



## 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.

<b>Manufacturer</b>	<b>Autronica Fire &amp; Security AS</b>
<b>Address</b>	Bromstadvegen 59, Trondheim, 7047, Norway
<b>Place of Production</b>	Autronica Fire & Security AS Bromstadvegen 59, Trondheim, 7047, Norway
<b>Type</b>	Fire Detection Alarm Systems
<b>Description</b>	Heat detectors (encapsulated housing with glands)  Heat detector without SelfVerify: BD-200M - Standard version, IP56  Heat detector with SelfVerify: BD-501 - Standard version, IP56 BD-501/N - Ex ic version for use in zone 2 only, IP56 BD-501/EX - Ex ia version for use in zone 0, 1 and 2, IP56
<b>Trade Name</b>	BD-200M, BD-501, BD-501/N, BD-501/EX
<b>Application</b>	Marine, Offshore and Industrial applications for use in environmental categories ENV1, ENV2, and ENV5, as defined in Lloyd's Register Type Approval System, Test Specification Number 1 – July 2024.

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**Matthias Karg**

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

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<b>Specified Standard</b>	EN-54-5: 2017 + A1: 2018 (heat detectors) EN 54-17: 2005 (short circuit isolator) IEC 60092-504: 2016 IACS UR E10 Rev. 9: 2024
<b>Ratings</b>	Ingress protection: IP56 IP67(only BD-200M, BD-501)
<b>Additional Tests</b>	Ingress protection: IP67 (BD-200M, BD-501)
<b>Other Conditions</b>	<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>Specific Conditions of Use as stated in applicable Ex-certificates shall be observed when installed in hazardous areas. The Ex-certification does not form part of this certificate.</p> <p>The EXia detectors shall be supplied by the Autronica interface and shunt protection unit, BZ-500.</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>

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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 LR2183663TA-01 issued on 03 March 2022 which is hereby cancelled.

The Design Appraisal Document TSO/24-020756 and its supplementary Type Approval Terms and Conditions form part of this Certificate.

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