



CERTIFICATE NUMBER	22-2320549-PDA
EFFECTIVE DATE	11-Jan-2023
EXPIRY DATE	10-Jan-2028
ABS TECHNICAL OFFICE	Gdynia Engineering Department

## CERTIFICATE OF Product Design Assessment

This is to certify that a representative of this Bureau did, at the request of

### **NORIS AUTOMATION GMBH**

located at

**F-BARNEWITZ-STR. 10, , D-18119 ROSTOCK, Germany**

assess design plans and data for the below listed product. This assessment is a representation by the Bureau as to the degree of compliance the design exhibits with applicable sections of the Rules. This assessment does not waive unit certification or classification procedures required by ABS Rules for products to be installed in ABS classed vessels or facilities. This certificate, by itself, does not reflect that the product is Type Approved. The scope and limitations of this assessment are detailed on the pages attached to this certificate.

**Product: Propulsion Remote Control System**

**Model: NORISYS 4**

**Endorsements:**

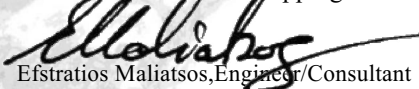
**Tier: 5 - Unit Certification Required**

This Product Design Assessment (PDA) Certificate remains valid until 10/Jan/2028 or until the Rules and/or Standards used in the assessment are revised or until there is a design modification warranting design reassessment (whichever occurs first).

Acceptance of product is limited to the "Intended Service" details prescribed in the certificate and as per applicable Rules and Standards.

This Certificate is valid for installation of the listed product on ABS units which exist or are under contract for construction on or previous to the effective date of the ABS Rules and standards applied at the time of PDA issuance. Use of the Product for non-ABS units is subject to agreement between the manufacturer and intended client.

American Bureau Of Shipping

  
Efstratios Maliatsos, Engineer/Consultant

NOTE: This certificate evidences compliance with one or more of the Rules, Guides, standards or other criteria of ABS or a statutory, industrial or manufacturer's standards. It is issued solely for the use of ABS, its committees, its clients or other authorized entities. Any significant changes to the aforementioned product without approval from ABS will result in this certificate becoming null and void. This certificate is governed by ABS Rules 1-1-A3/5.9 Terms and Conditions of the Request for Product Type Approval and Agreement (2010)

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**Tier: 5 - Unit Certification Required**

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**Product:** Propulsion Remote Control System

**Model:** NORISYS 4

**Endorsements:**

### Intended Service:

Remote control system for propulsion plants with reversible engines or gears or with CPP system.

### Description:

System components: Norisys 4 CPU, Norisys 4 24DIO, Norisys 4 VMP70 (touch panel),  
Norisys 4 UNIO (4AI / 8AI / 4AO / 8AO / 4AI4AO / 2AI2AO / 6AI2AO / 2AI6AO / PT100)

### Rating:

Power Supply: 24 V DC

Operating Temperature: -25° C up to 70° C

### Service Restriction:

Unit Certification is required for this product in accordance with 4-1-1/Table 3 of the Marine Vessel Rules.

If the manufacturer or purchaser request an ABS Certificate for compliance with a specification or standard, the specification or standard, including inspection standards and tolerances, must be clearly defined.

### Comments:

Each particular application/ configuration of the system is to be specifically approved for the intended installation.  
System Category II.

The Manufacturer has provided a declaration about the control of, or the lack of Asbestos in this product.

### Notes/Drawing/Documentation:

Drawing No. 00570638, NORISYS 4 CPU - Kabel Gesamtstückliste V01, Revision: 01, Pages: 1

Drawing No. 00748365, NORISYS 4 CPU - CPU Leiterplatte-BG Stuli\_V08\_170675, Revision: 08, Pages: 4

Drawing No. 00748365\_Schematic, NORISYS 4 CPU - CPU D1-4 H06, Revision: 06, Pages: 8

Drawing No. 00748392, NORISYS 4 CPU - IO Leiterplatte-BG Stuli\_V011\_170421, Revision: 11, Pages: 9

Drawing No. 00748392\_schematic, NORISYS 4 CPU - IO D2-5 H10, Revision: 10, Pages: 13

Drawing No. 014-19\_VIU, TREO Germany Test Report No. 014-19 dated 02/APR/2019, Revision: 1, Pages: 38

Drawing No. 091.001.03.101.B, NORISYS 4 - CPU, Revision: B, Pages: 1

Drawing No. 091.001.03.401.B, NORISYS 4 - CPU, Revision: B, Pages: 1

Drawing No. 091.001.03.501.B, NORISYS 4 - CPU - Parts List, Revision: B, Pages: 1

