



A dedicated BESS (battery energy storage system) Provider

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The future
is coming with sustainable,
smart, stable energy

 **PYLONTECH**
www.pylontech.com.cn

Follow our Heart-Oriented Always




A dedicated BESS (battery energy storage system) Provider

Pylontech, is a dedicated BSS (battery storage system) provider, by consolidating our expertise in electrochemistry power electronics and system integration, we have been providing reliable and affordable ESS battery products and solutions to


the global market, and been significantly contributing to a 6-years increasing rate by double, enabling our market position as one of the top suppliers of lithium battery storage world widely.

10+years
Dedication




 **300,000**
Global Residential ESS


 **10+**
Years Delivery experience


 **7.34%**
Continuous R&D investment

 **TOP 3**
Global residential ESS Supplier

 **3GWH+**
Delivered capacity

 **60+**
Self-developed Patents

 **80+countries**
Global Deliveries

 **Flexible battery solutions**
12V-1500V battery

The road-map of Pylontech BESS

2009
Found

2014
Mass production for Europe and Australia

2013
Deployed the solution for BESS

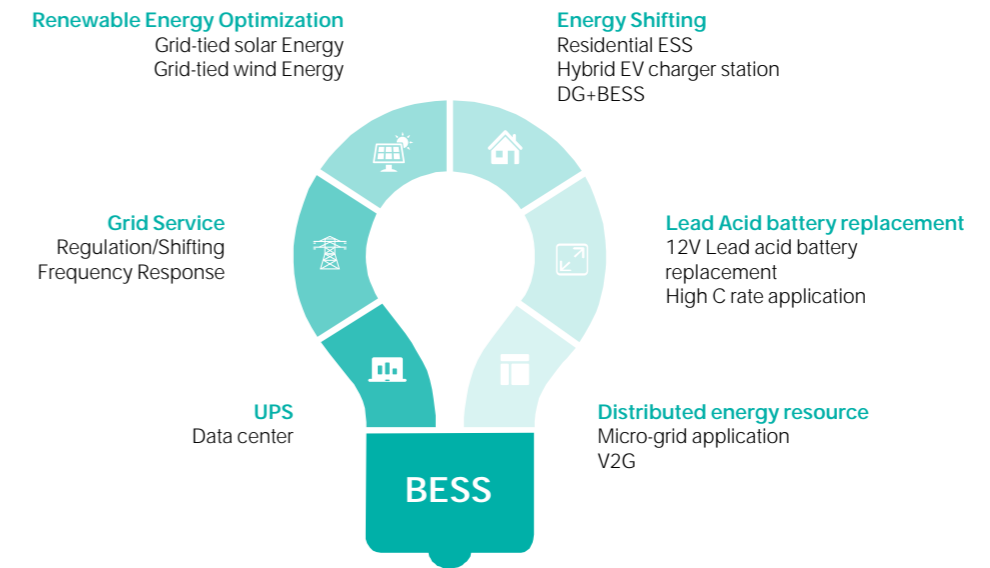
2015
Domestic Grid-Scale BESS Deployment

2018
1GWh ESS shipped globally

2019
1.5GWh New Capacity built

2020
Listed on STAR Market

Main Applications



Core Strengths

- More than 10 years technology accumulation for reliable BESS
- The safety and stability of battery has been protected by our own cells, modules and BMS
- All R&D, manufacturing, supplying and marketing are long-life-cycles driven.
- Flexible modularization and rack solution for various demands.

Vertical Integration Chain is the **Key** of the performance



A man in a dark blue t-shirt, black shorts, and a grey beanie is running down a wooden staircase. The staircase is built on a hillside overlooking the ocean. The man is looking down at the steps. The background shows a coastline with waves crashing against the shore under a clear sky.

Your dream of future
energy is our heart-oriented
motivation.

Vision | PYLONTECH

DEDICATION
Product Portfolio

- 01) Portable Power Station
- 02) Auto Aftermarket
- 03) Residential BESS
- 04) UPS Back Up
- 05) C&I ESS
- 06) Utility ESS

Over the past decade we have been redefining electric power generation, storage and usage with our partners globally. Continuous innovation and broad collaboration is the only route to an

