
Output Overcurrent Protection			Yes	
Output Overvoltage Protection			Yes	
Insulation Impedance Detection			Yes	
Residual Current Detection			Yes	
Anti-island Protection			Yes	
Surge Protection <sup>[6]</sup>			PV: Type I+II, AC: Type II	
<b>General Parameter</b>				
Inverter Topology			Non-Isolation	
Protective Class			Class I	
IP Rating			IP66	
Overvoltage Category			AC III, DC II	
Operating Temperature Range			-30°C ~ +60°C (derating above + 45°C)	
Relative Humidity Range			5%-95%	
Max. Operating Altitude			4000 m (derating above 2000 m)	
Standby Self-consumption <sup>[7]</sup>			< 15 W	
Installation Method			Wall Mounted	
Dimensions (W×H×D)			850×660×305 mm	
Cooling Mode			Intelligent Airflow	
Weight			75 kg	
Communication			RS485, Optional: WiFi/4G/LAN	
Display			LCD & APP	

[1] Minimum PV voltage to start MPPT operation. [2] Please refer to document "SOFAR inverter Model compatible battery list".  
[3] Full sun. [4] In the on-grid mode, the nominal power of the hybrid inverter is higher than the total power of the home loads.  
[5] Battery-AC maximum efficiency of battery charge and discharge. [6] According to EN/IEC 61643-11. [7] Standby loss at rated input voltage.

\*All specifications are subject to change without notice.

# HYD-75-125K-T1

75 / 80 / 99.9 / 100 / 110 / 125 kW

*Three-phase hybrid inverter*



## Simplicity

- Light weight and convenient transportation
- LCD and App for easy commissioning



## Safety

- IP66 protection rating
- DC SPD type I+II, AC SPD type II
- AI based AFCI protection



## Flexibility

- Multiple inverters in parallel connection
- Supports intelligent control of non critical loads



## Robustness

- Maximum 200% PV input, and 48A per MPPT
- Supports 100% unbalanced loads
- 150% overload capability for 10 seconds
- Integration of generators to extend backup duration