Drawing No. 091.002.03.101.D, NORISYS 4 - 24DIO, Revision: D, Pages: 1

Drawing No. 091.002.03.401.D, NORISYS 4 - 24DIO, Revision: D, Pages: 1

Drawing No. 091.002.03.501.D, NORISYS 4 - 24DIO - Parts List, Revision: D, Pages: 1

Drawing No. 091.003.03.106.B, NORISYS 4 - UNIO 8PT100, Revision: B, Pages: 1

Drawing No. 091.003.03.109.B, NORISYS 4 - UNIO 4AI, Revision: B, Pages: 1

Drawing No. 091.003.03.110.B, NORISYS 4 - UNIO 8AI, Revision: B, Pages: 1

Drawing No. 091.003.03.111.B, NORISYS 4 - UNIO 4AO, Revision: B, Pages: 1

Drawing No. 091.003.03.112.B, NORISYS 4 - UNIO 8AO, Revision: B, Pages: 1

Drawing No. 091.003.03.113.B, NORISYS 4 - UNIO 4AI4AO, Revision: B, Pages: 1

Drawing No. 091.003.03.114.B, NORISYS 4 - UNIO 2AI2AO, Revision: B, Pages: 1

Drawing No. 091.003.03.115.B, NORISYS 4 - UNIO 6AI2AO, Revision: B, Pages: 1

Drawing No. 091.003.03.116.B, NORISYS 4 - UNIO 2AI6AO, Revision: B, Pages: 1

Drawing No. 091.003.03.506.B, NORISYS 4 - UNIO 8PT100 - Parts List, Revision: B, Pages: 1

Drawing No. 091.003.03.507.B, NORISYS 4 - UNIO 4AI - Parts List, Revision: B, Pages: 1

Drawing No. 091.003.03.508.B, NORISYS 4 - UNIO 8AI - Parts List, Revision: B, Pages: 1

Drawing No. 091.003.03.509.C, NORISYS 4 - UNIO 4AO - Parts List, Revision: C, Pages: 1

Drawing No. 091.003.03.510.C, NORISYS 4 - UNIO 8AO - Parts List, Revision: C, Pages: 1

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### Tier: 5 - Unit Certification Required

