PYLONTECH

A Dedicated BESS (battery energy storage system) Provider

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PYLONTECH

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10+years Dedication | PYLONTECH

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 8-years increasing rate by double, enabling our market position as one of the top suppliers of lithium battery storage world widely.

500,000+
Global Residential ESS

10+
Years Delivery experience

7.34%
Continuous R&D investment

TOP 2
Global residential ESS Supplier

4.5GWH+
ESS Battery Delivered

60+
Self-developed Patents

80+countries
Global Deliveries

Flexible battery solutions
12V~1500V battery

The road-map of **Pylontech BESS**

2009
Found

2013
BESS Solutions Deployment

2014
Mass Production for Europe and Australia

2015
Domestic Grid-Scale BESS Deployment

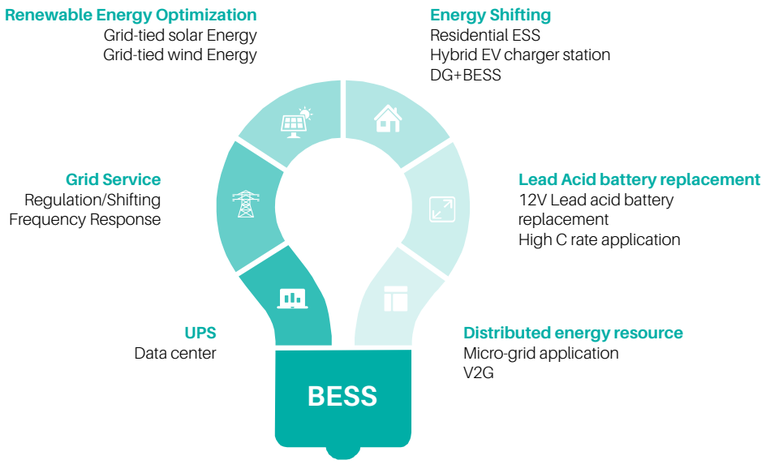
2018
1GWh ESS Shipped Globally

2019
1.5GWh New Capacity Built

2020
Listed on SSE STAR Market

2021
Top2 Residential BESS Supplier Globally

Main Applications



Core Strengths

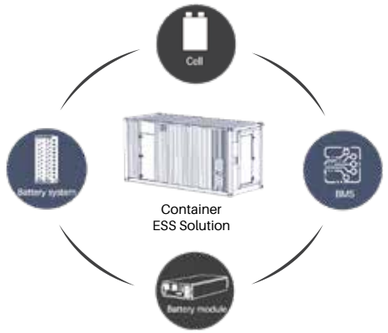
More than 10 years technology accumulation for reliable BESS

