All-In-One xStorage ESS (Energy Storage Solution)

xStorage Hybrid Inverter
Single-phase LFP Battery Solutions

Powering Business Worldwide

Advantages

- 3 Hybrid Inverters 3.6kW, 5kW & 6kW.
- CATL high performance LFP battery.
- 8KW PV input. 6KW charging and 6KW AC output.
- Modular design. The energy storage system can be expanded by multiple 5.12kWh units, up to 25kWh.
- 6KW 1phase backup output, on/off grid switching time is less than 20ms.
- EMS included. It is suitable for various applications.

Safety — CATL LFP Battery Stable and safe Module, pack, system, triple protection

Simple — Modular design Plug and play Mobile APP Monitoring

Efficient — Supporting 200% oversized PV power On & OFF Grid parallel system

Battery Model	XSTHSBP-5.1-16S-100A-F (Battery 5.12kWh with BMS & HF)
Physical	
Battery type	LFP (LiFePO4)
System Weight	54KG
Dimensions in mm (W x H x D)	540*490*240
IP Protection	IP65
Warranty	5 Years Product Warranty, 10 Years Performance
Electrical	
Energy Capacity	5.12kwh
Usable Capacity	4.6kwh
Depth of Discharge (DoD)	90%
Rated Voltage	51.2V
Operating Voltage Range	44.8-56.5V
Internal Resistance	<20mΩ
Cycle Life	10,000 Cycles
Operation	
Max. Charge/Discharge Current	50A/80A
Rated DC power	4096W
Max. Charge/Discharge Power	2825W/4096W
Operating Temperature Range	-10 to 50 charging -10 to 50 discharging
Humidity	0~95% (No condensation)
BMS	
Modules connection	Max.5
Capacity	100-500Ah
Power Consumption	<2W
Communication	CAN & RS485
Monitoring Parameters	System voltage, current, cell voltage, cell temperature, PCBA temperature measurement
Certificate	
Safety (Cell)	Pack: IEC/EN 62619;UN38.3 Cell: IEC/EN 62619;UN38.3;UL1973

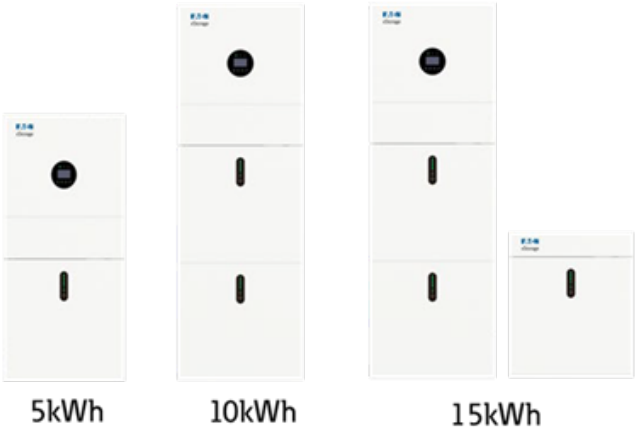
Hybrid Inverter Model	XTHS1P-3.68K	XSTHS1P-5K	XSTHS1P-6K
PV String Input			
Max. Continuous PV Input Power	4800W	6500W	7500W
Max. DC Voltage	580V		
Nominal Voltage	400V		
MPPT Voltage Range	80V-560V		
Start Voltage 1	150V		
Number of MPPT	2		
Strings Per MPPT	1		
Max. Input Current Per MPPT	15A		
Max. Short-circuit Current Per MPPT	18A		
AC Output (Grid)			
Nominal AC Output Power	3680W	5000W	6000W
Max. AC Apparent Power	3680VA	5000VA	6000VA
Max. AC Output Power	3680W	5000W	6000W
Nominal AC Voltage	230Vac P/N; 2*120V L1/L2(Norway)		
AC Grid Frequency Range	50 / 60Hz±5Hz		
Nominal Output Current	16A	22A	25A
Max. Output Current	16A	22A	25A
Power Factor (cos)	0.8leading-0.8lagging*		
THDi	<3%		
Battery Input			
Battery Type	LFP (LiFePO4)		
Nominal Battery Voltage	51.2V		
Charging Voltage Range	40-60V		
Max. Charging Current	50A	100A	100A
Max. Discharging Current	80A	100A	100A
Battery Capacity	100/200/300/400/500Ah		
Charging Rate for Li-ion Battery	discharge rate is 0.8C, charge rate is 0,5C		
AC Output (Backup)			
Nominal AC Output Power	3680W	4600W	4600W
Max. AC Output Power	4000VA	5000VA / 4600VA**	5000VA
Peak Output Apparent Power	6900VA 10sec	6900VA 10sec	6900VA 10sec
Max. Output Current	16A	20A	20A
Nominal Output Voltage	230V		
Nominal Output Frequency	50/60Hz		
Output THDv (@Linear Load)	<3% (Linear Load)		
Efficiency			
Max. PV Efficiency	97.60%		
Euro. PV Efficiency	97.00%		
Protection			
DC Switch	Bipolar DC Switch (125A/Pole)		
Anti-islanding Protection	Yes		
Output Over Current Protection	Yes		
DC Reverse Polarity Protection	Yes		
String Fault Detection	Yes		
AC/DC Surge Protection	AC Type III; DC Type II		
Insulation Detection	Yes		
AC Short Circuit Protection	Yes		

