



# Type Approval Certificate

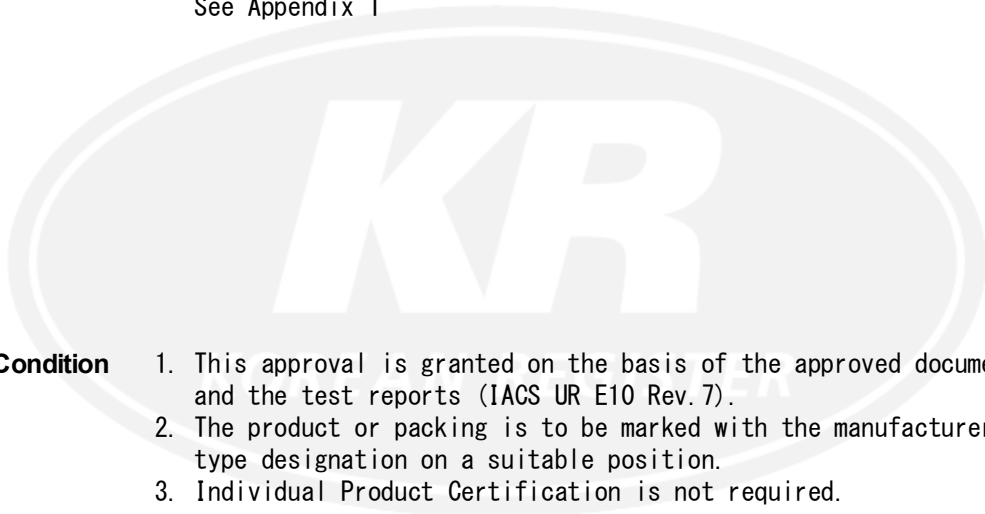
[ Programmable Logic Controller System ]

**Initial Approval** 23 June 2017

**Manufacturer** NORIS Automation GmbH  
Friedrich-Barnewitz Strasse 10, D-18119 Rostock, Germany

**Product Description** Type : NORISYS 4

“ See Appendix 1 ”



- Approval Condition**
1. This approval is granted on the basis of the approved documentation and the test reports (IACS UR E10 Rev. 7).
  2. The product or packing is to be marked with the manufacturer’s name and type designation on a suitable position.
  3. Individual Product Certification is not required.

**THIS IS TO CERTIFY** that the above-mentioned product has been approved in accordance with the relevant requirement of this Society's Rules and / or of the recognized standards as follows.

Pt. 6, Ch. 2, Art. 301 of the Rules for Classification, Steel Ships.

This Certificate is valid until 22 June 2027

Issued at Busan, Korea on 27 October 2022



This certificate is signed electronically in accordance with IMO FAL.5/Circ.39/Rev.2. Validation and authentication of the certificate can be confirmed from "<http://e-cert.krs.co.kr>" by using the tracking No(ME22031633742) and certificate No.(HMB27973-AC003).



**KOREAN REGISTER**

*General Manager of  
Marine & Ocean Equipment Team*

**Note :** 1. This certificate will be valid subject to complying with the approval conditions described on the certificate and/or on the Rules of this Society.  
 2. This certificate will be invalid from the expiry date aforementioned unless the extension or renewal has been granted to the applicant or the manufacturer.  
 3. Any significant modifications or changes in design or construction to the above product without approval from this Society will render this certificate invalid.  
 4. Should the specified rules, regulations or standards be amended during the validity of this certificate, the product is to be re-approved by this Society in accordance with the requirements as amended.

## Product Description and/or Approval Condition

Date of Issue : 27 October 2022

### A. Product Description:

Programmable Logic Controller System (Type: NORISYS 4)

Consists of the following components:

NORISYS 4 CPU	:	400MHz, 64MB RAM, 32MB Flash 2x Ethernet, 2x CAN-Bus, 1x RS232, RS 422, RS485, 1x USB, 1x SDcard memory 4x digital inputs 24V DC 4x relay outputs 30V DC, 2A
NORISYS 4 UNIO 4 AI	:	Analogue input 4 channels
NORISYS 4 UNIO 8 AI	:	Analogue input 8 channels
NORISYS 4 UNIO 4 AO	:	Analogue output 4 channels
NORISYS 4 UNIO 8 AO	:	Analogue output 8 channels
NORISYS 4 UNIO 4AI/4AO	:	Analogue input 4 channels/Analogue output 4 channels
NORISYS 4 UNIO-2AI/2AO	:	Analogue input 2 channels/Analogue output 2 channels
NORISYS 4 UNIO-2AI/6AO	:	Analogue input 2 channels/Analogue output 6 channels
NORISYS 4 UNIO-6AI/2AO	:	Analogue input 6 channels/Analogue output 2 channels
NORISYS 4 UNIO 8PT100	:	PT100 inputs 8 channels (3-wire) with earth fault detection
NORISYS 4 24DIO	:	24 digital channels (configurable)

