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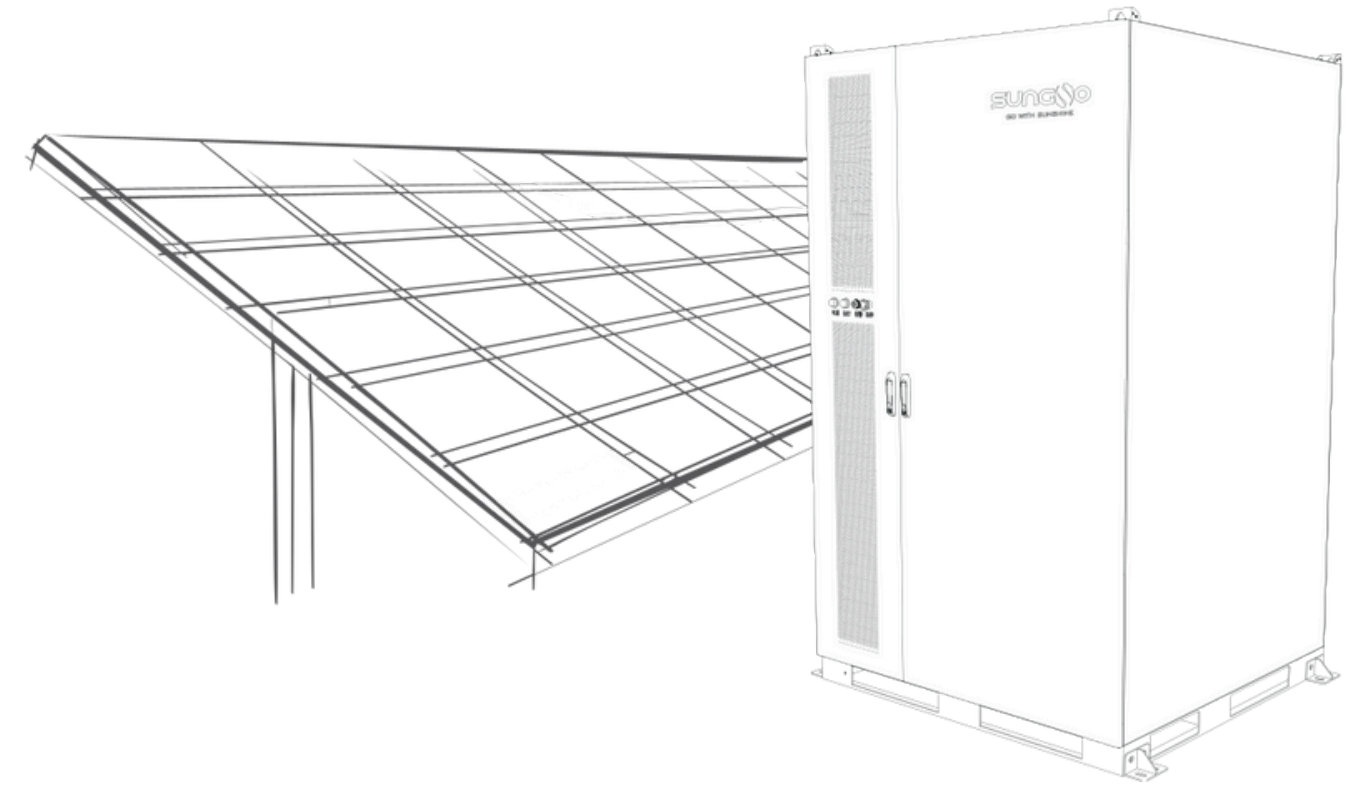
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Energy Storage Product Brochure



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SUNGO Energy

SUNGO Energy Technology focuses on the R&D and application of user-side solar+storage products, and is committed to providing global clients with excellent performance, leading-edge solar+storage products and comprehensive energy solutions. We have wide range product lines, including smart optimizers, and lithium-ion battery energy storage systems, which covers the entire industrial chain to meet users' requirements. In the future, we will continue to increase investment in R&D, continuously improve our competitive advantages, and provide global clients with products that are more integrated, easier to install and maintain.


