IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification System for Explosive Atmospheres

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

Certificate No.: **IECEx SIR 14.0024X**

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Certificate history:

Issue 3 (2021-12-09)
Issue 2 (2020-09-10)
Issue 1 (2017-08-03)
Issue 0 (2015-01-15)

Status: **Current**

Issue No: 4

Date of Issue: 2025-09-04

Applicant: **Kongsberg Maritime AS**
Skonnertvegen 1
7053 Ranheim
Norway

Equipment: **Cargo Temperature Unit, models GC-300 and GC-306**

Optional accessory:

Type of Protection: **Intrinsic Safety "ia"**

Marking: Ex ia IIC T4 Ga
Ta = -45°C to +85°C

Approved for issue on behalf of the IECEx Certification Body: **Michelle Halliwell**

Position: **Senior Director of Operations**

Signature:
(for printed version)

Date:
(for printed version)

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 www.iecex.com or use of this QR Code.

Certificate issued by:

CSA Group Testing UK Ltd
Unit 6, Hawarden Industrial Park
Hawarden, Deeside CH5 3US
United Kingdom

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Date of issue: 2025-09-04 Issue No: 4

Manufacturer: **Kongsberg Maritime AS**
Skonnertvegen 1
7053 Ranheim
Norway

Manufacturing locations: **Kongsberg Maritime AS**
Skonnertvegen 1
7053 Ranheim
Norway

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 equipment 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 60079-0:2017 Explosive atmospheres - Part 0: Equipment - General requirements
Edition:7.0

IEC 60079-11:2023 Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
Edition:7.0

This Certificate **does not** indicate compliance with 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 Reports:

GB/CSAE/ExTR21.0185/00 GB/SIR/ExTR14.0304/00 GB/SIR/ExTR17.0124/00
GB/SIR/ExTR25.0080/00

Quality Assessment Report:

NO/PRE/QAR18.0016/05

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EQUIPMENT:
Equipment and systems covered by this Certificate are as follows:

The GC-300/GC-306 Cargo Temperature Unit is a temperature transmitter and signal converter with HART output, primarily intended for use in cargo tanks for liquid gas. The GC-300 can connect up to three Pt-sensors, and GC-306 can connect up to six Pt-sensors. The GC-300 transmitter is enclosed in a stainless steel housing, while the GC-306 is enclosed in a housing made of polystyrene.
In addition, the difference between GC-300 and GC-306 is the shape of the PCB, and some minor changes to the circuitry. The GC-300 is circular in shape intended for a deck-mounted enclosure. The GC-306 is rectangular in shape intended for cabinet-mounting.

Refer to the Annexe for Entity Parameters.

Conditions of manufacture

The Manufacturer shall comply with the following:

1. In accordance with IEC 60079-11:2023 clause 9.6, each manufactured item shall be subjected to a dielectric strength test at 500Vac for 60s between the circuit (connector X4 terminals 1 and 2 connected together) and the metallic enclosure.
2. In accordance with IEC 60079-11:2023 clause 10.4, each manufactured item shall be subjected to an inspection for encapsulation. No damage shall be evident, such as cracks in the compound, exposure of the encapsulated/coated parts, flaking, inadmissible shrinkage, swelling, decomposition, failure of adhesion or softening.

SPECIFIC CONDITIONS OF USE: YES as shown below:
1. The supply to the GC-300 or GC-306 shall be resistive, such that Rsource ≥ Uo/Io.
2. The GC-306 shall be installed in an enclosure that complies with the requirements of IEC 60079-14 for the zone of use, with a degree of protection of IP54 minimum.
3. The Pt-sensors connected to the GC-300/GC-306 shall have their circuits isolated from earth; this shall be proved by applying a test voltage of 500 Vac between the circuit and the enclosure of the probe for 60 s. Alternatively, a voltage of 20% higher may be applied for 1 s. There shall be no evidence of flashover or breakdown and the maximum current flowing shall not exceed 5 mA.

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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)
R80251935A

This issue, Issue 4, recognises the following changes; refer to the certificate annex to view a comprehensive history:

1. Following appropriate assessment to the latest technical knowledge, IEC 60079-11:2011 Edition 6 was replaced by IEC 60079-11:2023 Edition 7.
2. Minor drawing updates.
3. Product description updated for correctness.

Annex:

IECEx SIR 14.0024X Issue 4 Annexe.pdf

The equipment has the following entity parameters:

GC-300	
X4 from associated apparatus (typically GLK-300)	X1 to X3 (Pt-sensor)
Ui = 28 V Ii = 160 mA Pi = 850 mW Ci = negligible Li = negligible	Uo = 28 V Io = 30 mA Po = 206 mW Co = 83 nF Lo = 41 mH

GC-306		
X8 from associated apparatus (typically GLK-300)	X1 to X6 (Pt-sensor)	X7 to optional sensor
Ui = 28 V Ii = 160 mA Pi = 850 mW Ci = negligible Li = negligible	Uo = 28 V Io = 30 mA Po = 206 mW Co = 83 nF Lo = 41 mH	Uo = Ui Io = Ii Po = Pi Ci = negligible Li = negligible

Full certificate change history

Issue 1 – this Issue introduced the following change:

1. The Applicant's address was changed:

From:	To:
Haakon VIIs gt. 4 N-7005 Trondheim Norway	Skonnertvegen 1 7053 Ranheim Norway

Issue 2 – this Issue introduced the following change:

1. Issued to update the QAR's to the latest issues and to remove an obsolete one. An ExTR was not required.

Issue 3 – this Issue introduced the following changes:

1. Following appropriate assessment to the latest technical knowledge, IEC 60079-0:2011 was replaced by IEC 60079-0:2017.
2. Minor drawing updates.

Issue 4 – this Issue introduced the following changes:

1. Following appropriate assessment to the latest technical knowledge, IEC 60079-11:2011 Edition 6 was replaced by IEC 60079-11:2023 Edition 7.
2. Minor drawing updates.
3. Product description updated for correctness.

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