

[1] EC-TYPE EXAMINATION CERTIFICATE

**[2] Equipment or Protected System Intended for use
in Potentially explosive atmospheres
Directive 94/9/EC**

[3] EC-Type Examination Certificate Number: Nemko 08ATEX1414 Issue 3

[4] Equipment or Protective System: Temperature Monitoring System

[5] Applicant: Kongsberg Maritime AS

[6] Address: Haakon VII's gate 4

N-7005 Trondheim

Norway

[7] This equipment or protective system and any acceptable variation thereto are specified in the schedule to this certificate and the documents therein referred to.

[8] Nemko AS, notified body number 0470 in accordance with Article 9 of Council Directive 94/9/EC of 23 March 1994, certifies that this equipment or protective system has been found to comply with the Essential Health and Safety requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in confidential report no. D0000969-00

[9] Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

CENELEC EN 60079-0: 2012 & EN 60079-1 : 2007 & EN 60079-11: 2012

[10] If the sign "X" is placed after the certificate number, it indicates that the equipment or protective system is subject to special conditions for safe use specified in the schedule to this certificate.

[11] This EC-TYPE EXAMINATION CERTIFICATE relates only to the design, examination and tests of the specified equipment or protective system in accordance to the directive 94/9/EC. Further requirements of the Directive apply to the manufacturing process and supply of this equipment or protective system. These are not covered by this certificate.

[12] The marking of the equipment or protective system shall include the following :



II 2/1 G

Ex d ia IIC T5 Gb Ga -20°C ≤ Ta ≤ +60°C

Oslo, 2014-07-18



**Asle Kaastad
Certification Manager**

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[13] Schedule

[14] EC-TYPE EXAMINATION CERTIFICATE No Nemko 03ATEX1414 Issue 3

[15] Description of Equipment or Protective System

The system is a wireless temperature monitoring system comprising Signal processing unit (SPU) GBP-200/----Y and stationary antenna GBS and wireless sensors GBW. This certificate covers the SPU GBP-200/----Y and antenna GBS-1 series. The wireless sensor GBW series are not covered by this certificate as manufacturer is declaring the wireless sensors as simple apparatus.

GBP-200/----Y is recognized as Y-version of Signal processing unit GBP-200. Other codes '----' in marking denote variants which affect no safety concern.

Manufacturer used a separately certified Ex d cabinet to enclose their designed internal electronics which provide intrinsic safe outputs (antenna).

The enclosure has to be completed with appropriately certified cable glands for the field cable entries and closing devices for unused entries, of type "Ex d IIC".

Type Designation

Sentry SPU – GBP200/----Y (with EPL d Gb for use in Ex hazardous zone 1)

Antenna GBS-1 series (with EPL ia Ga for use in Ex hazardous zone 0)