Model	HYD-75K-T1	HYD-80K-T1	HYD-99.9K-T1-A	HYD-100K-T1	HYD-110K-T1	HYD-125K-T1
<b>PV Input</b>						
Recommended Max. PV Power	150 kWp	160 kWp	200 kWp	200 kWp	220 kWp	250 kWp
Max. Input Voltage	1000 Vd.c					
Start-up Voltage <sup>[1]</sup>	200 Vd.c.					
Rated Input Voltage	600 Vd.c.					
MPP Voltage Range	160-950 Vd.c.					
Number of MPPT	8					
Max. Number of Input Strings per MPPT	3					
Max. Input Current	8 x 48 A					
Max. Isc	8 x 60 A					
<b>Battery</b>						
Voltage Range	600-1000 Vd.c.					
Number of Battery Input Channels	1					
Max. Charging Power	125 kW					
Max. Discharging Power	75 kW	80 kW	99.9 kW	100 kW	110 kW	125 kW
Max. Charging Current	200 A					
Max. Discharging Current	120 A	128 A	159.8 A	160 A	176 A	200 A
Battery Type <sup>[2]</sup>	Lithium-ion					
BMS Communication	CAN					
<b>AC Backup</b>						
Rated Output Voltage	3N++PE, 380/400/415 Va.c.					
Rated Output Frequency	50/60 Hz					
Rated Output Power	75 kW	80 kW	99.9 kW	100 kW	110 kW	125 kW
Rated Output Current	114.0/108.3/104.3 A	121.5/115.5/111.3 A	151.8/144.2/139.0 A	151.9/144.3/139.1 A	167.1/158.8/153.0 A	189.9/180.4/173.9 A
Rated Apparent Power	75 kVA	80 kVA	99.9 kVA	100 kVA	110 kVA	125 kVA
Max. Apparent Power	82.5 kVA	88 kVA	99.9 kVA	110 kVA	121 kVA	137.5 kVA
Max. Output Current	125.3/119.1/114.8 A	133.7/127.0/122.4 A	151.8/144.2/139.0 A	167.1/158.8/153.0 A	183.8/174.7/168.3 A	208.9/198.5/191.3 A
Peak Output Apparent Power <sup>[3]</sup>	1.5 times of rated power, 10s					
THDv(@ linear load)	< 3%					
Switching Time <sup>[4]</sup>	10 ms					
Asymmetric load	Yes, Supports 100% three-phase unbalanced load					
<b>AC Generator</b>						
Rated Input Voltage	3N++PE, 380/400/415 Va.c.					
Rated Input Frequency	50/60 Hz					
Rated Input Power	75 kW	80 kW	99.9 kW	100 kW	110 kW	125 kW
Rated Input Current	114.0/108.3/104.3 A	121.5/115.5/111.3 A	151.8/144.2/139.0 A	151.9/144.3/139.1 A	167.1/158.8/153.0 A	189.9/180.4/173.9 A
Rated Apparent Power	75 kVA	80 kVA	99.9 kVA	100 kVA	110 kVA	125 kVA
Max. Apparent Power	82.5 kVA	88 kVA	99.9 kVA	110 kVA	121 kVA	137.5 kVA
Max. Output Current	125.3/119.1/114.8 A	133.7/127.0/122.4 A	151.8/144.2/139.0 A	167.1/158.8/153.0 A	183.8/174.7/168.3 A	208.9/198.5/191.3 A
<b>AC Grid</b>						
Rated Voltage	3(N)+PE, 380/400/415 Va.c.					
Rated Frequency	50/60 Hz					
Rated Output Power	75 kW	80 kW	99.9 kW	100 kW	110 kW	125 kW
Rated Output Current	114.0/108.3/104.3 A	121.5/115.5/111.3 A	151.8/144.2/139.0 A	151.9/144.3/139.1 A	167.1/158.8/153.0 A	189.9/180.4/173.9 A
Rated Apparent Power	75 kVA	80 kVA	99.9 kVA	100 kVA	110 kVA	125 kVA
Max. Apparent Power	82.5 kVA	88 kVA	99.9 kVA	110 kVA	121 kVA	137.5 kVA
Max. Output Current	125.3/119.1/114.8 A	133.7/127.0/122.4 A	151.8/144.2/139.0 A	167.1/158.8/153.0 A	183.8/174.7/168.3 A	208.9/198.5/191.3 A
Max. Input Current	300 A					
THDi	< 3%					
Power Factor Range	0.8 lagging - 0.8 leading					
<b>Efficiency</b>						
Max. MPPT Efficiency	99.9%					
Max. Efficiency	98.0%	98.0%	98.2%	98.2%	98.2%	98.2%
European Efficiency	97.0%	97.0%	97.5%	97.5%	97.5%	97.5%
Max. Efficiency of Charging/Discharging <sup>[5]</sup>	98.0%	98.0%	98.2%	98.2%	98.2%	98.2%
<b>Protection</b>						
DC Switch	Yes					
PV Reverse Connection Protection	Yes					
Battery Reverse Connection Protection	Yes					
Output Short Circuit Protection	Yes					
Output Overcurrent Protection	Yes					
Output Overvoltage Protection	Yes					
Insulation Impedance Detection	Yes					
Residual Current Detection	Yes					
Anti-island Protection	Yes					
Surge Protection <sup>[6]</sup>	PV: Type I+II, AC: Type II					
<b>General Parameter</b>						
Inverter Topology	Non-Isolation					
Protective Class	Class I					
IP Rating	IP66					
Overvoltage Category	AC III, DC II					
Operating Temperature Range	-30°C ~ +60°C (derating above + 45°C)					
Relative Humidity Range	5%-95%					
Max. Operating Altitude	4000 m (derating above 2000 m)					
Standby Self-consumption <sup>[7]</sup>	< 50 W					
Installation Method	Wall Mounted					
Dimensions (W×H×D)	1150×760×345 mm					
Cooling Mode	Intelligent Airflow					
Weight	125 kg					
Communication	RS485, Optional: WiFi/4G/LAN					
Display	LCD & APP					

[1] Minimum PV voltage to start MPPT operation. [2] Please refer to document "SOFAR inverter Model compatible battery list".  
[3] Full sun. [4] In the on-grid mode, the nominal power of the hybrid inverter is higher than the total power of the home loads.  
[5] Battery-AC maximum efficiency of battery charge and discharge. [6] According to EN/IEC 61643-11. [7] Standby loss at rated input voltage.  
\*All specifications are subject to change without notice.

