

### Product Introduction

RS-L317 is an LR type approved Marine Battery System that is not only high-performance but also modular and scalable. With a maximum operating voltage reaching up to DC1000V and modules capable of drawing currents up to 300A, it proves itself suitable for high-capacity energy solutions. Our products are equipped with a sophisticated three-level architecture BMS that diligently monitors all functions and technical parameters through seamless communication, providing an additional layer of safety against potential failures. RS-L317 is well-suited for applications requiring both high energy and power output, efficiently transferring large amounts of energy at a low lifetime cost per kWh.

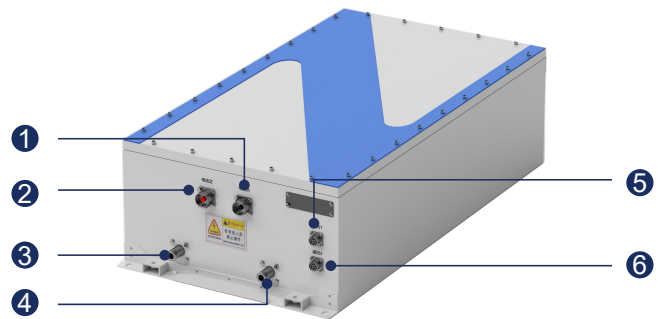
#### Battery System

- ① BMBX: Battery Module Box (with a BCU & ITMU)
- ② BSBOX: Battery String Box (with a BSMU, ITPU & HVSU)
- ③ BABOX: Battery Array Box (with a BAMU & EMU)
- ④ HMI
- ⑤ E-STOP
- ⑥ Power Cable
- ⑦ Inlet Pipe
- ⑧ Outlet Pipe



#### Battery Module

- ① BAT +
- ② BAT -
- ③ Liquid Inlet
- ④ Liquid Outlet
- ⑤ COM IN
- ⑥ COM OUT



#### Typical Vessel Types

- Ferries
- Wind Farms Service
- Offshore Vessels
- Merchant Vessels
- Cruise Ships
- Tugs
- RoRo / RoPax
- Yachts
- Fishing Vessels
- Sightseeing Vessels
- Containerized ESS
- Shore Charging
- Fishing Farms
- Canal Boats
- Tourist Vessels

#### Features and Benefits

- LFP cell from CATL
- Light weight
- Modular design
- Flexible installation
- Low lifecycle cost
- Scalable capacity and voltage
- Three-level BMS architecture
- No thermal propagation
- Independent temperature protection
- Enhanced mechanical design
- Independent fire extinguishing system
- Remote monitoring and diagnosis



## Technical Specifications

### Battery Module Specifications

Nominal Capacity	317Ah (0.2C, 25°C)
Nominal Voltage	51.52V (3.22V of battery cell, 1P4S*4)
Nominal Energy	16.33kWh
Charge Cut-off Voltage	58.4V (3.65V per cell)
Discharge Cut-off Voltage	40V (2.5V per cell)
Standard Charge/Discharge Current	158.5A
Maximum Continuous Charge/Discharge Current	300A
Ingress Protection	IP67
Short-circuit Protection	Fuse in modules
Cooling Method	Liquid cooling
Cycle Life	>6000 cycles@0.5C, 80%SOH
Dimensions	L897*W464*H253mm
Weight	135kg

### Battery System Specifications (18 battery modules in series)

Nominal Voltage	927.4V
Voltage Range	835.2~1036.8V
Nominal Energy	294kWh
Standard Charge/Discharge Current	158.5A
Maximum Continuous Charge/Discharge Current	300A
Operating Temperature	Charge: 0°C~60°C   Discharge: -20°C~60°C
Storage Requirements	Temperature: -35°C~60°C   Humidity: 10%~85% Cycle: 40%SOC for 3 months, 70%SOC for 6 months
External Communication Port	CAN / RS485 / LAN

### Battery String Specifications

#### Single string configuration

Battery modules in series	Voltage	Energy
1	50V	16kWh
6	300V	98kWh
12	600V	196kWh
18	900V	294kWh

### Battery Array Specifications

Strings	50V	300V	600V	900V
1	16kWh	98kWh	196kWh	294kWh
2	32kWh	196kWh	392kWh	588kWh
3	48kWh	294kWh	588kWh	882kWh
4	64kWh	392kWh	784kWh	1176kWh
5	80kWh	490kWh	980kWh	1470kWh
6	96kWh	588kWh	1176kWh	1764kWh

### Safety Specifications

Thermal Runaway Anti-propagation	No propagation between cell inside of module
Fire Suppression	Independent fixed water-based fire extinguishing system in battery rack
Short Circuit Protection	Fuse in each module and BSBOX
Class Compliance	LR
Ingress Protection	BMBOX: IP67, BSBOX: IP67, BABOX: IP44



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