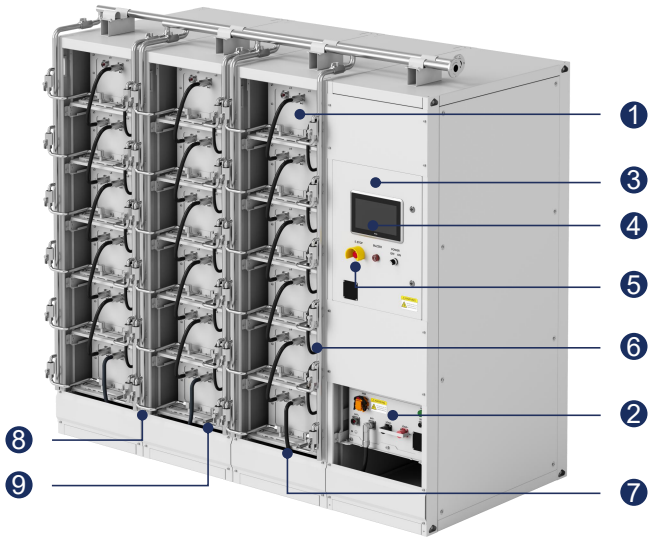
Product Introduction

RS-L280 is a NK and LR type approved Marine Lithium 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-L280 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.

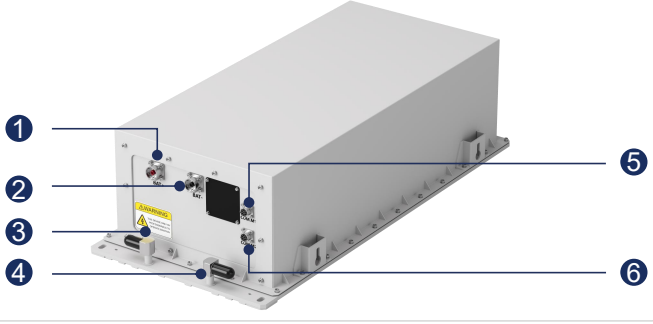
Battery System

1. BMBOX: 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. Communication Cable
7. Power Cable
8. Inlet Pipe
9. Outlet Pipe



Battery Module

1. BAT +
2. BAT -
3. Liquid Inlet
4. Liquid Outlet
5. COM.M IN
6. COM.M 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 EVE
- 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
- Explosion-proof valve for thermal runaway
- Remote monitoring and diagnosis

TA25286M

LR24143863TA

Technical Specifications

Battery Module Specifications

Nominal Capacity	280Ah (0.2C, 25℃)
Nominal Voltage	57.6V (3.2V of battery cell, 1P9S*2)
Nominal Energy	16.13kWh
Charge Cut-off Voltage	65.7V (3.65V per cell)
Discharge Cut-off Voltage	45V (2.5V per cell)
Standard Charge/Discharge Current	140A
Maximum Continuous Charge/Discharge Current	280A
Ingress Protection	IP67
Short-circuit Protection	Fuse in modules
Cooling Method	Liquid cooling
Cycle Life	>6000 cycles@0.5C, 80%SOH
Dimensions	L905*W425*H251mm
Weight	117kg

Battery System Specifications (16 battery modules in series)

Nominal Voltage	921.6V
Voltage Range	835.2~1036.8V
Nominal Energy	258.1kWh
Standard Charge/Discharge Current	140A
Maximum Continuous Charge/Discharge Current	280A
Operating Temperature	Charge: 0℃~60℃ | Discharge: -20℃~60℃
Storage Requirements	Temperature: -35℃~60℃ | 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
4	230V	64kWh
8	460V	128kWh
16	920V	256kWh

Battery Array Specifications

Strings	50V	230V	460V	920V
1	16kWh	64kWh	128kWh	256kWh
2	32kWh	128kWh	256kWh	512kWh
3	48kWh	192kWh	384 kWh	768kWh
4	64kWh	256kWh	512kWh	1024kWh
5	80kWh	320kWh	640kWh	1280kWh
6	96kWh	384kWh	768kWh	1536kWh

Safety Specifications

Thermal Runaway Anti-propagation	No propagation between cell inside of module
Short Circuit Protection	Fuse in each module and BSBOX
Thermal Runaway Pressure Relief	Explosion-proof valve
Class Compliance	NK & LR
Ingress Protection	BMBOX: IP67, BSBOX: IP67, BABOX: IP44

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Disclaimer: As classification society rules and International Maritime Organization (IMO) regulations are subject to continuous updates, the technical parameters, configurations and performance indicators contained in this document only reflect the status at the time of release and do not constitute a final delivery commitment. We reserve the right to make technical modifications without prior notice and shall not be liable for any direct or indirect losses arising from the misuse of information in this document or reliance on outdated technical parameters. The specific product delivery standards shall be subject to the officially signed purchase orders, technical agreements and factory inspection reports between the two parties.

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