# SOFAR 80-125KTLX-G4-ESS

80 / 99 / 100 / 110 / 125 kW

*Three-phase hybrid inverter*



## Battery-ready & Load flexibility

- 200A DC-coupled battery port
- 10ms on/off-grid switching with STS
- Supports max. 20kW unbalanced load
- Supports max. 62.5kW in off-grid mode (200% for 2s)



## Flexible PV input

- 9 MPPTs, 40A per MPPT
- 150% PV input power max



## Advanced safety

- AFCI arc-fault detection
- DC SPD type I+II surge protection



## Outdoor ready

- Engineered with IP66 rating and smart air cooling
- Lightweight for easy transport and installation

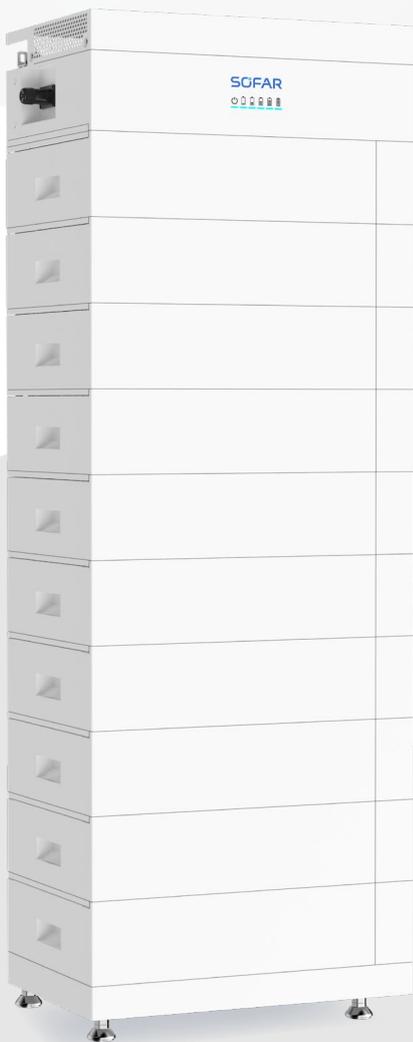
Model	SOFAR 80KTLX-G4-ESS	SOFAR 99KTLX-G4-ESS	SOFAR 100KTLX-G4-ESS	SOFAR 110KTLX-G4-ESS	SOFAR 125KTLX-G4-ESS
<b>Input (DC)</b>					
Max. input voltage	1100V				
Rated input voltage	625V				
Start-up voltage	200V				
MPPT operating voltage range	160V-1000V				
Number of MPP trackers	9				
Number for DC inputs	18				
Max. input MPPT current	9×40A				
Max. input short circuit current	9×50A				
<b>Output (AC)</b>					
Rated output power	80kW	99.99kW	100kW	110kW	125kW
Max. output apparent power	88kVA	99.99kVA	110kVA	121kVA	125kVA
Max. output current	133.7A@380V / 127.0A@400V / 122.4A@415V	151.9A@380V / 144.3A@400V / 139.1A@415V	167.1A@380V / 158.7A@400V / 153.0A@415V	183.8A@380V / 174.6A@400V / 168.3A@415V	190A@380V / 181.2A@400V / 174A@415V
Rated output voltage	3N++PE, 380V/400V/415V				
Output voltage range	310 - 480Vac				
Rated output frequency	50/60Hz				
Output frequency range	45Hz-55Hz / 55Hz-65Hz				
Active power adjustable range	0-100%				
THDi	<1% (@100%P)				
Power factor	0.8 leading - 0.8 lagging				
Max. asymmetric power	50%				
<b>Output (Off-grid)</b>					
Rated output voltage	3N++PE, 380/400/415 V.a.c.				
Rated output frequency	50 / 60Hz				
Rated output power	62.5kW				
Rated output current	94.9A				
Peak output apparent power	200%, 2s				
THDv (@ linear load)	3%				
Switching time	10ms. with STS				
Asymmetric load	100%				
<b>Input (BAT)</b>					
Battery type	Lithium-ion				
Numbers of battery	1-4				
Numbers of packs per battery	4-15				
Max. charge power	125kW				
Max. discharge power	88kW	99.99kW	110kW	121kW	125kW
DC voltage range	600-1000V				
Max. charge current	200A				
Max. discharge current	140.8A	160A	176A	193.6A	200A
BMS communication	RJ45, CAN*2 + DO*1				
<b>Efficiency</b>					
Max. efficiency	98.6%				
European efficiency	98.3%				
<b>Protection</b>					
DC reverse polarity protection	Yes				
Anti-islanding protection	Yes				
Leakage current protection	Yes				
Ground fault monitoring	Yes				
PV-array string fault monitoring	Yes				
DC switch	Yes				
PID recovery	Yes				
AFCI	Yes				
SPD	PV: type I+ II. AC: type II				
<b>General Data</b>					
Ambient temperature range	-30°C - +60°C				
Topology	Transformerless				
Degree of protection	IP66				
Allowable relative humidity range	0-100%				
Max. operating altitude	4000m (>3000m derating)				
Weight	80kg				
Cooling	Smart air cooling				
Dimension (W×H×D)	985×710×321mm				
Display	LCD & Bluetooth+APP				
Communication	Ethernet / RS485 / Wi-Fi /4G				
STS communication	RS485, DIO *2				
<b>Standard</b>	EN/IEC 62109-1/2, EN/IEC 61000-6-2/-4, IEC 61000-3-11/-12, EN 50530, EN 50549, VDE V 0126-1-1, VDE-AR-N 4105/4110, C10/11				

