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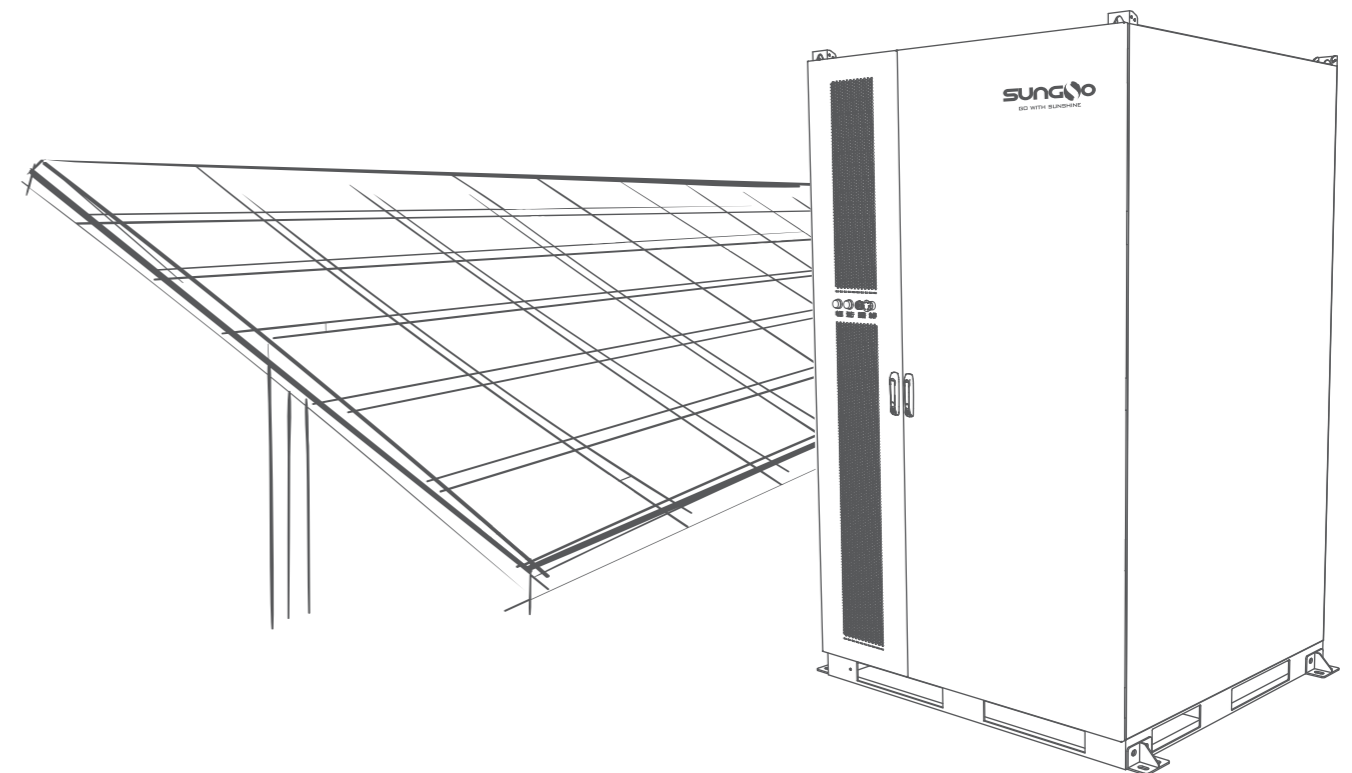
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# Energy Storage Product Brochure

GO WITH SUNSHINE



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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  
capacity