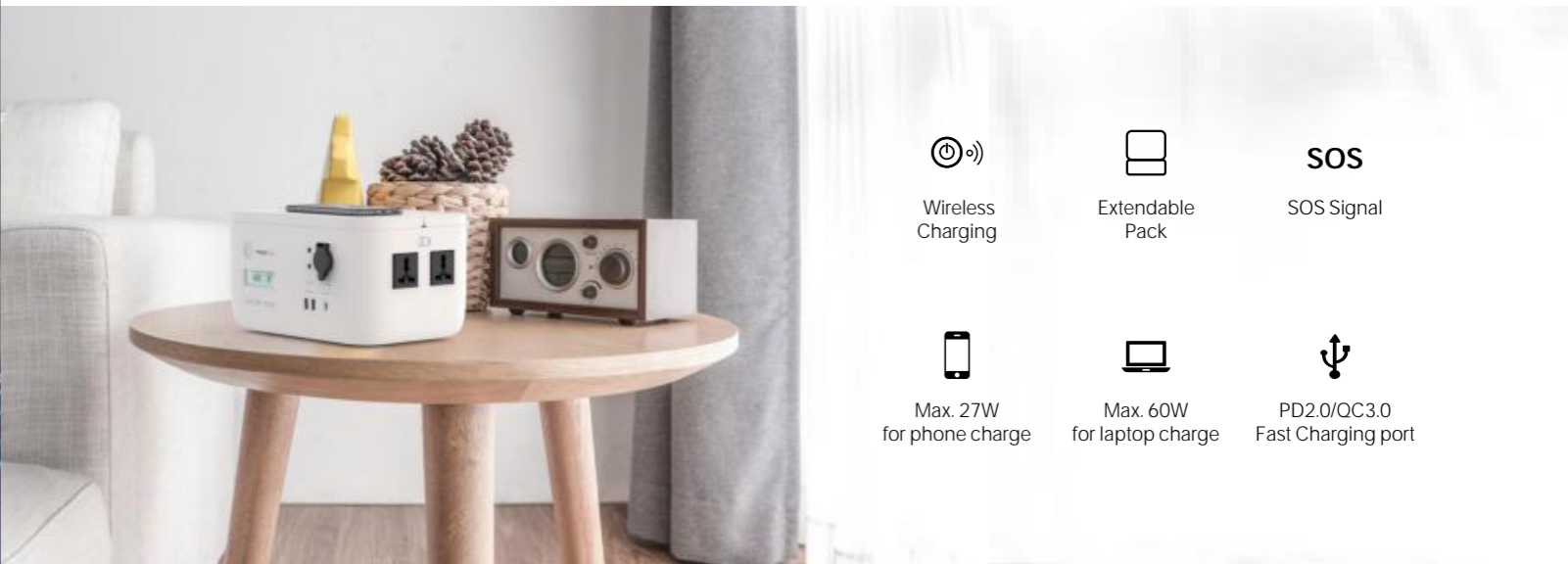
efficient, sustainable and affordable new energy structure. We strongly believe in the carbon neutral commitments from global leaders and strive to contribute our passion into the movement.

Innovative Portable Power Station

Smart and clean portable power for your demanding devices



Boosting more power with Extendable Battery Pack









Specification

	Amber Rock	Mini Amber
Nominal Capacity:	473Wh	473Wh
Cell Material:	LFP lithium Ion	LFP Lithium Ion
Size :	303*198*161	303*198*108
Weight:	6.4kg	3.2kg
Working temperature:	0-45 C	0-45 C
Shelf Temperature:	-20-60 C	-20-60 C
Output:	2 AC 2 USB 1 PD2.0 1 Cigar Lighter 2 DC Jack	1 USB 1 PD2.0
Input:	9hrs full charged-Standard Charger/2hrs full charged-Optional Charger	
Certification:	FCC CE MSDS UN38.3 PSE Rohs	





Intelligent Battery Management System

 Temperature Protection	 Over-Voltage Protection	 Over-Current Protection
 Heating Film	 Parallel & Serial Balancing Strategy	 Short-circuit Protection

KEY FEATURES

Ultra-Safety
The battery management system (BMS) provides comprehensive protection to the battery and manages the charging/discharging process wisely.

Auto-Balance
Connects multiple batteries in parallel safely without internal state non-uniformity issues.

Uncompromising Quality
State-of-the-art battery cells ensure a lifespan of more than 6000 cycles, 100A continuous discharge current, and a wide range of operation temperature.

Communication
CAN, RS485, Blue Tooth, Dry Contact enable data transmission to meet the needs of different usage scenarios.

