



## *myNORIS engine control* – replacement of Wärtsilä control WECS 2000

### Act now

Is your old WECS (Wärtsilä engine control system) outdated? Are longer downtimes and expensive repairs increasing? And is it getting harder to obtain expensive spare parts? Then it is time to reflect on Re-fit and in that way to reduce investment costs and laytime of your ship. The replacement of your outdated components ensures full lifecycle service. We supply a ready to use replacement system for your old WECS 2000 including installation and commissioning.

### Replace your old WECS 2000 - fast and easy

The original WECS 2000 system from Wärtsilä consists of two bus lines, numerous electronic components in the central control unit and several data acquisition units all around the engine. All that is replaced by a simple design with only one touchscreen display, one I/O-block and one independent safety system.

### Your benefits at a glance

- **SAFETY:** new, reliable components
- **NO RISK:** optimised engine efficiency due to reduced downtimes
- **LESS COSTS:** avoid never ending repair and service costs
- **SERVICE:** installation, technical support, spare parts, training
- **TRUST:** NORIS supplied over 3000 engine safety systems mainly as original equipment to engine manufacturers
- **AND:** we hand over dismantled units which you can keep as spares for your other vessels



## Solution

The original engine build-on control unit and the screen will be removed and replaced by a local control panel while the new control unit is built in separate cabinet. This will be installed next to the engine to protect the equipment from heat, vibration and oil or other dirt. The local data acquisition units (SDU, DCU) will be replaced by simple junction boxes, which enables you to keep the original sensors. New cables are laid between the junction boxes, the central unit and the local control panel.

When replacing a system on a ship, it is essential to clearly represent the new design and the integration into the existing system, thus making maintenance much easier for the crew. That is why we name the terminals after the old ones and provide an integration drawing. Interfaces to other systems (e. g. AMS) will be compatible which saves high cost for amending those system.

Optionally, we will also replace your governor by a new model (typically RE Viking 35).

## The benefit of our solution

- Electronics protected from heat, vibrations and oil
- Keep original sensors
- Built-in self-diagnosis and analysis tool
- Retrofit integration drawings to keep your ship easy to maintain and troubleshoot
- Spare part availability usually 20 years and more

### Interested?

#### Contact us

Phone: +47 35 56 03 00

E-mail: [electronics@teco.no](mailto:electronics@teco.no)

## Functions of our retrofit solution

### Monitoring and control system

- Start and stop of the engine
- Start interlock
- Load reduction in case of engine, gearbox or generator overload
- Local/remote control selection
- Stand-by and pre-lubrication pump control
- Cooling water temperature control
- Exhaust gas and cylinder liner monitoring
- Sensor-diagnosis, self-diagnosis and earth-fault monitoring
- Plug & play interface to alarm and monitoring system (AMS)
- Interface to performance and fuel consumption monitoring and cloud-based performance management NORINET

### Local engine control

- Panel for local engine control
- Indication of important operating parameters
- Local/remote and shutdown function

### Governor control (optional)

- Replacement of speed governor, e. g. by RE Viking 35 on request

### Independent safety system

- Engine overspeed shut down
- Automatic stop shut down
- Emergency stop shut down
- Sensor-diagnosis, self-diagnosis and earth-fault monitoring

### HMI Touchscreen display

- Alarm history list and filter function
- Built-in scope meter for four channels simultaneously
- Event history for all events like settings, engine starts, admin login etc.
- Online access for update, troubleshooting, analytics and support (requires special permission)
- Software update and backup via USB-memory stick
- Automatic configuration after exchange of spare parts

### Remote monitoring display (optional)

- For the engine control room
- For the wheelhouse

## Services

### Turnkey solution

Benefit from our extensive service prior, during and after installation. We take care about the entire upgrade. The complete job takes around 6-9 days.

### Our scope

- ✓ Prior inspection
- ✓ Demounting of old WECS
- ✓ Mounting of junction boxes
- ✓ Wiring of sensors
- ✓ Wiring of central cabinet
- ✓ Class approval
- ✓ Commissioning, testing
- ✓ Support during HAT and Sea Trial

### Solution for system integrators

We fully support electrical contractors or system integrators offering our solutions to ship owners.

### Our scope

- ✓ System
- ✓ Manuals and drawings
- ✓ Class approval documents
- ✓ Technical support
- ✓ Commissioning support if requested

Control and safety system

Local control panel



## Further options you should consider

Take the chance while your vessel is out of operation to upgrade other systems at the same time.

### **NORINET – cloud-based data logger and performance management**

Keep the overview of all data and machine processes on your ship with NORINET. Get all data of your ship directly on the screen of your office desk. The measuring data of our systems are stored in a safe cloud solution and are displayed on a web-based, intuitive, graphical surface in your standard web browser. Whether a single vessel or your whole fleet – with NORINET you rely on a sustainable solution to optimise your ship performance.

#### **Features**

- Performance monitoring
- Fuel meter
- Vibration monitoring
- E-mail reports and alerts
- Customisable dashboards and reports



### **NORISTAR Retrofit propulsion control for all propulsion types**

Since the middle of the 1990s, NORISTAR is our solution for propulsion controls for all drive types (FPP, CPP, POD and all types of thruster systems and also suitable for hybrid propulsion systems). The latest generation of NORISTAR provides a modular platform by which both small and also complex propulsion controls can be realised.



### **NORIMOS Retrofit alarm, monitoring and control system (AMCS)**

Since as early as the 1980s, NORIMOS has been a reliable and popular automation system. For some years now, NORIMOS 4 is available as the latest and in the fourth generation of monitoring and control system. Thanks to its modular structure the system is easily scalable and therefore is suitable for systems with a few channels up to complex systems with several thousands of measuring points. The system can easily be integrated into third-party applications due to its standard interfaces.



**Interested?**

**Contact us**

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