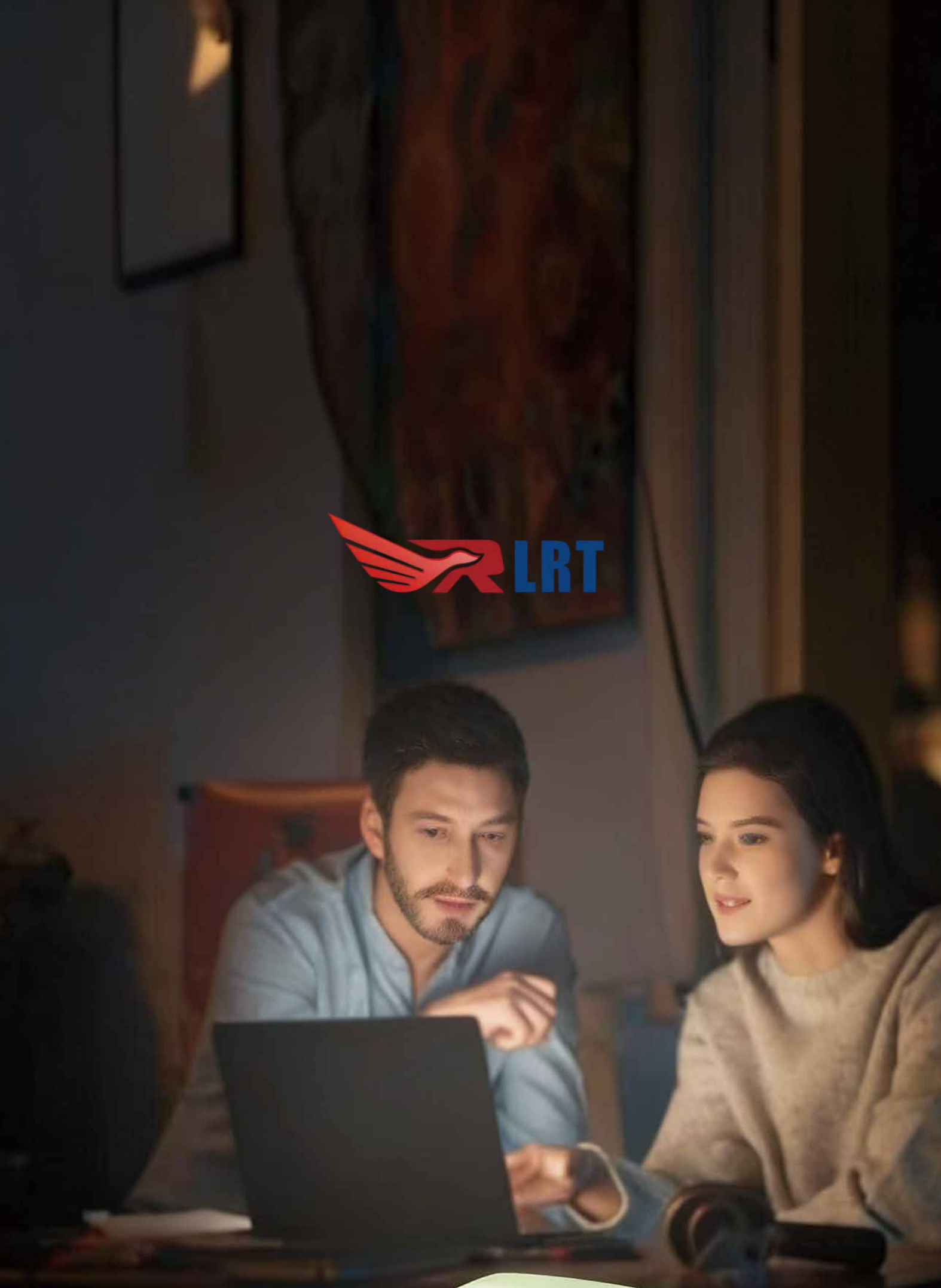




SAFE RELIABLE AND EFFICIENT

Lorentz Energy Polska Storage Solutions



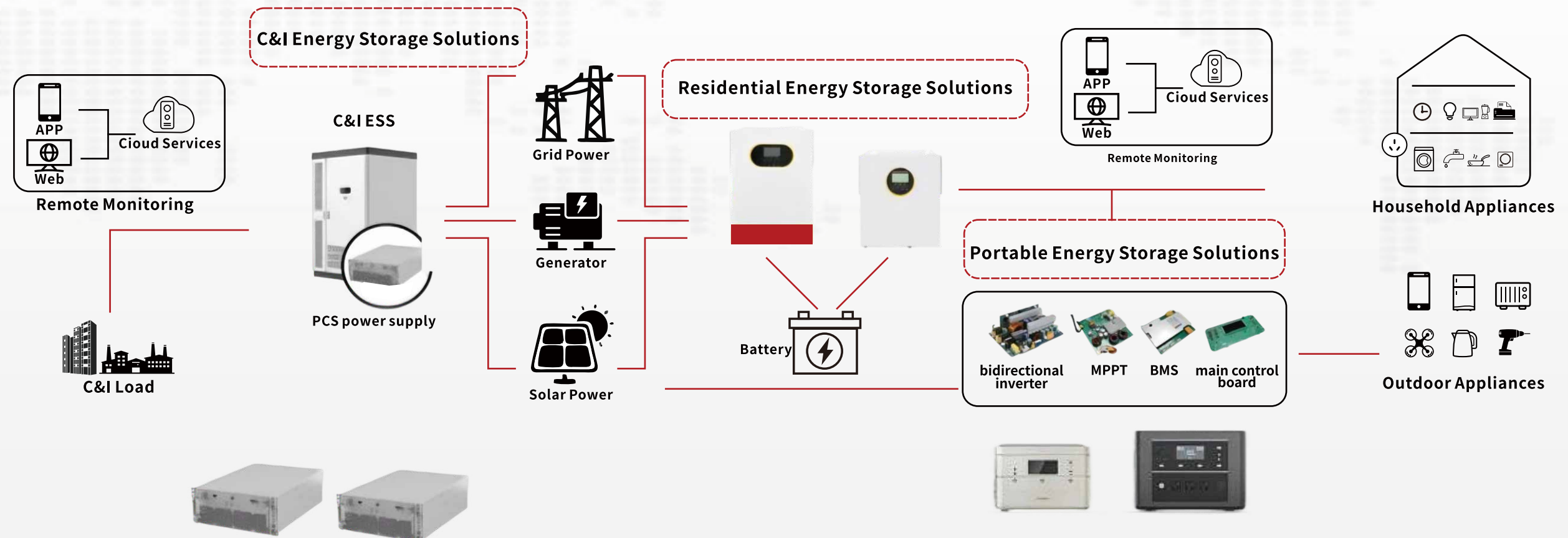
Lorentz Technology Co,. Ltd.