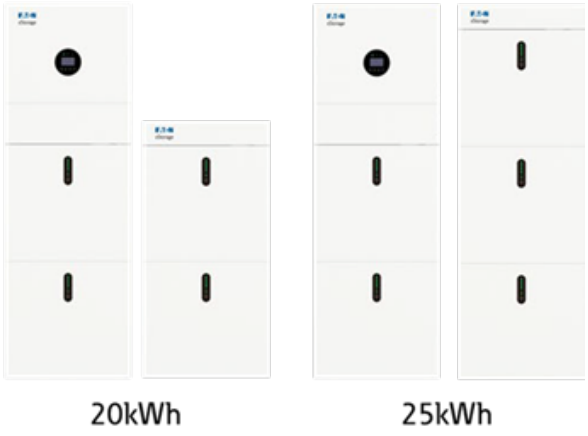
* 0.95leading-0.95lagging for Germany. 1. Minimum voltage for inverter to start power output. *2. Maximum output current is 21.7A for Australia and 20A for Germany and South Africa
** Ratings for Germany, South Africa

General Specifications	
Dimensions W x H x D	540*590*240mm
Weight	32kg
Operating Temperature Range	-25 ~ +60 (derating from +45)
Noise (dB)	<35dB
System Consumption	Standby By PV 8.6W -Standby during the night 11W
Cooling Type	Natural Convection
Max. Operation Altitude	2000m
Operation Humidity	0~95% (No Condensation)
IP Class	IP65
Topology	Battery Isolation
Communication	RS485/CAN2.0/WIFI/4G
Display	LCD/APP
Certification	
Certificate	CE
Environment	RoHS, REACH
Grid Code Compliance	Refer to the grid compliance list
Standard	IEC/EN 62109-1&2; IEC/EN61000-6-1; IEC/EN61000-6-2; EN61000-6-3; IEC/EN61000-6- 4;IEC/EN61000-3-11; EN61000-3-12;IEC60529;IEC 60068; IEC61683; IEC62116; IEC61727.

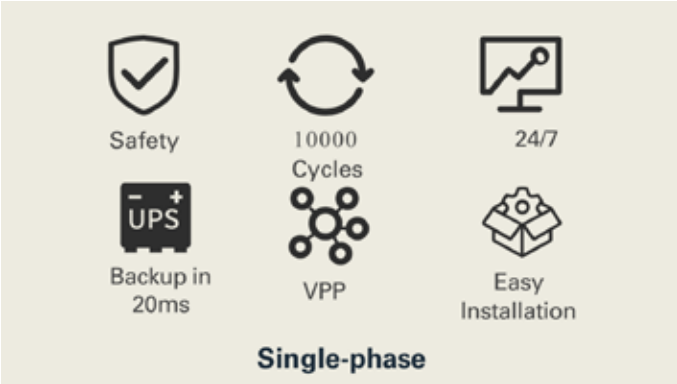
Configurations

All installation can evolve if your needs or your usages change, you can add a battery when you want.

