Marine & Offshore

Certificate number: 07854/D0 BV
File number: AP 624
Product code: 3812H

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

www.veristar.com

TYPE APPROVAL CERTIFICATE

This certificate is issued to

NORIS AUTOMATION GmbH

Nürnberg - GERMANY

for the type of product

TEMPERATURE SENSORS / PROBES / TRANSDUCERS

Type: TP 43-2, 43-3, 43-5

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 will expire on: 01 Dec 2022

For Bureau Veritas Marine & Offshore,
At BV HAMBURG, on 01 Dec 2017,
Dirk Hoepfner

BUREAU VERITAS SURVEYORS AT PARIS 1828 HAMBURG INTERNATIONAL REGISTER

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.

THE SCHEDULE OF APPROVAL

1. PRODUCT DESCRIPTION:
The **TP 43-...** series are resistance temperature sensors with screw fitting or protection tube.

Type	Sensor	Length [mm]	Screw fitting
TP 43-2...	1 x PT 100, (4-wire), 0-200°C	50, 100, 150, 200, 250	VS37-...
			Protection tube
TP 43-3...	1 x PT 100, (4-wire), 0-200°C	50, 100, 150, 200, 250	M X8-...-...E
TP 43-5...	1 x PT 100, (4-wire), 0-200°C	50, 75, 100, 150, 200, 275, 300	MX4/3-...-...
2TP 43-5...	2 x PT 100, (4-wire), 0-200°C	50, 75, 100, 150, 200, 275, 300	MX4/3-...-...

2. DOCUMENTS AND DRAWINGS:
– 60.242.1E Rev. b dated 14.11.94, 60.242.2E Rev. i dated 22.04.98, 60.224.6 Rev. c dated 4.12.89
- 60.242.04E dated 16.04.94, MX8-1 dated: 15.04.94.

3. TEST REPORTS:
- **RMS**: 03.03/95 dated 13.März 1995.
- **LGA:** 477 1245 dated 16.Dezember 1997

4. APPLICATION / LIMITATION:
4.1 - Bureau Veritas Rules and Regulations 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**

5. PRODUCTION SURVEY REQUIREMENTS:
5.1 - The sensors 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 Nuremberg
Germany

6. MARKING OF PRODUCT:
- Maker's name or tradename.
- Date of manufacture and/or serial number.
- Equipment type or model identification.

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° 07854/C0 BV issued on 29 Oct 2012 by the Society.

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