 **"0" accidents**  
Security incidents

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

 **30+**  
Exported countries

## Energy Storage Application Scenarios



School



Industrial park



Stadium



Charging station

# 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



**Energon 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



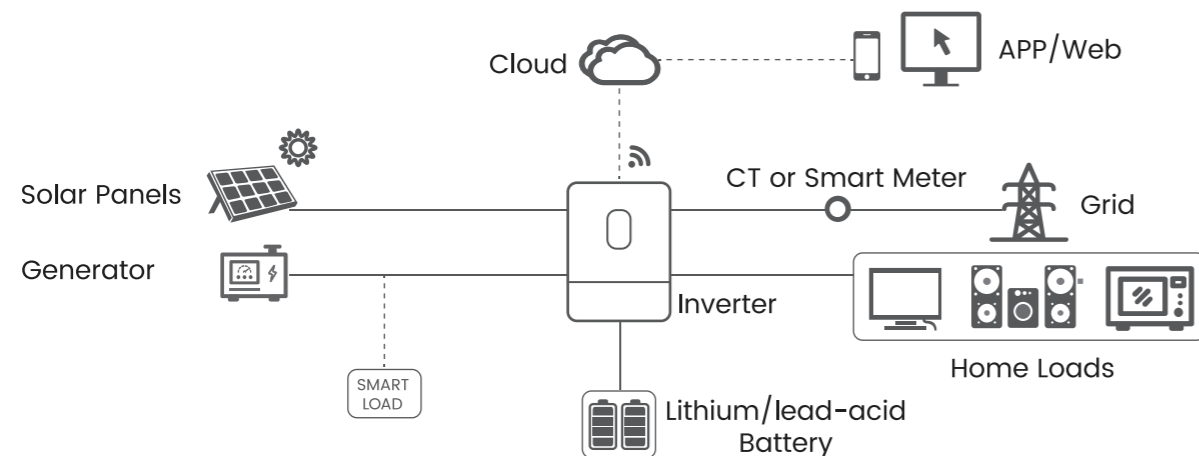
IP66 protection level



19A MPPT input current  
per string



Integrated and concise design



## Technical Parameters

Model	HN3KS-AH2	HN3K6S-AH2	HN4KS-AH2	HN5KS-AH2	HN6KS-AH2
<b>PV Input</b>					
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				
<b>AC Output(On-Grid)</b>					
Nominal Output Power to Grid	3kW	3.68kW	4kW	5kW	6kW
Max. Apparent Power to Grid	3kVA	3.68kVA	4kVA	5kVA	6kVA
Max. Apparent Power from Grid	3kVA	3.68kVA	4kVA	5kVA	6kVA
Max. Apparent Current from Grid	13.1A	16A	17.4A	21.8A	26.1A
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	230V(176V-280V), 50/60Hz, L+N+PE				
Adjustable Power Factor	0.8leading-0.8lagging				
THDI	<2%				
<b>AC Output(Backup)</b>					
Nominal Output Power	3kW	3.68kW	4kW	5kW	6kW
Max. Apparent Power	3kVA	3.68kVA	4kVA	5kVA	6kVA
Nominal Output Current	13.1A	16A	17.4A	21.8A	26.1A
Max. Output Current	13.1A	16A	17.4A	21.8A	26.1A
Nominal Voltage/Frequency	230V(176V-238V), 50/60Hz, L+N+PE				
Automatic Switch Time	<20				
THDu	<2%				
Overload Capacity	110%,30s/120%,10s/150%,0.02s				
<b>Efficiency</b>					
Max. Efficiency	98%				
Europe Efficiency	97.50%				
MPPT Efficiency	99.00%				
Max. Battery Charge/Discharge Efficiency	94.60%				
<b>Battery</b>					
Battery Voltage Range	40-60V				
Recommended Battery Voltage	48V				
Max. Charging Voltage	60V				
Max. Charging/Discharging Current	80/80A	80/80A	80/80A	120/120A	120/120A
Battery Type	Lithium and Lead Acid Battery				
<b>Protection</b>					
DC Switch	Yes				
DC Reverse Polarity Protection	Yes				
DC/AC Surge Protection	Type III/Type III				
AC Overvoltage Protection	Yes				
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				
<b>General Data</b>					
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	23.5kg	23.5kg	23.5kg	24kg	24kg
Self-consumption	<10W				
<b>Standard Compliance</b>					
Safety Regulation	IEC/EN62109-1/-2				
EMC	IEC/EN61000-6-1/-2/-3				
Grid Regulation	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
<b>System Parameters</b>	
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℃~25℃, 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
<b>Working Conditions</b>	
Installation	Wall-mounted / On Ground
Operating temperature	-20~55℃
Storage temperature	0℃~35℃
Humidity	10~90%
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%



