Høglund PMS

Power Managment System

Performs all normal functions necessary to handle the power generation and main distribution on the vessel, such as: controlling the generators, synchronizer, governors and main switchboard breakers.

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
· Bustie Control
· Clutch Control
· Heavy Consumers Control
· Thruster Load Control

Marine automation
Where it matters

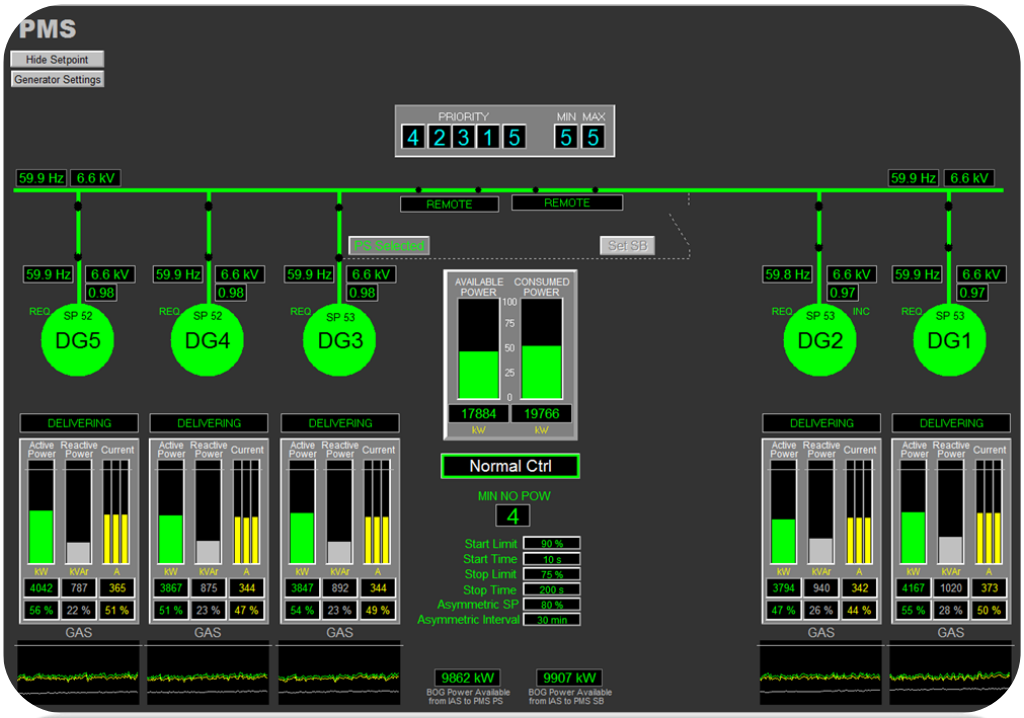
høglund
MARINE AUTOMATION

Høglund's PMS
Known worldwide for its adaptable functions, trustworthy logic and user-friendly operator interface. It may be integrated together with our IAS solution, or installed separately as a standalone system.
With our adaptable software, we can customize the PMS to fit all types of switchboard configurations, from diesel electric propulsion switchboards, to advanced mechanical/hybrid propulsion switchboards combining main engines, shaft generators and clutch control.

Design Philosophy
The design philosophy is that no failure of any system component shall lead to any changes in the system. In case of any system fail, all contacts will remain in the same position, or open.

Failure at the Operator Station
Current commands will remain in the AC800M, and when the OS is restarted it will resume operation at the position it failed without interruption of the process.

Failure at control units AC800M
SWB configuration will stay untouched. With two separate systems, any failure of one of the two generator control units will only affect the generators connected to the faulty unit, and the opposite system will work normal.



Marine automation
Where it matters

høglund
MARINE AUTOMATION

Main Parameter
The main parameters in the system are the actual number of generators to be kept connected by the system, and the desired starting order of these engines. When these parameters are altered, the system will automatically 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, and contains different programs for load dependent start/stop of generators

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 is getting critical near the shutdown limit

Shut down function
When an engine shutdown is detected, a signal is sent to the PMS which will immediately disconnect the breaker and start the next generator in the sequence

Load reduction
Each thruster drive will get an available power signal from the PMS, and the system will prevent the generators from overload, and reduce the risk for a total blackout in case of an unpredictable generator trip, in a sudden critical maneuvering situation.