12V Series All Purpose Lithium Ion Batteries



SPECIFICATION

Model	RT12100G31
Electrical	
Nominal Voltage(V)	12.8
Nominal Capacity(Ah)	100
Working Voltage Range(VDC)	10.8~14.4
Internal Resistance(mΩ)	<20
Charge Voltage(VDC)	14 ~14.4
Nominal Operation Current(A)	20
Continuous operation current(A)	100
Peak Current(A)	200A@30sec
Serial Connection	≤ 4 pcs
Parallel Connection	≤ 4 pcs
Structure	
Dimension (mm)	325*173.5*226
Weight(Kg)	12kg±0.2
IP rating	IP67
Power Terminal	M8 bolt
Working Environment	
Charge working temperature (C)	0~60
Discharge working temperature (C)	-20~60
Working temperature (C)	-40~60*
Altitude (M)	<4,000
Humidity(RH)	5~95% (w/o condensing)
Design life	10+years (25 C)
Cycle life	>4500(25 C)
Communication	
RS485	115200bps
CAN	500Kbps
Bluetooth	BLE5.0
Dry contactor	2×inputs & 2×outputs
Certification	
SAE J930, SAE J1455, UL1973, IEC62619,FCC,CE, Bluetooth SIG, UN38.3	

*During -40 C ~ -20C, only heater will be enabled for heating up the module, battery cannot charge/dischage during such period.





24V Back-Up Storage System



Application

Back-up system for office computer, data center, load and other equipments of business building, bank, hospital, school, railway station, airport, telecom..



Features



Cell Balance function



Voltage Protection



Over Charge Protection



Over Discharge Protection



Over Current Protection



Short-circuit Protection



Temperature Protection



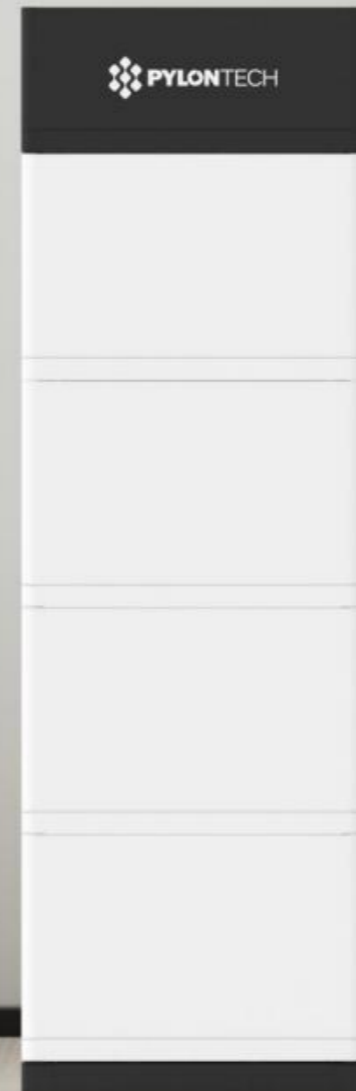
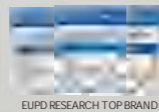
Soft Start Function

Specification

Basic Parameters	UP2500
Nominal Voltage(V)	25.6
Nominal Capacity(Wh)	2840
Usable Capacity(Wh)	2550
Dimension(W*D*H, mm)	442*420*120
Weight(Kg)	26.5
Discharge Voltage(V)	23.2-28.5
Charge Voltage(V)	28.2-28.5
Charge/Discharge Current(A)	55(continuous) 100 (Peak@15s)
Communication Port	CAN,RS485
Working Temperature(C)	0-50
Shelf Temperature(C)	-20-60
Humidity	5%-90%
Altitude (m)	<2000
Design Life	15+Years (25 C @77 F)
Cycle Life	>6000, @25 C
Authentication level	IEC62619/RoHS/UN38.3/CE

Residential BESS

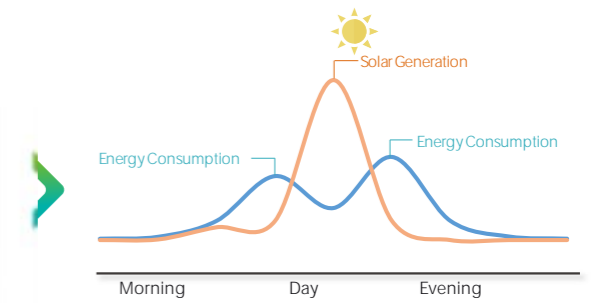
Save your bill, save the world, with our battery storage.
Little step for our generations to enjoy the safe and clean environment



How to save bill from Residential ESS?

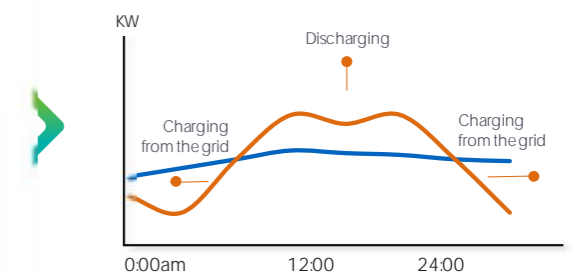
Self-Consumption Optimization

High energy demand in the morning and evening but solar generation is most sufficient during the Mid-Day. Battery Storage system balance the feeding and demands. Realize your grid independence.



