

Smart Underwater Battery Power System for Inspection ROV

Technology Overview

Ships coming into docks are required to undergo hull inspections and dock position checks. This task is traditionally performed by human divers. Recently, remotely operated underwater vehicles (ROVs) have been deployed to aid in this process.

However, conventional ROVs require the use of long umbilical cables or tethers to power the vehicles from shore or from floating buoys. This causes significant power losses.

Our Smart Underwater Battery Power System is an onboard power supply system for ROVs. It removes the need for tethering for ROVs, which increases the energy efficiency and overall portability of the vehicles.

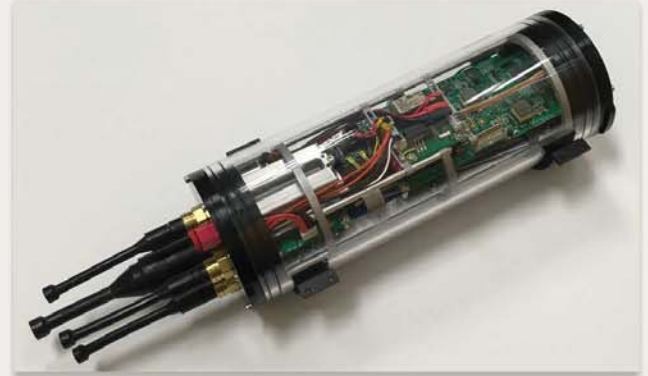
Features & Specifications

Features

- Smart battery management system
- Advanced battery monitoring system
- Inter-module communications
- Battery pack status communication with vehicle
- Active cell balancing technology
- Plug and play
- Modular and scalable
- Swappable
- Safe and reliable operation

Specifications

- Dimensions: Ø 115 mm x H 370 mm
- Weight: 3.75 kg (in air); 0.35 kg (in water)
- Depth Rating: 100 m
- Energy: 120 Wh
- Voltage : 12 VDC
- Capacity: 10 Ah
- Cycle Life: > 1,000 cycles
- Discharge Current: 10 A (nominal); 24 A(maximum)
- Charge Voltage: 14.4 VDC
- Charge Current: 4.5 A (nominal)



Customer Benefits

By replacing conventional power umbilical cables on the ROVs with our Smart Underwater Battery Power System, energy efficiency can be improved. Overall portability will also be enhanced as a long and heavy tether cable is no longer necessary.

Advanced battery management system and active balancing system also increase reliability of the power system, as well as improve operational safety.

Potential Applications

- Maritime industry
- Unmanned remotely underwater vehicles (ROVs)
- Extended power supply for marine sensors or equipment

