Corvus Dolphin NxtGen - Energy

The Corvus Dolphin NxtGen marine energy storage system energy variation is designed for applications that require a high-energy battery system where lightweight is essential.

The Dolphin NxtGen ESS energy variation offers outstanding energy density, reasonable power density, and the highest level of marine battery safety. The space-efficient, rack-free design enables flexible installation configurations to maximize utilisation of available battery room space.

Applications

Dolphin NxtGen - Energy is ideal for ships with long, slow charges and discharges where lightweight is essential.

Typical Vessel Types:

- Tourist vessels
- Canal boats
- Yachts
- Sightseeing vessels
- Ferries

Features

- Low C-rate for slow charge and discharge
- Low weight
- Designed for voltages up to 1200 VDC
- Flexible installation
- Low life cycle cost
- Easy and safe plug and play connections
- Very flexible and modularized design
- Passive single-cell Thermal Runaway protection
- Scalable capacity and voltage according to vessel requirements
- Industry-proven Battery Management System (BMS)
- Remote monitoring capabilities
- Enhanced EMI immunity design for maritime environments

Corvus Energy Safety Innovations

Passive Single-cell-level Thermal Runaway (TR) Isolation

- True cell-level thermal runaway isolation
- TR does not propagate to neighbouring cells
- Isolation NOT dependant on active cooling

Technical Specifications | Corvus Dolphin NxtGen ESS - Energy

Performance Specifications	
C-Rate - Peak (Discharge / Charge)	1,0C / 1,0C for 10 seconds
C-Rate - Continuous (Discharge / Charge)	0,5C / 0,5C
System Specifications	
Battery Cell Chemistry	Lithium ion NCA
Single Module Size / Increments	8,2 kWh / 50 VDC
Single String Range	33 ± 197 kWh / 130 ± 1205 VDC
Module Dimensions	666 x 500 x 100 mm (l x w x h)
Module Weight	45.5 kg
Max Gravimetric Density - **String**	168 Wh/kg | 5,96 kg/kWh
Max Volumetric Density - **String**	212,5 Wh/l
Safety Specifications	
Thermal Runaway Anti-Propagation	Passive cell-level thermal runaway isolation
External Fire Suppression	Per SOLAS, class and Corvus recommendation
Disconnect Protection	Hardware-based fail-safe overcharge protection
Short Circuit Protection	Integrated cell-level fusing
Emergency Stop Circuit	Hard-wired
Ground Fault Detection	Integrated
Integral Disconnect Circuitry Rating[1]	Full load
General Specifications	
Class Compliance	DNV, Bureau Veritas, Lloyd's Register [2]
Type Approval	DNV, Bureau Veritas, Lloyd's Register [3]
Ingress Protection	IP66 [4]
Cooling	Forced air

[1] Not compliant with IEC 60947-1
[2] Project Approval
[3] Type Approval pending
[4] LV AC compartment of SIB is IP56

2025-02-24