Benefits from Peak Shaving

House: Load Shifting
Store the power during low-peak and use the energy at peak-time. Save the money which happens arising from peak rate.
Transmission&Distribution: peak Shaving
Save on the electricity bills by reducing peak demand



VPP Revenue

VPP creates a network of renewable energy sources and battery storage systems, connected through a cloud-based technology that manages the stability of clean electricity to maximize your revenue.

Enabling a cost reduction, as well as boosting the system's efficiency





Your ideal Residential BESS

-  **Safety**
Multi-protection from self developed BMS
-  **Optimal Electricity Cost**
Long cycle life and superior performance
-  **Compact Size & Easy installation**
Module design help for quick installation
-  **Easy to Scale Up**
Be workable to be parallel based on 48V
-  **Compatibility**
Compatible with Tier 1 inverter brands



Complete Safety Certification

Product Lineup

48 V		96-336 V
Cabinet/rack installation	Quick connector	Quick connector
US2000C (2.4 kWh)	Force L1 (7.1-24.86 kWh)	Force H1 (10.65-24.86 kWh)
Phantom-S(2.4 kWh)	Force L2 (7.1-14.2 kWh)	Force H2 (7.1-14.2 kWh)
US3000C (3.55 kWh)		
US5000 (4.8 kWh)		

SPECIFICATION (48V)

Model	US2000C	US3000C	US5000	Phantom-S
Basic Parameters				
Nominal Voltage (Vdc)	48	48	48	48
Nominal Capacity(Wh)	2400	3552	4800	2400
Usable Capacity(Wh)	2280	3374	4560	2280
Dimension(mm)	442*410*89	442*420*132	442*420*161	440*440*88.5
Weight(kg)	24	32	39.5	24
(Recommend)	25	37	50	25
Charge/Discharge Current(A) (Max@1min)	50	74	100	50
(Peak @15s)	90	90	120	90
Communication Port	RS485, CAN			
Single string quantity(pcs)	16	16	16	16
Working Temperature/ °C	0-50			
Shelf Temperature/ °C	-20-60			
Attitude(m)	<4000			
Design Life	15+years (25 °C)			
Humidity	5% -95% (w/o condensing)			
Authentication Level	IEC62619/CE UN38.3	VDE2510-50 IEC62619/UL1973 UL9540A/CE/UN38.3	IEC62619/UL1973 /UL9540A/CE /UN38.3	IEC62619/CE UN38.3
Cycle Life	> 6000, 25 °C	>6000, 25 °C	>6000, 25 °C	>6000, 25 °C

Force Series

Concise steel color reflects the strong capability of holding energy. Furniture like design suits both indoor and outdoor installation. Ideal for large home and small commercial application.

7.10~24.86 kWh
Flexible Mounting
Plug&Play
95% DOD

SPECIFICATION (Force-L1/48V)



Model	2	3	4	5	6	7
Basic Parameters						
Battery System Capacity(kWh)	7.1	10.65	14.21	17.76	21.31	24.86
Voltage Range(Vdc)	44.5-54					
Dimension(W*D*H mm)	600*380*530	600*380*700	600*380*870	600*380*1040	600*380*1210	600*380*1380
Weight(kg)	84	119	154	189	224	259
Depth of Discharge	95%					
(Recommend)	30	45	60	75	90	100
Charge/Discharge Current(A) (Max)	75	100	100	100	100	100
(Peak @15s)	105	105	105	105	105	105
Communication Port	RS485, CAN					
Protection Class	IP55					
Working Temperature/ °C	0-50					
Shelf Temperature/ °C	-20-60					
Humidity	5%-95%(w/o condensing)					
Altitude	<2000					
Design Life	15+ Years (25 C/°F)					
Cycle Life	>6000, 25 C					
Authentication level	VDE2510-50/IEC62619/IEC62477/IEC62040/CE/UN38.3					

SPECIFICATION (Force-L2/48V)



Model	2	3	4
Basic Parameters			
Battery System Capacity(kWh)	7.1	10.65	14.21
Voltage Range(Vdc)	44.5-54		
Dimension(W*D*H mm)	450*300*820	450*300*1120	450*300*1410
Weight(kg)	83	119	14.21
Depth of Discharge	95%		
Charge/ Discharge Current(A)	(Recommend) 30	45	60
	(Max) 75	100	100
	(Peak @15s) 105	105	105
Communication Port	RS485/CAN		
Protection Class	IP55		
Working Temperature/ °C	0-50		
Shelf Temperature/ °C	-20-60		
Humidity	5%-95% (w/o condensing)		
Altitude	<2000		
Design Life	15+ Years (25 C /°F)		
Cycle Life	>6000, 25 C		
Authentication level	VDE2510-50/IEC62619/IEC62477/IEC62040/CE/UN38.3		

