



Marine & Offshore

Certificate number: 29149/C0 BV

File number: AP4369

Product code: 3925H

This certificate is not valid when presented without the full attached schedule composed of 7 sections

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TYPE APPROVAL CERTIFICATE

This certificate is issued to

NORIS Automation GmbH

Rostock - GERMANY

for the type of product

MISCELLANEOUS EQUIPMENT FOR SPEED MONITORING

Measuring converter NORISPEED FMN6-...

Requirements:

Bureau Veritas Rules for the Classification of Steel Ships

EC Code: 33B

This certificate is issued to attest that Bureau Veritas Marine & Offshore did undertake the relevant approval procedures for the product identified above which was found to comply with the relevant requirements mentioned above.

This certificate will expire on: 13 Jul 2028

For Bureau Veritas Marine & Offshore,

At BV HAMBURG, on 13 Jul 2023,

Dirk Hoepfner

This certificate was created electronically and is valid without signature



This certificate remains valid until the date stated above, unless cancelled or revoked, provided the conditions indicated in the subsequent page(s) are complied with and the product remains satisfactory in service. This certificate will not be valid if the applicant makes any changes or modifications to the approved product, which have not been notified to, and agreed in writing with Bureau Veritas Marine & Offshore. Should the specified regulations or standards be amended during the validity of this certificate, the product(s) is/are to be re-approved prior to it/they being placed on board vessels to which the amended regulations or standards apply. This certificate is issued within the scope of the General Conditions of Bureau Veritas Marine & Offshore available on the internet site www.veristar.com. Any Person not a party to the contract pursuant to which this document is delivered may not assert a claim against Bureau Veritas Marine & Offshore for any liability arising out of errors or omissions which may be contained in said document, or for errors of judgement, fault or negligence committed by personnel of the Society or of its Agents in establishment or issuance of this document, and in connection with any activities for which it may provide.

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BV Mod. Ad.E 530 June 2017

This certificate consists of 3 page(s)

THE SCHEDULE OF APPROVAL

1. PRODUCT DESCRIPTION:

The **NORISPEED FMN6-...** unit is a two channel frequency to voltage or current signal converter for speed measuring applications.

Main characteristics:

Power supply: 24V DC
 Input: 2x frequency input: 1...12000Hz
 Output: 2x analogue output: 0..20mA, 4..20mA, 0..5V, -5..5V, 0..10V, 2..10V, -10..10V, galvanic isolated
 6x relay output max. 30V DC/2A
 Degree of protection: IP40
 Firmware version: SAR33-g_V105
 Software version: 1.8.x (264)

2. DOCUMENTS AND DRAWINGS:

- NAR-PD-0105-1-en V 1.0 dated 28.09.2011; DB-FMN6-en V01.00 dated 08/2010
 - Drawings: 090.004.03.100 dated 18.04.2011; 090.004.03.200.A dated 18.04.2011; 090.004.03.201.B dated 01.06.2011;
 090.004.03.202.A dated 18.04.2011; 090.004.03.203.C dated 11.08.2011; 090.004.03.204.A dated 18.04.2011;
 090.004.03.205.A dated 18.04.2011; 090.004.03.400 dated 19.04.2011; 090.004.03.500 dated 18.04.2011
 - SAR33-G Rev. 244 dated 07.09.11
 For C0 version:
 - Manual NAR-KD-0105-1-en V.1.09 dated 13/11/2020
 - NAR-PD-0105-3-en V.2.0.0 dated 09/11/20; NAR-PD-0105-4-en V.1.05 dated 07/06/22
 - SL33-g V1.05 dated 29.02.2016

3. TEST REPORTS:

- NORIS Automation GmbH: NAR-PB-0105-1-en dated: 2012-02-29
 - TESEQ GmbH: D/11/3863/07 dated 2011-12-12
 - TÜV Rheinland: E 5.664 Part C dated Dec.13, 11; 3044390 030 dated 27.02.2012
 For C0 version:
 - AMETEK CTS: D/20/4791/02 dated 2021-07-28

4. APPLICATION/LIMITATION:

4.1 - Bureau Veritas Rules for the Classification of Steel Ships
 4.2 - Approval valid for ships intended to be granted with the following additional class notations: **AUT-UMS, AUT-CCS, AUT-PORT and AUT-IMS.**
 4.3 - Bureau veritas Environmental Category, **EC Code: 33B**
 4.4 - Equipment covered by this Type Approval certificate has been tested according to requirements of IACS UR E10 rev8.
 4.5 - In accordance with IACS UR E22 and as applicable to programmable devices for computer based systems of Category II or III, for each ship application:
 - Ship specific documentation is to be submitted including software documentation and categorization of the computer based system.
 - Inspection and testing before installation onboard is to be performed under the surveillance of the Society.
 4.6 - Safety functions are to be independent of control and monitoring functions.

5. PRODUCTION SURVEY REQUIREMENTS:

5.1 - The above mentioned products are to be supplied by **NORIS Automation GmbH** in compliance with the type described in this certificate.
 5.2 - This type of product is within the category HBV of Bureau Veritas Rule Note NR320 and as such does not require a BV product certificate.
 5.3 - **NORIS Automation GmbH** has to make the necessary arrangements to have its works recognised by Bureau Veritas in compliance with the requirements of NR320 for HBV products:

NORIS Automation GmbH
Friedrich-Barnewitz-Str. 10
18119 Rostock
GERMANY

6. MARKING OF PRODUCT:

- Maker's name or trademark.
- Equipment type or model identification.
- Date of manufacture and/or serial number.
- The title and version of each software element included in the installed software system shall be either marked or displayed on command on the equipment.

7. OTHERS:

7.1 - It is the responsibility of **NORIS Automation GmbH** to inform shipbuilders or their sub-contractors of the proper methods of fitting, use and general maintenance of the approved equipment and the conditions of this approval.

7.2 - This certificate supersedes the Type Approval Certificate N° 29149/B0 BV issued on 21 Jun 2018 by the Society.

***** END OF CERTIFICATE *****