COMPANY INTRODUCTION

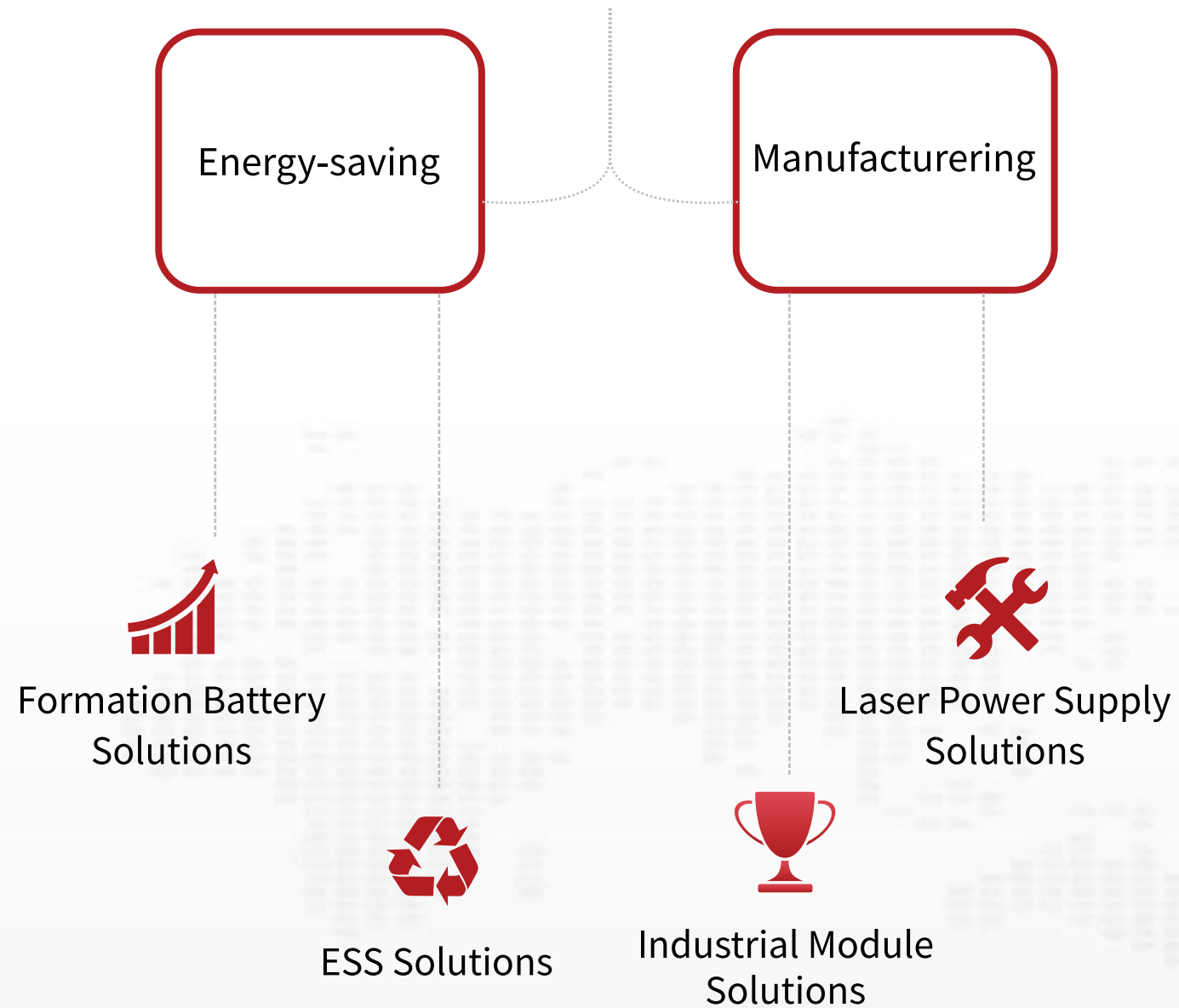
 **Annual turnover**
> 500 M
 **Empolyees**
> 500
 **R&D RATIO**
> 50%

- Lorentz Technology Co., Ltd. was founded in 2017. It is a high-tech enterprise specializing in the research and development, production and sales of high-frequency special power supplies;
- Our product layers include green energy-saving solutions for battery production, energy storage system solutions, and intelligent manufacturing laser power solutions; specific products include PCS from C&I ESS/residential ESS , formation bidirectional power supply, portable power station, laser power supply, and module power supply;
- The company has three R&D centers in the cities of Shenzhen, Changsha and Wuhan; it has its own factory of more than 20,000 square meters; the output value in 2022 is over 500 million in yuan;

Lorentz Energy Storage Solutions



Green energy comprehensive solutions provider



Applications

Formation bidirectional power supply

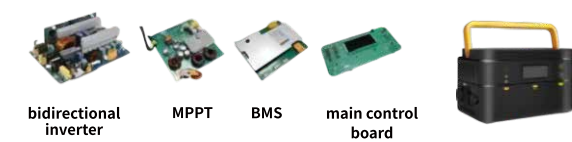


Our market share for this product is over 80% globally and shipped units close to 1 million