SPECIFICATION (96~336 V)



Basic Parameters	Force-H1	Force-H2
Battery Module	FH48074	FH9637M
Battery Module Voltage(Vdc)	48	96
Battery Module Capacity(Ah)	74	37
Battery Module Qty. (Optional)	3-7 pcs	2-4 pcs
Battery System Capacity(kWh)	24.86	14.21
Battery System Voltage (V)	336	384
Dimension (W*D*H mm)	600*380*1380	450*296*1415
Weight(kg)	259	155
Depth of Discharge	95%	
Charge/ Discharge Current(A)	(Recommend) 37	18.5
	(Max.) 40	
Communication	RS485, CAN	
Protection Class	IP55	
Working Temperature/ °C	0-50	
Shelf Temperature/ °C	-20-60	
Humidity	5%-95%(w/o condensing)	
Altitude	<2000	
Design Life	15+ Years (25 C /°F)	
Cycle Life	>6000, 25 C	
Authentication level	UL1973/VDE2510-50 /IEC62619/IEC62477/ IEC62040/CE/UN38.3	VDE2510-50/IEC62619 /IEC62477/ IEC62040 /CE/UN38.3

Pylontech
had been serving Over **300,000+**
Residential ESS globally from 2014



OUR RELIABILITY IS PROVEN

Helping You Stay connected...

LiPower UPS Battery

Ideal backup power solution to meet your demands.
Reserve power you can always rely on.



Data center



Bank



Public Utilities



Features

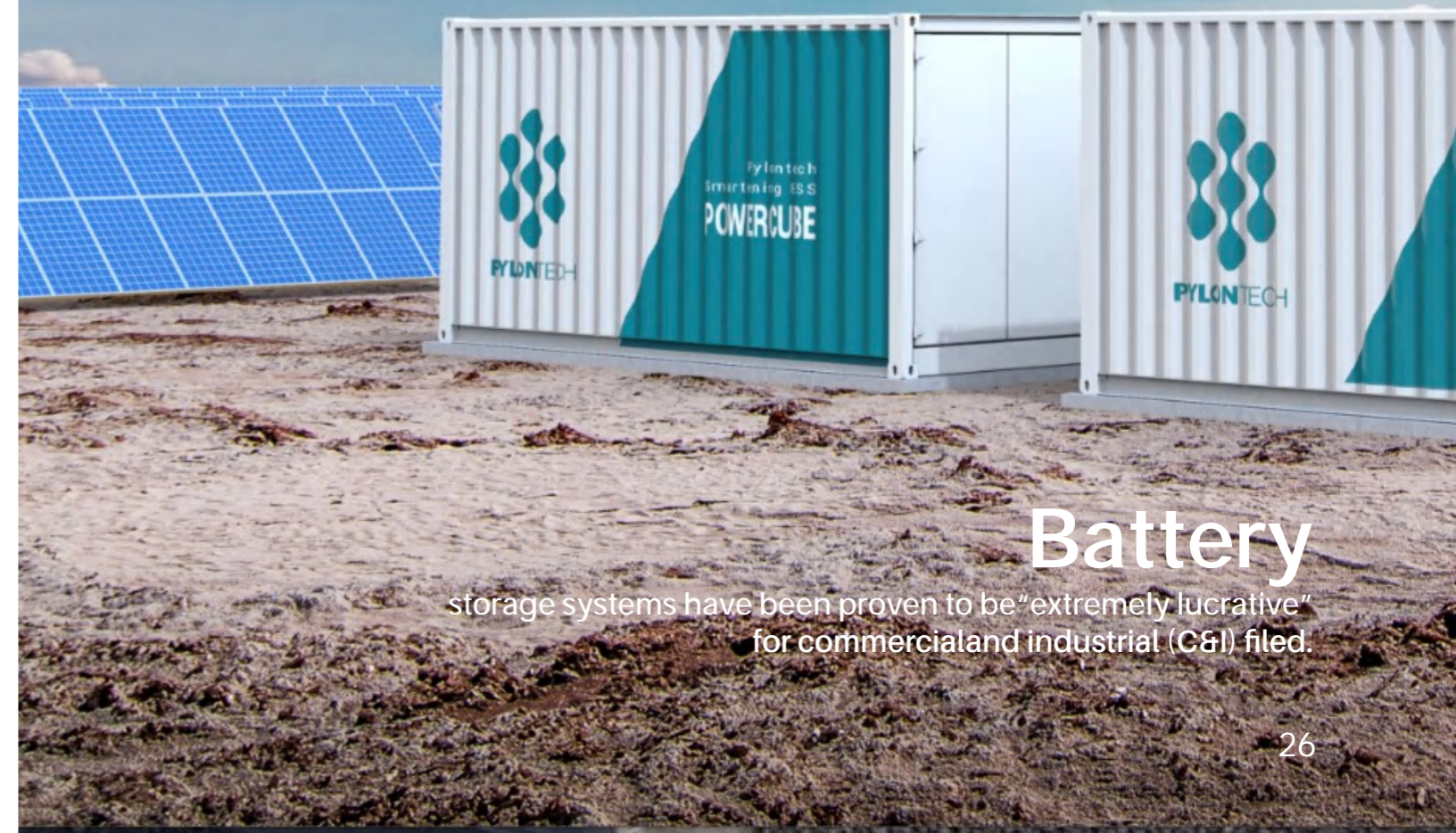
- ◆ Master BMS support Modbus RTU, CANBUS, Dry contactor communication;
- ◆ BMS support neutral connection (+&- Vdc);
- ◆ Internal & External power supply dual back-up;
- ◆ Dual back-up of discharge circuit;
- ◆ Independent control of discharge circuit, even charge circuit failure discharge still available;
- ◆ Automatic Insulation Detection;
- ◆ Pre-charge circuit;
- ◆ Operation Reliability 99.999%;

