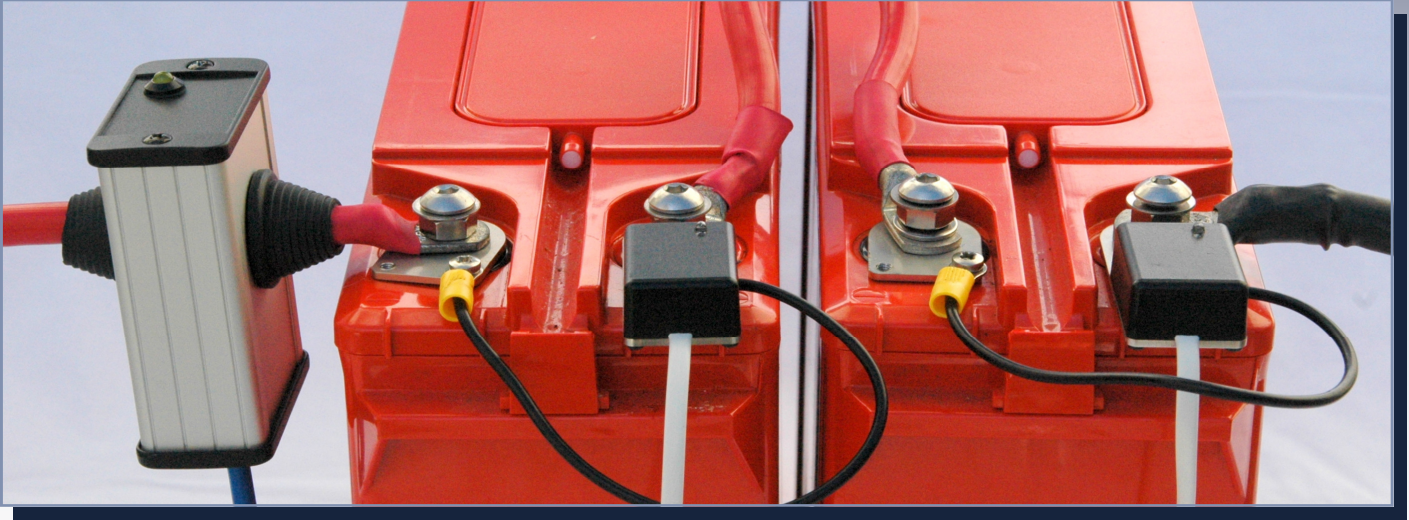


Advanced energy management for marine hybrid propulsion systems



As a HYMAR partner, Triskel Marine (TML) has produced the energy management system (EMS) and all of the data logging equipment for the project's Malo 46 test boat. By monitoring energy consumers and suppliers throughout the vessel, the EMS carefully optimises the use of energy on board. Resources are managed in accordance with the user's needs to ensure that energy is always available at the lowest possible cost.



Data is collected from all of the vessel's data systems and transmitted throughout the boat by the Energy Management Module (EMM)

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management*

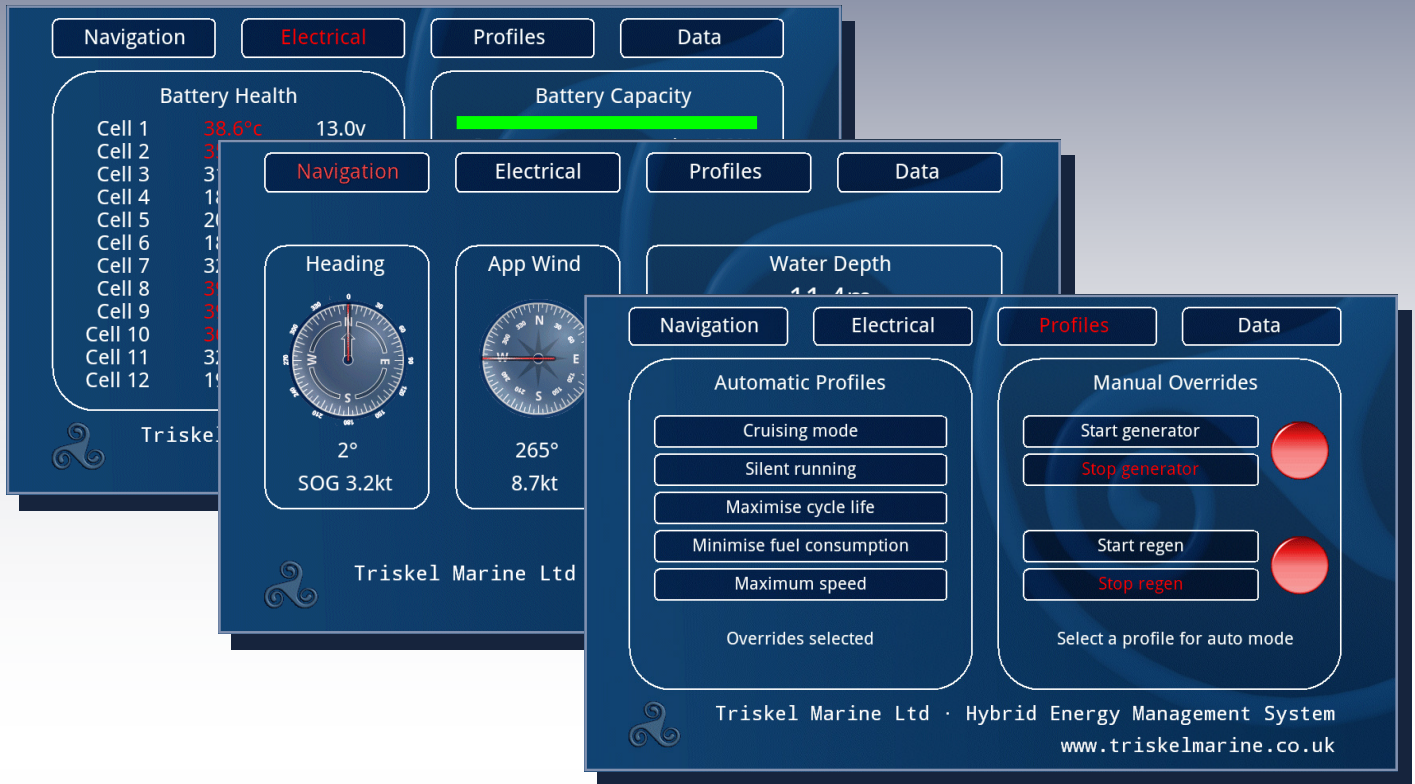


Features:

- Voltage and temperature monitoring at the individual battery level for optimal battery life
- Precise current measurement using "slip on" sensors—no need to cut cables
- Wireless transmission throughout the vessel from the EMM
- "eCon" portable and interactive user display for all vessel data
- CAN based sensors for maximum flexibility and connectivity
- Seamless integration with all of the other boat data system
- Customised energy control algorithms to deliver maximum efficiency
- Battery management, state of charge and capacity calculations on complex installations

Advanced energy management

“eCon” user interface



TML's "eCon" user interface, developed for HYMAR, is a portable tablet PC which displays all of the information available to the central Energy Management Module. It shows energy flows, allows different operational profiles to be set and enables the user to take "personal" control of critical functions such as generator stop/start and power regeneration from the propeller. Navigational and other data from NMEA2000 and NMEA0183 networks can be displayed, together with the boat's position on charts and mapping software.

Multiple "eCon" displays can be used anywhere on the boat giving the user unprecedented access to all of the vessel's technical and navigational information

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