PowerCore

C&I All-in-One Energy Storage System
50kW / 100kWh

Your Energy Guardian, Anytime, Anywhere.

200 % PV Oversizing	Max. 20 A PV Input Current Per String	Up to 6 pcs On/off Grid Parallel Operation	< 65 dB Suitable for Diverse Environments
280 Ah Battery Cells	< 10 ms EPS Switching Time	100 % Unbalanced Loads	0.86 m² Footprint

Superb

- Max. 20A PV input current per string, compatible with all PV modules.
- 4 MPPTs and 200% PV oversizing ensure maximum utilization of solar energy.
- 280Ah long-life cells with 8000 cycles.

Flexible

- Parallel connection of up to 6 PCS for on/off-grid expansion.
- < 10 ms EPS switching time for continuous power.
- Supports 100% unbalanced output, half-wave and surge loads.

User-Friendly

- High energy density, with a footprint of only 0.86m^2.
- No foundation required, simplifying setup.
- < 65dB, suitable for diverse environments.

Safe

- IP55 (Battery) / IP66 (Inverter) rating for dust and water resistance.
- Four-level active and passive fire protection ensures comprehensive safety.
- AFCI optional.

Applications

Shopping Mall
Factory
Farm
Community

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PowerCore

Technical Specifications

Model	IA-29.9kW/100kWh-EC10	IA-30kW/100kWh-EC10	IA-40kW/100kWh-EC10	IA-50kW/100kWh-EC10
PV Input				
Max. PV Input Power	59.8 kW	60 kW	80 kW	96 kW
Max. Input Voltage	1000 V			
Rated Operating Voltage	600 V			
Start-up Voltage	180 V			
MPPT Voltage Range	150...850 V			
Max. Input Current	3×40 A		4×40 A	
Max. Short Circuit Current	3×60 A		4×60 A	
MPPT No. / Max. Input Strings No.	3/6		4/8	
Battery Parameters				
Cell Specification	280 Ah			
Pack Configuration	1P16S			
Rated Current	140 A			
Pack Number	4...7			
System Capacity	57.34...100.35 kWh			
AC Input / Output (Grid)				
Rated Output Power	29.9 kW	30 kW	40 kW	50 kW
Max. Apparent Output Power	29.9 kVA	30 kVA	40 kVA	50 kVA
Rated Grid Voltage	3/N/PE, 220/380 V, 230/400 V			
Grid Voltage Range	304...460 V			
Rated Grid Frequency	50/60 Hz			
AC Grid Frequency Range	45...55/55...65 Hz			
Rated Grid Output Current	45.4/43.2 A	45.6/43.3 A	60.8/57.7 A	76.0/72.2 A
Max. Output Current	45.4/43.2 A	45.6/43.3 A	60.8/57.7 A	76.0/72.2 A
Max. AC Input Current	90.8/86.4 A	91.2/86.6 A	121.6/115.4 A	152/144.4 A
Power Factor	> 0.99 (0.8 leading...0.8 lagging)			
THDi	< 3%			
AC Output (Back-up)				
Rated Output Power	29.9 kW	30 kW	40 kW	50 kW
Max. Apparent Output Power @2 sec	47.8 kVA	48 kVA	64 kVA	80 kVA
Back-up Switch Time	< 10 ms			
Rated Output Voltage	3/N/PE, 220/380 V, 230/400 V			
Rated Frequency	50/60 Hz			
Rated. Output Current	45.4/43.2 A	45.6/43.3 A	60.8/57.7 A	76.0/72.2 A
Max. Imbalance Power per Phase	33% rated power			
THDv (@linear load)	< 2%			
AC Input (Generator)				
Max. Input Power	29.9 kW	30 kW	40 kW	50 kW
Rated Input Current	45.4/43.2 A	45.6/43.3 A	60.8/57.7 A	76.0/72.2 A
Rated Input Voltage	3/N/PE, 220V/380 V, 230V/400 V			
Rated Input Frequency	50/60 Hz			
General Data				
Dimensions (W*D*H)	750*1150*2250 mm (without inverter); 1070*1150*2250 mm (with inverter)			
Weight	~1.13 t (without inverter); ~1.2 t (with inverter)			
Protection Level	Battery Cabinet IP55, Inverter IP66			
Operating Temperature Range	-20°C...55°C			
Cooling Method	Air-cooling			
Fire Suppression System	Smoke detector, Heat detector, Alarm sounder, Aersol, Sprinkler Optional: Flammable gas detector + exhaust, Vent plate			
Altitude	2000 m			
Standard[1]	IEC 62109-1/-2, IEC 61000-6-2/-4, EN 50549-1/EN 50549-10, G99, VDE-AR-N 4105 / VDE V 0124, CEI 0-21, C10/11, NRS 097-2-1, UN 38.3, IEC 62477, IEC 63056			

Order Options	IA-29.9kW/100kWh-EC10	IA-30kW/100kWh-EC10	IA-40kW/100kWh-EC10	IA-50kW/100kWh-EC10
Consisting of	THA-29.9kW DC-100kWh-EC00	THA-30kW DC-100kWh-EC00	THA-40kW DC-100kWh-EC00	THA-50kW DC-100kWh-EC00

[1] For all standards refer to the certificates category on the WHES website.

* All information reflects the current state of technology at the time of printing and is subject to change. Despite careful editing, no liability is assumed.

PowerCore

C&I All-in-One Energy Storage System
100kW / 233kWh

Smart Power, Built to Last.

CATL 280 Ah
Battery Packs

< 2 °C
Difference Between Battery Cells

< 1 Day
Installation Time

Fully Certified
Globally

15 Years
Design Life [1]

PPB level
Battery Quality Control [2]

Powered by PANGUOS From WHES

Economical

- Highly integrated ESS for easy transportation and O&M.
- The integrated design allows the site to be quickly set up and used.