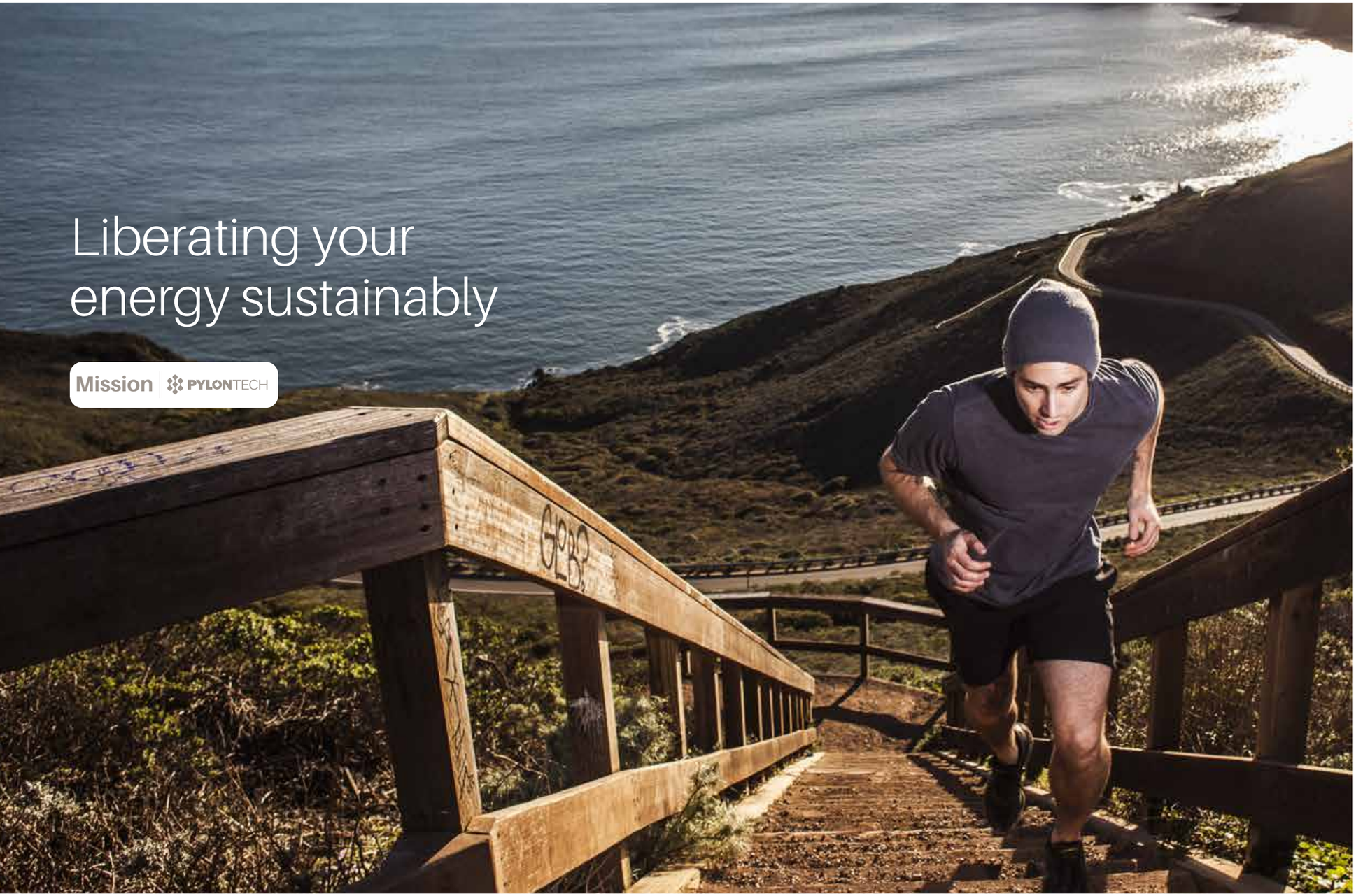
The safety and stability of battery has been protected by our own cells, modules and BMS

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





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.

DEDICATION

Product Portfolio

01) Portable Power Station

02) Auto Aftermarket

03) Residential BESS

04) UPS Back Up

05) C&I ESS

06) Utility ESS

Innovative Portable Power Station

Smart and clean portable power for your demanding devices

Boosting more power
with Extendable Battery Pack



Wireless Charging

Extendable Pack

SOS Signal

Max. 27W for phone charge

Max. 60W for laptop charge

PD2.0/QC3.0 Fast Charging port

Specification

	Amber Rock	Mini Amber
		
Nominal Capacity:	473Wh	473Wh
Cell Material:	LFP lithium Ion	LFP Lithium Ion
Size(mm) :	300*190*160	300*190*94
Weight:	6.4kg	4.7kg
Working temperature:	0~45 ℃	0~45 ℃
Shelf Temperature:	-20~60 ℃	-20~60 ℃
	2 AC	
	2 USB-A	1 USB-A
Output:	1 USB-C	1 USB-C
	1 Cigar Lighter	
	2 DC jack	
Input:	9hrs full charged-Standard Charger/3hrs full charged-Optional Charger	
Certification:	FCC CE MSDS UN38.3 PSE Rohs	

FC CE PSE UN38.3 RoHS



12V Series
All Purpose
Lithium Ion
Batteries



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.

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)	14V-14.4
Nominal Operation Current(A)	50
Max. continuous operation current(A)	100
Peak Current(A)	200@30sec
Serial Connection	⩽4 pcs
Parallel Connection	⩽4 pcs
Structure	
Dimension （mm）	325*173.5*226
Weight(Kg)	13±0.2
IP rating	IP67
Power Terminal	M8 bolt
Working Environment	
Charge working temperature（℃）	0～60
Discharge working temperature（℃）	-20～60
Working temperature（℃）	-40～60*
Altitude (M)	＜4,000
Humidity(RH)	5~95%（w/o condensing）
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℃~-20℃，only heater will be enabled for heating up the module, battery cannot charge/discharge 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(℃)	0~50
Shelf Temperature(℃)	-20~60
Humidity	5%~90%
Altitude (m)	＜2000
Design Life	15+Years (25℃@77℉)
Cycle Life	＞6000, @25℃
DOD	90%
Authentication level	IEC62619/CE/RoHS/UN38.3

Residential BESS

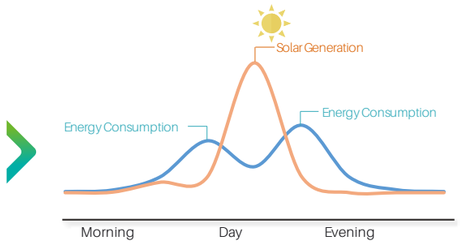
Save your bill, save the world, with our battery storage.
Little step for our generations to enjoy the safe and clean environment



How to save bill from Residential ESS?

