



## Confirmation of Product Type Approval

**Company Name:** KONGSBERG MARITIME AS, TRONDHEIM

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

**Product:** Wireless Temperature Monitoring System

**Model(s):** Sentry GB-300 and GB-300 Ex

**Endorsements:**

<b>Certificate Type</b>	<b>Certificate Number</b>	<b>Issue Date</b>	<b>Expiry Date</b>
Product Design Assessment (PDA)	25-0085279-PDA	13-FEB-2025	12-FEB-2030
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**

Temperature Monitoring in diesel engine crank pin/crosshead bearing and other rotating machinery for use on board Ship and Offshore installations.

**Description**

The SENTRY GB-300 temperature monitoring system comprises wireless temperature sensors.

The wireless temperature sensors are radar based passive devices without the need of an external power source.

A low energy and high frequency radar pulse is transmitted from the SPU to a SENTRY GBW series wireless sensor, via a SENTRY GBS series Stationary Antenna.

When the sensor passes the antenna, a radar pulse is transmitted to the sensor and reflected back to the SPU. The shape and characteristics of the reflected pulse determines the temperature of the sensor.

For Ex type, the SPU is used for Ex Zone 1 and 2 classified hazardous areas, and the Wireless Temperature Sensor and the Stationary Antenna are regarded as simple apparatus.

**Ratings**

SIGNAL PROCESSING UNIT:

Power Supply: 24 VDC18 to 32 VDC

Number of input Channels: 10 and 16

Number of Output Channels: 16 Max

Output Range: 0-160°C

Material Housing: Aluminum alloy

Protection ratings: IP66

SIGNAL PROCESSING UNIT\_Ex type:

Power Supply: 24 VDC18 to 32 VDC

Number of input Channels: 10, 16, and 20

Number of Output Channels: 10, 16, and 20

Output Range: 0-160°C

Material Housing: Aluminum alloy

Protection ratings: IP66

Ex certification zone 1: Ex db [ia Ga] IIC T6 Gb, -20 °C#Ta#60 °C

Ex certification zone 2: Ex nA [ia Ga] IIC T5 Gc, -25°C#Ta#85 °C

Ex nA [ia Ga] IIC T5 Gc, -40°C#Ta#85 °C

WIRELESS TEMPERATURE SENSOR:

Maximum temperature sensor tip: 200 °C

Maximum temperature sensor head: 130 °C (Grivory)

Protection: IP67

Material antenna body: AISI316

Sealing Material: Epoxy

WIRELESS TEMPERATURE SENSOR\_Ex type:

Maximum temperature sensor tip: 200 °C

Maximum temperature sensor head: 130 °C (Grivory)

Protection: IP67

Material antenna body: AISI304/316

Ex version GBW3--/--: Simple Apparatus

Temperature Class: T4, Ta = 130 °C

STATIONARY ANTENNA

Maximum ambient temperature: 130°C

Protection: IP67

Material antenna body: AISI316

STATIONARY ANTENNA\_Ex type:

Maximum ambient temperature: 130°C

Protection: IP67

Material antenna body: AISI304

Ex version GBS150/: Simple Apparatus

Temperature Class: T4, Ta = 130 °C

### **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. Application and use are to be in accordance with the manufacturer's instructions.
2. The Manufacturer has provided a declaration about the control of, or the lack of Asbestos in this product.

### **Notes, Drawings and Documentation**

Drawing No. 441782, SW revision GB-300, Revision: C

Drawing No. 442076, SDoC GB-300, Revision:-

Drawing No. 442138, GB-300 Block Diagram, Revision: B

Drawing No. 448163, Type Approval test procedure DNV-GL signed, Revision: A

Drawing No. 447662, Instructions for GBP300 specific to hazardous area installations, Revision: D

Drawing No. GB-1233, Safety control drawing GBP300 Instruction for using GBP300 in Hazardous area, Revision: C

Drawing No. GB-1233, SENTRY Wireless Temp. Monitoring GBP300, SPU ORDER KEY Layout Drawing, Revision: F

Drawing No. E-2779, Comm. Setting Labels for GBP300, Revision: C

Drawing No. E-2780, Name Label GBP300, Revision: A

Drawing No. E-2782, Name Label GBP300 for Ex Type, Revision: G

Drawing No. KM-CT GB-200/GB-300 FE, User Manual KM-CT GB-200/GB-300, Revision: H

Drawing No. P-GB300 CE-GB-300, GB-300 Product sheet, Revision:-

Drawing No. P-GB300\_Ex\_CE-GB-300, GB-300 Product sheet, Revision:A

Drawing No. P-GB300 FE, User Manual GB-300, Revision: D

Drawing No. TA Cert DNV, For information TA GB-300 from DNV-GL, Revision: -,

Drawing No. E16275.01, Nemko Test Report GB-200 E16275.01, Revision:01, Issue Date: 09/Jan/2017

Drawing No. E18061.00, Nemko Test Report GB-300 E18061.00, Revision 00, Issue Date: 25/Apr/2018

Drawing Nos. IECEx PRE 18.0086X / Presafe 18 ATEX 13741X, / Explosion-proof Certificate for Zone 1 SPU version

Drawing Nos. IECEx PRE 18.0087X / Presafe 18 ATEX 13742X, / Explosion-proof Certificate for Zone 2 SPU version

**Term of Validity**

This Product Design Assessment (PDA) Certificate remains valid until 12/Feb/2030 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**

2025 Marine Vessels Rules 1-1-4/7.7, 1-1-A3, 1-1-A4, 4-8-3/1.11, 4-8-4/27.5.1, 4-9-2/7 and 4-9-9/13

2025 Offshore Units Rules 1-1-4/9.7, 1-1-A2, 1-1-A3, 4-3-1/15, 4-3-3/9.1.2

2025 Facilities on Offshore Installations 1-1-4/9.7, 1-1-A2, 1-1-A3, 3-6/5.1, 3-6/Table 1A and 1B

**International Standards**

IACS UR E10 Rev.9

**EU-MED Standards**

NA

**National Standards**

IEC/EN 60945:2002

EN-60068-2-2: 2007

EN 60068-2-1: 2007

EN 60068-2-6: 2008

EN 60068-2-30: 2005

**Government Standards**

NA

**Other Standards**

NA





Corporate ABS Programs  
American Bureau of Shipping  
Print Date and Time: 13-Feb-2025 5:19

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.