SPECIFICATION

Basic Parameters	LiPower-U400
Cell Technology	Li-ion (LFP)
Battery System Capacity (kWh)	56.8
Battery System Voltage (Vdc)	512
Battery System Capacity(Ah)	111
Battery Controller Name	S1000U400
Battery Module Name	HLPU100
Battery Module Quantity (pcs)	10
Battery Module Voltage(Vdc)	51.2
Battery Module Capacity(Ah)	111
Battery System Charge Upper-Voltage(V)	576
Battery System Charge Current-Standard(A)	20
Battery System Charge Current-Max.(A)	100
Battery System Discharge lower-Voltage(V)	416
Battery System Discharge Current-Standard(A)	100
Battery System Discharge Current-Max. (A)	360
Efficiency	1P ≥ 95%; 2P ≥ 92%; 3P ≥ 88%
Depth of Discharge	95%
Operation Life	15+years
Operation Cycle Life	> 3,000
Communication	Modbus RTU/CAN/Dry Contactor
Protection Class	IP20
Weight (kg)	580
Operation Temperature(°C)	0-50 (ideal 20 – 30)
Storage Temperature(°C)	-20-60
Battery Module Dimensions (W*D*H mm)	442*600*152
Battery Controller Dimensions(W*D*H mm)	442*600*230
Battery System Dimensions(W*D*H mm)	600*800*2200
Certifications	IEC62619/IEC62040/UN38.3/EN61000-1/3/ EN55022/EN55024

DEDICATION

Commercial & Industrial ESS



Battery

storage systems have been proven to be "extremely lucrative" for commercial and industrial (C&I) filed.

SPECIFICATION

Battery Module



Basic Parameters	H48050	H48074	H32148
Energy (kWh)	2.4	3.55	4.74
Nominal Voltage(V)	48	48	32
Battery Capacity(Ah)	50	74	148
Voltage range(V)	45-54	45-54	30-36
Dimension (W*D*H mm)	442*390*100	442*390*132	330*628*150.5
Weight(kg)	24	32	48

Powercube X series
100~600V



Basic Parameters	Powercube X1 (336V50Ah)	Powercube X2 (336V74Ah)
Battery Module	H48050	H48074
Battery System Capacity(kWh)	16.8	24.9
Battery system Voltage(V)	336	336
Battery System Voltage Range (V)	315-378	315-378
Efficiency(@0.5C-rate)	96%	96%
Depth of Discharge	95%	95%
Dimension (W*D*H mm)	600*505*1300	600*505*1380
Weight(kg)	275	330
Design Life	15+Years	15+Years
Operation Temperature (°C)	0-50	0-50
Humidity	5%-95%	5%-95%
Altitude	<2000	<2000
Battery Module Qty.(Optional)	2-10	2-10
Authentication level	IEC62619/VDE2510-50/UL1973/CE/CEC	

