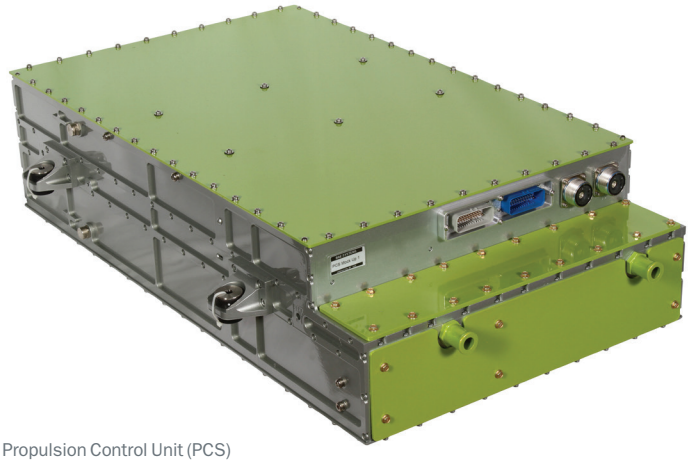
BAE SYSTEMS
INSPIRED WORK

Power and Propulsion Solutions
Propulsion Control System (PCS)

BAE Systems' Power and Propulsion Solutions business area increases a vessel's operating efficiency and performance while saving fuel, operational costs, and our environment. With more than 15 years of experience in hybrid propulsion, BAE Systems is partnering with leading manufacturers of marine diesel engines to provide complete, efficient propulsion and auxiliary power systems.

The Propulsion Control System (PCS) is the power processing and power management center for the entire system. The PCS is available for HDS200 and HDS300 systems for installation in various applications. It works in conjunction with the system's brain, the System Control Unit (SCU), which provides the operator interface, system monitoring, and control. The SCU can be mounted on either the propulsion control system or elsewhere depending on your space requirements and needs. These systems control the optimal flow of power to and from the traction motor, generator, and energy storage system.

Our PCS and SCU enable overall system performance to be customized to an operator's specific requirements and provide diagnostic information to enhance maintenance of the entire marine system.



Propulsion Control Unit (PCS)

Features

- Selectable acceleration and regenerative braking settings
- Onboard diagnostics
- Optional Electronics Cooling Package (ECP) is available
- SAE 1939 CAN interface
- System control and vehicle interface electronics mounted externally
- Operation and diagnostics fully integrated with APS
- Optional high-voltage output to support electric cabin heater
- PCS is liquid cooled for superior thermal management and control

Propulsion Control System (PCS) HDS 300

- Larger internal bus bars for higher power handling
- Larger power transistors (IGBTs) for continuous power handling

Benefits

- Rugged, durable, and highly reliable
- Flexible installation and cooling
- Standard communications interface
- Supports prognostics health management
- Optional heater output, eliminates need for fuel-fired heater
- Performance can be tailored to customer needs
- Identical mounting points and connections for both HDS200 and HDS300

Propulsion Control System (PCS) HDS 200

Power

- Generator 210 kW continuous
- Motor 210kW continous

Propulsion Control System (PCS) HDS 300

Power

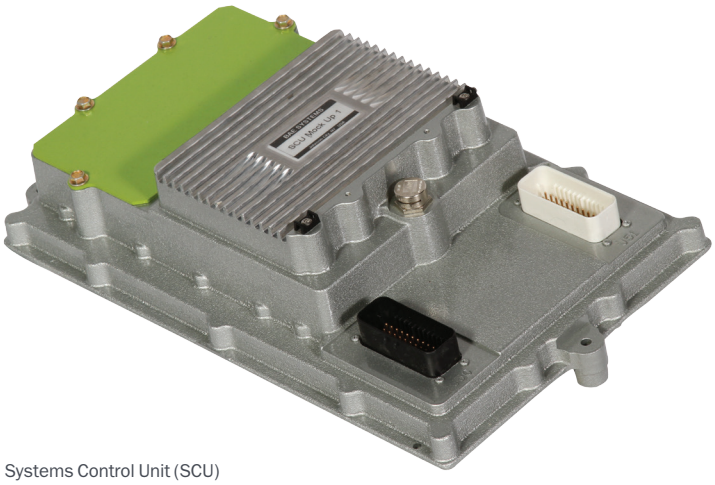
- Generator 240kW continuous
- Motor 246kW continous

Coolant

- Coolant temperature: -40°F to 149°F (-40°C to 65°C)
  113°F (45°C) nominal
- External ambient: -40°F to 167°F (-40°C to 75°C)

Size

- Length: 36.2 in. (919 mm)
- Width: 22.4 in. (569 mm)
- Height: 9.3 in. (237 mm)
- Weight : wet: 188 lbs. (85 kg)
- Coolant: water ethylene/glycol (or propylene glycol)
  15 gpm (57 lpm)



Systems Control Unit (SCU)

Ratings

- Operating temperature:
- External ambient: -40C to 52C continuous, up to 75C at initial start-up

Size (over chassis)

- Length: 15.15 in. (385 mm)
- Width: 8.70 in. (221 mm)
- Height: 3.91 in. (99 mm)
- Weight – 10 lbs. (4.5 kg)
- Coolant – air cooled

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