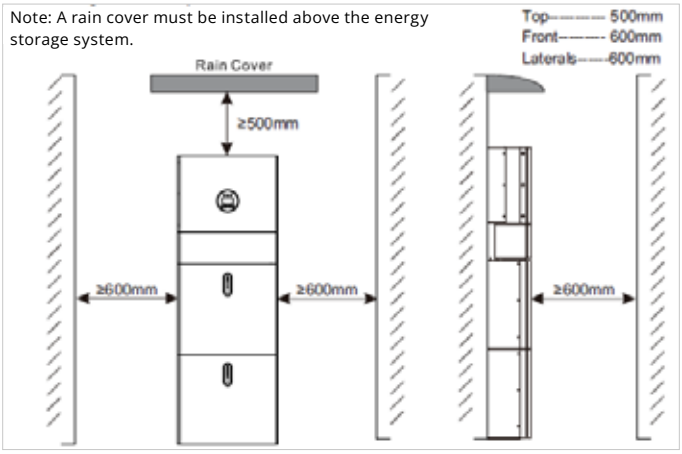




Features

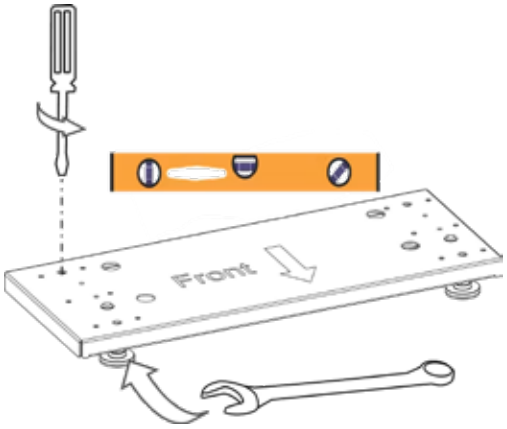


Dimensions

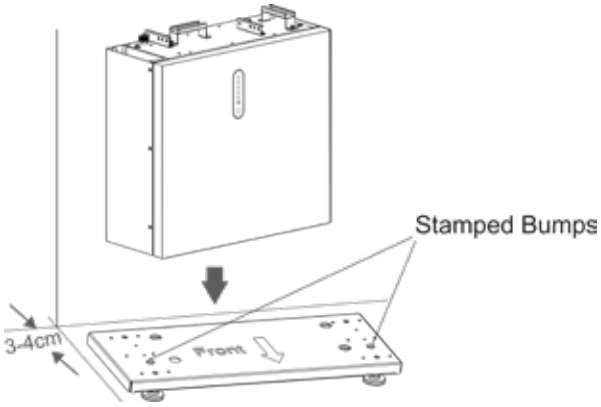


Mounting Steps

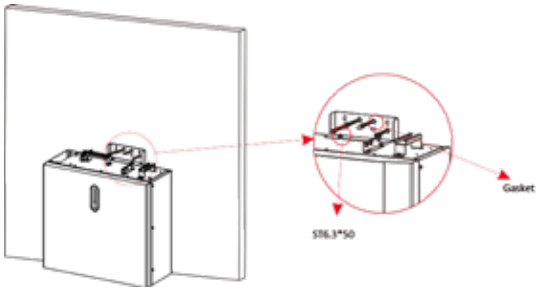
Step 1: Positioning and adjusting the bottom support



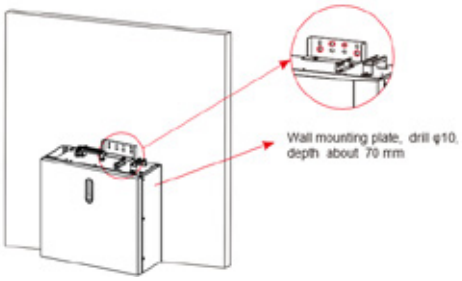
Step 2: Placing the Battery on the Bottom support



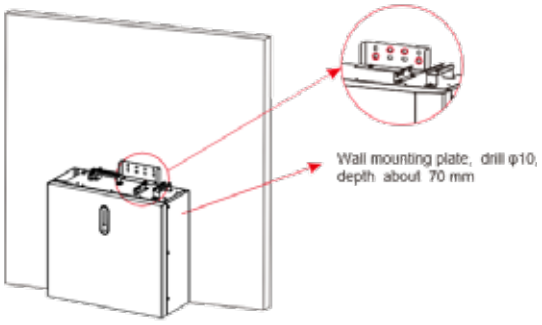
Step 3: Bracket battery pack mounting



Step 4: Trace the Bracket Battery on the wall.