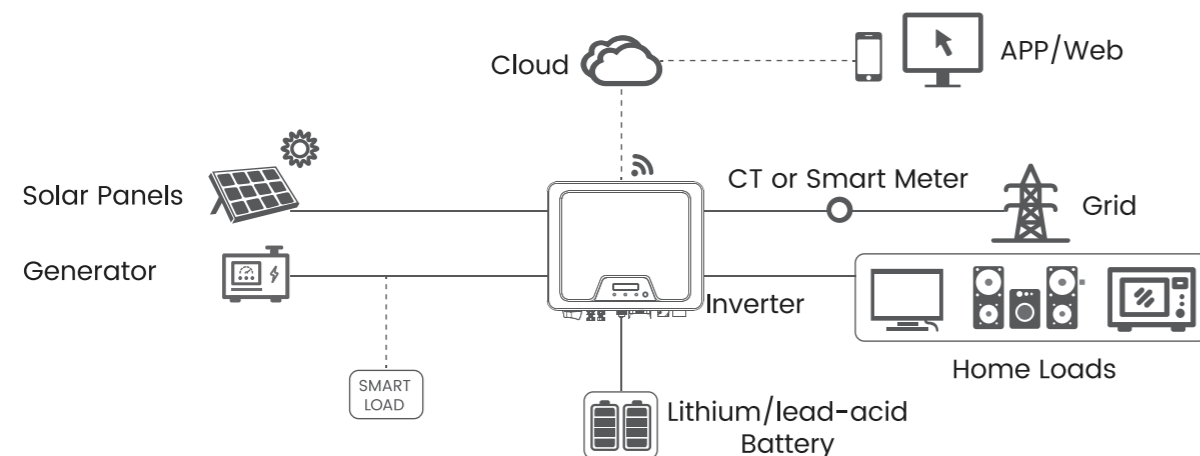
Smart Energy Management



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
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AC Output/Input						
Rated output power	5000W	6000W	8000W	10000W	12000W	15000W
Max. apparent output power	5500VA	6600VA	8800VA	11000VA	13200VA	16500VA
Grid output rated active power	10000W	12000W	15000W	15000W	18000W	20000W
Max. grid input power	11000W	13200W	16500W	16500W	20000W	22000W
Rated grid voltage	380/400V	380/400V	380/400V	380/400V	380/400V	380/400V
Grid access	3L-N-PE	3L-N-PE	3L-N-PE	3L-N-PE	3L-N-PE	3L-N-PE
Rated grid frequency	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz
Max. output current	8.5A	10A	13.5A	16A	20A	24A
Max. input current	17A	20A	23A	23A	29A	29A
Power factor	0.8ind - 0.8cap	0.8ind - 0.8cap	0.8ind - 0.8cap	0.8ind - 0.8cap	0.8ind - 0.8cap	0.8ind - 0.8cap
THDi(Rated power)	<3%	<3%	<3%	<3%	<3%	<3%

AC Output Parameters (off-grid)						
Rated output power	5000W	6000W	8000W	10000W	12000W	12000W
Max. apparent output power	10000VA	12000VA	15000VA	15000VA	15000VA	15000VA
Rated output voltage	380/400V	380/400V	380/400V	380/400V	380/400V	380/400V
Rated output frequency	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz
Max. output current	8.5A	10A	13.5A	16A	20A	20A
Switching time	<10	<10	<10	<10	<10	<10
THDV (linear load)	<3%	<3%	<3%	<3%	<3%	<3%

Efficiency						
Max. efficiency	98%	98%	98.2%	98.2%	98.2%	98.5%
European efficiency	97.3%	97.3%	97.3%	97.4%	97.4%	97.5%
MPPT efficiency	99.9%	99.9%	99.9%	99.9%	99.9%	99.9%
Charging efficiency (PV <-> battery)	98.5%	98.5%	98.5%	98.5%	98.5%	98.5%
Charge/discharge efficiency (battery <-> grid/load)	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	HHT-15000 2/(2/1)
					per circuit	

