

Modular Power Control System

MPCS

Our next-generation, Modular Power Control System (MPCS) offers a compact and lightweight design, delivering best-in-class power and performance utilizing game-changing power electronics.

Our latest power control system offers the greatest product flexibility while achieving the highest system efficiency. Our modular approach provides both shipyards and operators with options to configure a power control system that meets their needs without paying for excess capability.

The MPCS's scalable approach allows customers to design a custom system based on power requirements for their specific application. Our system is designed to provide power for propulsion while also accommodating the power requirements of generators, fuel cells, energy storage, and fast and slow charging. Our inverter systems are designed using common, interchangeable component modules to power both single and multi-motor/generator based systems.

Features

- Market leading electrical power densities and efficiencies
- Modular, scalable design
- No regularly scheduled maintenance is required
- SAE J1939 CAN interface
- Operation and diagnostics fully integrated with each system
- MPCS is liquid cooled for superior thermal management and control

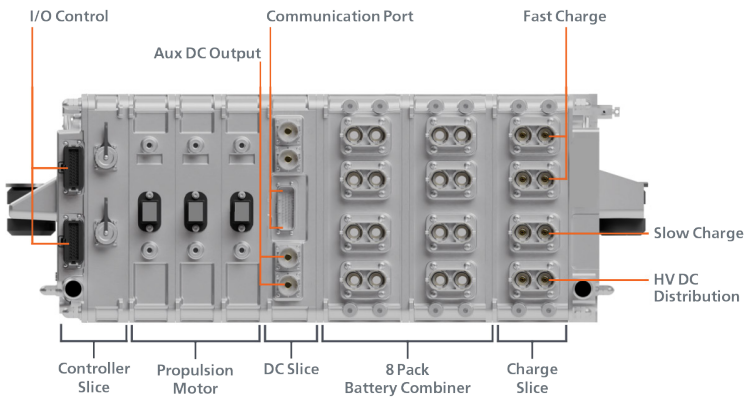


BAE Systems Modular Power Control Systems are custom configurable to decrease size and weight of our system and increase the efficiency of your vessel.

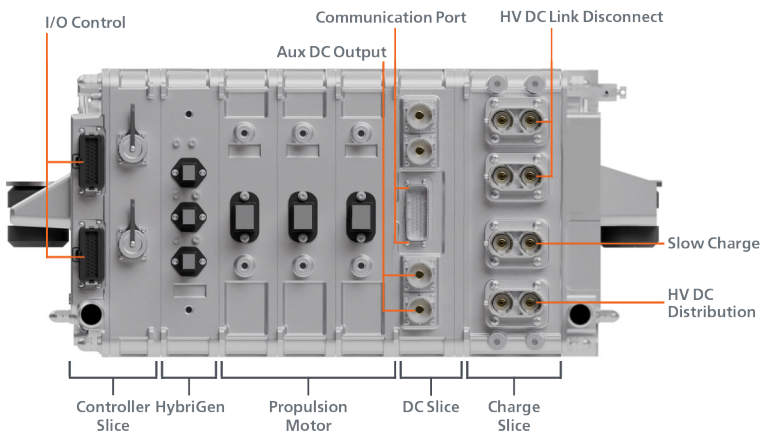
Benefits

- Improved electrical efficiency for extended zero emissions range
- Multi motor/generator drive capability in a single installed device
- Simplified and compact installation for greater reliability
- Rugged, compact multi-functional design
- Standard communications interface
- Supports prognostics health management
- Performance can be tailored to customer needs

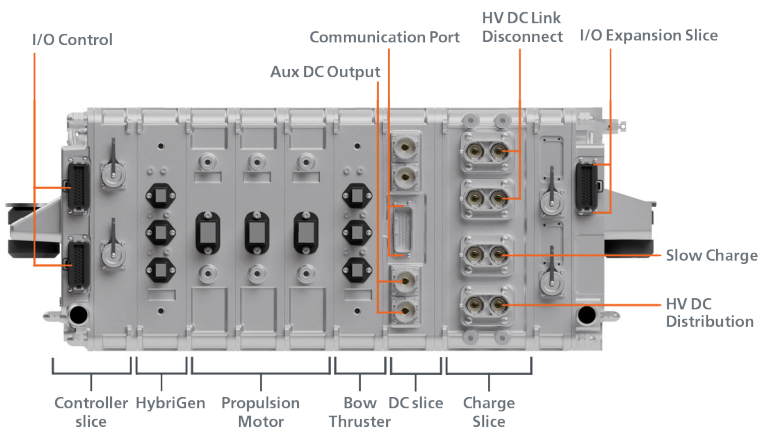
MPCS configured for battery electric



MPCS configured for electric hybrid



MPCS configured for electric hybrid with expanded capability



MPCS Module Weight & Widths

Module (Slice)	Approximate Weight (kg)	Approximate Width (mm)
Left end cap	7.2	105
Right end cap	5.9	100
Controller	4.4	54
AC 3-phase	8.9	62
AC 1-phase	8.1	62
DC	7.0	68.5
Battery Combiner	10.3	80
Charge	19.2	115

Module height: 305.8 mm Module depth: 382.2 mm
 *size and weight are based on slice customization

MPCS Ratings:

- Flow rate required = 40 lpm (10.6 GPM)
- Operating temperature = -40 to 75 °C
- WEG temperature = -40 to 65°C
- 3-phase module rated for 250kW HybriGen
- 3 x 1-phase module rated for 500kW propulsion motor
- DC slow charge = 200A continuous
- DC fast charge = 450A continuous

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