GO WITH SUNSHINE 

 **2GWh**
Annual production capacity of energy storage products

 **500MWh**
energy storage installed capacity

 **15 years**
Industry experience

 **"0" accidents**
Security incidents

 **30%**
Proportion of R&D personnel

 **30+**
Exported countries

Energy Storage Application Scenarios



阴影遮挡 (Shadow shading)


工业污染 (Industrial pollution)

光伏朝向 (Solar panel orientation)


光伏衰减 (Solar panel degradation)

Energy Storage Product Solutions

SUNGO Energy is an industry-leading provider of energy storage and integrated energy management solutions, with independent R&D and production capacity in key aspects such as BMS, EMS and system integration, and adopts high-performance premium brand batteries to provide customers with advanced and complete customized solutions for the whole scenario.



Single Phase Solution
Single Phase Hybrid Inverter
Wall-mounted LFP Battery



Three Phase Solution
Three Phase Hybrid Inverter
Stackable/Modular ESS



Energion AC200/DC300
AIO Industrial&Commercial ESS



Center L Plus
Containerized liquid-cooled ESS

Single Phase Hybrid Inverter HN3/3.6/4/5/6KS-AH2



Wide MPPT Range



2 MPP trackers



Type III SPD both on DC&AC side



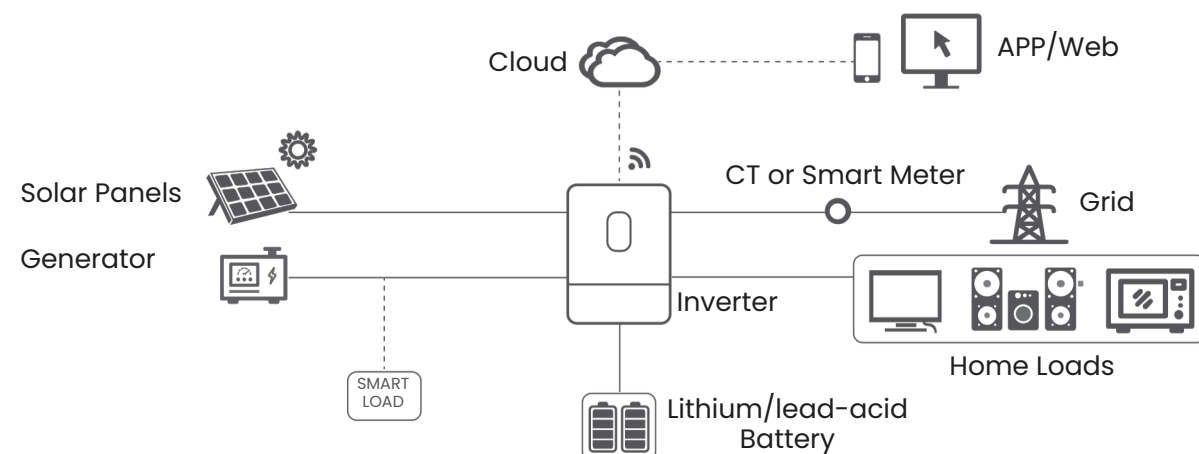
IP66 protection level



19A MPPT input current per string



Integrated and concise design



Technical Parameters

Model	HN3KS-AH2	HN3K6S-AH2	HN4KS-AH2	HN5KS-AH2	HN6KS-AH2
MPVa xIn. PpVu tinput Power					
Max. PV Input Power	4.5kW	5.5kW	6kW	7.5kW	9kW
Max. PV Open Circuit Voltage			550V		
MPPT Range@Operating Voltage			80-520V		
Full Power MPPT Voltage Range	117-500V	145-500V	158-500V	197-500V	250-500V
Start-up Voltage			90V		
Max. Input Current per MPPT			19/19A		
Max. Short-circuit Current			25/25A		
MPPT Tracker/Strings			2 / 1		
Nominal Input Voltage			360V		
AC Output(On-Grid)			4kW		
Nominal Output Power to Grid					
Max. Apparent Power to Grid	3kW	3.68kW	4kVA	5kW	6kW
Max. Apparent Power from Grid	3kVA	3.68kVA	4kVA	5kVA	6kVA
Max. Apparent Current from Grid	3kVA	3.68kVA	4kVA	5kVA	6kVA