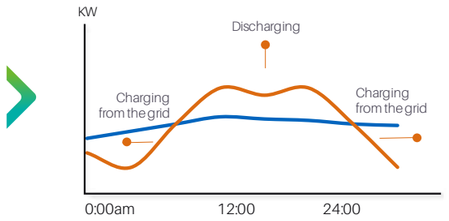
Self-Consumption Optimization

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





CEC Complete Safety Certification

Product Lineup

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

SPECIFICATION (48V)

Model		 US2000C	 US3000C	 US5000B
Basic Parameters				
Nominal Voltage (Vdc)		48	48	48
Nominal Capacity(Wh)		2400	3552	4800
Usable Capacity(Wh)		2280	3374	4560
Dimension(mm)		442*410*89	442*420*132	442*420*161
Weight(kg)		24	32	39.7
Charge/ Discharge Current(A)	(Recommend)	25	37	80
	(Max)	89@1min	89@1min	120@15min
	(Peak)	200@15sec	200@15sec	200@15sec
Communication Port			RS485, CAN	
Single string quantity(pcs)		16	16	16
Working Temperature/℃			0~50	
Shelf Temperature/℃			-20~60	
Cycle Life		>6000, 25℃	>6000, 25℃	>6000, 25℃
Authentication Level		IEC62619/CE UN38.3	VDE2510-50 IEC62619/UL1973 UL9540A/CE/UN38.3	IEC62619/UL1973 /UL9540A/CE /UN38.3

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)		43.5~54					
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)		86.5	123	159.5	196	232.5	269
Depth of Discharge		95%					
Charge/ Discharge Current(A)	(Recommend)	30	45	60	75	90	100
	(Max)	75	100	100	100	100	100
	(Peak @15s)	105	105	105	105	105	105
Communication Port		RS485, CAN					
Protection Class		IP55					
Working Temperature/ ℃		0~50					
Shelf Temperature/ ℃		-20~60					
Humidity		5%~95%(w/o condensing)					
Altitude		＜2000					
Design Life		15+ Years (25 ℃/°F)					
Cycle Life		＞6000, 25 ℃					
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)			43.5~54	
Dimension(W*D*H mm)		450*296*822	450*296*1120	450*296*1415
Weight(kg)		82	117.5	153
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/ ℃			0~50	
Shelf Temperature/ ℃			-20~60	
Humidity			5%~95% (w/o condensing)	
Altitude			＜2000	
Design Life			15+ Years (25 ℃/°F)	
Cycle Life			＞6000, 25 ℃	
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	14.20
Battery System Voltage (V)		336	384
Dimension (W*D*H mm)		600*380*1380	450*296*1414
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/ ℃		0~50	
Shelf Temperature/ ℃		-20~60	
Humidity		5%~95%(w/o condensing)	
Altitude		＜2000	
Design Life		15+ Years (25 ℃/°F)	
Cycle Life		＞6000, 25 ℃	
Authentication level		UL1973/VDE2510-50 /IEC62619/IEC62477/ IEC62040/CE/UN38.3	VDE2510-50/IEC62619 /IEC62477/ IEC62040 /CE/UN38.3

Pylontech
had been serving Over 500,000+
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.

Date 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-U4
Cell Technology	Li-ion (LFP)
Battery System Capacity (kWh)	56.8
Battery System Voltage (Vdc)	512
Battery System Capacity(Ah)	111
Battery Controller Name	S0700U400
Battery Module Name	HLPU111-400
Battery Module Quantity (pcs)	10
Battery Module Voltage(Vdc)	51.2
Battery Module Capacity(Ah)	111
Battery System Charge Upper-Voltage(V)	568
Battery System Charge Current-Max.(A)	111
Battery System Discharge lower-Voltage(V)	424
Battery System Discharge Current-Max. (A)	400
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(℃)	-5~60（ideal 20 – 30)
Storage Temperature(℃)	-20~45
Battery Module Dimensions (W*D*H mm)	442*600*152
Battery Controller Dimensions(W*D*H mm)	442*600*250
Battery System Dimensions(W*D*H mm)	600*800*2200
Certifications	IEC62619/IEC63056/IEC62040-1/IEC72477-1/ CE EMC/CE LVD/UN38.3

Dedicated

Commercial & Industrial ESS

Self-Consumption　Demand Charge　Micro-grid　Off grid

DG+BESS　V2G　Back Up　Peak Shifting



Battery

storage systems have been proven to be“extremely lucrative” for commercial and industrial (C&I) field.