\*All specifications are subject to change without notice.

# CBS5000-H4-H12

20/25/30/35/40/45/50/55/60 kWh

Smart battery



- ▶ SOFAR Battery control unit
- ▶ SOFAR Battery



## Flexible capacity

- Modular design, scalable 4-12 packs per series
- Up to 4 racks in parallel (Max. 240kWh)



## High power

- Integrated built-in optimizer, one cluster on management
- Active module balancing



## Easy installation

- Stack design
- No cable connections required between module



## Safe & Reliable

- Multi-level battery safety protection
- IP66 protect rating

Model	CBS5000-H4	CBS5000-H5	CBS5000-H6	CBS5000-H7	CBS5000-H8	CBS5000-H9	CBS5000-H10	CBS5000-H11	CBS5000-H12
<b>System Parameters</b>									
System Schematic									
Battery Distribution Unit	CBS5000-BCU								
Number of Battery Distribution Unit	1								
Battery Module	CBS5000-BMU								
Number of Battery Modules	4	5	6	7	8	9	10	11	12
Battery Total Energy <sup>[1]</sup>	20.48kWh	25.6kWh	30.72kWh	35.84kWh	40.96kWh	46.08kWh	51.2kWh	56.32kWh	61.44kWh
Rated Power	10kW	12.5kW	15kW	17.5kW	20kW	22.5kW	25kW	27.5kW	30kW
Peak Output Power	20 kW, 10 s	25 kW, 10 s	30 kW, 10 s	35 kW, 10 s	40 kW, 10 s	45 kW, 10 s	50 kW, 10 s	55 kW, 10 s	60 kW, 10 s
Nominal Voltage	600 Vd.c								
Operating Voltage Range	600-1000 Vd.c								
Max. Charging Current	50A								
Max. Discharging Current	50A								
<b>General Parameters</b>									
Display	LED								
Communication	CAN								
Dimensions (W×H×D)	625×870×415 mm	625×1020×415 mm	625×1170×415 mm	625×1320×415 mm	625×1470×415 mm	625×1620×415 mm	625×1770×415 mm	625×1920×415 mm	625×2070×415 mm
Weight	210kg	257kg	304kg	351kg	398kg	445kg	492kg	539kg	586kg
IP Rating	IP66								
Cooling Mode	Intelligent Airflow								
Operating Temperature Range <sup>[2]</sup>	-20°C - +50°C								
Humidity	5%-95%								
Installation	Floor Mounted								
Battery Type	LiFePO <sub>4</sub> - lithium iron phosphate battery								
Max. Operating Altitude <sup>[3]</sup>	4000m								
Scalability	Max. 4 systems in parallel operation								
<b>Ordering and Deliverable Part</b>									
Available for ordering <sup>[4]</sup>	CBS5000-BMU, CBS5000-BCU								

[1] Test conditions: 0.2C charging/discharging at 25°C, 100%DOD.