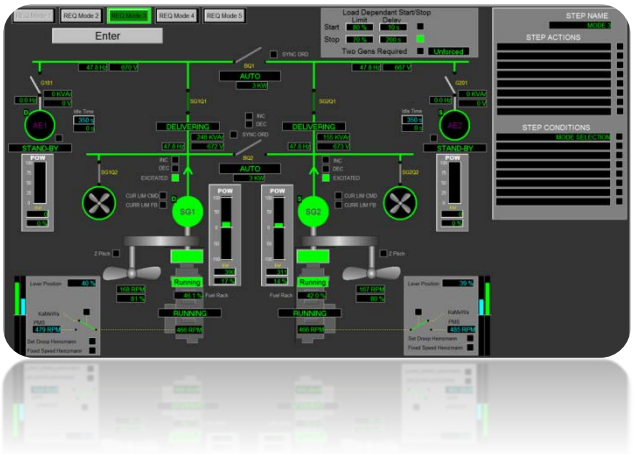
Heavy Consumers
Controlling start of heavy consumers by looking at connected and available power on the switchboard. Starting new engine / connecting new generator if needed.

Blackout
Handles both partial and total blackout, and reconnects 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 is handling the load and frequency control. We do also support droop compensated load sharing, were PMS control the engine speed with increase/decrease signals

Alarm handling
PMS and SWB alarms will be raised and needs to be reset by the operator



Marine automation
Where it matters

høglund
MARINE AUTOMATION

Proven concept, reliable hardware
The IAS is developed using standard hardware components available worldwide.

Easy debugging and troubleshooting
By utilizing the GMR HMI software with all it's troubleshooting capabilities.

Playback
As the system is based on HMA concept, it comes with data logging of all process variables every second.

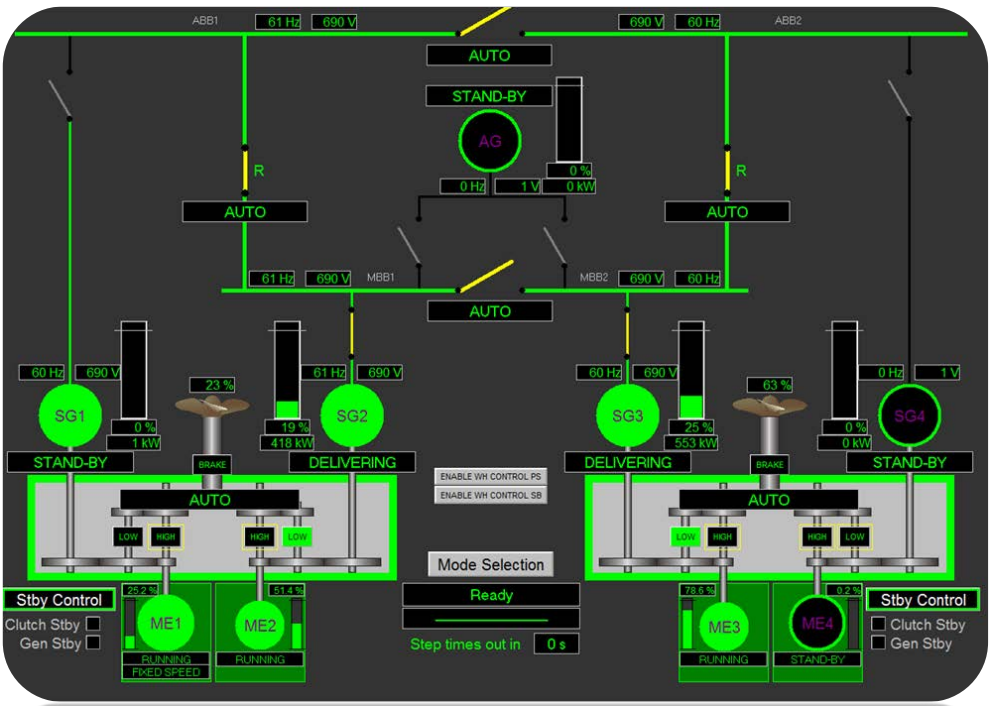
Seamless integration
By selecting a HMA control system for your equipment you will be able to mix and match with other HMA solutions.

Remote connection
If remote connection option is installed, HMA can logon. Generally 95% of all problems can be solved using remote connection, reduces MTTR (Mean Time To Repair) as well as having reduced service and travel costs.

Marine approvals
DNV GL
ABS
BV
LR

Environmental specs
Air 0°C-45°C
Water ingress protection field equipment IP54

Electrical
Supply voltage 230V AC or 24VDC



Marine automation
Where it matters

høglund MARINE AUTOMATION

Åshaugveien 39 | 3170 Sem | Norway | P:+47 334 14 150 | orders@hma.no | hma.no