Nominal Output Current from Grid	13.1A	16A	17.4A	21.8A	26.1A
Max. Output Current to Grid	13.1A	16A	17.4A	21.8A	26.1A
Nominal Voltage/Frequency	13.1A	16A	17.4A	21.8A	26.1A
Adjustable Power Factor			230V(176V-280V), 50/60Hz, L+N+PE		
THDI			0.8leading-0.8lagging		
AC Output(BackUp)			<2%		
Nominal Output Power					
Max. Apparent Power	3kW	3.68kW	4kW	5kW	6kW
Nominal Output Current	3kVA	3.68kVA	4kVA	5kVA	6kVA
Max. Output Current	13.1A	16A	17.4A	21.8A	26.1A
Nominal Voltage/Frequency	13.1A	16A	17.4A	21.8A	26.1A
Automatic Switch Time			230V(176V-238V), 50/60Hz, L+N+PE		
THDu			<20		
Overload Capacity			<2%		
Efficiency			110%,30s/120%,10s/150%,0.02s		
Max. Efficiency			98%		
Europe Efficiency			97.50%		
MPPT Efficiency			99.00%		
Max. Battery Charge/Discharge Efficiency			94.60%		
Battery					
BatteryVoltage Range					
Recommended Battery Voltage					
Max. Charging Voltage			40-60V		
Max. Charging/Discharging Current			48V		
BatteryType			60V		
Protection	80/80A	80/80A	Lithium and Lead Acid Battery	120/120A	120/120A
DC Switch					
DC Reverse Polarity Protection			Yes		
DC/AC Surge Protection			Yes		
AC Overvoltage Protection			Type III/Type III		
AC Short-circuit Protection			Yes		
Ground Fault Monitoring			Yes		
Anti-islanding Protection			Yes		
Residual-current Monitoring			Yes		
Insulation Resistance Monitoring			Yes		
Peak/Valley Time Setting			Yes		
General Data			Yes		
HMI			LCD & APP		
BMS			RS485; CAN		
EMS/Meter			RS485		
Communication			WiFi(standard)/GPRS(opt)/4G(opt)		
Ingress Protection			IP66		
Operating Temperature Range			-25-60°C		
Relative Humidity			0-95%(Non-condensing)		
Max. Operating Altitude			4000m(Derating above 3000m)		
Cooling			Natural		
Noise Emission			≤ 29dB		
Dimensions(W*H*D)			485*527*230mm		
Net Weight					
Self-consumption					
Standard Compliance					
Safety Regulation	23.5kg	23.5kg	23.5kg	24kg	24kg
EMC			<10W		
GridRegulation			IEC/EN62109-1/-2		
			IEC/EN61000-6-1/-2/-3		
			Europe: EN50549, South Africa: NRS097-2-1:2017, Belgium: C10/11		

