Confirmation of Product Type Approval

Company Name: KONGSBERG MARITIME AS, TRONDHEIM

Address: SKONNERTVEGEN 17053 RANHEIMP.O. BOX 2434 7005 Norway

Product: Water Level Detectors on Bulk Carriers

Model(s): GL-10

Certificate Type	Certificate Number	Issue Date	Expiry Date
Product Design Assessment (PDA)	20-2045806-PDA	06-NOV-2020	05-NOV-2025
Manufacturing Assessment (MA)	20-4414541	27-AUG-2020	26-AUG-2025
Product Quality Assurance (PQA)	NA	NA	NA

Tier
3

Intended Service
For use on ABS classed vessels and offshore facilities in accordance with the listed ABS Rules and International Standards.

Description
Level Switch capable of detecting water level by monitoring the phase of the radar signal between two antennas.

The sensing element of the level switch is based on RF technology. The sensor is delivered connected and moulded to a flexible PUR-cable and installed into an O60 mm steel-pipe with a length of 0.2 m. The detector antenna gap can be cleansed using jets of water when required.

Ratings
Power supply input: 24V DC (10 to 35 V);

Output signals: 4 to 20 mA

Operating temperatures / humidity: -25 degree C to + 85 degree C and 100% RH

Detector enclosure protection: IP68

Safety certification: EEx ia IIC T5 (NEMKO Certificate: 05ATEX1010)

Service Restrictions
Unit Certification is not required for this product. If the manufacturer or purchaser request an ABS Certificate for compliance with a specification or standard, the specification or standard, including inspection standards and tolerances, must be clearly defined.

The level sensor must be connected to a suitable alarm reporting panel, such as the C20/MOS detection

system, and through safe barriers (Zener diode) [EEx ia II C], such as the DZ-110 when used in hazardous areas.

Equipment must be installed in hazardous area according to ABS Marine Vessel Rules (2020) 4-8-4/27.7 or Mobile Offshore Units Rules (2020) 4-3-3/9.3.2 as applicable.

The sensor enclosure must be galvanically connected to the ships hull either by connecting the outer tube directly or by connecting the cable's outer shielding to the hull of the ship.

ATEX certified equipment is not to be installed in hazardous areas on U.S. Flagged Vessels, unless it can be proven to have been tested to the IEC 60079 series standards by an independent laboratory accepted by the U.S. Coast Guard. USCG MI Notice 01-12 (February 7, 2012).

Comments

1. The Manufacturer has provided a declaration about the control of, or the lack of Asbestos in this product.

2. Tests and approval are for detector hardware only.

3. Each vessel configuration and external connection is to be specifically approved.

Notes, Drawings and Documentation

Drawing No. P-GL10/CE/M, GL-10 Level Switch - Data Sheet, Revision: M

Drawing No. Nemko 05ATEX1010 Issue 5.pdf, EX certificate GL-10, Revision: 5

Drawing No. 2004-0002, Nemko GL10 Env., Revision: 1

Drawing No. 2005-0001, Nemko GL10 Env., Revision: -

Drawing No. 2006-3115, Insulation test GL-10, Revision: 1

Drawing No. 365113/G, Material Declaration GL-10, Revision: G

Drawing No. 444030, GL-10 Water Ingress Sensor, Revision: B

Drawing No. E-2639, Label for GL-10, Revision: H

Drawing No. EMC test, Nemko 30057, Revision: 1

Drawing No. EMC test 1, Nemko 186898, Revision: 1

Drawing No. EU Declaration of Conformity, GL-10

Drawing No. Solas report, SC-180, Revision: -

Drawing No. Statement, IEC 945 8.7, Revision: -

Drawing No. Statement 1, IP 68 GL-10 30057, Revision: -

Drawing No. Statement 2, SC-180, Revision: -

Drawing No. Vibration test, Nemko AM1469_30057, Revision: -

Support documentation from previous review:

Drawing No. 365113F.pdf, Material Declaration GL-10, Revision: F

Drawing No. GL-10 05ATEX1010 Issue 2.pdf, EX certificate GL-10, Revision: 2

Drawing No. Kongsberg Maritime EMC report 60945.pdf, EMC test report GL-10, Revision: 1

Drawing No. MATERIAL DECLARATION, MATERIAL DECLARATION, Revision: -

Drawing No. P-GL-10_CE_J.pdf, Data Sheet, Revision: J

Term of Validity
This Product Design Assessment (PDA) Certificate remains valid until 05/Nov/2025 or until the Rules and/or Standards used in the assessment are revised or until there is a design modification warranting design reassessment (whichever occurs first).

Acceptance of product is limited to the "Intended Service" details prescribed in the certificate and as per applicable Rules and Standards.

This Certificate is valid for installation of the listed product on ABS units which exist or are under contract for construction on or previous to the effective date of the ABS Rules and standards applied at the time of PDA issuance. Use of the Product for non-ABS units is subject to agreement between the manufacturer and intended client.

ABS Rules
2020 Rules for Conditions of Classification: 1-1-4/7.7, 1-1-A3, 1-1-A4, which covers the following:

2020 Rules for Building and Classing Marine Vessels: 4-8-3/1.11, 4-8-3/1.17, 4-8-4/27.5.1, 4-9-9/15.7 Table 1

2020 Rules for Conditions of Classification, Offshore Units and Structures: 1-1-4/9.7, 1-1-A2, 1-1-A3, which covers the following:

2020 Rules for Building and Classing Mobile Offshore Units: 4-3-1/15, 4-3-1/17, 4-3-3/9.3.1

International Standards
MSC 145(77)

IEC 60529 Ed. 2.2 b:2013

EU-MED Standards
NA

National Standards
NA

Government Standards
NA

Other Standards
NA

Corporate ABS Programs

ABS has used due diligence in the preparation of this certificate, and it represents the information on the product in the ABS Records as of the date and time the certificate is printed.

If the Rules and/or standards used in the PDA evaluation are revised or if there is a design modification (whichever occurs first), a PDA revalidation may be necessary.

The continued validity of the MA is dependent on completion of satisfactory audits as required by the ABS Rules. The validity of both PDA and MA entitles the product to receive a **Confirmation of Product Type Approval**.

Acceptance of product is limited to the “Intended Service” details prescribed in the certificate and as per applicable Rules and Standards.

This Certificate is valid for installation of the listed product on ABS units which exist or are under contract for construction on or prior to the effective date of the ABS Rules and standards applied at the time of PDA issuance. ABS makes no representations regarding Type Approval of the Product for use on vessels, MODUs or facilities built after the date of the ABS Rules used for this evaluation.

Type Approval requires Drawing Assessment, Prototype Testing and assessment of the manufacturer's quality assurance and quality control arrangements. The manufacturer is responsible to maintain compliance with all specifications applicable to the product design assessment. Unless specifically indicated in the description of the product, certification under type approval does not waive requirements for witnessed inspection or additional survey for product use on a vessel, MODU or facility intended to be ABS classed or that is presently in class with ABS.

Due to wide variety of specifications used in the products ABS has evaluated for Type Approval, it is part of our contract that; whether the standard is an ABS Rule or a non-ABS Rule, the Client has full responsibility for continued compliance with the standard.

Questions regarding the validity of ABS Rules or the need for supplemental testing or inspection of such products should, in all cases, be addressed to ABS.