



Høglund Power Management System agility at its very best

Høglund Power Management System (PMS) performs all necessary functions required to handle the power generation and main distribution on the vessel, such as controlling the generators, synchronizer, governors and main switchboard breakers.

The system is well-known for its adaptable functions, trustworthy logics and user-friendly operator interface. It may be integrated together with our IACS or installed as standalone system.

The PMS can be customized to fit all types of switchboard configurations, from diesel electric, to advanced mechanical/hybrid propulsion, combining main engines, shaft generators and clutch control.

Benefits

- Well proven standard industrial hardware with marine type approval
- High speed redundant communication IP network
- Low space and low power requirements
- Standard programming languages based upon the IEC 61131-3 standard
- Supports standard solutions for all commonly used marine power sources
- Integrated logging system and playback facilities, both local/remote and online/offline

Functions

- Alarm and Event monitoring
- Diesel/Gas Generator Control
- Battery Generator Control

- BOG (Boil Of Gas) Control
- Load Sharing
- Bus-tie Control
- Clutch Control
- Heavy Consumers Control
- Thruster Load Control

Design Philosophy

No failure of a system component shall lead to changes in the system. In case of any loss of system components, no generators will stop, and no breakers open/disconnect.

Main Parameters

The main parameters in the system are the number of generators to be kept connected, and the desired starting order of these. When these parameters are altered, the system will automatically re-arrange the generators, breakers and other components, in order to facilitate the desired configuration.

Load dependent start/stop

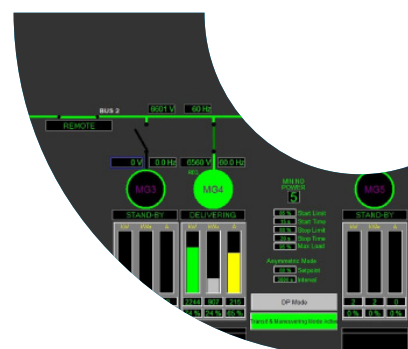
Handles the start/stop of the engine in situations when this is required by the power demand.

Pre-warning alarm

A function which automatically starts the next available generator if any engine conditions, which will lead to a shutdown of the engine, are getting critically near the shutdown limit.

Shut down function

When an engine shutdown is detected, the PMS will immediately disconnect the affected generator and start the next one in the pre-defined sequence.



PMS from Høglund

- Highly adaptable
- Proven concept
- Reliable hardware
- Easy debugging
- Integrated system gives full control



Load reduction

Each thruster drive receives an available power signal from the PMS, which prevents the generators from overloading, reducing the risk for a total blackout in case of an unpredictable generator trip.

Heavy Consumers

Controlling start of heavy consumers by looking at connected and available power on the switchboard. Starting a new engine/connecting new generator, if needed.

Blackout Reconnection

Handles both partial and total blackout, reconnecting important breakers after blackout.

Switchboard configuration

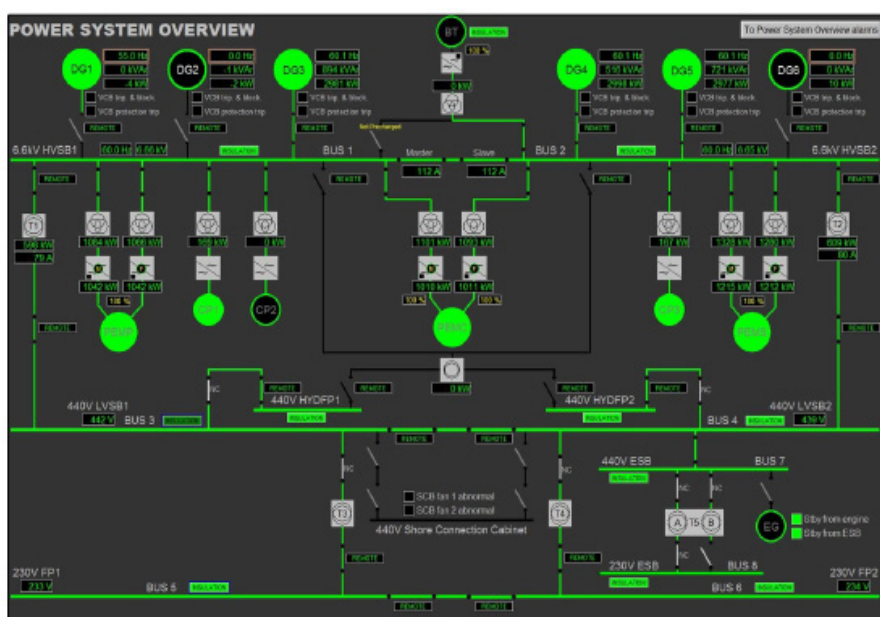
Configuration of tie breakers/SWB breakers, depending on operational mode.

Active Load sharing

The load sharing mode is normally isochronous, where the governor handles the load and frequency control. We also support droop compensated load sharing, where the PMS controls the engine speed with increase/decrease signals.

Alarm handling

PMS and SWB alarms will be raised and need to be reset by the operator- see Pre-warning alarm.



Seismic Vessel with Diesel Electrical Propulsion;
switchboard breaker control with blackout reconfiguration