Wall-mounted LFP Battery GN512100B



Protective and active BMS allows greater reliability and control



Flexible in parallel connection, total capacity up to 8pcs - 40.96 kWh



Compact wall-mounted design with IP65



Maximum 1C charge and 1C discharge capability



Cycle Life >5000cycle



Easy installation

Technical Parameters

Model	GN512100B
System Parameters	
Battery capacity	5.12kWh
Battery type	LFP (Lithium Iron Phosphate Battery)
Rated capacity	100Ah
Rated voltage	51.2V
Operating voltage range	44.8~58.4V
Charge current	60A (Recommended) / 100A (Max)
Discharge current	60A (Recommended) / 100A (Max)
Cycle life	>5000cycle (20°C ~ 25°C, 60A, 90% DoD)
Communication	RS485 / CAN 2.0 / RS232
Modules connection	1 - 8 parallel
Protection function	Over voltage / Under voltage / Over temperature Low temperature / Over current / Short circuit
Dimension (W*D*H)	440*202*660mm
Weight	50±1
Working Conditions	
Installation	
Operating temperature	Wall-mounted / On Ground
Storage temperature	-20~55°C
Humidity	0°C~35°C
Enclosure protection degree	IP65
Altitude	<4000m
Certificate	CE, UN38.3

Three Phase Hybrid Inverter SUNGO H5~H15



All in one design, all aluminum die-casting



Maximum over-allocation of 50% allowed



Maximum efficiency 98.2%



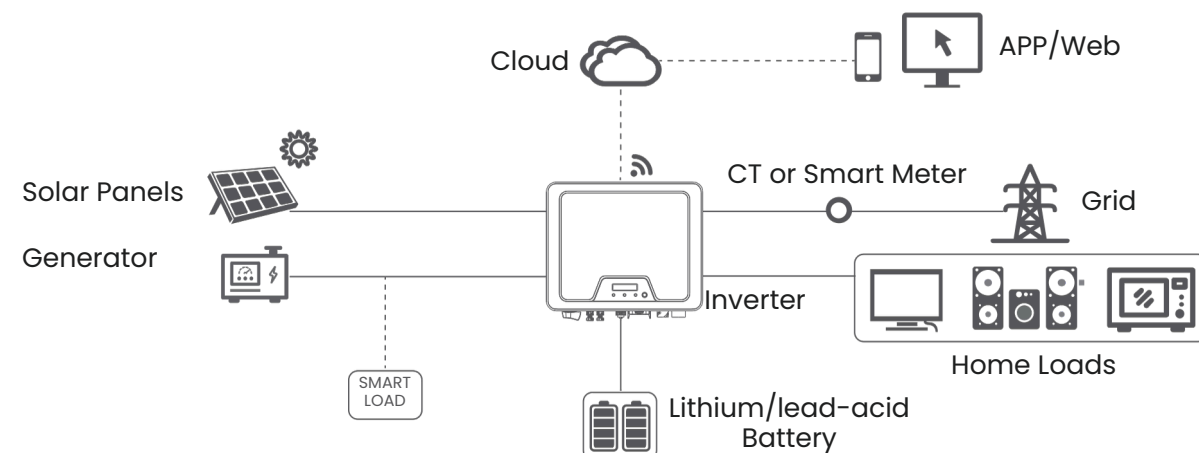
Smart Energy Management



MES+FCT+CRM Intelligent Manufacturing Management System



Lightweight, quick installation



Technical Parameters

Model	SUNGO H05	SUNGO H06	SUNGO H08	SUNGO H10	SUNGO H12	SUNGO H15	
AC Output/Input							
Rated output power							
Max. apparent output power	5000W	6000W	8000W	10000W	12000W	15000W	
Grid output rated active power	5500VA	6600VA	8800VA	11000VA	13200VA	16500VA	
Max. grid input power	10000W	12000W	15000W	15000W	18000W	20000W	
Rated grid voltage	11000W	13200W	16500W	16500W	20000W	22000W	
Grid access	380/400V	380/400V	380/400V	380/400V	380/400V	380/400V	
Rated grid frequency	3L-N-PE	3L-N-PE	3L-N-PE	3L-N-PE	3L-N-PE	3L-N-PE	
Max. output current	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	
Max. input current	8.5A	10A	13.5A	16A	20A	24A	
Power factor	17A	20A	23A	23A	29A	29A	
THDi(Rated power)	0.8ind - 0.8cap	0.8ind - 0.8cap	0.8ind - 0.8cap	0.8ind - 0.8cap	0.8ind - 0.8cap	0.8ind - 0.8cap	
	<3%	<3%	<3%	<3%	<3%	<3%	
AC Output Parameters (off-grid)							
Rated output power							
Max. apparent output power	5000W	6000W	8000W	10000W	12000W	12000W	
Rated output voltage	10000VA	12000VA	15000VA	15000VA	15000VA	15000VA	
Rated output frequency	380/400V	380/400V	380/400V	380/400V	380/400V	380/400V	
Max. output current	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	