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Drawing No. 091.003.03.511.C, NORISYS 4 - UNIO 4AI4AO - Parts List, Revision: C, Pages: 1  
Drawing No. 091.003.03.512.B, NORISYS 4 - UNIO 2AI2AO - Parts List, Revision: B, Pages: 1  
Drawing No. 091.003.03.513.B, NORISYS 4 - UNIO 6AI2AO - Parts List, Revision: B, Pages: 1  
Drawing No. 091.003.03.514.C, NORISYS 4 - UNIO 2AI6AO - Parts List, Revision: C, Pages: 1  
Drawing No. 113863b01, NORISYS 4 - EMC CPU - TESEQ GmbH Germany Test Report No. D/11/3863/01 dated 19/DEC/2011, Revision: 01, Pages: 54  
Drawing No. 113863b02, NORISYS 4 - EMC UNIO - TESEQ GmbH Germany Test Report No. D/11/3863/02 dated 31/OCT/2011, Revision: 02, Pages: 61  
Drawing No. 113863b03, NORISYS 4 - EMC UNIO - TESEQ GmbH Germany Test Report No. D/11/3863/03 dated 31/OCT/2011, Revision: 03, Pages: 51  
Drawing No. 113863b04, NORISYS 4 - EMC 24DIO - TESEQ GmbH Germany Test Report No. D/11/3863/04 dated 29/NOV/2011, Revision: 04, Pages: 52  
Drawing No. 113863b08, NORISYS 4 - Overall System - TESEQ GmbH Germany Test Report No. D/11/3863/08 dated 05/NOV/2012, Revision: -, Pages: 27  
Drawing No. 134085b09, NORISYS 4 - 24DIO - TESEQ GmbH Germany Test Report No. D/13/4085/09 dated 22/NOV/2013, Revision: -, Pages: 35  
Drawing No. 134085b10, NORISYS 4 - CPU - TESEQ GmbH Germany Test Report No. D/13/4085/10 dated 22/NOV/2013, Revision: -, Pages: 35  
Drawing No. 134085b12, NORISYS 4 - CPU - TESEQ GmbH Germany Test Report No. D/13/4085/12 dated 22/MAY/2014, -, Revision: -, Pages: 15  
Drawing No. 194706b01, NORISYS 4 - UNIO 2AI6AO\_A2 - AMETEK CTS Europe GmbH Test Report No. D/19/4706/01 dated 18/JUN/2019, Revision: -, Pages: 49  
Drawing No. 204785b01, NORISYS 4 - 24DIO - AMETEK CTS Europe GmbH Test Report No. D/20/4785/01 dated 30/MAR/2021, Revision: -, Pages: 13  
Drawing No. 204785b02, NORISYS 4 - UNIO 8PT100 - AMETEK CTS Europe GmbH Test Report No. D/20/4785/02 dated 30/MAR/2021, -, Revision: -, Pages: 13  
Drawing No. 204785b03, NORISYS 4 - UNIO 2AI6AO - AMETEK CTS Europe GmbH Test Report No. D/20/4785/03 dated 30/MAR/2021, -, Revision: -, Pages: 20  
Drawing No. 204785b04, NORISYS 4 - UNIO 4AI4AO - AMETEK CTS Europe GmbH Test Report No. D/20/4785/04 dated 30/MAR/2021, -, Revision: -, Pages: 20  
Drawing No. 204791b03, NORISYS 4 - CPU - AMETEK CTS Europe GmbH Test Report No. D/20/4791/04 dated 28/JUL/2021, -, Revision: -, Pages: 15  
Drawing No. 3056096\_060, NORISYS 4 - TUV Rheinland Flammability Test Report dated 03/AUG/2012, Revision: 01, Pages: 6  
Drawing No. TTBMP12-001, NORISYS 4 - Climate Test Report dated 24/NOV/2012, Revision: 01, Pages: 40  
Drawing No. PB\_E5664\_A, NORISYS 4 - TUV Rheinland Vibration Test Report dated 13/DEC/2011, Revision: A, Pages: 20  
Drawing No. PB\_E5664\_B, NORISYS 4 - TUV Rheinland Vibration Test Report dated 13/DEC/2011, Revision: B, Pages: 16  
Drawing No. DE011904-1\_EN, BV ISO 9001:2015 Certificate issued 25/AUG/2021, Revision: -, Pages: 1  
Drawing No. ---, NORISYS 4 - Data Sheet dated 2010/AUG/27, Revision: 02, Pages: 2  
Drawing No. NAR-KD-0100-1-en\_V172, NORISYS 4 - PLC Platform Manual, Revision: 1.72, Pages: 112  
Drawing No. NAR-KD-0101-1-en\_V145, NORISYS 4 - Basic Software Routines Description, Revision: 1.45, Pages: 119  
Drawing No. NAR-KD-0101-2-en\_V140, NORISYS 4 - Functional Software Routines Description, Revision: 1.40, Pages: 603  
Drawing No. NAR-PB-0100-3-en\_V101, NORISYS 4 CPU - NORIS Automation GmbH Test Report dated 26/JAN/2012, Revision: 1.01, Pages: 97  
Drawing No. NAR-PB-0100-4-en\_V101, NORISYS 4 24DIO - NORIS Automation GmbH Test Report dated 24/JAN/2012, Revision: 1.01, Pages: 42  
Drawing No. NAR-PB-0100-5-en\_V101, NORISYS 4 UNIO-4AI4AO - NORIS Automation GmbH Test Report dated 24/JAN/2012, Revision: 1.01, Pages: 42  
Drawing No. NAR-PB-0100-6-en\_V101, NORISYS 4 UNIO-8PT100 - NORIS Automation GmbH Test Report dated 24/JAN/2012, Revision: 1.01, Pages: 42

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### Tier: 5 - Unit Certification Required

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Drawing No. NAR-PB-0100-8-en\_V101, NORISYS 4 UNIO 2AI6AO - NORIS Automation GmbH Test Report dated 09/MAY/2019, Revision: 1.01, Pages: 62

Drawing No. NAR-PB-0100-9-en\_V101, NORISYS 4 CPU UNIO 24DIO - NORIS Automation GmbH Test Report dated 01/SEP/2021, Revision: 1.01, Pages: 28

Drawing No. NAR-PD-0100-10-en\_V101, NORISYS 4 - Overview Suppliers, Revision: 1.01, Pages: 5

Drawing No. NAR-PD-0100-2-en\_V100, NORISYS 4 - Hardware Description, Revision: 1.00, Pages: 45

