Certificate No: LR2008206TA
Issue Date: 29/10/2020
Expiry Date: 28/10/2025

Type Approval Certificate

This is to certify that the undernoted product(s) has/have been tested with satisfactory results in accordance with the relevant requirements of the Lloyd's Register Type Approval System.

Manufacturer	**Kongsberg Maritime AS**
Address	Skonnertvegen 1, 7053 Ranheim, Norway
Place of Production	Kongsberg Maritime AS Skonnertvegen 1, 7053 Ranheim, Norway
Type	Transmitters/Transducers
Description	SENTRY GB-300 Wireless temperature monitoring Temperature monitoring of crank pin/crosshead bearings in diesel engines and other rotating machinery. SENTRY SPU GBP300 Signal Processing Unit SENTRY GBS100/... Stationary Antenna SENTRY GBS150/... Stationary Antenna (Ex version, defined as simple apparatus) SENTRY GBW1xx/... Wireless Temperature Sensor SENTRY GBW3xx/... Wireless Temperature Sensor (Ex version, defined as simple apparatus) For detailed product description, pls. refer to appendix
Trade Name	SENTRY GB-300
Application	Marine, offshore and industrial applications for use in environmental categories ENV1, ENV2, ENV3 and ENV4 as defined in Lloyd's Register's Type

Thorsten Wolff

Senior Specialist to Lloyd's Register EMEA
A member of the Lloyd's Register group

71 Fenchurch Street, London, EC3M 4BS, United Kingdom

Type Approval Certificate

Approval System, Test Specification Number 1 – 2019.

Specified Standard Manufacturer's specification

Ratings

Overall system specifications:
Measuring range: 0 °C to 160 °C
Ambient operating temperature: -25 °C to 85 °C
Enclosure protection: IP66 (SPU) / IP67 (sensor & antenna)

Signal processing unit:
Nominated power supply: 24 VDC
Communication output: CANBUS, RS485 Modbus, 4 to 20 mA
No. of output channels: 16
No. of input channels: 10 and 16
Alarm output: 3, max. 150 mA/24 VDC, (high, high high, fault)
Marking: Ex db [ia Ga] IIC T6 Gb -20°C ≤ Ta ≤ +60°C
Marking: Ex nA [iaGa] IIC T5 Gc -25°C ≤ Ta ≤ +85°C
Maximum safe voltage Um: 250 VAC

Software versions (installed on SPU):
Bootloader software: P1GB300-BOOT, Version 1.2.x
Main software: P1GB300, Version 1.2.x

Configuration software tool:
KM-CT Sensor Version 5.2.0.x
(x = minor changes, not affecting LR Rules requirements)

Additional Tests

Hot immersion test: 80 °C / 48 h (Antenna)
Dry Heat Test: +85 °C / 16 h (SPU)
+90 °C / 16 h (Antenna & Sensor)
Low Temperature Test: -25 °C / 16 h (SPU)
0 °C / 16 h (Antenna & Sensor)

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Other Conditions Special conditions for Safe Use as stated in applicable Ex-certificates and the conditions of the LR Rules and Regulations of Classification of Ships Part 6, Chapter 2 shall be observed when installed in hazardous areas. The Ex-certification does not form part of this certificate.

This certificate is not valid for equipment, the design, ratings or operating parameters of which have been varied from the specimen tested. The manufacturer should notify Lloyd's Register EMEA of any modification or changes to the equipment in order to obtain a valid Certificate.

The Design Appraisal Document No. HTS/ETS 40292-20/MK/TW and its supplementary Type Approval Terms and Conditions form part of this Certificate.

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Appendix

DESCRIPTION

SENTRY GB-300 Wireless temperature monitoring consisting of:

- Signal Processing Unit:
  SENTRY SPU GBP300
- Stationary Antenna (non-Ex version):
  SENTRY GBS100/...
- Stationary Antenna (Ex version, defined as simple apparatus):
  SENTRY GBS150/...
- Wireless Temperature Sensor (non-Ex version):
  SENTRY GBW100/....
  SENTRY GBW104/...
  SENTRY GBW105/...
  SENTRY GBW106/...
  SENTRY GBW107/...
  SENTRY GBW110/...
  SENTRY GBW112/...
  SENTRY GBW116/...
  SENTRY GBW122/...
  SENTRY GBW138/...
  SENTRY GBW150/...
  SENTRY GBW180/...
- Wireless Temperature Sensor (Ex version, defined as simple apparatus):
  SENTRY GBW300/...
  SENTRY GBW305/...
  SENTRY GBW315/...
  SENTRY GBW317/...
  SENTRY GBW324/...
  SENTRY GBW325/...
  SENTRY GBW327/...
  SENTRY GBW328/...
  SENTRY GBW338/...
  SENTRY GBW342/...
  SENTRY GBW345/...
  SENTRY GBW346/...
  SENTRY GBW347/...
  SENTRY GBW348/...
  SENTRY GBW350/...
  SENTRY GBW351/...
  SENTRY GBW352/...
  SENTRY GBW353/...
  SENTRY GBW354/...
  SENTRY GBW355/...

SENTRY GBW360/...

All type designation may be followed by suffix such as length of coaxial cable or size of housing.