

Product Introduction

RS-J317LF-001 is a Jupiter series product that features an optimal structural design, outstanding energy density, and an detachable liquid cooling plate for each module. It is a DNV 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 three-level architecture BMS that monitors all functions and technical parameters through seamless communication, providing an additional layer of safety against potential failures. RS-J317LF-001 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.

Jupiter

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 MSD
- ⑥ E-Stop
- ⑦ Power Cable
- ⑧ Communication Cable
- ⑨ Inlet Pipe
- ⑩ Outlet Pipe



Battery Module

- ① BAT +
- ② BAT -
- ③ COM IN
- ④ COM OUT
- ⑤ Fire Coupling



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 (@25°C±2, 1C)
Nominal Voltage	77.28V
Nominal Energy	24.5kWh
Charge Cut-off Voltage	87.6V
Discharge Cut-off Voltage	60V
Standard Charge/Discharge Current	158.5A
Maximum Continuous Charge/Discharge Current	300A
Ingress Protection	IP67
Short-circuit Protection	Fuse in modules
Cycle Life	≥6000 cycles@0.5C, 80%SOH, 100%DOD
Cooling Method	Liquid Cooling
Dimensions	L735*W790*H267mm
Weight	186kg
Gravimetric Energy Density	132Wh/kg
Volumetric Energy Density	170Wh/L

Battery System Specifications (14 battery modules in series)

Nominal Voltage	1081.92V
Voltage Range	974.4~1209.6V
Nominal Energy	343kWh
Standard Charge/Discharge Current	158.5A
Maximum Continuous Charge/Discharge Current	200A
Operating Temperature	Charge: 0°C~60°C Discharge: -20°C~60°C
Storage Requirements	Temperature: -35°C~60°C Humidity: 10%~85% A dry, ventilated, and cool environment to avoid direct sunlight, high temperature, corrosive gas, violent vibration, and mechanical impact.
External Communication Port	CAN / RS485 / LAN

Battery String Specifications

Battery modules in series	Voltage	Energy
1	80V	24kWh
4	300V	98kWh
8	600V	196kWh
14	1000V	343kWh

Battery Array Specifications

Strings	80V	300V	600V	920V
1	24kWh	98kWh	196kWh	343kWh
2	48kWh	196kWh	392kWh	686kWh
3	72kWh	294kWh	588kWh	1029kWh
4	96kWh	392kWh	784kWh	1372kWh
5	120kWh	490kWh	980kWh	1715kWh
6	144kWh	588kWh	1176kWh	2058kWh

Safety Specifications

Thermal Runaway Anti-propagation	No propagation between cell inside of module
Short Circuit Protection	Fuse in each module and BSBOX
Class Compliance	DNV
Ingress Protection	BMBOX: IP67, BSBOX: IP67, BABOX: IP44



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