Protective Function			
Anti-islanding protection	Built-in	Residual current monitoring	Built-in
Module reverse polarity protection	Built-in	Output overcurrent protection	Built-in
Insulation impedance monitoring	Built-in	Output short-circuit protection	Built-in
		Overpressure protection	Built-in
		Surge protection	DC Class II, AC Class III
		Reverse battery protection	Built-in

General Parameters			
Dimensions (W*H*D)	425*351*200mm	AC Connection Terminal	Plug-in connector
Weight	HHT-5000-12000 20kg	Communication interface	RS485/Wi-Fi/4G/LAN(optional)
	HHT-15000 23kg	BMS communication method	CAN,RS85
Noise standard	40dB	Instrument communication method	RS485
user	LED/LCD	Cooling method	HHT-5000-12000 Natural cooling
DC Connection Terminal	MC4		HHT-15000 Intelligent Cooling
Battery Connection Terminal	SUNCLIX	Operating temperature range	-25~+60°C
		relative humidity	0-100%
		CT connection type	Plug-in Connector
		Max. operating altitude	2000 (>2000 Derating)
		Protection level	IP65
		Meteorological standards (IEC 60721-3-4)	4K4H
		topological structure	Transformerless type
		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						
<b>BMS</b>						
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					
<b>Battery Stack Parameters</b>						
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					
<b>System parameters</b>						
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)					
<b>General Parameters</b>						
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