Switching time	8.5A	10A	13.5A	16A	20A	20A	
THDV (linear load)	<10	<10	<10	<10	<10	<10	
	<3%	<3%	<3%	<3%	<3%	<3%	
Efficiency							
Max. efficiency							
European efficiency	98%	98%	98.2%	98.2%	98.2%	98.5%	
MPPT efficiency	97.3%	97.3%	97.3%	97.4%	97.4%	97.5%	
Charging efficiency (PV <-> battery)	99.9%	99.9%	99.9%	99.9%	99.9%	99.9%	
Charge/discharge efficiency (battery <-> grid/load)	98.5%	98.5%	98.5%	98.5%	98.5%	98.5%	
	97.6%	97.6%	97.6%	97.6%	97.6%	97.6%	
Battery Input							
Battery type	li-ion battery		Max. charge/discharge current		25/25A		
Input voltage range	160-800V		Lithium battery charging strategy		Automatic application of BMS		
Photovoltaic Input							
Max. module input power							
	HHT-5000	7500W	Max. input voltage	1000V	Maximum short-circuit current	HHT-5000-12000 20/20A	
	HHT-6000	9000W	MPP voltage range	150-850V		HHT-15000 40/20	
	HHT-8000	12000W	Start-up voltage	145V			
	HHT-10000	15000W	Rated input voltage	620V			
	HHT-12000	18000W	Max. input current	HHT-5000-12000 15/15A	Number of MPPT channels/HHT-5000-12000	2/(1/1)	
	HHT-15000	22500W		HHT-15000 30/15A	Number of MPPT strings per circuit	HHT-15000 2/(2/1)	
Protective Function							
Anti-islanding protection	Built-in		Residual current monitoring	Built-in		Overpressure protection	Built-in
Module reverse polarity protection	Built-in		Output overcurrent protection	Built-in		Surge protection	DC Class II, AC Class III
Insulation impedance monitoring	Built-in		Output short-circuit protection	Built-in		Reverse battery protection	Built-in
General Parameters							
Dimensions (W*H*D)							
	425*351*200mm		AC Connection Terminal	Plug-in connector		relative humidity	0-100%
Weight	HHT-5000-12000	20kg	Communication interface	RS485/Wi-Fi/4G/LAN(optional)		CT connection type	Plug-in Connector
	HHT-15000	23kg	BMS communication method	CAN,RS85		Max. operating altitude	2000 (>2000 Derating)
Noise standard	40dB		Instrument communication method	RS485		Protection level	IP65
user	LED/LCD		Cooling method	HHT-5000-12000 Natural cooling		Meteorological standards (IEC 60721-3-4)	4K4H
DC Connection Terminal	MC4			HHT-15000 Intelligent Cooling		topological structure	Transformerless type
Battery Connection Terminal	SUNCLIX		Operating temperature range	-25~+60°C		Night Power Consumption	<13

Stackable/Modular ESS ENERGY-CORE 1.0



Automatic battery system configuration (setting free)



Intelligent Display (Key Info, Err code, SOC)



1 and 3 phase, on / off grid / back up support



Thin and compact, stackable design for easy installation



Immediate use (Direct Connect RJ45)