[2] Refer to the curve of temperature VS charging/discharging current.

[3] Derating above 2000m.

[4] Storage system is ordered and delivered in the form of power module and battery module separately with corresponding quantity.

\*All specifications are subject to change without notice.

# CBS8000-H4-H12

64/80/96/112/128/144/160/176/192 kWh

Smart battery



▶ SOFAR Battery control unit

▶ SOFAR Battery



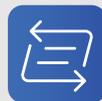
## Simplicity

- Modular design and stacked installation, plug and play
- Maintenance made effortless with built-in optimizer



## Safety

- Multi-level battery safety protection
- Dynamic temperature regulation



## Flexibility

- Scalable 4-12 packs per racks (64-192kWh)
- Support 4 racks in parallel connection (Max. 768kWh)



## Robustness

- Integrated EMS, suitable for various applications
- Faster monitoring and quicker response

Model	CBS8000-H4	CBS8000-H5	CBS8000-H6	CBS8000-H7	CBS8000-H8	CBS8000-H9	CBS8000-H10	CBS8000-H11	CBS8000-H12
<b>System Parameters</b>									
System Schematic									
Battery Distribution Unit	CBS8000-BCU								
Number of Battery Distribution Unit	1								
Battery Module	CBS8000-BMU								
Number of Battery Modules	4	5	6	7	8	9	10	11	12
Battery Total Energy <sup>[1]</sup>	64kWh	80kWh	96kWh	112kWh	128kWh	144kWh	160kWh	176kWh	192kWh
Rated Power	30.72kW	38.4kW	46.08kW	53.76kW	61.44kW	69.12kW	76.8kW	84.48kW	92.16kW
Peak Output Power	40.96 kW, 10s	51.20 kW, 10s	61.44 kW, 10s	71.68 kW, 10s	81.92 kW, 10s	92.16 kW, 10s	102.40 kW, 10s	112.64 kW, 10s	122.88 kW, 10s
Nominal Voltage	600 Vd.c								
Operating Voltage Range	600-1000 Vd.c								
Max. Charging Current	150A								
Max. Discharging Current	200A								
<b>General Parameters</b>									
Display	LED								
Communication	CAN								
Dimensions (W×H×D)	500×1415×750 mm	500×1695×750 mm	500×1975×750 mm	500×1135×750 mm 500×1120×750 mm	500×1415×750 mm 500×1120×750 mm	500×1415×750 mm 500×1400×750 mm	500×1695×750 mm 500×1400×750 mm	500×1695×750 mm 500×1680×750 mm	500×1975×750 mm 500×1680×750 mm
Weight	510kg	625kg	740kg	855kg	970kg	1085kg	1200kg	1315kg	1430kg
IP Rating	IP65 for CBS8000-BCU, IP20 for CBS8000-BMU								
Cooling Mode	Intelligent Airflow								
Operating Temperature Range <sup>[2]</sup>	-20°C - +50°C								
Humidity	5%-95%								
Installation	Floor Mounted								
Battery Type	LiFePO <sub>4</sub> - lithium iron phosphate battery								
Max. Operating Altitude <sup>[3]</sup>	4000m								
Scalability	Max. 4 systems in parallel operation								
<b>Ordering and Deliverable Part</b>									
Available for ordering <sup>[4]</sup>	CBS8000-BMU, CBS8000-BCU								

[1] Test conditions: 0.2C charging/discharging at 25°C, 100%DOD.

[2] Refer to the curve of temperature VS charging/discharging current.

[3] Derating above 2000m.

[4] Storage system is ordered and delivered in the form of power module and battery module separately with corresponding quantity.

\*All specifications are subject to change without notice.

