



IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification Scheme for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.: issue No.:

Status:

Date of Issue: **2012-08-28** Page 1 of 3

Applicant: **Kongsberg Maritime AS**
Haakon VII's gt. 4
N-7005 Trondheim
Norway

Electrical Apparatus: **Level Gauging Radar Sensor**
Optional accessory:

Type of Protection: **Intrinsic Safety**

Marking: **Ex ia IIC T4**

Approved for issue on behalf of the IECEx
Certification Body:

Asle Kaastad

Position:

Certification Manager, Ex-products

Signature:
(for printed version)

Asle Kaastad

Date:

2012-08-28

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting the [Official IECEx Website](http://www.iecex.com).

Certificate issued by:

NEMKO
Gaustadalleen 30
Oslo N-0314
Norway





IECEX Certificate of Conformity

Certificate No.: IECEx NEM 12.0009X

Date of Issue: 2012-08-28

Issue No.: 0

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Manufacturer: **Kongsberg Maritime AS**
Haakon VII's gt. 4
N-7005 Trondheim
Norway

Manufacturing location(s):

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended.

STANDARDS:

The electrical apparatus and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards:

IEC 60079-0 : 2007-10 Explosive atmospheres - Part 0: Equipment - General requirements
Edition: 5

IEC 60079-11 : 2006 Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
Edition: 5

*This Certificate **does not** indicate compliance with electrical safety and performance requirements other than those expressly included in the Standards listed above.*

TEST & ASSESSMENT REPORTS:

A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in

Test Report:

NO/NEM/ExTR12.0012/00

Quality Assessment Report:

NO/NEM/QAR12.0004/00



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Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

The type GLA-120/- Level Gauging Radar Sensor comprises an electronic unit GLB-122 which have 10 or 24 GHz microwave unit, depending on the application. Communication with safety compatible central equipment is analogue over four twisted pairs of wire. Antenna unit enclosed in a stainless steel enclosure AISI 316. The unit is connected to intrinsically safe power supply and signal circuits as advised in this certificate. The GLA-120 is intended for use in ships. Type designation: GLA-120/- The symbol "/-" is the version of the parabolic antenna GLA-120/P

Safety Data:

Power supply, terminals 1 and 2	
Maximum input voltage	U_i : 15,6 V
Maximum input current	I_i : 397 mA
Maximum input power	P_i : 2,5 W
Maximum internal capacitance	C_i : 347 nF
Maximum internal inductance	L_i : Negligible
Signal supply, terminals 3,4,5,6, 7, 8	
Maximum input voltage	U_i : 15,6 V
Maximum input current	I_i : 12 mA
Maximum internal capacitance	C_i : Negligible
Maximum internal inductance	L_i : Negligible

The input circuits shall be connected to intrinsically safe output circuits with data corresponding to the listed input data of the GLA-120.

The power supply connected to terminals 1 and 2 may have resistive trapezoid output characteristic.

CONDITIONS OF CERTIFICATION: YES as shown below:

- The allowed ambient temperature range of the apparatus is $-40^{\circ}\text{C} \geq T_a \geq +85^{\circ}\text{C}$
- The intrinsically safe electrical circuit of the GLA120 is connected to the earthed metal enclosure and does not comply with clause 6.3.12 in IEC 60079-11. Special precautions shall be considered in order to avoid the possibility of different earth potential at the sensor location and the earth connection of the supply barrier.
- The GLA-120 may be used for connection to the associated apparatus GLK-100, IECEx certificate no. IECEx NEM 12.0011X

GLK-100 Power Supply, Terminals X81:2-1

Maximum output voltage	$U_o=15,6$ V	
Maximum output current	$I_o=397$ mA	
Maximum output power	$P_o=2,1$ W	
Maximum external capacitance	IIC: $C_o=497$ nF	IIB: $C_o=3$ mF
Maximum external inductance	IIC: $L_o=40$ mH	IIB: $L_o=160$ mH
Maximum ratio L_o/R_o	IIC: $L_o/R_o=17$ mH/W	IIB: $L_o/R_o=68$ mH/W