Battery formation and capacity testing

Portable power supply



Portable power station

C&I R Inverter



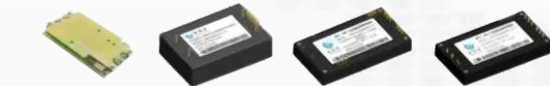
ESS&BESS

Laser power supply

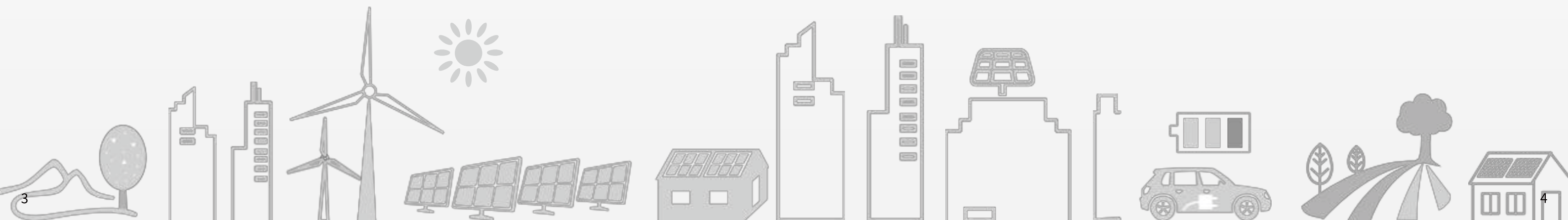


Laser equipment

Module power supply

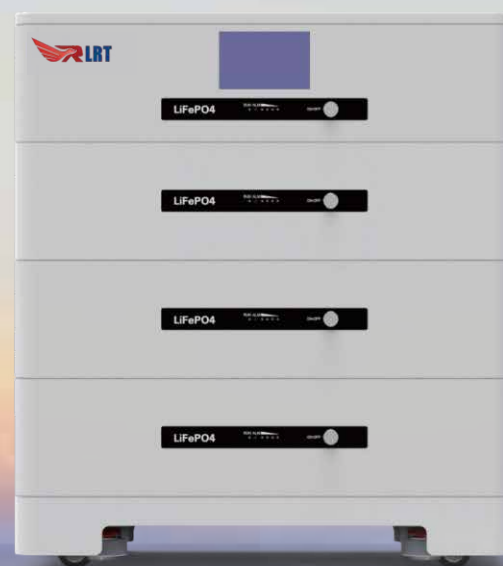


Rail transit& Industrial equipment



HOME ENERGY STORAGE SERIES

Stackable HV Battery



Stackable All in one

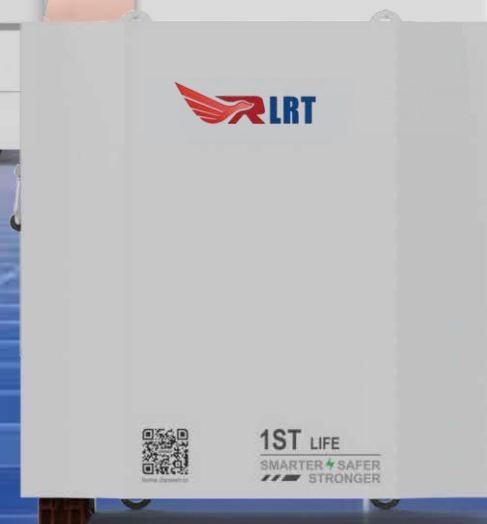


Single-phase Off-grid Inverter

Portable Large Capacity battery



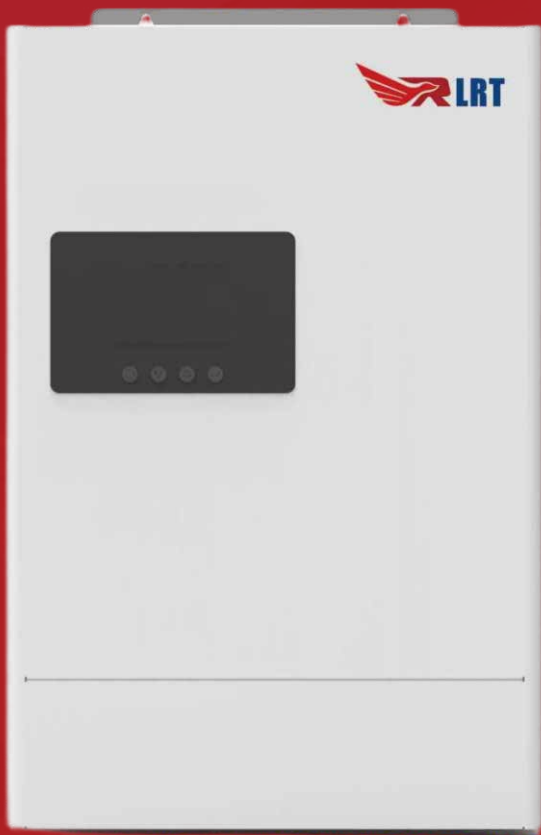
Wall-mounted Battery



Off-Grid Inverter

OG SERIES

Single Phase
1K2 | 3K6 | 5K | 6K5



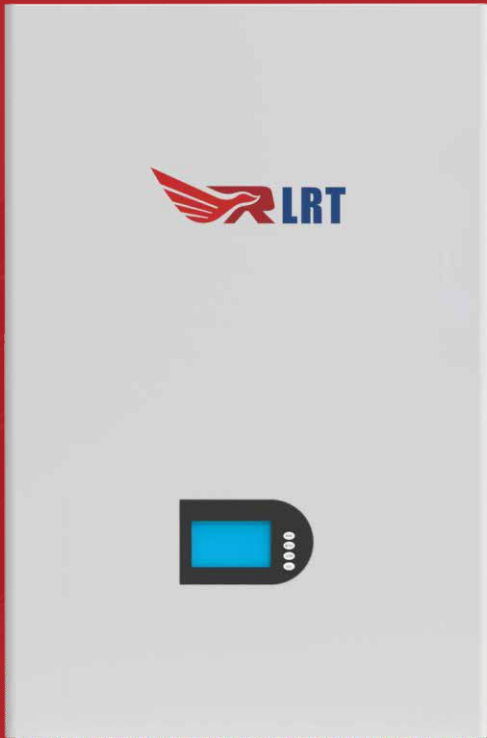
MODEL	OG-1P1K2-T / HI1-1P1K2-T	OG-1P3K6-DT / HI1-1P3K6-DT	OG-1P5K-PDT / HI1-1P5K-PDT	OG-1P6K5-DT / HI1-1P6K5-DT
Rated Capacity	1500VA / 1200W	5000VA / 3600W	6000VA / 5000W	9000VA / 6500W
PV Input				
PV Maximum Input Power	1200W	6500W	6500W	9000W
Max. PV Open Circuit Voltage	125VDC	500VDC	500VDC	500VDC
MPPT Range Operating Voltage	18~100VDC	40~450VDC	120~450VDC	60~450VDC
Max. Solar Input Current	14A	18A	18A	28A
Battery Specifications				
Battery Type	Lithium and Lead-acid			
Nominal Battery voltage	12V (1*12V)	24V (2*12V)	48V (4*12V)	
AC Input				
Nominal voltage	208 / 220 / 230 / 240; L + N + PE			
Voltage Range	90~280±3 (normal mode); 170~280±3 (UPS mode)			
Frequency	50 / 60Hz (Auto Adaptive)			
AC Output				
Rated Capacity	1500VA / 1200W	5000VA / 3600W	6000VA / 5000W	9000VA / 6500W
Second Output Capacity	1380VA / 1380W	2300VA / 2300W	4150VA / 4150W	4150VA / 4150W
Surege Power	3600VA	11000VA	15000VA	16500VA
Parallel	/	/	9 Unit (1P & 3P)	/
Waveform	Pure Sine Wave			
Nominal Voltage	208 / 220 / 230 / 240 VAC			
Feed-in Grid Voltage Range	195~253VAC			
Nominal Frequency	50 / 60Hz			
Feed-in Grid Frequency Range	49~51Hz±0.1% / 59~61±0.1%			
Transfer Time	Transfer Time 10ms UPS mode 10ms Appliance mode			
Peak Efficiency (PV to INV)	94.00%	96.00%	96.50%	97.00%
Peak Efficiency (Battery to INV)	90.00%	92.00%	93.50%	94.50%
Admissible Power Factor	-0.8~+0.8			
Physical				
Dimensions, DxWxH (mm)	91*236*347	112*283*448.9	119*338*539.1	119*338*539.1
Net Weight (Kg)	3.2	8.2	12.5	13.56
Communication Interface	RS485 / RS232	RS485 / RS232 / USB / Dry Contact		
Environment				
Ingress Protection	IP21			
Operating Temperature Range	-10 °C~ 50 °C			
Storage Temperature	-15 °C~ 60 °C			
Humidity	5% ~ 95% (Non-condensing)			