#### 1. Main Characteristics

- Power supply : 24V DC
- Degree of protection : IP30

#### 2. Documents and Drawings

- Drawings : 091.001.03.100, 091.001.03.101.B, 091.001.03.400, 091.001.03.401.B, 091.001.03.500, 091.001.03.501.B, 091.002.03.100, 091.002.03.101.D, 091.002.03.400.B, 091.002.03.401.D, 091.002.03.500.B, 091.002.03.501.D, 091.003.03.106.C, 091.003.03.109.B, 091.003.03.110.B, 091.003.03.111.B, 091.003.03.112.B, 091.003.03.113.B, 091.003.03.114.B, 091.003.03.115.B, 091.003.03.116.B, 091.003.03.506.B, 091.003.03.507.B, 091.003.03.508.C, 091.003.03.509.C, 091.003.03.510.C, 091.003.03.511.C, 091.003.03.512.B, 091.003.03.513.B, 091.003.03.514.C  
00748365\_Schematic\_NORISYS4\_CPU\_D1-4\_H06,  
00748392\_Schematic\_NORISYS4\_IO\_D2-5\_H10,  
00748392\_NORISYS 4-IO\_Leiterplatte-BG-Stuli\_V011\_170421,  
00570638\_NORISYS 4 Kabel\_Gesamtstückliste\_V01,  
00748365\_NORISYS4-CPU\_Leiterplatte-BG-Stuli\_V08\_170675,  
81028622\_i06\_Schaltplan, 81028622\_i07\_Stückliste, SAR40-d-Schaltplan,  
SL40-d-Stückliste-V104, SAR41-d\_1A3\_Schematic, SAR41-d\_1A3\_BOM,  
SAR42-d-Schaltplan, SL42-d-Stückliste-V109, SAR43-a\_Schaltplan,  
SL43-a-Stückliste-V103, SAR108-a\_1A2\_Schematic, SAR108-a\_1A2\_BOM
- NAR-KD-0100-1-en\_V172\_NORISYS 4 Platform Manual
- NAR-KD-0101-1-en\_V145\_NORISYS 4 basic software routines description
- NAR-PD-0100-2-en\_V100\_NORISYS 4 Hardware Description
- NAR-PD-0100-10-en\_V101NORISYS 4 Overview Suppliers
- NAR-PD-0110-1-en\_V103\_NORISYS 4 Firmware element extensionbus description
- NAR-KD-0101-2-en\_V140\_NORISYS 4 functional software routines description
- NAR-PD-0100-8-en\_V210\_NORISYS4\_UNIO Firmware Description
- NAR-PD-0100-7-en\_V210\_NORISYS4\_24DIO\_Firmware Description

#### 3. Test Reports

- NORIS Automation GmbH
- TTBMP12-001\_NAR Ver.01
- NAR-PB-0100-3-en V.1.01, NAR-PB-0100-4-en V.1.01, NAR-PB-0100-5-en V.1.01,  
NAR-PB-0100-6-en V.1.01, NAR-PB-0100-09-en V.1.01, NAR-PB-0100-8-en V.1.01

- Teseq GmbH
- D/11/3863/01, D/11/3863/02, D/11/3863/03, D/11/3863/04
- D/13/4085/09 dated 2013-11-22
- D/13/4085/10 dated 2013-11-22

**Product Description and/or Approval Condition**

Date of Issue : 27 October 2022

- D/13/4085/12 dated 2014-05-22
- D/11/3863-08 dated 2012-05-11

## TUV Rheinland

- Report No. 21173861 (Order No. E5.664 Part A / 3031766)
- Report No. 21173861 (Order No. E5.664 Part B / 3031766)
- Report No. 21187305 001

## TREQ

- 014-19 Rev. 1 dated 2019-04-02

## AMETEK

- D/20/4785/01 dated 2021-03-30
- D/20/4791/03 dated 2021-07-28
- D/20/4785/02 dated 2021-03-30
- D/20/4785/04 dated 2021-03-30
- D/19/4706/01 dated 2019-06-18
- D/20/4785/03 dated 2021-03-30

&lt; End of Certificate &gt;

