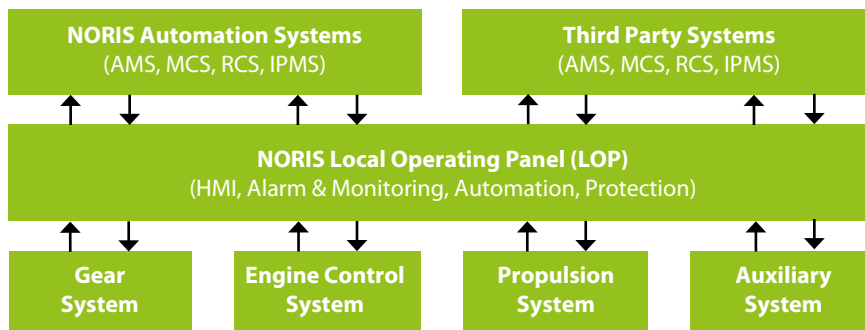




myNORIS Smart Machinery Automation

Expandable system concept

We develop smart solutions for machinery automation in one-off or series production. They can be used to monitor and control engines, gearboxes, drive systems and auxiliary systems. Each solution is engineered to customer-specific requirements and can be easily extended with additional displays for decentral visualisation or additional operating panels to provide local operation. The intuitive visualisation is based on the powerful CODESYS software suite and can be easily adapted to customer's corporate design. All components are especially suitable for the use in harsh environments and ensure maximum operational reliability.



Extensive service and long-term availability of spare parts

We keep service in mind right from the start, from developing and designing each solution, to installation, commissioning and throughout the equipment's entire operating life, and right through to the actual service work itself – in other words, over the life cycle in its entirety. Our service is operating world-wide and our active obsolescence management system ensures the long-term availability of components and spare parts over more than 15 years.

Your benefits at a glance

- Local availability of measurement data, operating states and control functions
- High-resolution, graphic depiction of operating states
- Integrated data logging
- Standardised interfaces to higher-level systems (IAMCS, RCS, IPMS, etc.)
- Predictive maintenance
- Extensive project and installation support
- Integrated safety logic
- Remote access during servicing
- Various expansion levels

Application examples

We engineer each LOP to your specific applications:

- Propulsion engine
- Reduction gear-box
- Hybrid gear-box
- Trolling clutch
- Genset
- Others (e. g. winches, separators, purifiers, fresh and waste water treatment)



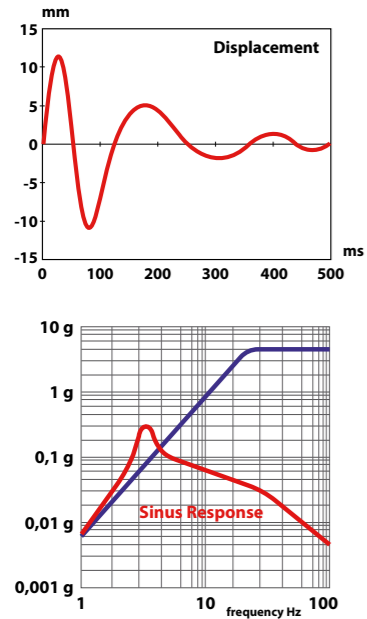
- ### System extension
- Additional remote displays for decentral visualisation (e. g. bridge, engine control room)
 - Additional control panels for local control functions
 - Alarm extension system for accomodation areas
 - Mobile device support for visualisation (e. g. for local service)
 - Alarm printer, dead-man system
 - Safety system for combustion engines

- ### General features
- Compact and robust design
 - Easy firmware and software update via USB
 - Multiple interfaces: MODBUS, J1939, CANopen, Profibus, NMEA
 - Intelligent motor starter: thermal model, single phase monitoring, settings log, trip log
 - Up to 500 channels

- ### Visualisation
- Modern and uniform look & feel
 - According to customer's corporate design
 - Intuitive, clear and easy to understand GUI
 - Remote access for mobile visualisation

- ### Project and installation support
- We support you during the complete project phase – from the idea to the undocking
 - Over 90 years of experience with marine systems
 - We guide you through the classification process

- ### Predictive maintenance
- Condition monitoring based on customisable models
 - Including vibration, temperature, torque, current
 - Intelligent condition based warnings, messages, hints according to your maintenance plan



- ### Construction and design
- Mechanical design according to your vibration and shock requirements
 - Detailed system response calculations on request
 - Technical drawings and documentation are customised to your requirements
 - 3D-Modelling during planning phase simplifies the integration

Ethernet / IP	CANopen	MODBUS RTU / TCP	Open Data Protocol	Remote Access	FTP Access	Web-based Visualisation
IEC 61131	Profibus	J1939	Data Logging (32 GB Flash)	Service Friendly	Class Approvals	WLAN

Integrated solutions for your LOP with the NORISYS 4 automation platform

The local control and operating panels can be easily integrated into higher-level automation solutions. As a manufacturer of automation components and systems, we have the know-how and the product portfolio required to provide you with comprehensive solutions: from sensors and devices for signal processing to analogue indicators and drive levers, remote control systems, etc. On request, we also plan your engine monitoring and control system, remote control system, etc.