Liquid cooling

- The temperature deviance of battery cells in the whole system is within 2°C, due to intelligent liquid cooling system.
- It can expand the life time of the battery cells up to 20%.

Friendly

- High energy density, with a footprint of only 0.86m^2.
- No foundation required, simplifying setup.
- < 65dB, suitable for diverse environments.

Safe

- The system has four levels management structure which can accurately provide short circuit protection, over current protection, over voltage protection, under voltage protection, over temperature protection, etc.

Applications

Shopping Mall
Factory
Farm
Community

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[1] Over 80% SOH remaining (after 10 years).

[2] Reduced the failure rate of cells to one part per billion.

PowerCore

Technical Specifications

Model	WH-TIANWU-100-233B
Battery Parameters	
Rated Capacity	233 kWh
Rated Voltage DC	832 V
Battery Type	LFP (from CATL)
Cell Specification	3.2 V 280 Ah
System Battery Configuration	1P*52S*5S
AC Parameters	
Rated Power	100 kW
Max. Output Power	110 kW
Rated Voltage AC	400 V, 3W+PE
Rated Frequency AC	50/60 Hz
Max. THD of Current	< 3% (at nominal power)
Power Factor	-1...+1
General Data	
Protection Level	IP55
Inverter Topology	Non-isolated
Operating Temperature Range	-20°C...+55°C (derating @ > 45°C)
Cooling Method	Air cooling (PCS) Liquid cooling (Battery)
Altitude	2000 m
Communication Protocols	Modbus, TCP/IP
Dimensions (W*D*H)	1400*1350*2100 mm
Weight	~2700 kg
Standard[1]	EMC, IEC 62619, EN 50549, G99, VDE4105, CEI016, CEI021, AS4777.2, C10/11, UL9540A, UN38.3

[1] For all standards refer to the certificates category on the WHES website.

PowerCore

C&I All-in-One Energy Storage System
62.5-250kW / 500kWh

Always On, Energy for All.

2/4/8 Hours
Flexible Solutions

< 60 dB
Low-noise Operation

CATL 306 Ah
Battery Packs for High Energy Density

VDE 4110
Certified

Powered by PANGUOS From WHES

Completely Flexible

- Modular AC/DC design for flexible configurations and easy expansion.
- Supports 0.5C/0.25C/0.125C storage solutions for various applications.
- Cluster management reduces internal circulation, extending lifespan.

Reliable and Stable

- CATL 306Ah battery pack for high energy density and long cycle life.
- UL9540A certified with quadruple fire protection. [1]
- Independent cluster control ensures uninterrupted operation during PCS failures.

User-Friendly

- Forklift or crane installation compatible.
- Side-by-side parallel setup and side cabling for seamless deployment.
- Low-noise operation at 60dB. [2]
- Built-in protections against overcharge, over-discharge, and short circuits for worry-free use.

Multi-Scenario Applications

- VDE 4110 certified for large-capacity grid compliance in Germany.
- Supports peak shaving, dynamic capacity expansion.
- Rapid grid response for frequency stabilization.

Applications

Shopping Mall
Factory
Farm
Community

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[1] Quadruple fire protection includes smoke/temperature detection, perfluorohexanone agents, water suppression, and pressure relief.

[2] 60 dB noise level tested at 3M.

PowerCore
Technical Specifications

Model	IA-62.5kW/500kWh-DA10	IA-125kW/500kWh-DA10	IA-187kW/500kWh-DA10	IA-250kW/500kWh-DA10
Battery (DC)				
Rated Energy	509 kWh			
Battery Type	306 Ah			
Rated DC Voltage	832 V			
DC Voltage Range	728...936 V			
Grid Connection (AC)				
Rated AC Power	62.5 kW	125 kW	187 kW	250 kW
Max. AC Power	62.5 kW	125 kW	187 kW	250 kW
AC Power Frequency	50/60 Hz			
Normal AC Voltage	400 Vac (3W+PE)			
AC Voltage Range	360...440 V			
Grid Connetion Type	Three-phase/PE			
THDi	< 3%			
Power Factor Range	-1...+1			
Max. Efficiency	98.5%			
General Data				
Dimensions (W*D*H)	1940*1500*2100 mm (Battery) 1000*1500*2100 mm (AC Side)			
Weight	~5.2 t			
Ingress Protection	IP55			
Anti-corrosion	C4 (C5 optional)			
Noise	60 dB			
Operating Relative Humidity	0%...100% (No condensation)			
Operating Temperature Range	-20°C...+55°C			
Cooling Method	Liquid cooling (Battery)			
Altitude	4000 m (@derating > 2000m)			
Communication	CAN, RS485			
Standard[1]	IEC62619, IEC63056, IEC62477, IEC61000, EN50549-10, VDE4110, UL9540A, UN38.3			

Order Options	IA-62.5kW/500kWh-DA10	IA-125kW/500kWh-DA10	IA-187kW/500kWh-DA10	IA-250kW/500kWh-DA10
Consisting of	AC-62.5kW-1D10 DC-500kWh-EA10	AC-125kW-2D10 DC-500kWh-EA10	AC-187kW-3D10 DC-500kWh-EA10	AC-250kW-4D10 DC-500kWh-EA10

[1] For all standards refer to the certificates category on the WHES website.

PowerAce

Utility Energy Storage System
1720kW / 3258kWh

Ace in Every Way.

CATL 306 Ah
Battery Packs for High Energy Density

Built-in PCS
Simplifies Delivery and Enhances Efficiency

Full Fire Protection
With Multi-layered Proactive Prevention and Fire Suppression

50 °C
Full Performance without Derating

22 %
Footprint Reduction through Modular Design

Powered by PANGUOS From WHES

Safe & Reliable

- Proactive Prevention: Intelligent control, temperature monitoring, gas detection, and water immersion ensure safety.
- Fire Suppression: Sprinklers, vent panels, FACP, aerosol, and pressure relief ports provide full protection.