Energy Storage System
Product Info

DDBGSG51100

51.2V 100Ah-5.12kWh

Lithium Ion Battery Pack



Battery Specifications



Nominal Parameters	
Product	Lithium Ion Battery Pack
Model	DDBGSG51100
Installation Mode	Wall Mounted
Rated Voltage	51.2V
Rated Capacity	100Ah
Energy	5.12kWh
Cell Type	LFP
BMS Brand	PACE
BMS Communication	RS485, RS232, CAN
Configuration	16S1P
Charge cutoff voltage	57.6V
Discharge cutoff voltage	43.2V
Life time(25°C)	15 years
Life cycles(80% DOD, 25°C)	6000 cycles
Maximum charging continuous current	100A
Maximum discharge continuous current	100A
Charging efficiency	≥98%
Electricity charged in the shipped product	30%-50% SOC
Operating temperature	Charging: 0~55°C Discharge: -10~55°C
Storage temperature	- 20~60°C
Working humidity	10~85%
Storage humidity	10~85%
Dimensions (L x W x H)	About 610+-mm(L)*400-mm(W)*170+-mm(H)
Package size(L x W x H)	About 704+-mm(L)*494+-mm(W)*270+-mm(H)
Weight	About 45kgs
Modules Connection	Maximum 16 in Parallel
Ingress Protection	IP 21
Battery packaging accessories	

Desiccant (5g) 2 Bag; User Manual 1 Set; Positive and negative power cables 1 Set;
1 meter with RJ45 connector 1 Pc; Mounting frame screw (M8*60mm) 4 Pc; Fixed iron frame 1 Pc

Home Energy Storage System Technical Parameter

DGR

51.2V 314Ah-16.07kWh

Lithium Ion Battery Pack



Battery Specifications



Nominal Parameters	
Product name	Lithium Ion Battery Pack
Model	DGR
Installation Mode	Removable
Rated Voltage	51.2V
Rated Capacity	314Ah
Energy	16.07kWh
Cell Unit	3.2V314Ah
BMS Brand	PACE
BMS Communication	RS485, RS232, CAN
Configuration	16S1P
Charge cutoff voltage	57.6V
Discharge cutoff voltage	43.2V
Life time(25°C)	15 years
Life cycles(80% DOD, 25°C)	8000 cycles remark: the residual capacity is more than 70% of the first cycle discharge capacity)
Maximum charging continuous current	200A
Maximum discharge continuous current	200A
Charging efficiency	≥98%
Electricity charged in the shipped product	30%-50% SOC
Operating temperature	Charging: 0~55°C Discharge: -10~55°C
Storage temperature	- 20~60°C
Working humidity	10~85%
Storage humidity	10~85%
Dimensions (L x W x H)	About 460mm(L)*240mm(W)*837mm(H)
Package size(L x W x H)	About 560+-mm(L)*350-mm(W)*910+-mm(H)
Weight	About 117.5kg
Modules Connection	Maximum 16 in Parallel
Ingress Protection	IP 21
Battery packaging accessories	
Desiccant (5g) 2Bag; User Manual 1Set; Positive and negative power cables 1Set; 1 meter with RJ45 connector 1Pc	

Low Voltage Stackable Battery

5.12-25.6kWh | Low pressure | 5-Year Warranty



Battery is safe and reliable
High-quality lithium batteries,
intelligent battery management system, long lifespan,
with a 5-year warranty.



Enjoy enduring power Long endurance time
stable power supply / Reduce frequent charging, Cost-
effective / Quick installation, plug and play



Strong environmental adaptability
Operating temperature range from -20 to 60°C,
stable and reliable.