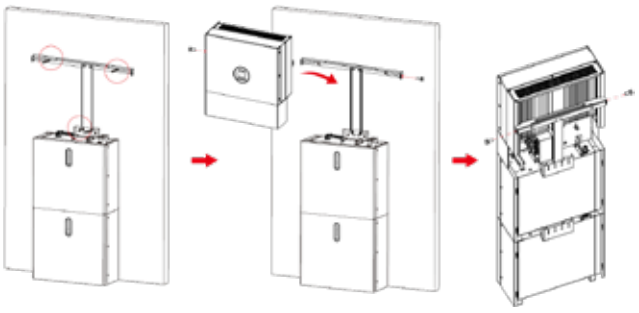


Step 5: Attached the battery pack on the wall.

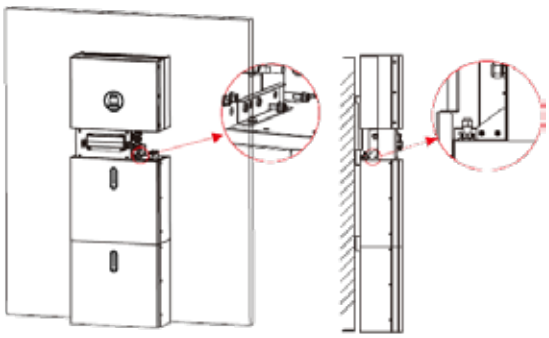


Step 6: Add the 2nd battery pack*

Step 7: Inverter Assembly



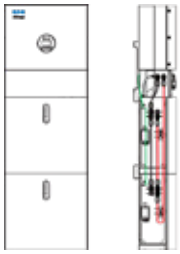
Step 8: Final Assembly



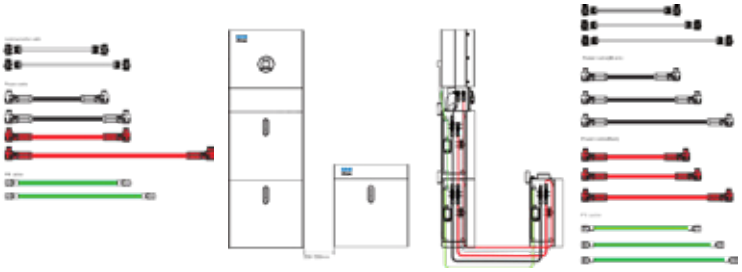
Capacity configurations and scalability

Hybrid Inverter + Pack 5.1

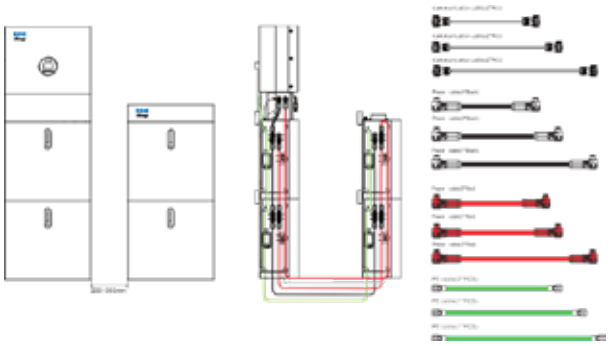
Hybrid Inverter + Pack 10.2



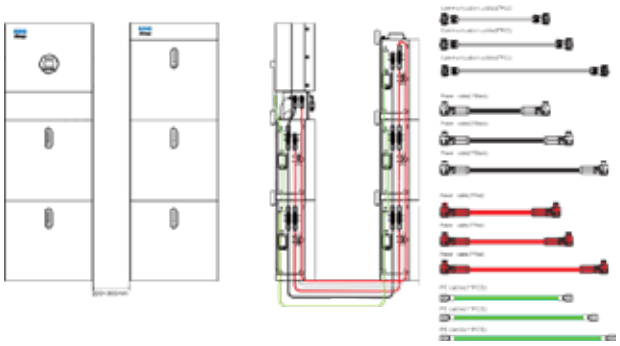
Hybrid Inverter + Pack 15.3



Hybrid Inverter + Pack 20.4



Hybrid Inverter + Pack 25.6



*Between 2 columns, plan to have 200 and 300mm. Add 600mm on both sides (Space inside walls)