Efficient & Flexible

- Modular design reduces footprint by 22%, enhancing space utilization.
- Cluster management responds to capacity needs and minimizes failure impacts.

Enhanced Performance

- Integrated AC/DC system reduces initial investment costs.
- Cluster management increases generation efficiency for higher revenue.
- Single-stage DC/AC conversion improves charging and discharging efficiency, reducing energy loss.
- Wide operating conditions support efficient performance in up to 50°C without derating.

Easy O&M

- Standardized design simplifies delivery and reduces implementation time.
- Cluster management reduces manual operations and lowers operational costs.
- Advanced liquid cooling reduces coolant need and maintenance.

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PowerAce
Technical Specifications

Model	IA-1720kW/3258kWh-DA10
DC Side	
Cell Type	LFP
Cell Specification	3.2 V / 306 Ah
Battery Configuration	416S8P
Nominal Capacity	3.25 MWh
Nominal Voltage Range	1123.2... 1497.6 V
AC Side	
Nominal AC Power	215 kVA * 8
AC Current Distortion Rate	< 3 % (at nominal power)
DC Component	< 0.5 %
Nominal AC Voltage	690 V
AC Coltage Range	621...759 V
Power Factor	> 0.99 (Nominal Power)
Adjustable Range of Reactive Power	-100% ...100 %
Nominal Frequency	50 Hz
General Data	
Dimension (W*D*H)	6058*2462*2896 mm
Weight	31000 kg
Protection Level	IP55
Anti-corrosion Level	C3/C5 (optional)
Operation Ambient Temperature Range	-30°C...+ 50°C (Derating @ > 50°C)
Operation Humidity Range	0%...100 % (Non-condensing)
Maximum Operation Altitude	3000 m
Cooling Method	Liquid Cooling (DC Side)
Fire Suppression System	Flammable gas detector, Smoke detector, Heat detector, Sounder beacon, Alarm bell, Warning sign, Extinguishant abort button, Ventilation system, Pressure relief port, Manual automatic switching and emergency starting device(Default) Sprinkler, Vent panel, FACP,Aerosol.
Communication	Modbus TCP
Standard[1]	IEC62619, IEC6000, IEC63056, IEC62477, EN50549-2, UL9540A, UN38.3

[1] For all standards refer to the certificates category on the WHES website.

Hybrid Inverter

Three-Phase Hybrid Inverter
5-13kW

Small in Size, Big on Power.

Max. 1.67 times
Photovoltaic Over-configuration

18 A
Max. PV Input Current Per String

180-980 V
MPPT Operating Voltage Range

Max. 16 kW
EPS Peak Output Apparent Power

110 %
Unbalanced Output

< 10 ms
EPS Switching Time

Powered by ECOS Smart Home From WHES

Powerful

- Max. 18A DC input current per string, compatible with 182/210 PV modules.
- Ultra-wide MPPT voltage range captures every ray of light from dawn to dusk, maximizing energy collection.

Flexible

- Up to 110% three-phase unbalanced output, increasing self-use ratio and optimizing solar production.
- Max. 5 units in parallel, offering a cost-effective commercial solution.

Efficient

- High charge/discharge efficiency, up to 98.5%/97.7%.
- Reduced energy loss between battery and inverter interaction.

Friendly

- < 25dB, no noise pollution.
- IP65, indoor or outdoor application.

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Hybrid Inverter

Technical Specifications

Model	WH-THA502	WH-THA602	WH-THA802	WH-THA103	WH-THA123	WH-THA133
PV Input						
Absolute Max. Voltage	1000 V					
MPPT Voltage Range	180...980 V					
Max. DC Input Power	7500 W	9000 W	12000 W	15000 W	20000 W	20000 W
Start-up Voltage	145 V					
Rated Operating Voltage	620V					
Max. Input Current	18/18 A					
Max. Inverter Backfeed Current to Array	0 A					
Isc PV	22/22 A					
No. of MPP Trackers	2					
No. of Strings per MPP Tracker	1					
Battery						
Battery Voltage Range	160...700 V					
Max. Charge/Discharge Current	25/25 A					
AC Input/Output						
Nominal Output Power	5000 W	6000 W	8000 W	10000 W	12000 W	13000 W
Max. Apparent Power to Grid	5000 W	6000 W	8000 W	10000 W	12000 W	13000 W
Max. Apparent Power from Grid	10000 W	12000 W	16000 W	17900 W	17900 W	17900 W
Nominal Voltage	3/N/PE; 220 V /380 V 3/N/PE; 230V /400 V 3/N/PE; 240 V / 415 V					
Nominal Frequency	50/60 Hz					
Max. AC Current to Grid	8.1 A	9.6 A	12.8 A	16 A	19.2 A	20.8 A
Max. AC Current from Grid	16.2 A	19.2 A	25.6 A	26 A	26 A	26 A
Max. Output Fault Current	52 A (peak), 37 A (rms)					
AC Output Max. Output Overcurrent Protection	37 A					
AC Input Power Factor	-0.8...+0.8					
AC Output Power Factor	1 (-0.8...+0.8 adjustable)					
THDi	< 3%					
EPS Output						
Nominal Output Power[1]	5000 W	6000 W	8000 W	10000 W	12000 W	13000 W
Peak Output Apparent Power @60 sec	10000 W	12000 W	16000 W	16000 W	16000 W	16000 W
Nominal Voltage	3/N/PE; 220 V /380 V 3/N/PE; 230V /400 V 3/N/PE; 240 V / 415 V					
Nominal Frequency	50 Hz / 60 Hz (±0.2%)					
Max. Output Current	8.1 A	9.6 A	12.8 A	16 A	19.2 A	20.8 A
Max. Output Fault Current	52 A (peak), 37 A (rms)					
EPS Output Max. Output Overcurrent Protection	37 A					
Switch Time	< 10 ms					
THDv @ Linear Load	< 2%					
Power Factor	-0.8...+0.8					
Efficiency						
PV Max. Efficiency	98%					
PV Europe Efficiency	97%					
PV Max. MPPT Efficiency	99.90%					
Battery Charge by PV Max. Efficiency	98.50%					
Battery Discharge Efficiency	97.70%					
Protection						
Over/Under Voltage Protection, DC Isolation Protection, DC Injection Monitoring, Residual Current Detection, Anti-islanding Protection, Over Load Protection, Battery Input Reverse Polarity Protection, PV Reverse Polarity Protection, Surge Protection, Over Heat Protection						
General Data						
Dimension (W*D*H)	510*205*480 mm					
Dimension of Packing (W*D*H)	705*355*615 mm					
Net Weight	30.8 kg					
Gross Weight	35 kg					
Operation Temp	-25°C...60°C					
Relative Humidity	0%...95%					
Altitude	≤ 3000m					
Ingress Protection	IP65					
Cooling	Natural					
Inverter Topology	Non-isolated					
Over Voltage Category	III (AC), II (DC)					
Protective Class	Class I					
Active Anti-Islanding Method	Frequency shift					
Human Interface	LED/APP					
BMS Communication Interface	RS485/CAN					
Meter Communication Interface	RS485					
Noise Emission	< 25 dB					
Standby Power Consumption	< 10 W					
Standard[2]	IEC 62109, IEC 62040, AS/NZS 4777.2, EN 50549-1, C 10/11, VDE 4105, VDE 0124, XP C 15-712-3, VDE 0126, EN50549-1/RfG/PTPiREE, CEI 0-21, EIFS					