# CBS8000-64-96KWH

64 / 80 / 96 KWH

*Smart battery cabinet*



## Simplicity

- Pre-installed in factory for easy installation on site
- Effortless operation, cloud control



## Safety

- IP55 protect rating and C4 corrosion resistance
- Double fire suppression system design



## Flexibility

- Single cabinet capacity of 64/80/96kWh
- Up to 4 cabinet in parallel (Max. 384kWh)



## Robustness

- Max. 48kW charging/discharging power
- Active balancing for each battery module

Model	CBS8000-64KWH	CBS8000-80KWH	CBS8000-96KWH
<b>Battery</b>			
Battery Type <sup>[1]</sup>	LiFePO <sub>4</sub>		
Rated Capacity	314 Ah		
Max. Charging Current	150 A		
Max. Discharging Current	200 A		
Pack Configuration	1P16S		
Nominal Voltage	600 Vd.c		
Pack Quantity	4 Pack/Cluster	5 Pack/Cluster	6 Pack/Cluster
Battery Total Energy <sup>[2]</sup>	64.31 kWh	80.38 kWh	96.46 kWh
Rated Power	30.72 kW	38.40 kW	46.08 kW
<b>System</b>			
Protective Class	Class I		
IP Rating	IP55		
Anti-Corrosion Grade	C4		
Operating Temperature Range <sup>[3]</sup>	-20°C ~ +50°C (Derating above 45°C)		
Relative Humidity Range	5%-95%		
Max. Operating Altitude <sup>[4]</sup>	3000m		
Installation	Floor Mounted		
Communication	CAN		
Cooling Mode	Intelligent Airflow		
Air Conditioner Power	1.5kW (Cooling), 1kW (Heating)		
Noise	65 dB (Typical)		
Fire Protection	Aerogel (Optional Perfluorohexanone)		
Dimensions (W×H×D)	750×2100×1150 mm (±20mm)		
Weight	1000±100 kg	1120±100 kg	1240±100 kg

[1] Rechargeable Li-ion Battery system.

[2] Test conditions: 0.2C charging/discharging at 25°C,100%DOD.

[3] Refer to the temperature derating curve and the battery needs to enable heating function if it needs to be charge when temperature is below 0°C.

[4] If the altitude is >2000m, derating operation is required, refer to the derating curve.

\*All specifications are subject to change without notice.

# CBS8000-128-224KWH

128 / 144 / 160 / 176 / 192 / 208 / 224 kWh

*Smart battery cabinet*



## Simplicity

- Pre-installed in factory for easy installation on site
- Effortless operation, cloud control



## Safety

- IP55 protect rating and C4 corrosion resistance
- Double fire suppression system design



## Flexibility

- Single cabinet capacity of 128-224kWh
- Up to 4 cabinet in parallel (Max. 896kWh)



## Robustness

- Max. 112kW charging/discharging power
- Active balancing for each battery module
- Wide temperature range from -20°C to 50°C

Model	CBS8000-128KWH	CBS8000-144KWH	CBS8000-160KWH	CBS8000-176KWH	CBS8000-192KWH	CBS8000-208KWH	CBS8000-224KWH
<b>Battery</b>							
Battery Type <sup>[1]</sup>	LiFePO <sub>4</sub>						
Rated Capacity	314 Ah						
Max. Charging Current	150 A						
Max. Discharging Current	200 A						
Pack Configuration	1P16S						
Nominal Voltage	600 Vd.c						
Pack Quantity	8 Pack/Cluster	9 Pack/Cluster	10 Pack/Cluster	11 Pack/Cluster	12 Pack/Cluster	13 Pack/Cluster	14 Pack/Cluster
Battery Total Energy <sup>[2]</sup>	128 kWh	144 kWh	160 kWh	176 kWh	192 kWh	208 kWh	224 kWh
Rated Power	32 kW	72 kW	80 kW	88 kW	96 kW	104 kW	112 kW
<b>System</b>							
Protective Class	Class I						
IP Rating	IP55						
Anti-Corrosion Grade	C4						
Operating Temperature Range <sup>[3]</sup>	-20°C - +50°C (Derating above 45°C)						
Relative Humidity Range	5%-95%						
Max. Operating Altitude <sup>[4]</sup>	3000m						
Installation	Floor Mounted						
Communication	CAN						
Cooling Mode	Intelligent Airflow						
Air Conditioner Power	3 kW (Cooling), 2 kW (Heating)						
Noise	65 dB (Typical)						
Fire Protection	Aerogel (Optional Perfluorohexanone)						
Dimensions (W×H×D)	1350×2000×1250 mm (±20mm)						
Weight	1300±100 kg	1410±100 kg	1520±100 kg	1630±100 kg	1740±100 kg	1850±100 kg	1960±100 kg

[1] Rechargeable Li-ion Battery system.

