



## **NORISTAR 4 –** **Propulsion Control System**

### System Concept

The NORISTAR 4 system has been designed for controlling ship propulsion systems. It meets all the requirements set forth in AUT24 and UMS. The NORISTAR 4 can be used in controllable pitch propeller systems for controlling the pitch and/or speed and in reversing gears and reversing diesel engines for controlling a speed controller. As standard each system is equipped with a user-friendly full follow-up control and a simple non-follow-up back-up control.

NORISTAR 4 comprises a central processing unit provided by the NORISYS 4 automation system and operator panels connected via a bus system. The add-on architecture of the operator film panels ensures the necessary flexibility for creating solutions that are optimised for different applications and customer requirements.

The NORISTAR 4 equipment is rounded off by NORIS lever systems for standard purposes, azimuth propulsion applications or tube thruster systems.

All NORISTAR 4 systems are tested and pre-set at the factory to ensure rapid and smooth commissioning. The engine control room panel contains a graphical

display which shows all the system information and allows the actual end users to adapt the system in accordance with their

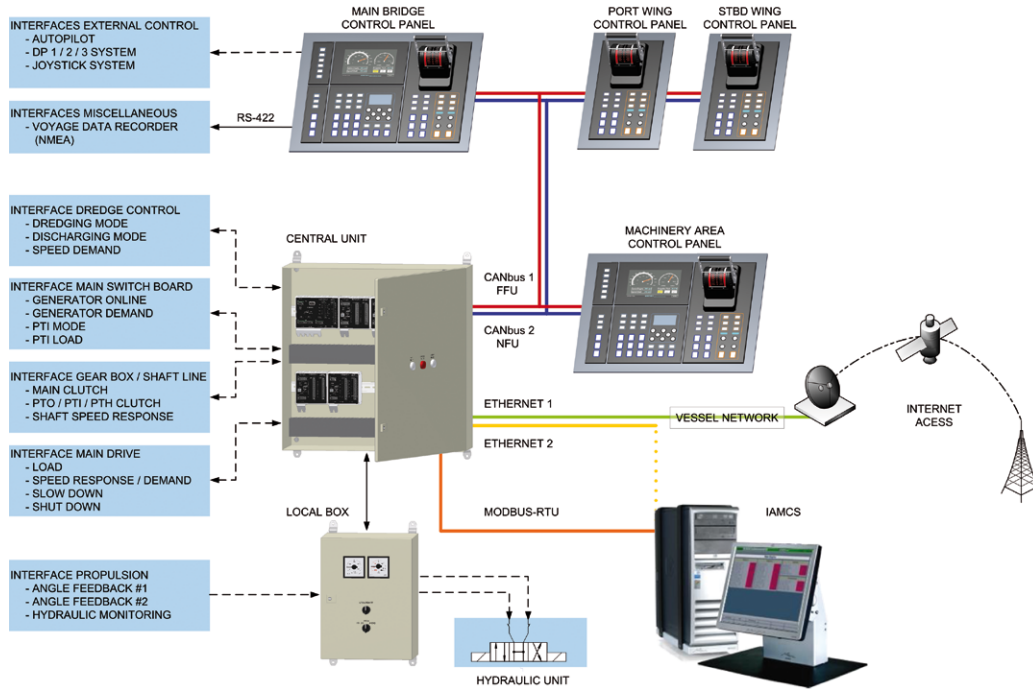
specific needs during port trials and trials at sea. No programming knowledge is required for this purpose.



### Features

- Designed for CPP, FPP, POD and any kind of thruster
- System can be adapted to suit different requirements
- Load control prevents overloading of engines
- Defined control programs for any trading regions
- Integrated NFU control
- Equipped with VDR interface
- Integrated touch panel for user-friendly monitoring and parameter set up
- Easy to install and, thus, cost-effective
- Can be commissioned by end user
- Guaranteed worldwide service for maximum availability
- Optional additional functions such as load distribution, electric shaft, start-stop logic, DP and joystick interconnection, etc.
- Approvals: BV, DNV, GL, LR, classNK

## Propulsion Control System Concept



## Operator Control Panel Devices

### NORISYS 4 MP-12L12B Master Panel



- 2xCAN, 1xN4ExtBus, 1xRS422/485, 1xPrg.
- 4xAO, 4xDI, 4xDO
- 2xPWM OUT
- 12 Lamps (multicolor)
- 12 Push buttons (multicolor)

### NORISYS 4 MP-23L9B-TU Master Panel Transfer Unit



- 2xCAN, 1xN4ExtBus, 1xRS422/485, 1xPrg.
- 4xAO, 4xDI, 4xDO
- 2xPWM OUT
- 23 Lamps (18 white, 5 multicolor)
- 9 Push buttons (multicolor)

### NORISYS 4 SP-6L Slave Panel



- 1xN4ExtBus
- 1xPWM OUT
- 6 Lamps (multicolor)

### NORISYS 4 SP-4B Slave Panel



- 1xN4ExtBus
- 1xPWM OUT
- 4 Push buttons (multicolor)

### NORISYS 4 SP-3L3B Slave Panel



- 1xN4ExtBus
- 1xPWM OUT
- 3 Lamps (multicolor)
- 3 Push buttons (multicolor)

### NORISYS 4 SP-6L6B Slave Panel



- 1xN4ExtBus
- 1xPWM OUT
- 6 Lamps (multicolor)
- 6 Push buttons (multicolor)

### NORISYS 4 SP-12L12B-LS4 Slave Panel



- 2xCAN, 1xN4ExtBus
- 1xPWM OUT
- 12 Lamps (multicolor)
- 12 Push buttons (multicolor)
- LS4 Control lever

### NORISYS 4 SP-12L12B-LA4 Slave Panel



- 2xCAN, 1xN4ExtBus
- 1xPWM OUT
- 12 Lamps (multicolor)
- 12 Push buttons (multicolor)
- LA4 Control lever

### NORISYS 4 SP-7L2B-TU Slave Panel Transfer Unit



- 1xN4ExtBus
- 1xPWM OUT
- 7 Lamps (6 white, 1 multicolor)
- 2 Push buttons (multicolor)