Data

Power supply 18-32Vdc. Pi: 17W

Maximum safe voltage Um: 250V

Max RF output 100mW , mean RF power 140 μ W, 856MHz

[16] Report No. D0000969-00

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Descriptive Documents

Name/Title	Drawing No.	Rev	Date	Sheets
Electronics				
Schematic Drawings GBX-2	GB-1062	F	03.01.2012	6
PCB Layout Drawings GBX-2	7212-435	4	03.01.2012	4
Bill of Materials GBX-2	GBX-2 BOM	F	03.01.2012	3
PCB Specification GBX-2	GBX-2 PCB Spec	A	03.01.2012	1
Schematic Drawings GBA-200	GB-1065	C	02.09.2009	16
PCB Layout Drawings GBA-200	7212-433	2	11.11.2008	9
Bill of Materials GBA-200	GBA-200 BOM	E	27.06.2013	6
PCB Specification GBA-200	GBA-200_PCB Spec	B	18.07.2012	2
Schematic Drawings GBK-2	GB-1066	B	14.10.2008	3
PCB Layout Drawings GBK-2	7212-451	3	14.10.2008	4
Bill of Materials GBK-2	GBK-2 BOM	C	23.02.2012	2
PCB Specification GBK-2	GBK-2_PCB Spec	A	15.11.2010	1
Schematic Drawings GBF-1	GB-1061	B	20.01.2009	6
PCB Layout Drawings GBF-1	7212-453	1	21.01.2009	3
Bill of Materials GBF-1	GBF-1 BOM	B	21.01.2009	1
PCB Specification GBF-1	GBF-1_PCB Spec	1	21.01.2009	1
Schematic Drawings GBE-200	GB-1069	D	01.12.2012	3
PCB Layout Drawings GBE-200	7212-438.0002	2	01.12.2012	4
Bill of Materials GBE-200	GBE-200_BOM	D	01.12.2012	1
PCB Specification GBE-200	GBE-200_PCB Spec	B	25.01.2013	1
Schematic Drawings GBS-1	3.02.0005.2.00	2	07.10.2000	1
PCB Layout Drawings GBS-1	7212-372.0070	1	03.12.2001	1
Bill of Materials GBS-1	GBS-1_BOM	B	12.06.2014	1
PCB Specification GBS-1	7212-372.900	B	12.06.2014	1
Enclosure				
GBP200/BK 16SY Ex d IIC enclosure Assembly drawing	GB-1126	D	17.07.2014	1
Miscellaneous				
Name label for GBP200/-----X and GBP200/-----Y	E-2685	J	07.07.2014	1
Order key for GBP200	GB-1064	D	10.08.2011	1
Safety Control drawing	GB-1123	F	07.07.2014	1
Instructions for using GBP200 in hazardous area	338028	E	08.07.2014	2
Ex marking of stationary antenna GBS-1-series	GB-427	E	08.07.2014	1
Framework drawing GBS	395527	A	10.07.2014	1
Dimentional drawing GBS	GB-140	L	10.07.2014	1

[17] Routine Test

None

Special Conditions for Safe Use

None

[18] Essential Health and Safety Requirements

See item 9

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Certificate History and Associated Nemko Reports

Issue	Date	Report	Description
—	—	—	Certificate 03ATEX016X *)
0	2003-04-11	200244128	Main test report. Complied with requirements of the standards EN 50014: 1997 + A1: 1999 + A2: 1999, EN 50020: 1994 and EN 50284: 1999 & EN 50281-1-1.
—	2004-10-29	24943	Supplement 1. Alternative types of antenna and sensor.
—	2005-05-03	29881	Supplement 2. Alternative plastic material for the lid of antenna
—	2008-02-19	102270	Supplement 3 Fuse F1 changed from 250mA to 315mA type. D16, D17 and D18 replaced by new type, BT151 from NXP semiconductors.
—	2009-02-17	102818	Supplement 4 Included model GB-200.
—	2010-11-17	133909	Supplement 5 Various technical and documentation changes. No influence on safety issues.
—	2012-05-30	207575	Supplement 6 Reduced maximum ambient from 85°C to 70°C for Signal processing unit GBP-200. No influence on safety issues.
—	—	—	Certificate 08ATEX1414
0	2009-03-02	102818	Main test report which includes model GB-200. Complied with requirements of the standards EN 50014: 1997 + A1: 1999 + A2: 1999, EN 50020: 1994 and EN 50284: 1999 & EN 50281-1-1.
—	2010-05-23	141666	Supplement 1. Changes of documentation.
—	2012-05-25	204313	Supplement 2. Changes of documentation.
3	2014-07-10	D0000969-00 (Nemko-44739)	- Update to requirements of the standards: EN 60079-0: 2012 6 th Ed. (IEC 60079-0: 2011) EN 60079-1: 2007 6 th Ed. (IEC 60079-1: 2007) EN 60079-11: 2012 6 th Ed. (IEC 60079-11: 2011) - Exclude sensors from the certification since manufacturer request to declare sensor as simple apparatus - Move assessments of intrinsic safe parts which are covered by certificate 03ATEX016X into this investigation, certificate 08ATEX1414 Issue 3. (Reference to certificate 03ATEX016X is removed) *)
Supplementary information: *) Certificate 08ATEX1414 was previously tied up to intrinsic safe electronics which is covered by certificate 03ATEX016X. Due to manufacturer's request of future cancelling of certificate 03ATEX016X, the investigation associated to certificate 03ATEX016X is moved into this update of 08ATEX1414.			

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