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 (℃)	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 (℃)	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 (℃)	10~40
Humidity	5%~95%
Altitude	＜2000
Battery Module Qty.(Optional)	1~23 pcs
Authentication level	IEC62619/IEC63056/UL1973/UL9540A/ VDE2510-50/CE/UN38.3

Optimus **all-in-one ESS**



KEY FEATURES

High Integration
Highly integrated ESS with outdoors cabinet design provides high protection class

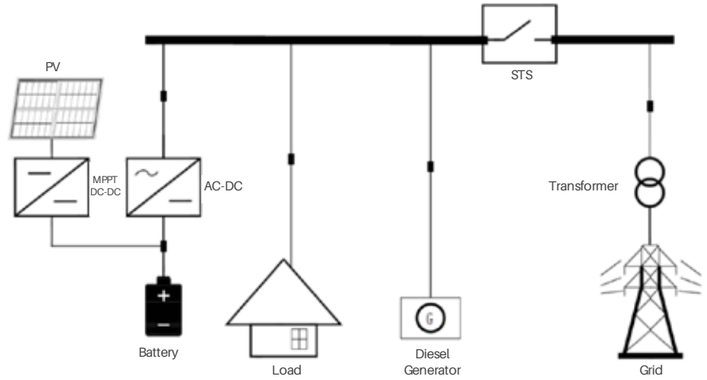
Safe and Reliable
Three level BMS structure for good cooperation and better operation performance

