



Marine & Offshore

Certificate number: 26599/C0 BV

File number: AP4254

Product code: 3812H

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

Nürnberg - GERMANY

for the type of product

TEMPERATURE SENSORS / PROBES / TRANSDUCERS

Temperature Sensors of type: TH31 and TP31

Requirements:

Bureau Veritas Rules for the Classification of Steel Ships

EC Code: 33

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 is a renewal of certificate N° 26599/B0 BV expiring on 07/12/2021

This certificate will expire on: 07 Dec 2026

For Bureau Veritas Marine & Offshore,

At BV HAMBURG, on 13 Oct 2021,

Dirk Hoepfner



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 2 page(s)

THE SCHEDULE OF APPROVAL

1. PRODUCT DESCRIPTION :

TH31 and TP31 series are NTC and PT100 resistance temperature sensors with thermowells.

Main characteristics:

Thermowell: MX2-xxx- : brass
 MX5-xxx- : stainless steel
 MX13- xxx- : Cu-Ni-Fe-alloy
 Length: 56 mm to 150 mm
 Sensor: TH31: NTC
 TP31: PT100
 Measuring range: TH31: 42 to 120°C
 TP31: 0 to 120°C
 Electrical connection: Terminals in the form of flat connectors
 Degree of protection: IP54

2. DOCUMENTS AND DRAWINGS :

- 60.206 E, revision o, dated 10.01.95
- T 523 E, Ed. V
- HG-TH31-2 II, revision e, dated 4.12.97

3. TEST REPORTS :

- Noris: Test Results: TP31, dated Oct. 88
- LGA: Untersuchungsbericht Nr.: 477 1245, dated 16.12.1997

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: 33**
- 4.4 - The installation shall comply with the Manufacturer's recommendation described in the above-referenced documentation.

5. PRODUCTION SURVEY REQUIREMENTS :

- 5.1 - The **TH31, TP31** 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
Muggenhofer Straße 95
90429 Nürnberg
GERMANY

6. MARKING OF PRODUCT :

- Maker's name or trademark
- Date of manufacture and/or serial number
- Equipment type or model identification under which it was type tested.

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° 26599/B0 BV issued on 07 Dec 2016 by the Society.

*** END OF CERTIFICATE ***