SPECIFICATION

Powercube H series
200~1000V



Basic Parameters	Powercube-H1 (720V50Ah)	Powercube-H2 (576V74Ah)
Battery Module	H48050	H48074
Battery System Capacity(kWh)	36	42.62
Battery system Voltage(V)	720	576
Battery System Voltage Range (V)	664-810	531-648
Efficiency(@0.5C-rate)	96%	96%
Depth of Discharge	95%	95%
Dimension (W*D*H mm)	600*505*2130	600*505*2130
Weight(kg)	400	450
Design Life	15+Years	15+Years
Operation Temperature (°C)	0-50	0-50
Humidity	5%-95%	5%-95%
Altitude	<2000	<2000
Battery Module Qty.(Optional)	5-15 pcs	5-12 pcs
Authentication level	IEC62619/VDE2510-50/ UL1973/CE/CEC	IEC62619/UL1973/CE

Powercube M1
100~1000V



Basic Parameters	Powercube-M1 (736V148Ah)
Battery Module	H32148
Battery System Capacity(kWh)	108.93
Battery system Voltage(V)	736
Battery System Voltage Range (V)	621-828
Efficiency(@0.5C-rate)	96%
Depth of Discharge	90%
Dimension (W*D*H mm)	815*659*2130
Weight(kg)	1250
Design Life	15+Years
Operation Temperature (°C)	10-40
Humidity	5%-95%
Altitude	<2000
Battery Module Qty.(Optional)	1-23 pcs
Authentication level	IEC62619/IEC63056/UL1973/UL9540 AVDE2510-50/CE/UN38.3

Optimus all-in-one ESS



KEY FEATURES



High Integration

Highly integrated ESS with outdoors cabinet design provides high protection class



Safe and Reliable

Three level BMS structure for good cooperation and better operation performance



Flexible

Supports system parallel connection and easy for expansion

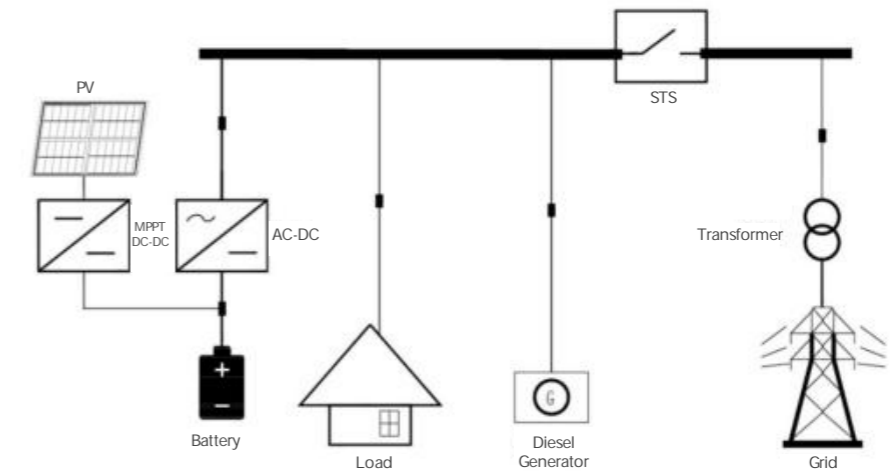


Pre-Engineered System

Easy for on-site installation and save the cost

DIAGRAM

Outdoor Cabinet ESS for micro-grid island, hotel, fram... Applications
 PCS Power optional power range: 30~200KW
 Battery optional capacity range:100~400KWh
 Be suitable for 2~4 hours back up



SPECIFICATION

System Type	Optimus all-in-one ESS
Battery Data	
Battery Type	Li-ion (LFP)
Nominal Capacity (kWh)	107
Battery Item	Powercube-M2-180/M3A-100
Battery Module Qty.	19
DC Voltage Range(V)	661~820
Max. Operation Current (A)	148
Efficiency	95%
PCS DC/AC Data On-grid Mode	
Rated AC Power (KW)	62.5 (expandable to 3*62.5)
Rated AC Output Voltage(V)	400
Rated AC Output Frequency (Hz)	50/60
Max. AC Current(A)	95
Overload Capacity	110% 15mins; 120% 1mins
AC PF	1 (leading) ~1 (lagging)
THDi	≤ 3%
Isolation Type	Non-isolation
Peak Efficiency	99%