[1] Depends on the voltage and the discharge current of the batteries connected.

[2] For all standards refer to the certificates category on the WHES website.

* The product features a shiny silver color design with a mirror-like logo, which exhibits subtle color variations under different lighting conditions.

* All information reflects the current state of technology at the time of printing and is subject to change. Despite careful editing, no liability is assumed.

EV Charger

Electric Vehicle Charger
7-11kW

Seamless EV Charging, Powered by Your Home.

Powered by
ECOS Smart Home
From WHES

Flexible
- Optional cable/socket; supports wall-mount and pole-mount installation.
- Automatic switching between single-phase and three-phase.

Friendly
- Streamlined design with a finely polished finish.
- Plug and play, easy installation.

Safe
- IP65, indoor or outdoor application.
- Anti-welding protection.

Smart
- Supports load balancing system control.
- Supports remote control and compatible with PV&BESS.

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EV Charger

Technical Specifications

Model	WH-ECA-7.0	WH-ECA-11.0
Input		
Power Supply	1P+N+PE	3P+N+PE
Rated Voltage	230 V	400 V
Rated Current	32 A	16 A
Frequency	50/60 Hz	
Output		
Output Voltage	230 V	400 V
Max. Current	32 A	16 A
Output Power	7 kW	11 kW
User Interface		
Charge Connector	Type 2 cable (Type 2 socket optional)	
Cable Length	4 m	
Housing Material	Plastic PC940	
LED Indicator	Green/Yellow/Red	
RFID Reader	Mifare ISO/IEC 14443 A	
Start Mode	Plug&Play/RFID card/App	
Communication		
Wi-Fi	Wi-Fi (2.4 GHz)	
Bluetooth	Optional	
3G/4G	Optional	
Ethernet	Optional	
Protocol	OCPP 1.6J	
Secure and Safety		
RCD	30mA Type A + 6mA DC	
Ingress Protection	IP65	
Impact Protection	IK10	
Electrical Protection	Over current protection, Residual current protection, Surge protection, Over/under voltage protection, Over/under frequency protection, Over temperature protection	
Standard[1]	CE, EN/IEC 61851-1: 2019, EN/IEC 61000-6-1:2019, EN/IEC 61000-6-2:2019, EN/IEC 61000-6-4:2019	
Environment		
Installation	Wall-mount/Pole-mount	
Work Temperature	-30°C...+50°C	
3G/4G	5%...95%	
Ethernet	< 2000 m	
Dimension		
Product Dimension (W*D*H)	201*100*344 mm Cable Series 201*135mm*344 mm Socket Series	

[1] For all standards refer to the certificates category on the WHES website.

Battery Box

High Voltage LFP Stackable Battery Box
4.99-29.9kWh

Install in Minutes, Power for Years.

-20 °C
Operating Temperature, Heating Module Inside

15 s
Eliminate Safety Risks, Built-in Aerosol Fire Suppression Module

Powered by ECOS Smart Home From WHES

Battery Heating Technology

Compatible
- Supports optional intelligent heating module, providing a wider operating temperature range.
- Equipped with the same battery modules as the Agave TH AIO BESS.

Convenient
- Equipped with the same battery modules as the Agave TH AIO BESS.
- IP65, indoor or outdoor application.

Safe
- Four-layer protection design, including built-in fire suppression system.
- The industry's most stringent safety standards-UL9540A.

Scalable
- Max. 5 units in parallel, up to 149.76kWh capacity range.
- Adaptable to a wide range of applications, including commercial and industrial.