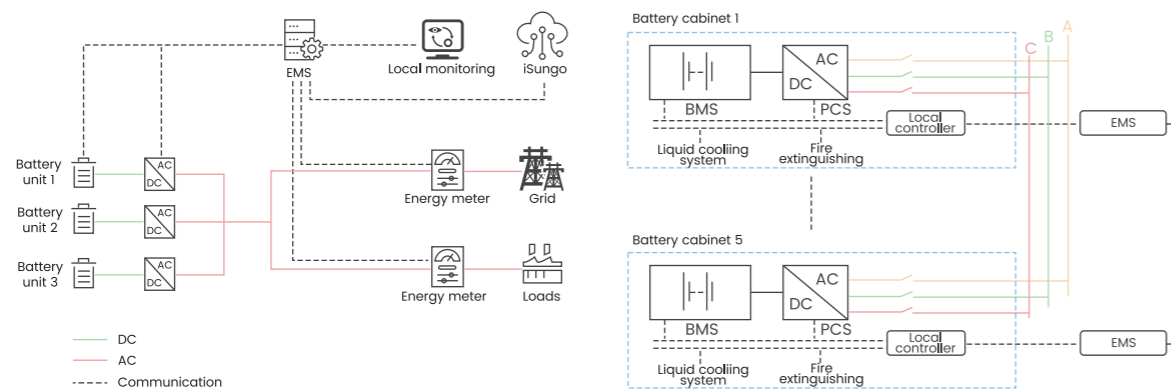
BMS ensures optimal battery operation



Easy to install and expand



Suitable for diverse scenarios

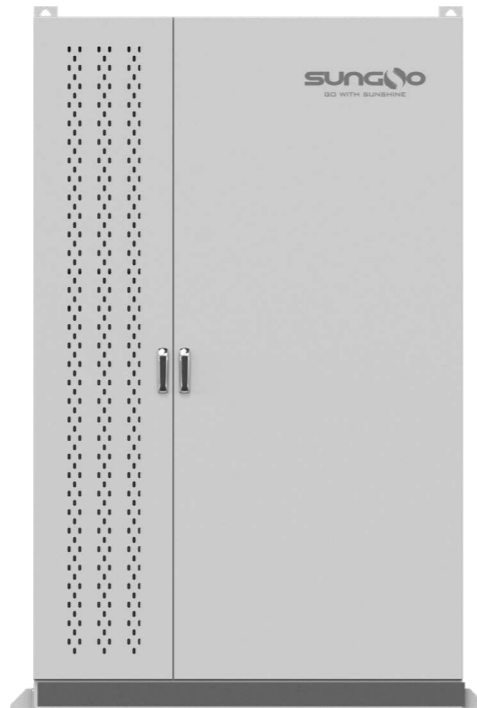


## Technical Parameters

Model	Energon AC200-PV
<b>Battery Parameters</b>	
Cell type	LFP
System configuration of cells	240S1P
Capacity of Battery units	215kWh
Voltage range of Battery units	648~876Vdc
<b>PV Parameters</b>	
Max system voltage	900V
MPPT voltage range	300~900V
Max input current	320A
Nos of MPPT	1
Nos of input	2
<b>AC Parameters</b>	
Rated output power	100kW
THDi	< 3% (Rated power)
Direct component	< 0.5% (Rated power)
Rated AC voltage	400V
AC voltage range	340~460V
Rated AC frequency	50/60Hz
AC frequency range	45~55/54~66Hz
AC connection	3W+N+PE
<b>System Parameters</b>	
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



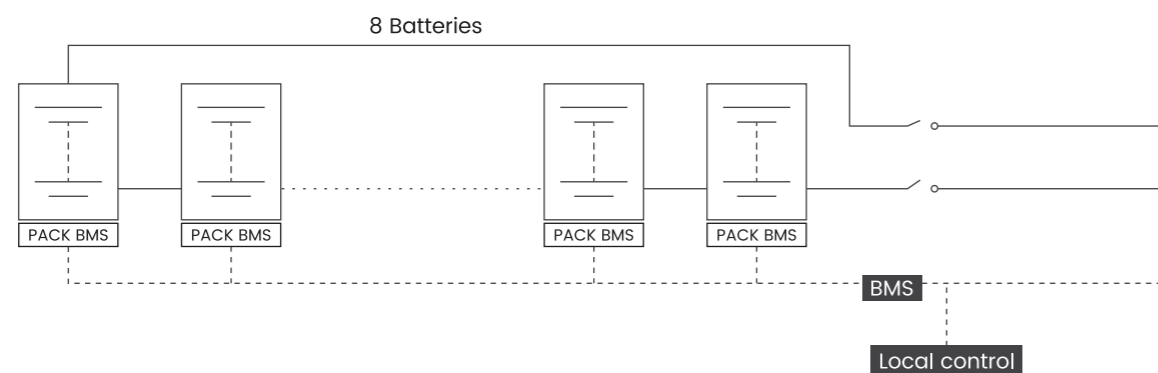
BMS ensures optimal battery operation



Easy to install and expand



Suitable for diverse scenarios



## Technical Parameters

Model	Energon DC300
<b>DC Battery Parameters</b>	
Cell type	LFP 280Ah
Battery pack configuration	43.008kWh
Battery system configuration	344kWh
Combination	1P384S
Voltage range	960~1401.6VDC
DC protection	MSD+Fuse
<b>System Parameter</b>	
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	RS485/CAN
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

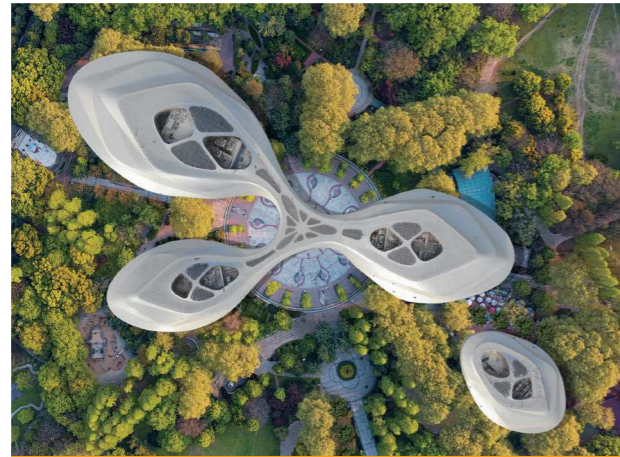
## Technical Parameters

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

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

Tel: +31 (0)10 307 21 68

After-sales e-mail: [after-sales@sungoess.com](mailto:after-sales@sungoess.com)