



Marine & Offshore

Certificate number: 60909/A0 BV

File number: MPA2000243

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

Kongsberg Maritime AS

Ranheim - NORWAY

for the type of product

TEMPERATURE SENSORS / PROBES / TRANSDUCERS

Sentry GB-300

Wireless temperature monitoring system

Requirements:

Bureau Veritas Rules for the Classification of Steel Ships

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: 06 Mar 2025

For Bureau Veritas Marine & Offshore,

At BV OSLO, on 06 Mar 2020,

Rune MARSTEIN

Rune Marstein



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 :

Wireless temperature monitoring of crank pin / crosshead bearings temperatures in diesel engines and other rotating machines.

description	type
Signal processing unit	GBP300/A (1) or B(2)
Stationary antenna with coax cable	GBS---
Wireless temperature sensor	GBW---

1) unit with CAN and RS 485 MODBUS

2) unit with CAN, RS 485 MODBUS and 4-20 mA

The Sentry GB-300 has one microcontroller requiring bootloader and main software installation

Software	Software reference	Software version	Date
GB300 bootloader	P1GB300-BOOT	1.0.3	20180820
GB300 main software	P1GB300	1.2.1	20190618
KM-CT sensor program for GBW---	KM-CT sensor	5.2.0.3	20180820

2. DOCUMENTS AND DRAWINGS :

User manual GB-300 P-GB300_FE_A

User manual KM-CT sensor GB-200/GB-300 P-kmctgb200-FE-G

Product Sheet P-GB300_CE - GB-300

GB-300 Block Diagram 442138A Visio-GB-300_BlockDiagram

3. TEST REPORTS :

Nemko E18061.00 dated 20180425

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

4.4 - The equipment fulfils the EMC requirements for installation in General Power Distribution Zones.

4.5 - This equipment is assigned as Category I and can be used for monitoring functions or for informational tasks only.

5. PRODUCTION SURVEY REQUIREMENTS :

5.1 - The above products are to be supplied by **Kongsberg Maritime AS** 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 - **Kongsberg Maritime AS** has to make the necessary arrangements to have its works recognised by Bureau Veritas in compliance with the requirements of NR320 for HBV products

5.4 - **Kongsberg Maritime AS** has declared to Bureau Veritas the following production site(s):

Kongsberg Maritime AS
Skonnertvegen 1
N-7053 Ranheim
NORWAY

6. MARKING OF PRODUCT :

- Trade name.

- Date of manufacture and serial number.

- Equipment type number or model identification under which it was type-tested.

7. OTHERS :

7.1 - It is **Kongsberg Maritime AS** responsibility 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.

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