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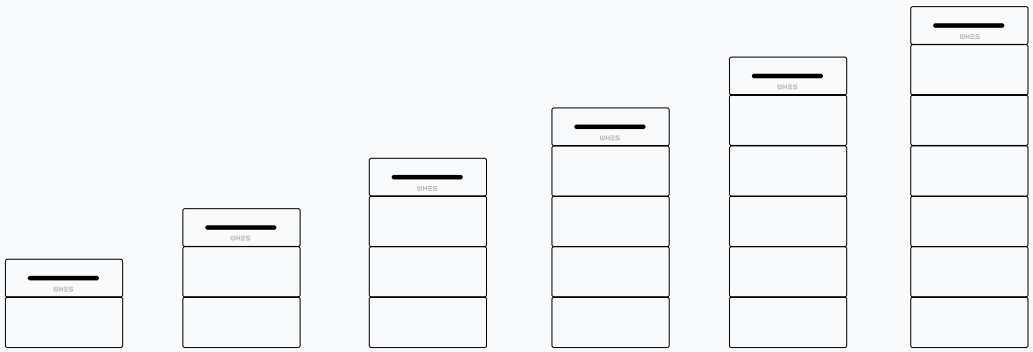
Battery Box

Technical Specifications

Model	WH-BXC4992 -1S	WH-BXC4992 -2S	WH-BXC4992 -3S	WH-BXC4992 -4S	WH-BXC4992 -5S	WH-BXC4992 -6S
System Demo						
System Data						
Battery Type	LFP					
Battery Module	4.992 kWh, 96 V					
No. of Modules	1	2	3	4	5	6
Nominal Capacity	4.992 kWh	9.984 kWh	14.976 kWh	19.968 kWh	24.96 kWh	29.952 kWh
Nominal Voltage	96 V	192 V	288 V	384 V	480 V	576 V
Operating Voltage	84...108 V	168...216 V	252...324 V	336...432 V	420...540 V	504...648 V
Recommend Charge/Discharge Current	26 A					
Max. Charge/Discharge Current	52 A					
Depth of Discharge	90%					
Display	SOC indicator, Status indicator					
Communication Interface	CAN, RS485					
General Data						
Dimensions (W*D*H)	600*350*575 mm	600*350*880 mm	600*350*1185 mm	600*350*1490 mm	600*350*1795 mm	600*350*2100 mm
Weight	69 kg	126 kg	183 kg	240 kg	297 kg	354 kg
Operating Temperature Range	-20°C...+55°C[1]					
Relative Humidity	5%...95%					
Altitude	≤ 3000 m					
AC Grid Frequency Range	Indoor/Outdoor, Floor stand					
Rated Grid Output Current	Natural					
Max. Output Current	IP65					
Standard [2]	UN38.3, IEC62619, IEC61000, IEC63056, IEC62040, UL1973, UL9540A, FCC Part 15 (Class B)					

[1] This is the operating temperature when the intelligent heating module is built-in, if not, the operating temperature is Charge: 0°C...50°C, Discharge: -10°C...+55°C.

[2] For all standards refer to the certificates category on the WHES website.

* The product features a shiny silver color design with a mirror-like logo, which exhibits subtle color variations under different lighting conditions.

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PowerPod

Residential Single-Phase All-In-One Energy Storage System
3.6-10kW / 4.99-19.9kWh

Powering Bigger Needs with Ease.

Max. 2 times
Photovoltaic Over-configuration

16 A
DC Single String Input Current

50 A
Fast Charge / Discharge Current

< 10 ms
EPS Switching Time Full House Backup Available

-20 °C
Operating Temperature, Heating Module Inside

15 s
Eliminate Safety Risks, Built-in Aerosol Fire Suppression Module

Powered by ECOS Smart Home From WHES

Battery Heating Technology

Convenient

- Built-in meter function simplifies communication wiring.
- Integrated plug-in terminal replaces manual wiring, saving 75% installation time between modules.

Flexible

- 4.992kWh per battery module, up to 4 battery modules for a single unit.
- Supports up to 5 units in parallel.

Safe

- Four-layer protection design, including built-in fire suppression system.
- Support AFCI.
- UL-certified battery modules for enhanced safety.

Friendly

- Supports optional intelligent heating module, providing a wider operating temperature range.
- < 25 dB, no noise pollution.

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PowerPod

Technical Specifications

Model	SIA-3.6kW	SIA-4.6kW[1]	SIA-5kW	SIA-6kW	SIA-8kW	SIA-10kW
PV Input						
Absolute max. Voltage	600 V					
MPPT Voltage Range	50...560 V					
Max. DC Input Power	7200 W	9200 W	10000 W	12000 W	16000 W	20000 W
Start-up Voltage	90 V					
Rated Operating Voltage	360 V					
Max. Input Current	16/16 A				32/32 A	
Isc PV	22/22 A				44/44 A	
No. of MPP Trackers	2					
No. of Strings per MPP Tracker	1/1				2/2	
Battery Model						
Battery Type	LiFePO4					
Battery Voltage Range	80...500 V					
Max. Charge/Discharge Current	50/50 A					
Depth of Discharge	90%					
Scalability	WH-BXC4992 (Up to 20 kWh, 4 modules)					
AC Input/Output						
Rated Output Power	3600 W	4600 W	5000 W	6000 W	8000 W	9999 W
Max. Apparent Power to Grid	3600 VA	4600 VA	5000 VA	6000 VA	8000 VA	9999 VA
Max. Apparent Power from Grid	7200 VA	9200 VA	10000 VA	12000 VA	14490 VA	
Rated Voltage	220/230/240 V					
Rated Frequency	50/60 Hz					
Max. Output Current	16 A	18.2 A	22.8 A	27.3 A	36.4 A	45.5 A
Power Factor	1 (-0.8...+0.8 adjustable)					
THDi	< 3%					
EPS Output						
Max. Outpout Power[2]	3600 W	4600 W	5000 W	6000 W	8000 W	9999 W
Max. Output Current	16 A	18.2 A	22.8 A	27.3 A	36.4 A	45.5 A
Peak Output Apparent Power	5400 VA, 10 s	6900 VA, 10 s	7500 VA, 10 s	9000 VA, 10 s	12000 VA, 10 s	14490 VA, 10 s
Rated Voltage	220/230/240 V					
Rated Frequency	50/60 Hz					
Power Factor	1 (-0.8...+0.8 adjustable)					
THDv @Linear Load	< 2%					
Protection						
Over/Under Voltage Protection, DC Isolation Protection, DC Injection Monitoring, Residual Current Detection, Anti-islanding Protection, Over LoadProtection, Battery Input Reverse Polarity Protection, PV Reverse Polarity Protection, Surge Protection, Over Heat Protection, AFCI (optional)						
General Data						
Dimension (W*D*H)	600*350*1800 mm (four battery modules, with foundation)					
Hybrid Inverter Net Weight	27.4 kg					
Operation Temperature	-20°C...+55°C[3]					
Relative Humidity	0...95%					
Altitude	≤ 3000 m					
Ingress Protection	IP65					
Cooling	Natural					
Inverter Topology	Non-isolated					
Over Voltage Category	III (AC), II (DC)					
Protective Class	Class I					
Active Anti-islanding Method	Frequency shift					
Human Interface	LED/APP					
BMS Communication Interface	RS485/CAN					
Meter Communication Interface	RS485					
Noise Emission	< 25 dB					