Suitable for diverse scenarios

Technical Parameters

Model	ENERGY-CORE 1.0					
	3	4	5	6	7	8
Stacks						
BMS						
Operating voltage range	120-600 V					
Max. output current	30 A					
Communication	CAN 2.0 / RS 485					
Dimensions (W*D*H)	650*260*175 mm					
Weight	≤ 20 kg					
Battery Stack Parameters						
Cell type	LFP					
System capacity	3.3 kWh					
Usable capacity	3.2 kWh					
Rated voltage	64 V					
Operating voltage range	54-73 V					
Max. output current	30 A					
System parameters						
System capacity	9.9kWh	13.2kWh	16.5kWh	19.8kWh	23.1kWh	26.4kWh
Usable capacity	9.6kWh	12.8kWh	16.0kWh	19.2kWh	22.4kWh	25.6kWh
Max. output current	30A	30A	30A	30A	30A	30A
Peak output current	50A (5s)	50A (5s)	50A (5s)	50A (5s)	50A (5s)	50A (5s)
Rated voltage	192V	256V	320V	384V	448V	512V
Operating voltage range	162-219V	216-292V	270-365V	324-438V	378-511V	432-584V
Scalability	Up to 6 groups in parallel (from 9.6kWh to 153.6kWh)					
General Parameters						
Dimension (W*D*H)	650*260*800mm 650*260*975mm 650*260*1150mm 650*260*1325mm 650*260*1500mm 650*260*1675mm					
Weight	129.5 kg	166kg	202.5kg	239kg	275.5kg	312kg
Operating temperature	-10-55 °C					
Protection level	IP65					
Round-trip efficiency	≥ 96 %					
Standards & Certifications	VDE2510-50 / IEC62619 / CEC / CE / UN38.3					
Applications	ON Grid / ON Grid Backup / OFF Grid					
Warranty	10 Years					