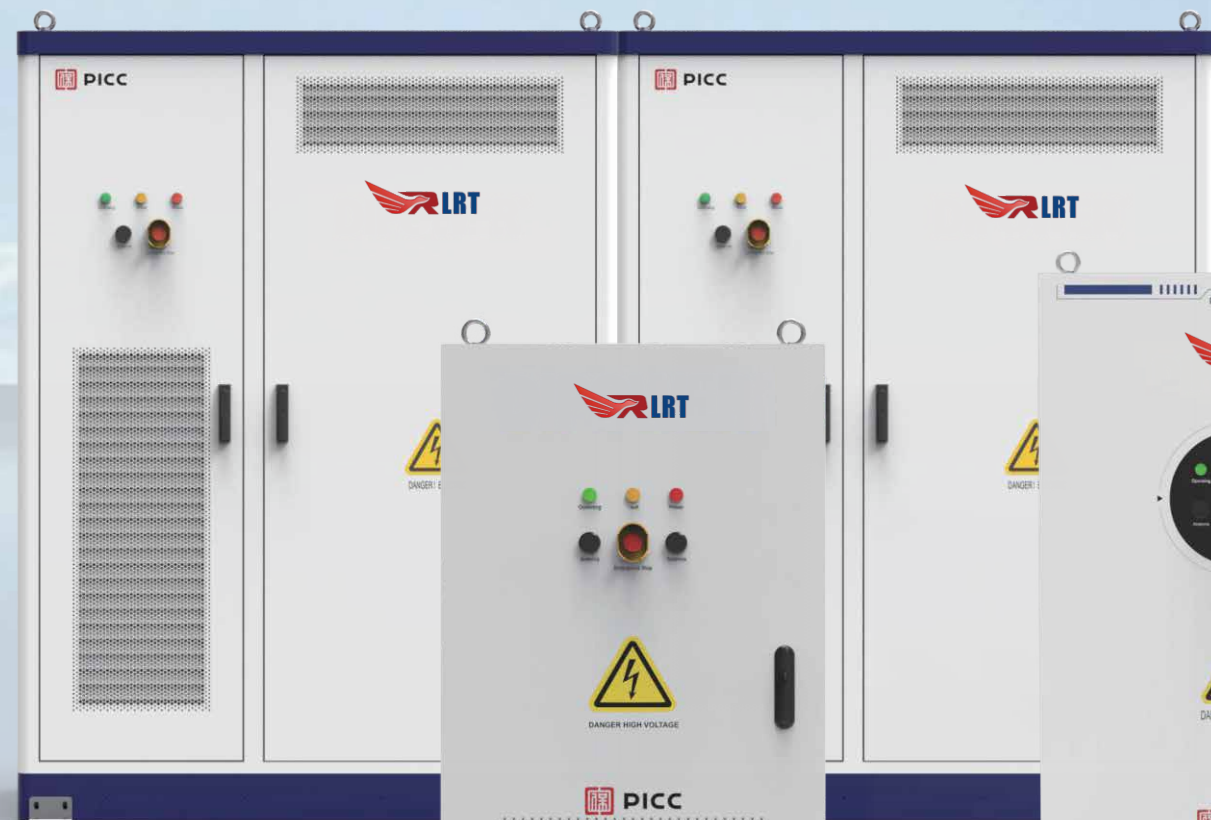


Technical Specifications



Model	DDTSSG51200	DDTSSG51300	DDTSSG51400	DDTSSG51500
Battery				
Battery Cells	LFP			
Battery Module Energy (kWh)	10.24	15.36	20.48	25.6
Number of Battery Modules	2	3	4	5
Rated Voltage (V)	51.2			
Operating Voltage Range (V)	44.8~57.6			
Maximum Charge/Discharge Current (A)	100			
Dimensions [W*T*H] (mm)	680*400*438	680*400*598	680*400*758	680*400*918
Weight (kg)	60	105	150	195
BMS Communication	CAN2.0/RS485			
General Information				
Display Screen	LCD			
IP Protection Rating	IP21			
Operating Temperature (°C)	-20~60			
Relative Humidity	0%~95%, no condensation			
Altitude	<4000m(>2000m derating)			
Cycle Life	5000 cycles			
Warranty	5 years			
Installation Method	Fixed and Portable			
Certification	IEC62619/EN61000-6-1/EN61000-3/RoHS/UN38.3			

INDUSTRIAL AND COMMERCIAL ENERGY STORAGE SERIES



OUTDOOR LIQUID COOLED
PV-ESS CABINET
SPECIFICATION
DZ105233L2PRO



OUTDOOR AIR-COOLED PV-ESS
CABINET SPECIFICATION
DZ050105B



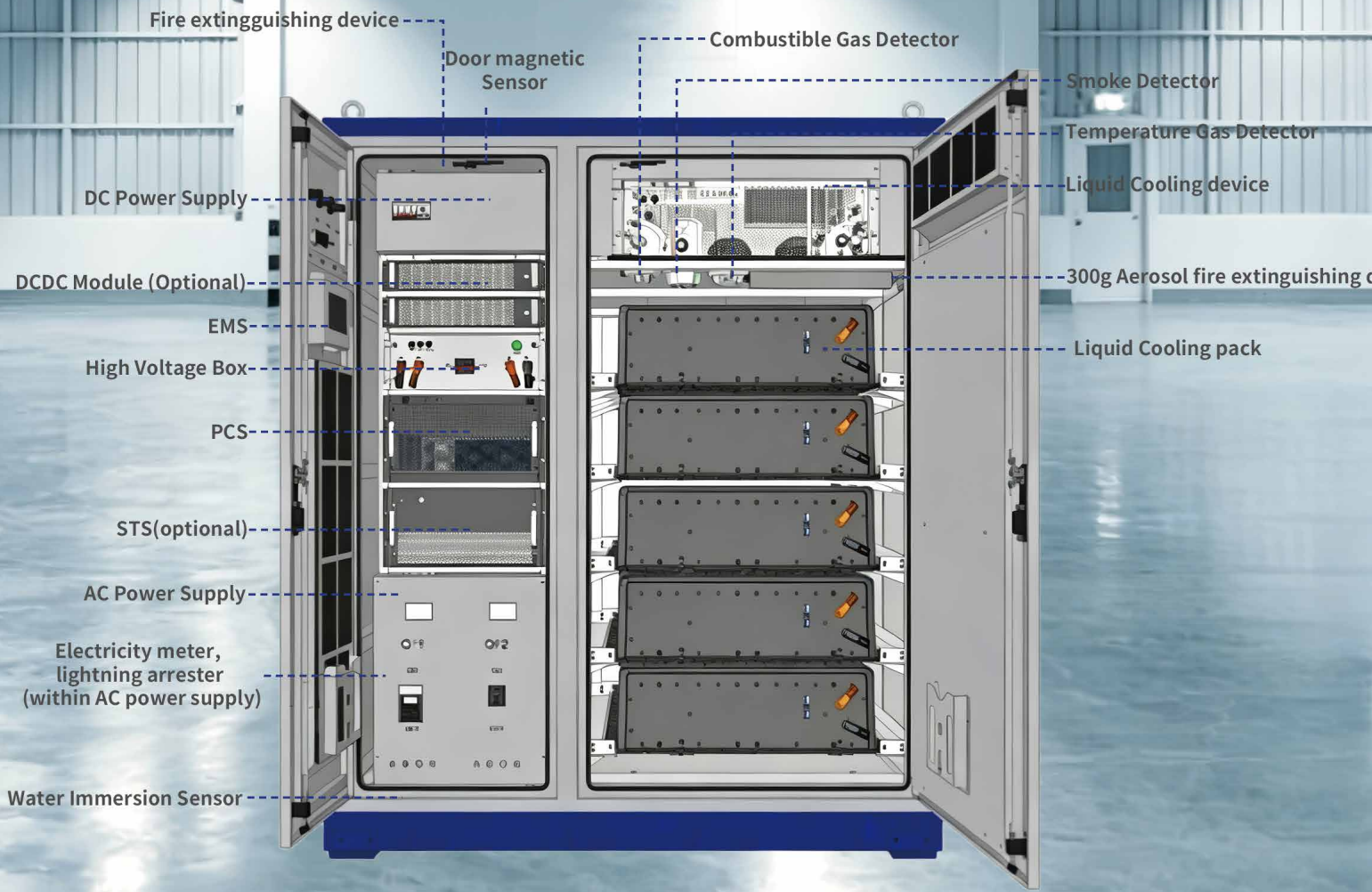
OUTDOOR AIR-COOLED ON-GRID
ESS CABINET SPECIFICATION
DZ105215B



