

**[1] EC-TYPE EXAMINATION CERTIFICATE**

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

**[3] EC-Type Examination Certificate Number:** Nemko 04ATEX1253

**[4] Equipment or Protective System:** Temperature Transmitter

**[5] Applicant/ Manufacturer:** Kongsberg Maritime AS

**[6] Address:** 7005 Trondheim  
Norway

**[7] This equipment or protective system and any acceptable variation thereto is 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. 16224

**[9] Compliance with the Essential Health and Safety Requirements has been assured by compliance with:  
CENELEC EN 50014: 1997 + A1: 1999 + A2: 1999, CENELEC EN 50020 :2002 and CENELEC EN 50284:1999**

**[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 1 G

EEx ia IIC T4 Ta:+70°C

Oslo, 2005-01-24



Rolf Hoel  
Certification Department

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## [13] Schedule

[14] EC-TYPE EXAMINATION CERTIFICATE No Nemko 04ATEX1253

[15] **Description of Equipment or Protective System**

The apparatus is a triple temperature transmitter with 4-10mA outputs. The transmitters are completely separated and each transmitter circuit shall be connected to a certified diode safety barrier with the appropriate safety parameters. The transmitter enclosure is made of stainless steel.

**Type Designation**

GC-120/ -U

**Safety Data**

Maximum input voltage	<b>Ui:</b> 28V
Maximum input current	<b>Ii:</b> 147mA
Maximum input power	<b>Pi:</b> 0,9W
Maximum internal capacitance	<b>Ci:</b> 33nF
Maximum internal inductance	<b>Li:</b> 5μH

The stated input values  $U_i$ ,  $I_i$ ,  $P_i$  are to be regarded as separate maximum values. It is a precondition that the supply barrier has a linear resistive output characteristic.

The output terminals 3,4,5,6 are for the connection of sensing elements. The elements are not parts of the certified apparatus and may be used as "Simple apparatus" according to EN 50020 clause 5.4.

The cable connecting the sensing elements may be up to 300m. The capacitance and inductance of the cable need not be considered.

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**[16] Report No. 16224****Descriptive Documents**

<b>Name/Title</b>	<b>Drawing No.</b>	<b>Rev.</b>	<b>Date</b>	<b>Sheets</b>
Typeskilt	E-2630	0	2004-06-24	1
Safety control drawing	GC-120	-	2004-11-02	1
Signalconverter GCB-120	GC-195	0	2004-08-11	1
Fellesmateriell	GCB-120/FELL	0	2004-06-15	1
Fellesmateriell FRAMO	GC-120/B-FELL	0	2004-06-15	1
Fellesmateriell STANDARD	GC-120/A-FELL	0	2004-06-15	1
Materialliste GCB-120	9212-380.0100	0	2004-08-11	3
PCB spec	M4450SPC.DOC	0	2004-06-21	2
Mønsterkortunderlag GCB-120	7212-380	0	2004-06-21	11
Sammenstillingstegning	GC-202	0	2004-06-16	1
Sammenstillingstegning	GC-203	0	2004-06-16	1

**[17] Special Conditions for Safe Use**  
None**[18] Essential Health and Safety Requirements**  
Sec item 9

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**Supplement 1 to EC-TYPE EXAMINATION CERTIFICATE****[13] Supplement 1****[14] EC-TYPE EXAMINATION CERTIFICATE No Nemko 04ATEX1253****[15] Description of Equipment or Protective System**

Various technical changes and changes of documentation. The technical changes do not alter the safety characteristics of the equipment.

**[16] Report No. 133787****Descriptive Documents**

Name/Title	Drawing No.	Rev.	Date	Sheets
Signal Converter GCB-120 (In: Pt1000, Out: 4 – 20mA)	GC-195	A	22.01.2008	1
Temperature transmitter Type GC-120 Safety Control	GC-210	A	22.01.2008	1
GC-120/B, FRAMO temperatur omformer sammenstillingstegning	GC-203	A	17.02.2005	1
GC-120/A, Temperatur omformer sammenstillingstegning	GC-202	A	16.02.2005	1
GC-120/- Typeskilt Detaljtegning	E-2630	A	21.01.2008	1
BOM (GCB-120/U22)	9212-380.0022	3	23.03.2009	-
BOM (GCB-120/U23)	9212-380.0023	3	23.03.2009	-
BOM (GCB-120/U25)	9212-380.0025	3	23.03.2009	-
BOM (GCB-120/U26)	9212-380.0026	3	23.03.2009	-
PCB Specification	M5142SPC	A	10.05.2010	1
PCB Layout/Assembly drawing GCB-120	7212-380	1	14.08.2008	9

**[18] Essential Health and Safety Requirements**

See item 9

Oslo, 2011-05-10



**Rolf Hoel**  
Certification Manager, Ex-products

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