

# EU-TYPE EXAMINATION CERTIFICATE

- [2] EQUIPMENT OR PROTECTIVE SYSTEM INTENDED FOR USE IN POTENTIALLY EXPLOSIVE ATMOSPHERES DIRECTIVE 2014/34/EU
- [3] EU-Type Examination Certificate Number: **Presafe 14 ATEX 5412 X** **Issue 3**
- [4] Product: **Associated power and signal unit for level gauging radar sensor**
- [5] Manufacturer: **Kongsberg Maritime AS**
- [6] Address: **Skonnertvegen 1  
7053 Ranheim  
Norway**
- [7] This product and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.
- [8] DNV GL Presafe AS, notified body number 2460, in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Annex II to the Directive.
- The examination and test results are recorded in confidential reports listed in section 16.
- [9] Compliance with the Essential Health and Safety Requirements has been assured by compliance with:  
**EN 60079-0:2018 and EN 60079-11:2012**
- [10] If the sign "X" is placed after the certificate number, it indicates that the product is subject to the Specific Conditions of Use specified in the schedule to this certificate.
- [11] This EU - TYPE EXAMINATION CERTIFICATE relates only to the design and construction of the specified product. Further requirements of the Directive apply to the manufacturing process and supply of this product. These are not covered by this certificate.
- [12] The marking of the product shall include the following:

 **II (1) G [Ex ia Ga] IIC Ta: -15°C to +70°C**



Date of issue:  
2020-11-18



Asle Kaastad  
For DNV GL Presafe AS  
The Certificate has been digitally signed.  
See [www.dnvgl.com/digitalsignatures](http://www.dnvgl.com/digitalsignatures) for info

[13] **Schedule**

[14] **EU-Type Examination Certificate No:** Presafe 14 ATEX 5412X Issue 3

[15] **Description of Product**

GLK-300 is an associated apparatus for power supply and communication for level gauging radar sensors and auxiliary pressure and temperature transmitters. The power and RS-485 are for connection to the level gauging radar sensor. Hart circuit for pressure and temperature transmitters. More than one transmitter may be connected to the Hart circuit so far as the sums of capacitance and inductance of the transmitters and cables are less or equal to the Co and Lo for GLK-300.

**Type designation**

GLK-300

**Safety parameters**

Maximum safe voltage Um: 250V AC

Power supply, terminals X2 & X3: p4 - X1& X4: p4

	IIB	IIC
Maximum output voltage.	Uo: 14.3VDC	14.3VDC
Maximum output current.	Io: 360mA	360mA
Maximum output power.	Po: 2.1W	2.1W
Maximum external capacitance.	Co: 4.28µF	680nF
Maximum external inductance.	Lo: 168µH	42µH
Maximum ratio	Lo/Ro 68µH/Ω	17µH/Ω

X1 & X4: p5-p6 (HART)

	IIB	IIC
Maximum output voltage.	Uo: 25.8VDC	25.8VDC
Maximum output current.	Io: 115mA	115mA
Maximum output power.	Po: 0.74W	0.74W
Maximum external capacitance.	Co: 780nF	100nF
Maximum external inductance.	Lo: 9mH	1.6mH

X2 & X3: p5- p6 (RS-485)-X1&X4: p4 (0V-ref.)

	IIB	IIC
Maximum output voltage.	Uo: 7VDC	7VDC
Maximum output current.	Io: 70mA	70mA
Maximum output power.	Po: 88mW	88mW
Maximum external capacitance.	Co: 300µF	15.7µF
Maximum external inductance.	Lo: 25mH	7mH

X1, X2, X3 &X4: p1-p3 (0V/ GND)

**Degrees of protection (IP Code)**

IP20

**Ambient temperature:**

-15°C to +70°C

**Routine tests**

The manufacturer performs specific routine verifications and tests of the shunt assemblies of the power supply.

[16] **Report No.:** 198864  
**Project No.:** PRJN-198864-2020-PA-NOR

[17] **Specific Conditions of Use**

1. The separation distance of minimum 50mm between intrinsically and non-intrinsically safe circuits has to be observed for the final installation in a cabinet.
2. The GLK-300 has to be installed in a cabinet with a degree of protection of at least IP20
3. The ambient temperature range for the GLK-300 is  $-15^{\circ}\text{C} \leq T_a \leq +70^{\circ}\text{C}$
4. The power output circuit has a resistive trapezoidal output characteristic with a maximum U1 voltage 23,5V.
5. The RS-485 circuit has a safety open voltage  $U_o$ : 7V with a maximum voltage 5V for load and thermal assessments.

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

Essential Health and Safety Requirements (EHSRs) are covered by the standards listed at item 9

[19] **Drawings and documents**

Number	Title	Rev.	Date
GL-2513	GL-300 Safety Control dwg	E	25.08.2017
E-2693	Sticker for GLK-300 Detail dwg	G	12.11.2020
GL-2534	GLK-300 Dimensional sketch	C	24.11.2011
UL RCF1006FR	Datasheet plastic in housing	-	05.03.2009
BUILDUP_GLK-300_9212-459.pdf	GLK-300 Main Board, PCB, 8 Layer, 1.6 mm	-	05.02.2001
7212-459.900	GLK-300 Main Board, PCB Specifications	A	24.01.2012
GL-2464	GLK-300 Main Board, Schematics	B	23.01.2012
BUILDUP_GLK-300_9212-460 0.pdf	GLK-300 Piggyback Board, 4 Layer, 1.6 mm	-	11.04.2001
7212-460.900	GLK-300 Piggyback Board, PCB Specifications	B	11.05.2015
GL-2465	GLK-300 Piggyback Board, Schematics	A	23.01.2012
7212-459.901	BOM GLK-300 Main Board	C	13.02.2019
7212-460.901	BOM GLK-300 Piggyback Board	C	16.09.2016
7212-459.000	GLK-300 Main Board, PCB Layout Drawings	A	07.02.2011
7212-460.000	GLK-300 Piggyback Board, PCB Layout Drawings	A	28.05.2009
399336	GLK-300 SPU coating procedure	B	04.08.2017

[20] **Certificate History**

Issue	Description	Issue date	Report no.
1	Original issue	2014-11-27	D0001576/00
2	New company address	2017-08-29	D0001576/01
3	Update to new standard EN 60079-0:2018, Notified Body number updated on marking label drawing, Bill of material for GLK-300 Main Board upgraded for component replacement items U559 og U560, non-safety critical component. GLK-300 Main Board and Piggyback Board, PCB Layout Drawings are unchanged content.	2020-11-18	198864

END OF CERTIFICATE