OUTDOOR LIQUID COOLED
ON-GRID ESS CABINET
SPECIFICATION
DZ215418L8

OUTDOOR LIQUID COOLED
ON-GRID ESS CABINET
SPECIFICATION
DZ105233L3/DZ125261L7

DZ125261L2 Outdoor Liquid-cooled PV-ESS Cabinet Specifications



System Parameter

System Parameter	
Model	DZ125261L2
DC side	
Battery rated capacity	261kWh
Battery rated voltage	832V
Battery voltage rang	780V - 936V
Battery type	LFP
Cell capacity	314Ah
Battery life cycle	8000 cycles (0.5P, 5%~95%DOD, 70%SOH)
Standard charge/discharge rate	0.5P
Pack Configuration	1P260S
Cooling Method	Liquid-cooling
AC side	
Rated AC power	125kW
Maximum power	137.5kW
Maximum current	200A
Rated AC voltage	400V
Voltage range	±15%
Output wiring	3P/N
Rated AC frequency	50/60Hz
Current harmonic distortion THDI	<3% (rated power)
Power factor	≥0.99/-1~1
Overload capacity	110%
PCS cooling method	Air-cooling
Maximum efficiency	98.5%

System Parameter	
Energy cycle efficiency	≥90%
Protection rating	IP54
Corrosion resistance rating	C3, (C4/C5 optional)
Fire protection	Aerosol/Perfluoro (Optional)
Isolation method	Non-isolation (transformer optional)
Relative humidity	0~95% (no condensation)
Ambient temperature	-30℃~55℃ (≥45℃ derating)
Altitude	<3000m (≥2000m derating)
BMS communication	CAN2.0b
EMS communication	4G/CAN/RS485
Dimension (W*D*H)	1692mm*1385mm*2220mm
Weight	3.0t
Annual degradation rate	<3%
Warranty	5 years
PV DCDC (Optional)	
Maximum input module power	125kW
MPPT voltage range	300- 800V
PV maximum PV input current	160A (single channel)
MPPT channel number	2

DZ125261L7 Outdoor Liquid Cooling Grid-Connected Cabinet Specifications



System Parameter

System parameters	
model	DZ125261L7
DC battery parameters	
Battery rated capacity	261kWh
Battery rated voltage	832V
Battery voltage rang	780V - 936V
Battery type	LFP
Battery capacity	314Ah
Battery life cycle	8000 cycles (0.5P, 5%~95%DOD, 70%SOH)
Battery standard charge/discharge curren	0.5P
Battery pack series and parallel connection	1P260S
Module cooling method	Liquid-cooling
AC parameters	
Rated AC power	125kW
Maximum power	138kW
Maximum current	200A
Rated AC voltage	400V
Voltage range	±15%
Rated AC frequency	50/60Hz
Wiring method	Three-phase four-wire
Current distortion rate THDI	<3% (rated power)
Power Factor	≥0.99/-1~1
Voltage total harmonic distortion THDU	<3% (linear load)
PCS cooling method	Air cooling
Maximum efficiency	98.5%

System parameters	
Energy cycle efficiency	≥90%
Protection level	IP54
Corrosion resistance level	C3 is the default, (C4/C5 are optional)
Fire Fighting	Aerosol/perfluorohexanone (optional)
Isolation method	Not isolated (transformer optional)
relative humidity	0~95% (no condensation)
Ambient temperature	-30℃ ~ 55℃ (derating above 45℃)
Altitude	< 3000m (derating applies over 2000m)
BMS communication	CAN2.0b
EMS Communications	4G/CAN/RS485
Dimension (W*D*H)	1050 * 1330 * 2400mm
Weight (approx.)	2.5t
Annual decay rate	<3%
Warranty	5 years

Outdoor Air-cooled PV-ESS Cabinet Specification

DZ050105B



High-efficiency lithium iron phosphate (LFP) battery
8000 cycles, ensuring enduring and stable power supply.



Intelligent air cooling system
Effectively reduces battery temperature, enhancing battery performance and lifespan.



Customizable for multiple scenarios
Optional photovoltaic (PV) DC-DC converters and rapid STS (Static Transfer Switch) for flexible adaptation to various needs.



Technical specifications

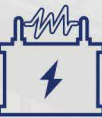
Model	DZ050105B
DC side	
Battery rated capacity	105kWh
Battery rated voltage	374.4V
Battery voltage range	351V~421.2V
Battery type	LFP
Cell capacity	280Ah
Battery life cycle	8000 cycles (0.5P, 5%~95%DOD, 70%SOH)
Standard charge/discharge rate	0.5P
Pack Configuration	1P117S
Module Cooling Method	Air-cooling
AC side	
Rated AC power	50kW
Maximum power	55kW
Maximum current	80A
Rated AC voltage	230V/400V
Voltage range	±15%
Output wiring	3P/N
Rated AC frequency	50/60Hz
Current harmonic distortion THDI	<3% (rated power)
Power factor	≥0.99/-1~1
Overload capacity	110%
Maximum efficiency	97.8%
System Parameter	
Energy cycle efficiency	≥88%
Protection rating	IP54
Corrosion resistance rating	C3, (C4/C5 optional)
Fire protection	Aerosol
Isolation method	Non-isolation (transformer optional)
Relative humidity	0~95% (no condensation)
Ambient temperature	-30°C~55°C (≥45°C derating)
Altitude	<2000m (≥1000m derating)
BMS communication	CAN2.0b
EMS communication	4G/CAN/RS485
Dimension (W*D*H)	1310*800*1540 mm
Weight	1.6t
Annual degradation rate	<3%
Warranty	5 years

Outdoor Air-cooled On-grid ESS Cabinet Specification

DZ105215B



High-efficiency Lithium Iron Phosphate (LFP) Battery
280Ah large-capacity cells, with an 8000-cycle long lifespan ensuring a durable and stable power supply.



Intelligent air cooling system
Effectively reduces the temperature of the battery, enhancing its performance and lifespan.



Compact Energy Storage Equipment
Requires minimal space, easy to deploy, and suitable for various spatial environments.