Full Sizing and weight

Configurations	Description	Dimensions (mm) Width x Heigh x Depth	Weight (kg)	Width Space of reservation to install, 600mm on both sides. (Space inside walls)
XSTHS1P036BP05V1	XSTS 1P 3.6kW 5kWh V1	540 x 1130 x 270	94	1740
XSTHS1P036BP10V1	XSTS 1P 3.6kW 10kWh V1	540 x 1720 x 270	155	1740
XSTHS1P036BP15V1	XSTS 1P 3.6kW 15kWh V1	1380 x 1720 x 270	216	2580
XSTHS1P036BP20V1	XSTS 1P 3.6kW 20kWh V1	1380 x 1720 x 270	278	2580
XSTHS1P036BP25V1	XSTS 1P 3.6kW 25kWh V1	1380 x 1720 x 270	336	2580
XSTHS1P050BP05V1	XSTS 1P 5kW 5kWh V1	540 x 1130 x 270	94	1740
XSTHS1P050BP10V1	XSTS 1P 5kW 10kWh V1	540 x 1720 x 270	155	1740
XSTHS1P050BP15V1	XSTS 1P 5kW 15kWh V1	1380 x 1720 x 270	216	2580
XSTHS1P050BP20V1	XSTS 1P 5kW 20kWh V1	1380 x 1720 x 270	278	2580
XSTHS1P050BP25V1	XSTS 1P 5kW 25kWh V1	1380 x 1720 x 270	336	2580
XSTHS1P060BP05V1	XSTS 1P 6kW 5kWh V1	540 x 1130 x 270	94	1740
XSTHS1P060BP10V1	XSTS 1P 6kW 10kWh V1	540 x 1720 x 270	155	1740
XSTHS1P060BP15V1	XSTS 1P 6kW 15kWh V1	1380 x 1720 x 270	216	2580
XSTHS1P060BP20V1	XSTS 1P 6kW 20kWh V1	1380 x 1720 x 270	278	2580
XSTHS1P060BP25V1	XSTS 1P 6kW 25kWh V1	1380 x 1720 x 270	336	2580

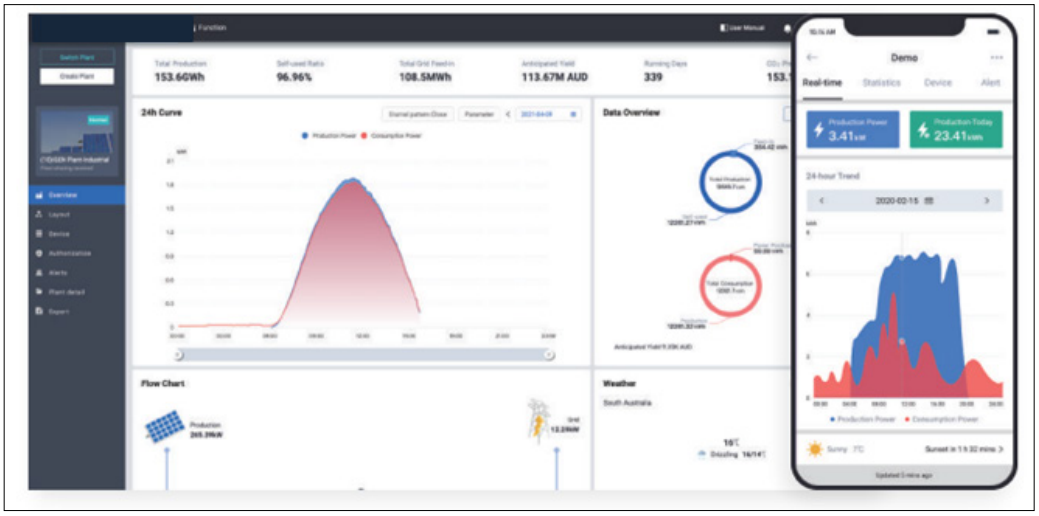
Note: The above configurations are given as an indication to obtain the dimensions of the solution to be installed. The item codes cannot be ordered as is. To be able to order the products or obtain more information on these configurations, please contact your sales representative

xStorage Solar Monitoring

From the latest hardware devices to functional software, Eaton is the right choice for everyone. It meets the requirements of device manufacturers, investors, project developers, EPCs and factory owners etc. Additionally, custom needs can be easily covered by Eaton's modular design. Solar software consists of different products: business and homeowner oriented. Both products are available through a web portal and apps.

Monitoring for Business (a web app and a mobile app), fulfills the needs of technical professionals, making PV plant management easy, effective, and efficient. Besides visualizing real-time data and analyzing performance indexes, i.e., PR, the product enables comparison among different plants, and comparison between plant's actual generation and weather-based simulation. The expanded performance analysis gives extra meaningful messages for plant management.

Monitoring for homeowners (a web app and a mobile app), follow and visualize production, consumption of the installation, the % of self-consumption and self-generation in real time locally and remotely from the site. Energy management has never been easier.



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