

## ECS product leaflet

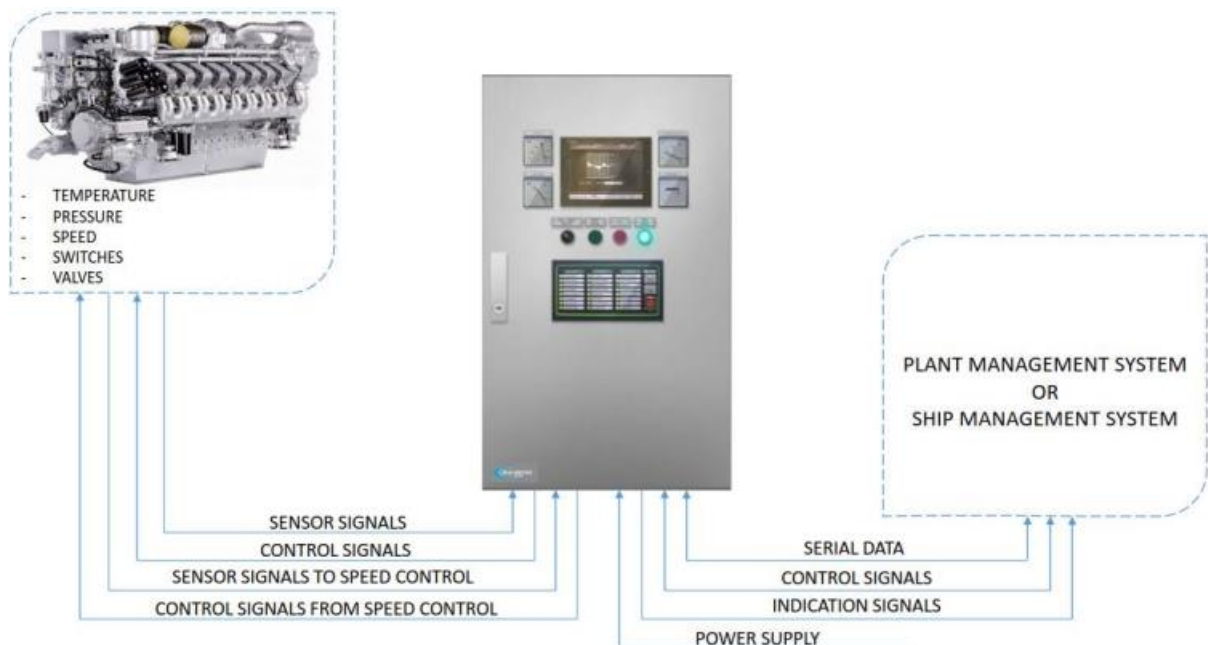
A monitoring and control system of a diesel engine is subject to vibrations and high temperatures. This causes the product lifecycle of a diesel engine to differ from the product lifecycle of a monitoring and control system.

Renewing an engine monitoring and safety system will upgrade it to the latest safety standards.

The system can easily be adapted to every engine type. The ECS can be used as a pin compatible replacement of an existing engine monitoring and safety system, but can also be an extension to your existing engine monitoring and safety system.

The system is built up modularly, so the systems can vary from a small type approved engine safety system to a complete engine monitoring and control system.

Options like remote monitoring using direct wiring or the cloud can be implemented.



### Technical benefits

- Improvement of the security by failure monitoring
  - User friendly interface, no training necessary
  - State of the art hardware
- Safe engine operation
- Increased reliability, no unnecessary engine stops
- Easy to retrofit old systems
- New functionalities available
- Classification Society accepted (in case of marine application)

### **Economic benefits**

- Availability of spare parts
- Existing sensors can be reused
- Lifetime extension of a diesel engine
- Can be used for all engine types

### **Applicable engine types**

- Wärtsilä, Stork, Stork Werkspoor engines like R150, R210, F240, SW280, W32, W38A, W38B, TM410 and TM620
- All DEUTZ Marine engines (like D620 and D628)
- All other engines on request

### **Replacement for**

- LCS, WECS2000, WECS7000, UCS, UNIC, MKS, Spemos, Deuta

### **Technical description**

All sensors and actuators on the engine are connected to the ECS. Also the signals from and to the ships system are connected to the ECS.

The ECS is equipped with a PLC and a hardwired safety module which is used for redundancy. This safety system has a redundant power supply. The stop signal inputs, speedpickup inputs, stop solenoid outputs and power supplies are monitored for failures.

This type approved safety module is handling the following engine stops:

Overspeed,  
Low lub oil pressure,  
High (HT) cooling water temperature,  
High oil mist concentration (ia)  
Common shutdown command from the PLC,  
Emergency stop buttons.

All other engine signals are connected to the PLC. The PLC is handling all the monitoring and the control.

The ECS is equipped with a 7,5 inch colour VGA TFT touch display for read-out, trending, and adjusting of parameters.

The ECS can be connected to alarm systems via Modbus, Profibus etc.

The cabinet is equipped with analogue readout for engine speed, luboil pressure and HT cooling water temperature. These analogue gauges are independent from the PLC to have read out of the most important engine parameters even in case of a PLC breakdown.

The new ECS will be delivered with a user manual comprising the next documents:

- Electrical drawings of the ECS
- Mechanical layout of the ECS cabinet
- Operator manual of the ECS

### General specifications

Power supply to ECS	Remark
Main	100 - 240 Vac/ 9 - 96 Vdc
Backup	100 - 240 Vac/ 9 - 96 Vdc
Ambient temperature	Max 50°C (suitable for engine room mounting)
Cabinet dimensions	Depending on configuration, typical for a medium speed diesel engine 1000x600x400mm (h x w x d)
Possible approvals	DNV-GL, BV, Llyods, ABS, RMRS, etc

### Pictures of ECS cabinets



Medium speed



Cabinet for large engines