[2] Test conditions: 0.2C charging/discharging at 25°C,100%DOD.

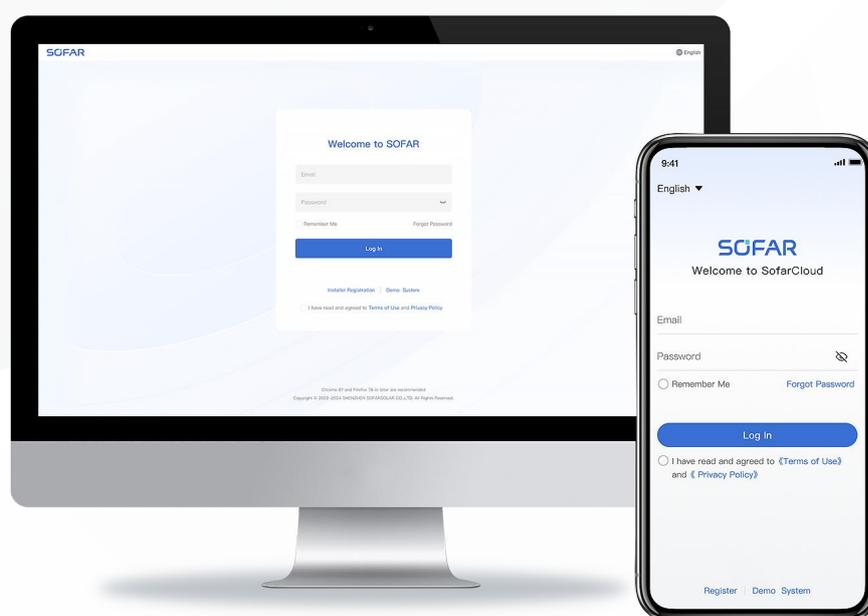
[3] Refer to the temperature derating curve and the battery needs to enable heating function if it needs to be charge when temperature is below 0°C.

[4] If the altitude is >2000m, derating operation is required, refer to the derating curve.

\*All specifications are subject to change without notice.

# SofarCloud

## System monitoring



### Diverse scenarios

- Integrated management of various SOFAR devices
- Adaptive display of system energy flows
- Remote real-time control of system and devices



### Safe & Efficient

- Mobile O&M, local device control via Bluetooth
- One-click device upgrade reduces maintenance time
- Minute monitoring and alarming plus professional online helpfunction, supports to eliminate errors faster



### User-friendly

- 3 steps system setup, plug-and-play device installation
- Hierarchical permission control, secure user data management
- Operating parameters can be easily adjusted to local requirements

<b>Product Parameter</b>	<b>SofarCloud</b>
<b>Supported Devices</b>	
Device type	Inverter, Battery, Wallbox, Electricity meter, MVS, Environmental monitoring device and other devices in the plant
<b>Acquisition Environment</b>	
Acquisition devices	Stick logger, CH1000, Communication box and other acquisition devices
Acquisition interval	1-5 minutes
Acquisition methods	4G, WLAN, Ethernet
<b>Client Environment</b>	
Lowest browser version	Chrome 87, Edge 88, Safari 14, Firefox 78
Lowest system version	Android 8.0, iOS 12.4
Browser resolution	1440×900, 1920×1080 (recommended)
Mobile device resolution	Supported all major resolutions
Languages	Multilingual
<b>System Parameter</b>	
Years of data retention	Can be customised according to requirements

### Support SOFAR'S products



Inverter



Battery



Wallbox

### Support third-party products



Meter



Environmental monitor devices



Heater



Generator



Temperature and humidity sensors

... ..

Functions		Web	APP
Demo System	Experience Power Station	●	●
Home	Data Board	●	●
	Alarm	●	●
Plant	Plant List	●	●
	Plant Detail	●	●
	Create Plant	●	●
Device	Device List	●	●
	Device Detail	●	●
	Remote Upgrade	●	●
	Remote Setting	●	●
Maintenance	Account Management	●	—
	Device Management	●	—
	Local O&M	—	●

\*All specifications are subject to change without notice.



**SCFAR**

ENERGY TO POWER YOUR LIFE





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