AIO Industrial&Commercial ESS Energon AC200-PV



High-density energy, safe and scalable



Intelligent fire extinguishing system



PACK-level liquid cooling technology



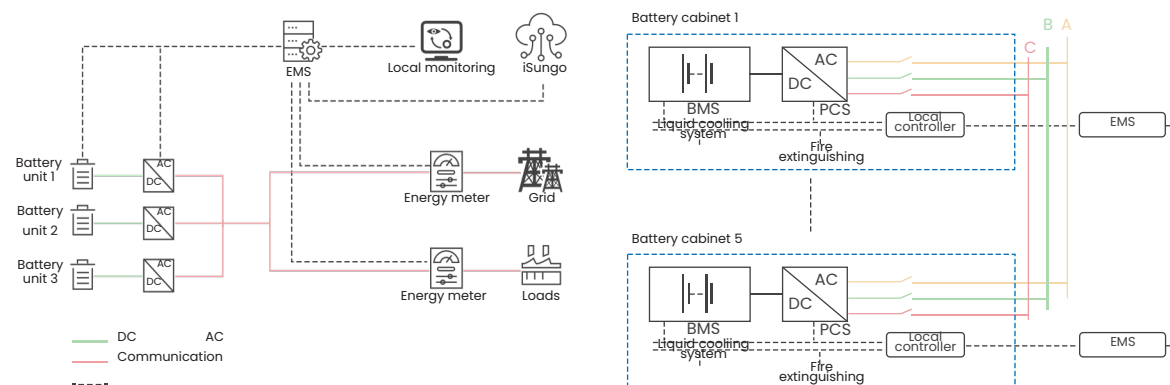
BMS ensures optimal battery operation



Easy to install and expand



Suitable for diverse scenarios

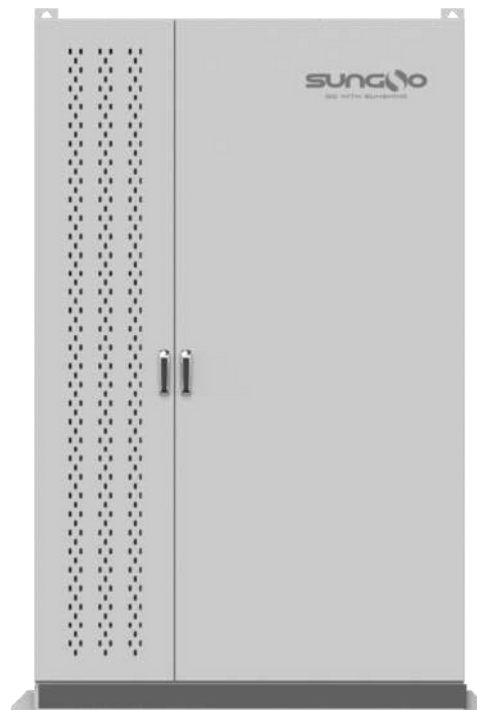


Technical Parameters

Model	Energon AC200-PV
Battery Parameters Cell type	LFP
System configuration of cells	240S1P
Capacity of Battery units	215kWh
Voltage range of Battery units	648-876Vdc
PV Parameters Max system voltage MPPT voltage range	900V
Max input current Nos of MPPT	300-900V
Nos of input	320A
AC Parameters	1
Rated output power	2
THDi	100kW
Direct component	<3% (Rated power)
Rated AC voltage	<0.5% (Rated power)
AC voltage range	400V
Rated AC frequency	340-460V
AC frequency range	50/60Hz
AC connection	45-55/54-66Hz
System Parameters	3W+N+PE
Dimension (W*D*H)	1340mm*1440mm*2350mm
Weight	2200Kg
MAX efficiency	≥90%
Charge/Discharge rate	0.5C
DOD	90%
Cycle index	>6000 (100%DOD, 80%SOH)
Protection	IP54
Auxiliary power supply	Self-powered
Corrosion-proof grade	C4
Operation humidity range	5-95%, RH, without condensation
Operation temperature range	-25~+60°C
Operation altitude	2000m
Cooling	Liquid cooling
Fire extinguishing and security	Aerosol (Perfluorohexanone or Heptafluoropropane), temperature sensors
Communication	RS485/CAN
Standards	IEC62619 IEC62477 UN38.3

If the product size and parameters change, the latest information shall prevail without prior notice.