[1] Only for Germany.

[2] Depends on the voltage and the discharge current of the batteries connected.

[3] This is the operating temperature when the intelligent heating module is built-in, if not, the operating temperature is Charge: 0°C...50°C, Discharge: -10°C...+55°C.

* The product features a shiny silver color design with a mirror-like logo, which exhibits subtle color variations under different lighting conditions.

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PowerPod

Residential Three-Phase All-In-One Energy Storage System
5-13kW / 9.98-29.9kWh

Powerful and Reliable Energy for Life.

Max. 2 times
Photovoltaic Over-configuration

180-980 V
Wider MPPT Range

< 10 ms
EPS Switching Time

110 %
Unbalanced Output

Powered by ECOS Smart Home From WHES

Battery Heating Technology

Superb

- Max. 16/26A DC input current per string, compatible with 182/210 PV modules.
- Max. 5 units in parallel, covering a capacity range up to 149.76kWh.

Friendly

- Integrated plug-in terminal replaces manual wiring, saving 75% installation time between modules.
- IP65, indoor or outdoor application.
- <25dB, no noise pollution.

Safe

- Four-layer protection design, including built-in fire suppression system.
- Long life cell, meeting the most stringent safety standards – UL9540A.

Smart

- Compatible with VPP, EV, and diesel generators.
- Remote updates & self-diagnosis.

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PowerPod

Technical Specifications

Model	WH-TIA502	WH-TIA602	WH-TIA802	WH-TIA103	WH-TIA123	WH-TIA133
PV Input						
Absolute Max. Voltage	1000 V					
MPPT Voltage Range	180...980 V					
Max. DC Input Power	10000 W	12000 W	16000 W	20000 W	20000 W	20000 W
Start-up Voltage	145 V					
Rated Operating Voltage	620 V					
Max. Input Current	16/26 A					
Isc PV	20/36 A					
No. of MPP Trackers	2					
No. of Strings per MPP Tracker	1/2					
Battery Model						
Battery Type	LFP					
Battery Voltage Range	160...700 V					
Battery Module	4.992kWh, 96V					
Number of Battery Module [1]	2...6					
Battery Capacity	9.98...29.9 kWh					
Max. Charge/Discharge Current	30/30					
AC Input/Output						
Nominal Output Power	5000 W	6000 W	8000 W	10000 W	12000 W	13000 W
Max. Apparent Power to Grid	5000 VA	6000 VA	8000 VA	10000 VA	12000 VA	13000 VA
Max. Apparent Power from Grid	10000 VA	12000 VA	16000 VA	17900 VA	17900 VA	17900 VA
Nonmial Voltage	3/N/PE; 220 V / 380 V 3/N/PE; 230 V / 400 V 3/N/PE; 240 V / 415 V					
Nomial Frequency	50/60 Hz (±0.2%)					
Max. AC Current to Grid	8.1 A	9.6 A	12.8 A	16 A	19.2 A	20.8 A
Max. AC Current from Grid	16.2 A	19.2 A	25.6 A	26 A	26 A	26 A
Max. Output Fault Current	52 A (peak), 37 A (rms)					
AC Output Max. Output Overcurrent Protection	37					
AC Input Power Factor	-0.8...+0.8					
AC Output Power Factor	(-0.8...+0.8 adjustable)					
THDi	< 3%					
EPS Output (With Battery)						
Nominal Output Power [2]	5000 W	6000 W	8000 W	10000 W	12000 W	13000 W
Peak Output Apparent Power @60 sec	10000 VA	12000 VA	16000 VA	16000 VA	16000 VA	16000 VA
Nominal Voltage	3/N/PE; 220 V/380 V 3/N/PE; 230 V / 400 V 3/N/PE; 240 V / 415V					
Nominal Frequency	50/60 Hz (±0.2%)					
Max. Output Current	8.1 A	9.6 A	12.8 A	16 A	19.2 A	20.8 A
Max. Output Fault Current	52 A (peak), 37 A (rms)					
EPS Output Max. Output Overcurrent Protection	37 A					
Switch Time	< 10 ms					
THDv @ Linear Load	< 2%					
Power Factor	-0.8...+0.8					
Efficiency						
PV Max. Efficiency	98.50%					
PV Europe Efficiency	97%					
PV Max. MPPT Efficiency	99.90%					
Max. Battery Charge Efficiency (PV to BAT)	98.50%					
Max. Battery Discharge Efficiency (BAT to AC)	98.50%					
Protection						
Over/Under Voltage Protection, DC Isolation Protection, DC Injection Monitoring, Residual Current Detection, Anti-islanding Protection, Over Load Protection, Battery Input Reverse Polarity Protection, PV Reverse Polarity Protection, Surge Protection, Over Heat Protection						
General Data						
Dimension (W*D*H)	600*350*1880 mm (four battery modules, with foundation)					
Hybrid Inverter Net Weight	33 kg					
Operating Temperature Range	-20°C...+55°C [3]					
Relative Humidity	0...95%					
Altitude	≤ 3000 m					
Ingress Protection	IP65					
Cooling	Natural					
Inverter Topology	Non-isolated					
Over Voltage Category	III(AC), II(DC)					
Protective Class	Class I					
Active Anti-islanding Method	Frequency shift					
Human Interface	LED/APP					
BMS Communication Interface	RS485/CAN					
Meter Communication Interface	RS485					
Noise Emission	< 25 dB					
Standby Power Consumption	< 10 W					
Standard [4]	EN 50549-1:2019, VDE-AR-N 4105:2018, C10/11:2021, EIFS 2018:2, RfG:2016, CEI 0-21:2022/V2:2024					

[1] There are installation space restrictions in some scenarios. The optimal number of batteries to be installed is less than or equal to 4.

