DNV·GL

Certificate No:
TAA00002KH

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Peripheral Equipment

with type designation(s)
NORISYS 4 MP, NORISYS 4 SP

Issued to
Noris Automation GmbH
Rostock, Germany

is found to comply with
DNV GL rules for classification – Ships, offshore units, and high speed and light craft

Application :

Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.

Temperature	**D**
Humidity	**B**
Vibration	**A**
EMC	**B**
Enclosure	**C (front side)**

Issued at **Hamburg** on **2020-01-15**
This Certificate is valid until **2025-01-14**.
DNV GL local station: **Hamburg CMC**

Approval Engineer: **Holger Jansen**

for **DNV GL**

Joannis Papanuskas
Head of Section

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid.
The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.

© DNV GL 2014. DNV GL and the Horizon Graphic are trademarks of DNV GL AS.

Product description

The NORISYS Control Panel System are input/output modules without any application related functions.

Supply Voltage: 24Vdc
Mounting: Desk Cut Out

Control Panel Master MP-12L12B
Digital Inputs: 4, 12 Pushbuttons
Digital Outputs: 4 (Relay), 2 PWM, 12 Lamps, 1 Buzzer
Analogue Outputs: 4 (0..10V)
Interfaces: 2 CAN, 1RS-422/485, 1N4ExtBus, 1xPRG

Control Transfer Unit Master MP-TU-23L9B
Digital Inputs: 4, 9 Pushbuttons
Digital Outputs: 4 (Relay), 2 PWM, 23 Lamps, 1 Buzzer
Analogue Outputs: 4 (0..10V)
Interfaces: 2 CAN, 1RS-422/485, 1N4ExtBus, 1xPRG

Control Transfer Unit Extension SP-TU-7L2B
Digital Inputs: 2 Pushbuttons
Digital Outputs: 1 PWM, 7 Lamps, 1 Buzzer
Interfaces: 1N4ExtBus

Control Panel Extension SP-6L
Digital Outputs: 1 PWM, 6 Lamps, 1 Buzzer
Interfaces: 1N4ExtBus

Control Panel Extension SP-4B
Digital Inputs: 4 Pushbuttons
Digital Outputs: 1 PWM, 1 Buzzer
Interfaces: 1N4ExtBus

Control Panel Extension SP-3L3B
Digital Inputs: 3 Pushbuttons
Digital Outputs: 1 PWM, 3 Lamps, 1 Buzzer
Interfaces: 1N4ExtBus

Control Panel Extension SP-6L6B
Digital Inputs: 6 Pushbuttons
Digital Outputs: 1 PWM, 6 Lamps, 1 Buzzer
Interfaces: 1N4ExtBus

Control Panel Extension with Control Lever SP-12L12B-….-LS4 with integraded LS4 control lever (TAA00002KK)
Digital Inputs: 12 Pushbuttons
Digital Outputs: 2 PWM, 12 Lamps, 1 Buzzer
Interfaces: 2N4ExtBus

Control Panel Extension with Control Lever SP-12L12B-….-LT4 with integraded LT4 control lever (TAA00002KK)
Digital Inputs: 12 Pushbuttons
Digital Outputs: 2 PWM, 12 Lamps, 1 Buzzer
Interfaces: 2N4ExtBus

Control Panel Extension with Control Lever SP-12L12B-….-LA4

with integraded LA4 control lever (TAA00002KJ)
Digital Inputs: 12 Pushbuttons
Digital Outputs: 2 PWM, 12 Lamps, 1 Buzzer
Interfaces: 2N4ExtBus

Classic Control Panel Master MPc-12L12B
Digital Inputs: 12 Pushbuttons
Digital Outputs: 12 Lamps, 1 Buzzer
Analogue Inputs: 2 Potentiometer 2k
Analogue Outputs: max. 1 Dimmer

Classic Control Panel Extension SPc-6L6B
Digital Inputs: 6 Pushbuttons
Digital Outputs: 6 Lamps, 1 Buzzer
Analogue Outputs: max. 1 Dimmer

Application/Limitation

The Type Approval covers hardware listed under Product description. When the hardware is used in applications to be classed by DNV GL, documentation for the actual application is to be submitted for approval by the manufacturer of the application system in each case. Reference is made to DNV GL Rules for Ships Pt.4 Ch.9 Control and Monitoring Systems.

Type Approval documentation

Tests carried out

Applicable tests according to DNV GL Class Guideline CG0339, November 2016.

Marking of product

The products to be marked with:
- Noris Automation GmbH
- Model name
- Serial number

Periodical assessment

The scope of the periodical assessment is to verify that the conditions stipulated for the type are complied with, and that no alterations are made to the product design or choice of systems, software versions, components and/or materials.

The main elements of the assessment are:
- Ensure that type approved documentation is available
- Inspection of factory samples, selected at random from the production line (where practicable)
- Review of production and inspection routines, including test records from product sample tests and control routines
- Ensuring that systems, software versions, components and/or materials used comply with type approved documents and/or referenced system, software, component and material specifications
- Review of possible changes in design of systems, software versions, components, materials and/or performance, and make sure that such changes do not affect the type approval given
- Ensuring traceability between manufacturer's product type marking and the type approval certificate

Periodical assessment is to be performed after 2 years and after 3.5 years. A renewal assessment will be performed at renewal of the certificate.

END OF CERTIFICATE