Industrial&commercial ESS Energon DC300



High energy, safe and scalable



Intelligent fire extinguishing system



PACK-level liquid cooling technology



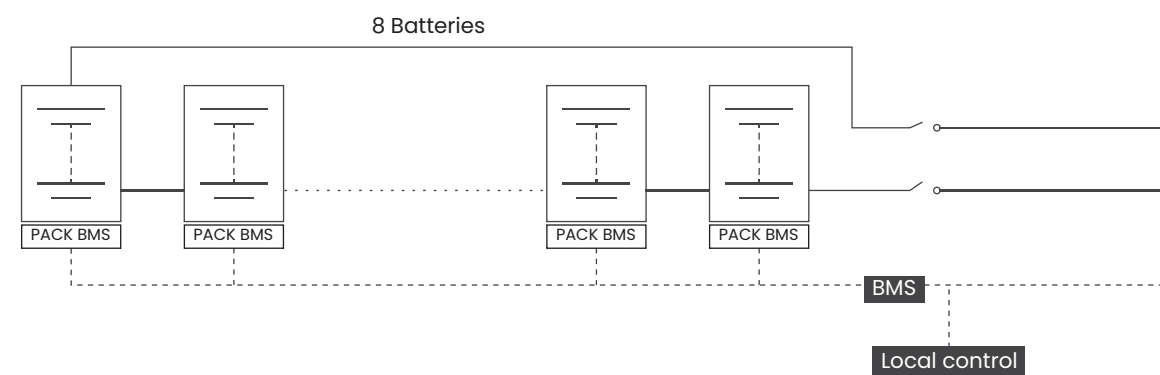
BMS ensures optimal battery operation



Easy to install and expand



Suitable for diverse scenarios



Technical Parameters

Model	Energon DC300
DC Battery Parameters	
Cell type	LFP 280Ah
Battery pack configuration	43.008kWh
Battery system configuration	344kWh
Combination	1P384S
Voltage range	960~1401.6VDC
DC protection	MSD+Fuse
System Parameter	
Rated voltage	1228.8VDC
Rated power	172kW
System efficiency	≥90%
Charge/discharge rate	0.5P
Depth of discharge	0-100%DOD
Cycles	≥6000 (@ 80%)
Communication	
Waterproof level	IP55
Cooling	Liquid Cooling
Work temperature	-25~60°C
Relative humidity	5-95% RH No condensation
Noise	<72dBa@1m
Altitude	≤2000m
Dimension(W*D*H)	1340*1440*2350mm
Fire protection system	Aerosol (perfluorohexanone & heptafluoropropane optional)
Weight	3060kg
Standards and certifications	IEC62619 IEC62477 UN38.3

Containerized liquid-cooled ESS Center L Plus



Safer
PACK-level fire
suppression technology



long life
Cycle life over 10000 times



More reliable
Dual liquid-cooling system with
mutual backup



Intelligent monitoring
Cloud Edge Collaboration and Digital
Twin Technology



Easy to O&M
Modular design to enhance
the convenience



More compact
Save 35% of floor space

Technical Parameters

Battery Rated Capacity		280Ah
Battery Parameters DC side rated voltage		1331.2V
Maximum charge/discharge ratio DC		0.5CC/ICD
side rated capacity Performance & Safety		3.7MWh
DC charging and discharging efficiency		
Battery type		
Calendar life		≥95% (rated power)
Fire protection system		LFP
Temperature control method		20 years
Certification Standards		Gas extinguishing (water firefighting optional)
System Parameters		Liquid cooling
Weight		UL9540/UL9540A/CE/IEC/KC/KBIA/GB/T 36276
Container external dimensions (W*H*D)		
Container protection grade		About 35 tons
Operating temperature range		6058*2896*2438mm
Communication	Communication	IP54
interface Communication protocols		-40~55°C
		CAN,RS485,Ethernet
		CAN,Modbus RTU,Modbus TCP/IP

Battery Rated Capacity		305Ah
Battery Parameters DC side rated voltage		1331.2V
Maximum charge/discharge ratio DC		0.5CC/ICD
side rated capacity Performance & Safety		4.06MWh
DC charging and discharging efficiency		
Battery type		
Calendar life		≥95% (rated power)
Fire protection system		LFP
Temperature control method		20 years
Certification Standards		Gas extinguishing (water firefighting optional)
System Parameters		Liquid cooling
Weight		UL9540/UL9540A/CE/IEC/KC/KBIA/GB/T 36276
Container external dimensions (W*H*D)		
Container protection grade		About 35.4 tons
Operating temperature range		6058*2896*2438mm
Communication	Communication	IP54
interface Communication protocols		-40~55°C
		CAN,RS485,Ethernet
		CAN,Modbus RTU,Modbus TCP/IP

*Data in this table is for reference only and is subject to actual delivery.

Project Cases



PV System Project Hainan, China | Year: 2019



PV System Project Suzhou, China | Year: 2020



PV System Project Fukuoka, Japan | Year: 2021



PV System Project Hokkaido, Japan | Year: 2022



PV & Energy Storage System Project Wuxi, China | Year: 2023

Professional and Comprehensive Service



Fast Response

12-hour agreement signing, 24-hour accurate quotation



Professional R&D Team

Structural, electrical, software, industrial design engineers to satisfy the diverse requirements of clients

After-sales service



Remote Support Troubleshooting



On-site support: Global projects, 24 hours arrival



Follow up & Customer Satisfaction Survey



Adhere to the concept of global localized operation and service

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