[2] Depends on the voltage and the discharge current of the batteries connected.

[3] This is the operating temperature when the intelligent heating module is built-in, if not, the operating temperature is Charge: 0°C...50°C, Discharge: -10°C...+55°C.

[4] For all standards refer to the certificates category on the WHES website.

* The product features a shiny silver color design with a mirror-like logo, which exhibits subtle color variations under different lighting conditions.

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PowerPod

Residential Single-Phase All-In-One Energy Storage System
3.6-6kW / 5.12-10.24kWh

Smart, Seamless, Sustainable Power for Your Home.

89 Wh/kg
Power Density Over-configuration

10 years / **30** MWh
Warranty

2 Hours
Installation Time

25 dB
Noise

IP **65**
Protection Level

< **10** ms
Switching Time

Powered by ECOS Smart Home From WHES

Convenient
- Pre-installed battery for easy installation.
- Fully integrated all-in-one, no extra modules or inverters required.

Flexible
- IP65, indoor or outdoor application.
- Self-power, backup, and load shifting modes.

Quiet
- < 25 dB, no noise pollution.

Smart
- Compatible with VPP and IOT.
- Remote updates & self-diagnosis.

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PowerPod

Technical Specifications

Model	WH-SPHA3.6H-5.12kWh WH-SPHA3.6H-10.24kWh	WH-SPHA4.6H-5.12kWh[1] WH-SPHA4.6H-10.24kWh[1]	WH-SPHA5.0H-5.12kWh WH-SPHA5.0H-10.24kWh	WH-SPHA6.0H-5.12kWh WH-SPHA6.0H-10.24kWh
PV Input				
Absolute Max. Voltage	600 V			
MPPT Voltage Range	100...550 V			
Max. DC Input Power	4800 W	6200 W	6650 W	8000 W
Start-up Voltage	90 V			
Rated Operating Voltage	360 V			
Max. Input Current	12.5 A/12.5 A			
Max. Inverter Backfeed Current to Array	0 A			
Isc PV	18 A /18 A			
No. of MPP Trackers	2			
No. of Strings per MPP Tracker	1			
Battery Model	**WH-BXB5.12**		**WH-BXB10.24**	
Battery Capacity	LFP 5.12 kWh		LFP 10.24 kWh	
Nominal Battery Voltage	204.8 V		409.6 V	
Battery Voltage Range	160...227.2 V		320...454.4 V	
Max. Charge/Discharge Current	25/25 A			
Depth of Discharge	90%			
AC Input/Output				
Rated Output Power	3600 W	4600 W	5000 W	6000 W
Rated Apparent Power to Grid	3600 VA	4600 VA	5000 VA	6000 VA
Max. Apparent Power to Grid	3600 VA	4600 VA	5000 VA	6000 VA
Max. Apparent Power from Grid	7200 VA	9200 VA	10000 VA	12000 VA
Rated Voltage	220/230/240 V			
Rated Frequency	50/60 Hz			
Rated AC Current to Grid	15.6 A	20 A	21.7 A	26.1 A
Max. Output Current	17.2 A	22 A	23.9 A	28.7 A
Max. Current from Grid	31.2 A	40 A	43.4 A	52.2 A
Max. Output Fault Current	57 A (peak), 40 A (rms)			
AC Output Max. Output Overcurrent Protection	40 A			
AC Input Power Factor	-0.8...+0.8			
AC Output Power Factor	1 (-0.8...+0.8 adjustable)			
THDi	< 3%			
EPS Output				
Max. Output Power[2]	3600 W	4600 W	5000 W	6000 W
Rated Apparent Power	4320 VA	5520 VA	6000 VA	7200 VA
Max. Apparent Power	4320 VA	5520 VA	6000 VA	7200 VA
Rated Voltage	230 V (±2%)			
Norminal Frequency	50/60 Hz (±0.2%)			
Max. Output Current	18.8 A	24 A	26.1 A	31.3 A
Max. Output Fault Current	57 A (peak), 40 A (rms)			
EPS Output Max. Output Overcurrent Protection	40 A			
Switch Time	< 10 ms			
THDv @Linear Load	< 2%			
Power Factor	-0.8...+0.8			
Efficiency				
PV Max. Efficiency	97.6%			
PV Europe Efficiency	97%			
PV Max. MPPT Efficiency	99.9%			
Battery Charge by PV Max. Efficiency	98%			
Battery Discharge Efficiency	96.7%			
Protection				
Over/Under Voltage Protection, DC Isolation Protection, DC Injection Monitoring, Residual Current Detection, Anti-islanding Protection, Over Load Protection, Battery Input Reverse Polarity Protection, PV Reverse Polarity Protection, Surge Protection, Over Heat Protection				