Drawing No. NAR-PD-0100-21-en\_V104, NORISYS 4 - Overview Approval - Renewal-ABS, Revision: 1.04, Pages: 2

Drawing No. NAR-PD-0100-4-en\_V104, NORISYS 4 - CPU Revision Outline, Revision: 1.04, Pages: 10

Drawing No. NAR-PD-0100-5-en\_V102, NORISYS 4 - 24DIO Revision Outline, Revision: 1.02, Pages: 7

Drawing No. NAR-PD-0100-52-en\_V102, NORISYS 4 - 24DIO Firmware Revision Outline, Revision: 1.02, Pages: 8

Drawing No. NAR-PD-0100-53-en\_V102, NORISYS 4 - UNIO Firmware Revision Outline, Revision: 1.02, Pages: 11

Drawing No. NAR-PD-0100-6-en\_V104, NORISYS 4 - UNIO Revision Outline, Revision: 1.04, Pages: 9

Drawing No. NAR-PD-0100-7-en\_V210, NORISYS 4 - 24DIO Firmware Description, Revision: 2.10, Pages: 611

Drawing No. NAR-PD-0100-8-en\_V210, NORISYS 4 - UNIO Firmware Description, Revision: 2.10, Pages: 611

Drawing No. NAR-PD-0110-1-en\_V103, NORISYS 4 - Firmware Element Extension-bus Description, Revision: 1.03, Pages: 70

Drawing No. Correspondence, Online PDA Application NORISYS 4, -, Revision: -, Pages: 4

Drawing No. Produkt-FMEA\_NORISYS 4 24DIO\_v006-gb, -, Revision: -, Pages: 5

Drawing No. Produkt-FMEA\_NORISYS 4 CPU\_v006-gb, -, Revision: -, Pages: 9

Drawing No. Produkt-FMEA\_NORISYS 4 UNIO\_v008-gb, -, Revision: -, Pages: 11

Drawing No. SMS.W.II./51611/02/C.0, NORIS Recognition for BV Mode II Scheme, Revision: -, Pages: 2

Drawing No. SAR108-a\_1A2, NORISYS 4 UNIO - SAR108-a Schematic, Revision: 1A2, Pages: 6

Drawing No. SAR108-a\_1A2\_BOM, NORISYS 4 UNIO - SAR108-a BOM Manufacturer, Revision: 1A2, Pages: 4

Drawing No. SAR40-d, NORISYS 4 UNIO - SAR40-d Schaltplan, Revision: d, Pages: 2

Drawing No. SAR41-d\_1A3, NORISYS 4 UNIO - SAR41-d Schematic, Revision: 1A3, Pages: 6

Drawing No. SAR41-d\_1A3\_BOM, NORISYS 4 UNIO - SAR41-d BOM Manufacturer, Revision: d, Pages: 5

Drawing No. SAR42-d, NORISYS 4 UNIO - SAR42-d Schaltplan, Revision: d, Pages: 4

Drawing No. SAR43-a, NORISYS 4 UNIO - SAR43-a Schaltplan, Revision: a, Pages: 10

Drawing No. SL40-d, NORISYS 4 UNIO - SL40-d Stuckliste-V104, Revision: d, Pages: 7

Drawing No. SL42-d, NORISYS 4 UNIO - SAR42-d Stuckliste-V109, Revision: d, Pages: 8

Drawing No. SL43-a, NORISYS 4 UNIO - SAR43-a Stuckliste-V103, Revision: a, Pages: 2

Drawing No. 81028622\_i06, NORISYS 4 24DIO - Schaltplan, Revision: 06, Pages: 2

Drawing No. 81028622\_i07, NORISYS 4 24DIO - Stuckliste, Revision: 07, Pages: 7

### Terms of Validity:

This Product Design Assessment (PDA) Certificate remains valid until 10/Jan/2028 or until the Rules and/or Standards used in the assessment are revised or until there is a design modification warranting design reassessment (whichever occurs first).

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### STANDARDS

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**Tier: 5 - Unit Certification Required**

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**ABS Rules:**

2022 Rules for Conditions of Classification: 1-1-4/7.7, 1-1-A3 and A4, which covers the following:

2022 Rules for Building and Classing Marine Vessel Rules 4-9-3/5.1.4, 4-9-3//5.1.5, 4-9-3/5.1.9, 4-9-9/3, 4-9-9/7, 4-9-9/13.1

**National:**

NA

**International:**

IACS UR E10, Rev. 7: 2018

**Government:**

NA

**EUMED:**

NA

**OTHERS:**

NA