Technical specifications

Model	DZ105215B
DC side	
Battery rated capacity	215kWh
Battery rated voltage	768V
Battery voltage range	720V - 864V
Battery type	LFP
Cell capacity	280Ah
Battery life cycle	8000 cycles (0.5P, 5%~95%DOD, 70%SOH)
Standard charge/discharge rate	0.5P
Pack Configuration	1P240S
Module Cooling Method	Air-cooling
AC side	
Rated AC power	105kW
Maximum power	116kW
Maximum current	167A
Rated AC voltage	230V/400V
Voltage range	±15%
Output wiring	3P/N
Rated AC frequency	50/60Hz
Current harmonic distortion THDI	<3% (rated power)
Power factor	≥0.99/-1~1
Overload capacity	110%
Maximum efficiency	98.5%
PCS Cooling Method	Air-cooling
System Parameter	
Energy cycle efficiency	≥88%
Protection rating	IP54
Corrosion resistance rating	C3, (C4/C5 optional)
Fire protection	Aerosol/Perfluoro (Optional)
Isolation method	Non-isolation (transformer optional)
Relative humidity	0~95% (no condensation)
Ambient temperature	-30°C~55°C (≥45°C derating)
Altitude	<2000m (≥1000m derating)
BMS communication	CAN2.0b
EMS communication	4G/CAN/RS485
Dimension (W*D*H)	1310 * 995 * 2040mm
Weight	2.4t
Annual degradation rate	<3%
Warranty	5 years

Outdoor Liquid Cooled On-grid ESS Cabinet Specification

DZ215418L8



High-efficiency Lithium Iron Phosphate (LFP) Battery

314Ah large-capacity cells, with an 8000-cycle long lifespan ensuring a durable and stable power supply.



Advanced Liquid Cooling System

Effectively reduces the temperature of the battery, enhancing its performance and lifespan.



Compact Energy Storage Equipment

Requires minimal space, easy to deploy, and suitable for various spatial environments.



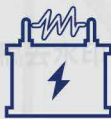
Technical specifications

Model	DZ215418L8
DC side	
Battery rated capacity	418kWh
Battery rated voltage	1331.2V
Battery voltage range	1164.8V - 1497.6V
Battery type	LFP
Cell capacity	314Ah
Battery life cycle	8000 cycles (0.5P, 5%~95%DOD, 70%SOH)
Standard charge/discharge rate	0.5P
Pack Configuration	1P416S
Module Cooling Method	Liquid-cooling
AC side	
Rated AC power	215kW
Maximum power	237kW
Rated AC voltage	690V
Voltage range	-15%~10%
Output wiring	3P
Rated AC frequency	50/60Hz
Current harmonic distortion THDI	<3% (rated power)
Power factor	≥0.99/-1~1
Overload capacity	110%
Maximum efficiency	99%
PCS Cooling Method	Air-cooling
System Parameter	
Energy cycle efficiency	≥90%
Protection rating	IP54
Corrosion resistance rating	C3, (C4/C5 optional)
Fire protection	Aerosol/Perfluoro (Optional)
Isolation method	Non-isolation (transformer optional)
Relative humidity	0~95% (no condensation)
Ambient temperature	-30°C~55°C (≥45°C derating)
Altitude	<2000m (≥1000m derating)
BMS communication	CAN2.0b
EMS communication	4G/CAN/RS485
Dimension (W*D*H)	1300 * 1350 * 2350 mm
Weight	4.5t
Annual degradation rate	<3%
Warranty	5 years

20-Foot Dc Side 2.5MWh Container Liquid-cooled containe



Large-capacity Energy Storage
314Ah large-capacity cells, with an 8000-cycle long lifespan! ensuring a durable and stable power supply.



Advanced Liquid Cooling System
Effectively reduces the temperature of the battery, enhancing its performance and lifespan.



Strong environmental adaptability
Operating temperature -20°C-55°C,
IP55 high protection level, capable of withstanding extreme temperature variations.



Technical specifications

Model	2.5MWh energy storage liquid-cooled container
Product type	Lithium iron phosphate battery system
Rated capacity	2.5MWh
Rated voltage	1331.2V
Working voltage range	1206.4V~1456V
Cell	314Ah
Battery module	1P104S
Battery cluster	1P416S
System	6P416S
Rated charging power	1250KW
Rated discharging power	1250KW
Cooling method	Liquid cooling
Work environment temperature	-20°C-50°C
Storage temperature	-30°C~45°C
Relative humidity	≤95% (No condensation)
Highest operating altitude	≤1000m (>2000m Reduce the operating capacity)
Fire protection system	Perfluorohexanone fire extinguishing + water firefighting
Environmental monitoring	Temperature, humidity, CO、H2
External communication method	RS485/Ethernet/CAN2.0
Balanced mode	Passive balance, balanced current 100mA
Protection and safety devices	Short-circuit protection, lightning protection, overcharge/overdischarge protection, over-temperature protection, fire detection, emergency stop switch, Uninterruptible Power Supply (UPS)
Product Certification	GB/T36276
Protection level	IP54
Corrosion resistance level	C4
Dimensions of 20-foot container (length, width, height)	6058mm*2438mm*2896mm (L*W*H)
Weight of battery system	22 t ±5 t

20-Foot Dc side 5MWh Container

Liquid-cooled container



Large-capacity Energy Storage

314Ah large-capacity cells, with an 8000-cycle long lifespan, ensuring a durable and stable power supply.



Advanced Liquid Cooling System

Effectively reduces the temperature of the battery, enhancing its performance and lifespan.



Strong environmental adaptability

Operating temperature -20°C~55°C, IP55 high protection level, capable of withstanding extreme temperature variations.



Technical specifications

Model	5MWh energy storage liquid-cooled container
Product type	Lithium iron phosphate battery system
Rated capacity	5.016MWh
Rated voltage	1331.2V
Operating voltage range	1123.2V~1497.6V
Cell (of battery)	314Ah
Battery module	1P104S
Battery cluster	1P416S
System	12P416S
Rated charge power	2.5MW (0.5P1)
Rated discharge power	2.5MW (0.5P1)
Cooling method	Liquid cooling
Operating temperature	-20°C-50°C
Storage temperature	-30°C~45°C
Fire protection system	Perfluoro (Optional)
Environmental Monitoring	Temperature, Humidity, CO, H2, water immersion
Product Certification	GB/T36276
Protection level	IP55
20-foot container size	6058mm x 2438mm x 2896mm (±10mm)
Battery system weight	42 t±1 t