General Data	WH-BXB5.12	WH-BXB10.24
Dimension (W*D*H)	550*233*1125 mm	550*233*1750 mm
Dimension of Packing (W*D*H)	655*302*1390 mm	655*302*2085 mm
Net Weight	68kg	115kg
Gross Weight	78kg	130kg
Operation Temp	-10°C...+55°C[3]	
Relative Humidity	0...95%	
Altitude	≤ 3000 m	
Ingress Protection	IP65	
Cooling	Natural	
Inverter Topology	Non-isolated	
Over Voltage category	III (AC), II (DC)	
Protective Class	Class I	
Active Anti-islanding Method	Frequency shift	
Human Interface	LED/APP	
BMS Communication Interface	RS485/CAN	
Meter Communication Interface	RS485	
Noise Emission	< 25 dB	
Standby Power Consumption	< 5 W	
Standard[4]	UN 38.3, IEC 62619, IEC 62100, IEC 62109, AS/NZS 4777.2, EN 50549-1, C 10/11, VDE 4105, VDE 0124, MEA/PEA, XP C 15-712-3, VDE 0126, PDC, EN50549-1/RfG/PTPiREE, G98/G99, RD 1699, CEI 0-21, EIFS, PPDS, NRS 097	

[1] Only for Germany.

[2] Depends on the voltage and the discharge current of the batteries connected.

[3] This is the operating temperature when the intelligent heating module is built-in, if not, the operating temperature is Charge: 0°C...50°C, Discharge: -10°C...+55°C.

[4] For all standards refer to the certificates category on the WHES website.

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Hybrid Inverter

Three-Phase Hybrid Inverter
20-30kW

Handles More, Worries Less.

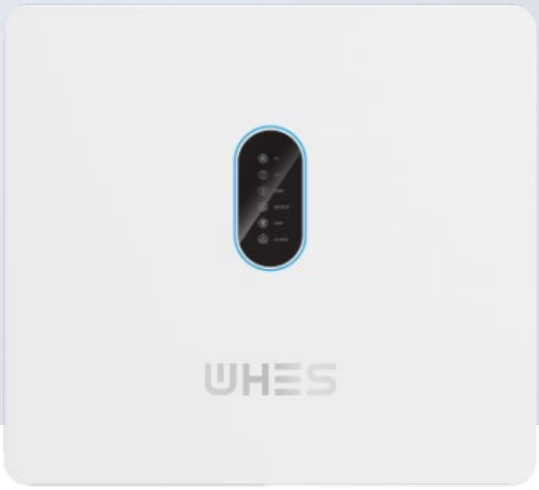
Max. **4500** W
PV Input Power

32 A
Max. PV Input Current Per String

110%
Unbalanced Output

75 A
Max. Charge/Discharge Current

Powered by
ECOS Smart Home
From WHES



Powerful

- Max. 32A DC input current per string, compatible with 182/210 PV modules.
- Max. 75A charge/discharge for faster energy flow and powerful load support.

Flexible

- Up to 110% three-phase unbalanced output, increasing self-use ratio and optimizing solar production.
- Supports two separate battery systems for smarter storage design.
- Max. of 5 units in parallel, offering a cost-effective commercial solution.

Safe

- Multiuple-layer protection, supports built-in AFCI.

Friendly

- IP66, indoor or outdoor application.

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Hybrid Inverter

Technical Specifications

Model	THA-20kW	THA-25kW	THA-30kW
PV Input			
Max. DC Input Power	45000 W		
Absolute Max. Voltage	1000 V		
MPPT Voltage Range	160...950 V		
Start-up Voltage	150 V		
Max. Input Current	32/32/32A		
Isc PV	40/40/40 A		
No. of MPP Trackers	3		
No. of Strings per MPP Tracker	2		
Battery			
Battery Voltage Range	120...800 V		
Max. Charge/Discharge Current	2*75/2*75 A		
AC Input/Output			
Nominal Output Power	20000 W	25000 W	30000 W
Max. Apparent Power to Grid	22000 W	27500 W	33000 W
Nominal Voltage	380 V/400 V/415 V, 3W+N+PE		
Nominal Frequency	50/60 Hz		
Max. AC Current to Grid	3*33.3 A	3*41.7 A	3*50 A
Max. input power	40000 W	45000 W	
Max. input current	3*60.6 A	3*68.2 A	
AC Output Power Factor	> 0.99 (-0.8...+0.8 adjustable)		
THDi	< 3%		
EPS Output			
Nominal Output Power [1]	20000 W	25000 W	30000 W
Nominal Voltage	380V/400V/415V, 3W+N+PE		
Nominal Frequency	50/60 Hz		
Nominal output current	3*30.3 A	3*37.9 A	3*45.5 A
Overload 5min	24000 W	30000 W	36000 W
Overload 10s	30000 W	37500 W	45000 W
Switch Time	<10 ms		
THDi	< 3%		
Efficiency			
PV Max. Efficiency	98.40%		
PV Europe Efficiency	97.90%		
Battery Charge by PV Max. Efficiency	98.00%		
Protection			
Over/Under Voltage Protection, DC Isolation Protection, DC Injection Monitoring, Residual Current Detection, Anti-islanding Protection, Over Load Protection, Battery Input Reverse Polarity Protection, PV Reverse Polarity Protection, Surge Protection, Over Heat Protection, AFCI			
General Data			
Dimension (W*D*H)	660*235*596 mm		
Weight	55 kg		
Operation Temp	-25°C...+60°C (>45°C derating)		
Humidity	0...100%		
Altitude	4000 m (>2000 m derating)		
Ingress Protection	IP66		
Cooling	Smart Cooling		
Protective Class	Class I		
Human Interface	Bluetooth & APP + LED, LCD (optional)		
BMS Communication Interface	RS485/CAN		
Meter Communication Interface	DRM/RS485		
Standard [2]	IEC 62109-1&2, IEC/EN 61000, VDE 4105, EN 50549-1, CEI 0-21, NRS 097-2-1, RD 1699/661/647/413, UNE 217002, AS 4777.2, C10/11, IEC 61727/62116		

[1] Depends on the voltage and the discharge current of the batteries connected.

[2] For all standards refer to the certificates category on the WHES website.

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