



Confirmation of Product Type Approval

Company Name: KONGSBERG MARITIME AS, TRONDHEIM

Address: SKONNERTVEGEN 17053 RANHEIMP.O. BOX 2434 7005 Norway

Product: Temperature Transmitter

Model(s): MB / MN Series

Endorsements:

| Certificate Type | Certificate Number | Issue Date | Expiry Date |
|---------------------------------|---------------------------|-------------------|--------------------|
| Product Design Assessment (PDA) | 20-2066252-PDA | 29-DEC-2020 | 28-DEC-2025 |
| Manufacturing Assessment (MA) | 20-4414541 | 27-AUG-2020 | 26-AUG-2025 |
| Product Quality Assurance (PQA) | NA | NA | NA |

Tier

3 - Type Approved, unit certification not required

Intended Service

Marine and Offshore applications - For Use on ABS ABCU, ACC and ACCU Classed Vessels.

Description

Temperature sensors with resistance elements (PT100 or PT1000), thermocouples (NiCr-NiAl) and thermistors.

Ratings

Refer to manufacturer's details as per data sheet attached.

Service Restrictions

1. Unit Certification is not required for this product.
2. 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

1. The Manufacturer has provided a declaration about the control of, or the lack of Asbestos in this product.
2. The Power supply variations (Test no. 1), the High voltage (Test no. 8), the Electrostatic discharge (Test no. 11), the Electromagnetic field (Test no. 12), the Conducted Low Frequency (Test no. 13), the Conducted Radio Frequency (Test no. 14), the Electrical Fast Transients/Burst (Test no. 15), the Surge (Test no. 16), the Radiated Emission (Test no. 17) and the Conducted Emission (Test no. 18) tests per

2020 Marine Vessel Rules 4-9-9/15.7 Table 1 have not been performed on the subject temperature sensors as they are constructed with no electronics, but only resistance elements (PT100 or PT1000), thermocouples (NiCr-NiAl) and thermistors.

Notes, Drawings and Documentation

Drawing No. Declaration 1, Declaration of Conformity 03.12.2020, Revision: 1, dated Dec-2020

Drawing No. Manual, Temperature Sensors standard type, Revision: 1, dated Jul-2008

Drawing No. Material Declarations, 349551B Temp. Sensors, Revision: 1, dated Apr-2014

Drawing No. Test report Nemko, E-10123.01, Revision: 1, dated Apr-2013

Drawing No. Test report Nemko 1, Test report E10179.00, Revision: 1, dated Oct-2010

Drawing No. Environment testing, Table Environment testing, Revision: 1

Term of Validity

This Product Design Assessment (PDA) Certificate remains valid until 28/Dec/2025 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.

ABS Rules

2020 Rules for Conditions of Classification, Part 1: 1-1-4/7.7, 1-1-A3, 1-1-A4

2020 Marine Vessel Rules: 4-8-3/1.7, 4-8-3/1.17.1, 4-9-9/13.1, 4-9-9/15.7 Table 1

International Standards

IACS UR E10: Rev. 7: 2018

EU-MED Standards

NA

National Standards

NA

Government Standards

NA

Other Standards

NA





Corporate ABS Programs
American Bureau of Shipping
Print Date and Time: 31-Dec-2020 10:31

ABS has used due diligence in the preparation of this certificate, and it represents the information on the product in the ABS Records as of the date and time the certificate is printed.

If the Rules and/or standards used in the PDA evaluation are revised or if there is a design modification (whichever occurs first), a PDA revalidation may be necessary.

The continued validity of the MA is dependent on completion of satisfactory audits as required by the ABS Rules. The validity of both PDA and MA entitles the product to receive a **Confirmation of Product Type Approval**.

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 prior to the effective date of the ABS Rules and standards applied at the time of PDA issuance. ABS makes no representations regarding Type Approval of the Product for use on vessels, MODUs or facilities built after the date of the ABS Rules used for this evaluation.

Type Approval requires Drawing Assessment, Prototype Testing and assessment of the manufacturer's quality assurance and quality control arrangements. The manufacturer is responsible to maintain compliance with all specifications applicable to the product design assessment. Unless specifically indicated in the description of the product, certification under type approval does not waive requirements for witnessed inspection or additional survey for product use on a vessel, MODU or facility intended to be ABS classed or that is presently in class with ABS.

Due to wide variety of specifications used in the products ABS has evaluated for Type Approval, it is part of our contract that; whether the standard is an ABS Rule or a non-ABS Rule, the Client has full responsibility for continued compliance with the standard.

Questions regarding the validity of ABS Rules or the need for supplemental testing or inspection of such products should, in all cases, be addressed to ABS.