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

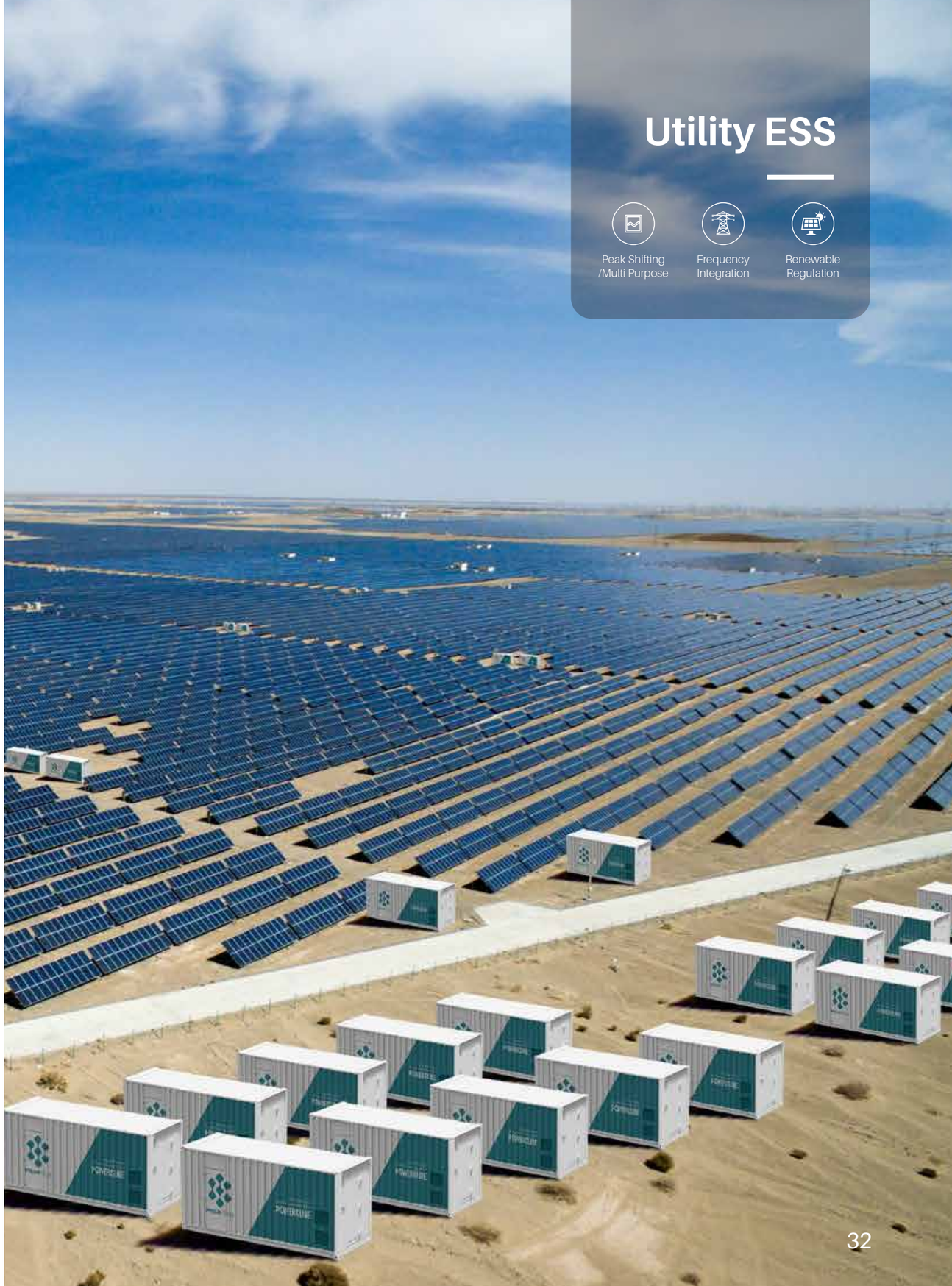


SPECIFICATION

System Type	Optim US-B1-100
General Data	
Dimension(W*H*D mm)	1500*2320*1107.5
Weight(Kg)	2600 (incl. battery)
Working Temperature Range (℃)	-20~60
Protection Class	IP54
Altitude	3000
Humidity	0~95%
Fire Extinguishing	Perfluoro
Air Conditioner	2kW
Anti-Corrosion	C3 (Optional upgrade to C5)
Authentication level	CE/IEC62619/UN38.3/UN3536
Battery Data	
Battery Type	Li-ion (LFP)
Nominal Capacity (kWh)	113. 7
Battery Item	Powercube-M1C
Battery Module Qty.	24
DC Voltage Range(V)	696~864
Max. Operation Current (A)	148
Efficiency	95%

SPECIFICATION

System Type	Optim US-B1-100
PCS DC/AC Data On-grid Mode	
Rated AC Power (KW)	60 (expandable to 4*60)
Rated AC Output Voltage(V)	400
Rated AC Output Frequency (Hz)	50/60
Max. AC Current(A)	86
Overload Capacity	110%@1min
AC PF	0.8（leading）~0.8（lagging）
THDi	⩽3%
Isolation Type	Non-isolation
Peak Efficiency	98.5%
Unbalanced capacity	100%
PCS DC/AC Data Off-grid Mode	
Output voltage accuracy	⩽1%
Unbalanced capacity	100%
Voltage harmonic distortion	＜2% @line load
Overload capacity	≤110%
PV DC/DC Data Parameter	
Rated Power(kW)	60 (expandable to 4*60)
PV Input Voltage(Vdc)	200 - 850
Max. current(A)	100
Max. Efficiency(%)	98.5%
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



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 (℃)	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 (℃)	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 (℃)	-20～50			
Communication	CANBUS/Modbus TCP/IP			



GLOBAL
DELIVERY



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



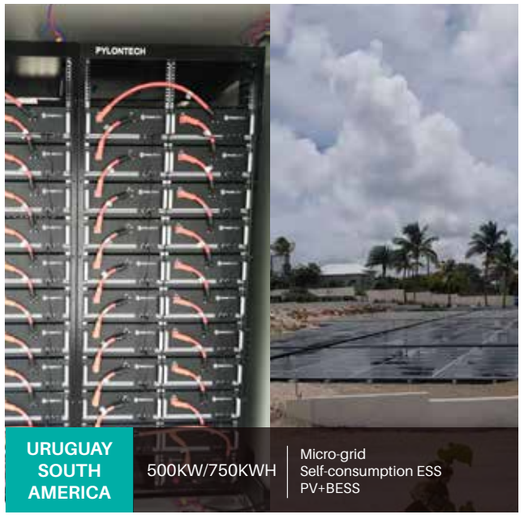
SHANGHAI CHINA | 1MW/2MWH | IDC UPS Back Up Grid+BESS



GERMANY | 1MW/2.5MWH | Peak Shaving Arbitrage Grid service ESS Grid+ESS



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



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



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



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



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