40-Foot BESS 2.5MW5MWh Container

Liquid-cooled container



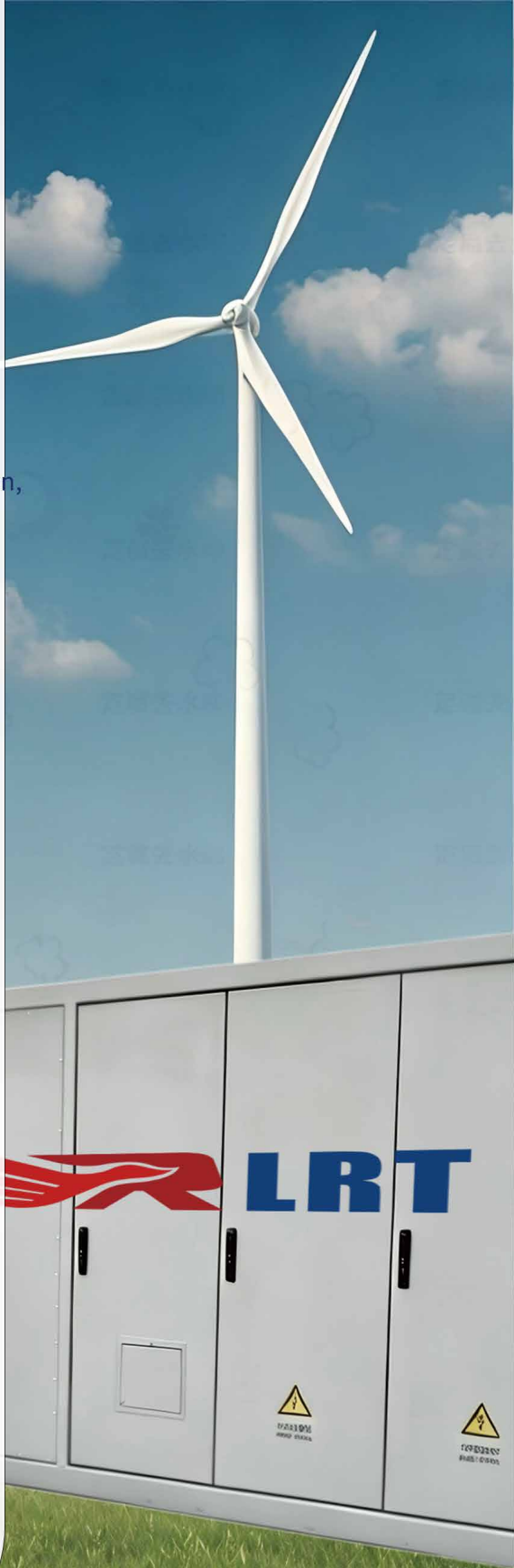
Liquid-cooled container
314Ah large-capacity cells, with an 8000-cycle long lifespan, ensuring a durable and stable power supply.



Advanced Liquid Cooling System
Effectively reduces the temperature of the battery, enhancing its performance and lifespan.



Strong environmental adaptability
Operating temperature -20°C~55°C, IP55 high protection level, capable of withstanding extreme temperature variations.



Technical specifications

Model	2.5MW5MWh energy storage liquid-cooled container
Product type	Lithium iron phosphate battery system
Rated capacity	5.016MWh
Rated voltage	1331.2V
Operating voltage range	1123.2V~1497.6V
Cell (of battery)	314Ah
Battery module	1P104S
Battery cluster	1P416S
System	12P416S
Rated charge power	2.5MW (0.5P1)
Rated discharge power	2.5MW (0.5P1)
Cooling method	Liquid cooling
Operating temperature	-20°C-50°C
Storage temperature	-30°C~45°C
Fire protection system	Perfluoro (Optional)
Environmental Monitoring	Temperature, Humidity, CO, H2, water immersion
Product Certification	IEC62619/IEC62477/IEC61000
Protection level	IP55
20-foot container size	12192mm x 2438mm x 2896mm (±10mm)
Battery system weight	54 t ±1 t

PORTABLE.POWER.SERIES

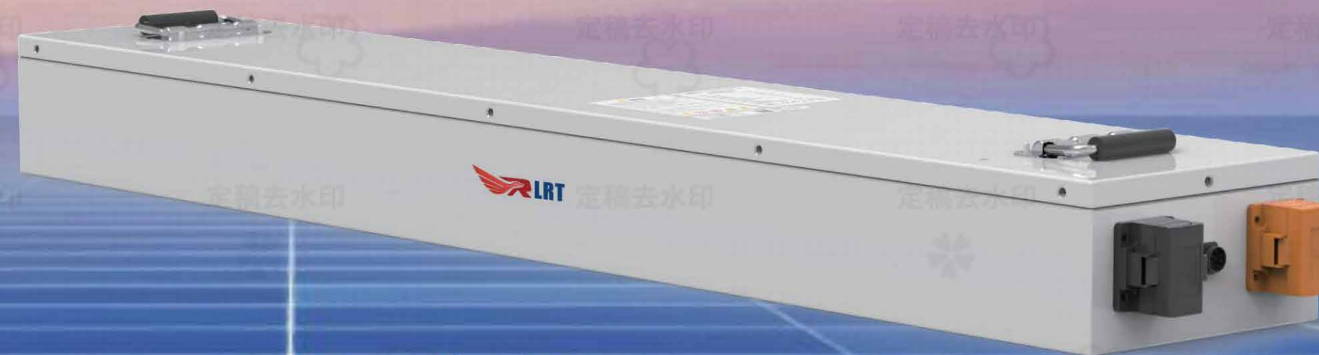
Portable power supply



Forklift battery



Lead-acid to lithium



Automotive Battery



New-launched Portable Power Station

Reliable

- *Customer complaint rate is lower than 1%* across different countries.
- *Anti-dust, anti-thermal design, can endure different working environment.

Continuous

- *Lifespan over 3000 times charges, remain over 80% battery health after 24 months.
- *Power refrigerator and Television for 4 hours without connecting the grid

Quick response

- *Automatically swaps when the grid is off within 20ms.
- *Start powering the loads connected to the Station within 5s.
- *Response from after-sale centers or dealerships within 24h.



Application scenarios



MODEL	Fundament 1000	Fundament 1000 Pro	Fundament 2000	Fundament 2000 Pro
Battery type	Lithium-Iron phosphate(LiFePO4)			
Battery capacity	1000Wh	1000Wh	1800Wh	2000Wh
Battery lifespan	>3000 times		>3000 times	
AC output(maximum)	250W	500W	500W	1000W
AC input(Grid)/Frequence	230 Vac/50Hz			
DC input(Solar)/Connector	12-36Vdc, 200W/(maximum)/XT90	12-50V,300W(maximum)/XT90		12-50V, 450W(Maximum)/XT90
Waveform	Pure Sine Wave			
AC outlet	Universal			
Protection	Over-charge & over-discharge protection Over-voltage & under-voltage protection Over-curent protectionOverload protection High/low temperature protection Short-circuit protection Fault protection			
Operating/ Storage Temp.	0°C-45°C/-20°C-45°C			
Net weight	8.18KG		16.5KG	
Dimensions	275mm(L)*175mm(W)*345mm(H)		346mm(L)*256mm(W)*360mm(H)	
Warranty	2 years			
Certification	CE			

How it works

