



# TYPE APPROVAL CERTIFICATE

Certificate No:  
**TAA00001SJ**  
Revision No:  
**1**

**This is to certify:**  
**That the Level Switches**

with type designation(s)  
**GL-3D/R, GL-3D/N**

Issued to  
**Kongsberg Maritime China Jiangsu, Ltd.**  
**Zhenjiang, Jiangsu, China**

is found to comply with  
**DNV rules for classification – Ships, offshore units, and high speed and light craft**

## Application :

**Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV.**

<b>Temperature</b>	<b>B</b>
<b>Humidity</b>	<b>B</b>
<b>Vibration</b>	<b>A</b>
<b>EMC</b>	<b>B</b>
<b>Enclosure</b>	<b>C</b>

Issued at **Hamburg** on **2023-05-24**

for **DNV**

This Certificate is valid until **2028-04-02**.

DNV local unit: **Nanjing NB & CMC**

Approval Engineer: **Holger Jansen**

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**Joannis Papanuskas**  
**Head of Section**

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid. The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV AS, its parent companies and their subsidiaries as well as their officers, directors and employees ("DNV") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to 300,000 USD.



## Product description

Type: **GL-3D/R, GL-3D/N**

Level switch with capacitive element and built in temperature sensor

Power supply:	24 Vdc
Current consumption:	normal approx.. 25 mA; maximum approx.. 40 mA
Relay alarm output:	2 potential free contacts 120 V/0,5 A or 32 Vdc/0,5 A
Minimum distance from teflon tip:	15 mm
Material sensor tip, wetted part:	AISI 316 and Teflon
Cable gland connection:	M20 x 1,5 (7 – 13 mm)
Built in temperature sensor:	Pt100, 3-wire

Nomenclature:

GL-3D / X – X – XXX

Insertion length in mm:	100, 150, 200, 250
Mechanical design	0:IP56 Al-alloy painted 1:IP67 AISI316
Relay operated with	R: dry sensor N: wet sensor

## Application/Limitation

The type approval covers hardware listed under Product description. When the hardware is used in applications to be classed by DNV, documentation for the actual application is to be submitted for approval by the manufacturer of the application system in each case. Reference is made to DNV rules for classification of ships Pt.4 Ch.9 Control and monitoring systems.

Not to be used in polluted seawater.

## Type Approval documentation

Documentation: [Technical Specification P-GL3D/CE rev B](#)

Test report: [SIMT 2012J30-30-103039](#),  
[SIMT 2012J00-30-105114](#),  
[SIMT 2012J10-30-102058](#),  
[DNV 99-1427](#),  
[Nemko E10123.00](#)  
[STIEE no. 23BAS01P3D32-36059, dated 2023-04-13](#)

[Type Approval Assessment Report 2023-03-30](#)

## Tests carried out

Applicable tests according to DNV-CG-0339, August 2021.

## Marking of product

The products to be marked with:

- Manufacturer name
- Model name
- Production order number

## Periodical assessment

The scope of the periodical assessment is to verify that the conditions stipulated for the type are complied with, and that no alterations are made to the product design or choice of systems, software versions, components and/or materials.

The main elements of the assessment are:

- Ensure that type approved documentation is available
- Inspection of factory samples, selected at random from the production line (where practicable)
- Review of production and inspection routines, including test records from product sample tests and control routines
- Ensuring that systems, software versions, components and/or materials used comply with type approved documents and/or referenced system, software, component and material specifications
- Review of possible changes in design of systems, software versions, components, materials and/or performance, and make sure that such changes do not affect the type approval given
- Ensuring traceability between manufacturer's product type marking and the type approval certificate

Periodical assessment is to be performed after 2 years and after 3.5 years. A renewal assessment will be performed at renewal of the certificate.

END OF CERTIFICATE