SPECIFICATION

System Type	Optimus all-in-one ESS
General Data	
Dimension(W*H*D mm)	1200*2100*1000
Weight(Kg)	500
Working Temperature Range ((C)	-30-60
Protection Class	IP65(battery room)+IP54(PCS room)
Altitude	3000
Humidity	0-95%
Fire Extinguishing	FM200
Air Conditioner	3kW
Anti-Corrosion	C3 (Optional upgrade to C5)
Authentication level	CE/IEC62619/UN38.3/UN3536
PCS DC/AC Data Off-grid Mode	
Output voltage accuracy	≤ 1%
AC PF	>0.7
Output voltage distortion factor	< 3%
PV DC/DC Data Parameter	
Rated Power(kW)	30 (expandable to 6*30)
PV Input Voltage(Vdc)	100 – 1000 (full power from 300)
Max. current(A)	100
Max. Efficiency(%)	95.5%
Operation Mode	
On/off-grid Switch	Optional STS module, switching time<20ms
EMS	10 inch LCD Touch Panel Self-Consumption; Micro-grid control; Demand response; Remote Control; Time of use;
Communication Type	Modbus TCP/IP



Utility ESS



Peak Shifting
/Multi Purpose



Frequency
Integration



Renewable
Regulation

SPECIFICATION

Powercube M2
100~1000V



Basic Parameters	Powercube-M2A-180 (729.6V148Ah)
Battery System Capacity(kWh)	107.98
Battery Module	HM2A180
Battery system Voltage(V)	729.6
Battery System Voltage Range (V)	615.6~820.8
Efficiency(@0.5C-rate)	96%
Depth of Discharge	90%
Dimension (W*D*H mm)	803*845*2130
Weight(kg)	1228
Design Life	15+Years
Operation Temperature (°C)	10~40
Humidity	5%~95%
Altitude	<2000
Battery Module Qty.(Optional)	1~19 pcs
Authentication level	IEC62619/CE/UN38.3

Powercube M3
100~1400V



Basic Parameters	Powercube-M3A-100 (729.6V148Ah)	Powercube- M3A-180 (1113.6V148Ah)
Battery Module	HM3A100	HM3A180
Battery System Capacity(kWh)	107.98	164.81
Battery system Voltage(V)	729.6	1113.6
Battery System Voltage Range (V)	615.6~820.8	939.6~1252.8
Efficiency(@0.5C-rate)	96%	96%
Depth of Discharge	90%	90%
Dimension (W*D*H mm)	803*845*2130	1185*845*2130
Weight(kg)	1228	1798
Design Life	15+Years	15+Years
Operation Temperature (°C)	10~40	10~40
Humidity	5%~95%	5%~95%
Altitude	<2000	<2000
Battery Module Qty.(Optional)	1~19 pcs	1~29 pcs
Authentication level	UL1973/IEC62619/CE/UN38.3/UL9540A	IEC62619/VDE2510-50/CE/UN38.3

SPECIFICATION



Basic Parameter	20ft High Voltage System Container		40ft High Voltage System Container	
Container System Type	Powercube-20H-M1		Powercube-40H -M1	
System Charge/Discharge Rate	0.5C		0.5C	
System Voltage Range(V)	736(690~828)		736(690~828)	
System Capacity(kWh)	1296		2592	
Container System Type	Powercube-20H-M2		Powercube-40H -M2	
System Charge/Discharge Rate	0.5C	0.5C	0.5C	0.5C
System Voltage Range(V)	806(680~907)	1228(1036~1382)	806(680~907)	1228(1036~1382)
System Capacity(kWh)	1432	1454	2983	3273
Container System Type	Powercube-20H-M3		Powercube-40H -M3	
System Charge/Discharge Rate	0.5~1C	0.5~1C	0.5~1C	0.5~1C
System Voltage Range(V)	806(680~907)	1228(1036~1382)	806(680~907)	1228(1036~1382)
System Capacity(kWh)	1194	1091	2625	2546
Dimension (L*W*H, M)	6.058*2.438*2.896		12.192*2.438*2.896	
Ambient Temperature (°C)	-20~50			
Communication	CANBUS/Modbus TCP/IP			



GLOBAL DELIVERY



BEIJI Island CHINA 2.65MWH/1.2MW
Micro-grid Self-consumption /Back-up ESS
PV+DG+BESS



SHANGHAI CHINA 2MWH/1MW
IDC UPS Back Up
Grid+BESS



GERMANY 213KWH/100KW
Peak Shaving Arbitrage
Grid service ESS
Grid+ESS



SENDAI JAPAN 540KWH/250KW
Micro-grid Self-consumption
Commercial ESS
PV+DG+BESS



URUGUAY SOUTH AMERICA 750KWH/500KW
Micro-grid Self-consumption ESS
PV+BESS



U.S.A. 2.MWH/1MW
Self-consumption/Back-up
Commercial ESS
PV+Grid+BESS



MADAGASCAR 1.5MWH/500KW
Micro-grid Self-consumption ESS
PV+DG+BESS



SOUTH EAST ASIA 624KWH/50KW
Micro-grid Self-consumption ESS
PV+DG+BESS