



Type Approval Certificate

This is to certify that the undernoted product(s) has/have been tested with satisfactory results in accordance with the relevant requirements of the Lloyd's Register Type Approval System.

Manufacturer	Kongsberg Maritime AS
Address	Skonnertvegen 1, Ranheim, 7053, Norway
Place of Production	KONGSBERG MARITIME CHINA (Jiangsu) Co., Ltd No. 711 Changjiang Road, Run Zhou District, Jiangsu Province, Zhenjiang City, China
Place of Production	Kongsberg Maritime AS Skonnertvegen 1, Ranheim, 7053, Norway
Type	Switches - Level
Description	Level sensor for high level / overflow detection in cargo tanks GL-7B/n (n = 1 for one level; n = 2 for two levels)
Trade Name	GL-7B
Application	Marine, Offshore and Industrial applications for use in environmental categories ENV5, as defined in Lloyd's Register Type Approval System, Test Specification Number 1 – December 2021.
Specified Standard	Manufacturer's specification IACS E10 Rev. 8 / 2021



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Ratings	Power supply: 24 VDC Output signal: 4 to 20 mA Operating temperature: -45 °C to 85 °C
Additional Tests	Low temperature (-45 °C / 16 h) Dry heat (85 °C / 16 h)
Other Conditions	<p>For systems consisting of the listed components the final functional arrangement and application software are to comply with appropriate Lloyd's Register Rules and Regulations and shall be subject to project related Plan Approval Process, when installed on LR classed vessels. Documents and drawings for the actual application are to be provided according relevant LR Rules and Regulations.</p> <p>For high level / overflow detection applications in hazardous area installation/ operation, the sensors are to be used with certified intrinsically safe equipment.</p> <p>Specific Conditions of Use as stated in applicable Ex-certificates and the conditions of the LR Rules & Regulations for the Classification of Ships, Part 6, Chapter 2 shall be observed when installed in hazardous areas. The Ex-certification does not form part of this certificate.</p> <p>Type Approval does not eliminate the need for normal inspection and survey procedures required by the Rules and Regulations.</p> <p>If the specified standards are amended during the validity of this certificate, the product is to be re-approved prior to it being supplied to vessels to which the amended standards apply.</p>

This certificate is not valid for equipment, the design, ratings or operating parameters of which have been varied from the specimen tested. The manufacturer should notify Lloyd's Register EMEA of any modification or changes to the equipment in order to obtain a valid Certificate.

Previous Version: This certificate supersedes certificate number 19/20033 issued on



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30 April 2019 which is hereby cancelled.

The Design Appraisal Document HPC1862133-22/MK and its supplementary Type Approval Terms and Conditions form part of this Certificate.

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