



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 AS Skonnertvegen 1, Ranheim, 7053, Norway
Type	Barrier Units
Description	Intrinsically safe Transmitter Barrier Unit / Zener Barrier Unit DZ-110/U DZ-120
Trade Name	DZ-110/U, DZ-120
Application	Marine, Offshore and Industrial applications for use in environmental categories ENV1, ENV2 and ENV3, as defined in Lloyd's Register Type Approval System, Test Specification Number 1 – July 2024 where the Test Specification is satisfactory for the intended operation.
Specified Standard	IACS UR E10 Rev. 9 / 2023
Ratings	[Ex iaGa] IIC -20°C ≤ Ta ≤ +70°C

Matthias Karg

Electrical & Control - Specialist to Lloyd's Register EMEA
A member of the Lloyd's Register group

71 Fenchurch Street, London, EC3M 4BS, United Kingdom

Lloyd's Register Group Limited, its affiliates and subsidiaries and their respective officers, employees or agents are, individually and collectively, referred to in this clause as 'Lloyd's Register'. Lloyd's Register assumes no responsibility and shall not be liable to any person for any loss, damage or expense caused by reliance on the information or advice in this document or howsoever provided, unless that person has signed a contract with the relevant Lloyd's Register entity for the provision of this information or advice and in that case any responsibility or liability is exclusively on the terms and conditions set out in that contract.





Type Approval Certificate

Additional Tests	Low temperature (-20 °C / 16 h) Ingress protection IP20
Other Conditions	Specific Conditions of Use as stated in applicable Ex-certificates and the conditions of the LR Ship Rules & Regulations of 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. Type Approval does not eliminate the need for normal inspection and survey procedures required by the Rules and Regulations. 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.

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 LR2002815TA issued on 15 April 2020 which is hereby cancelled.

The Design Appraisal Document TSO/24-022565 and its supplementary Type Approval Terms and Conditions form part of this Certificate.

