

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	Autronica Fire & Security AS
Address	Bromstadvegen 59, Trondheim, 7047, Norway
Place of Production	Autronica Fire & Security AS Bromstadvegen 59, Trondheim, 7047, Norway
Type	Fire Detection Alarm Systems
Description	Heat detectors (bundle of detector head and standard base BWA-100) BD-200 series BD-300 series BD-500 series Heat detectors (encapsulated housing with glands) BD-200M BD-501 series Smoke detectors (bundle of detector head and standard base BWA-100) BH-200 series BH-300 series BH-500 series MultiSensor detectors (bundle of detector head and standard base BWA-100) BH-220 series BH-320 series BH-520 series

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For detailed product description, pls. refer to appendix.

Trade Name	BH, BD and BWP
Application	Marine, Offshore and Industrial applications for use in environmental categories ENV1, ENV2 and ENV5 ⁽¹⁾ , as defined in Lloyd's Register Type Approval System, Test Specification Number 1 – December 2021. (1) ENV5 only for types BD-200M, BD-501, BD-501/Ex, BD-501/N
Specified Standard	EN-54-5: 2000 + A1: 2002 (heat detectors) EN 54-7: 2000 + A1: 2002 + A2: 2006 (smoke detectors) EN 54-17: 2005 (short circuit isolator) IEC 60092-504: 2016 IACS E10 Rev. 8 / 2021
Ratings	Ingress protection: IP56 (only BD-200M, BD-501, BD-501/Ex, BD-501/N, IP67(only BD-200M, BD-501)
Additional Tests	Ingress protection: IP67 (BD-200M, BD-501)
Other Conditions	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. 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.

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The EXia detectors shall be supplied by the Autronica interface and shunt protection unit, BZ-500.

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 LR2183663TA issued on 04 March 2021 which is hereby cancelled.

The Design Appraisal Document HTS/ETS 42188-22/MK/TW and its supplementary Type Approval Terms and Conditions form part of this Certificate.

Appendix

DESCRIPTION

Type	Description	Software version
Detectors without SelfVerify (standard)		
BDH-200	Heat detector head	2-41
BD-200M	Heat detector, IP56	2-41
BHH-200	Smoke detector head	2-41
BHH-220	MultiSensor detector head	2-41
Detectors with SelfVerify		
BDH-300	Heat detector head	2-41
BDH-500	Heat detector head	2-41
BDH-500/EX	Heat detector head, Ex ia version for use in zone 0, 1 and 2	2-41
BDH-500/N	Heat detector head, Ex ic version for use in zone 2 only	2-41
BD-501	Heat detector, IP56	2-41
BD-501/EX	Heat detector head, Ex ia version for use in zone 0, 1 and 2, IP56	2-41
BD-501/N	Heat detector head, Ex ic version for use in zone 2 only, IP56	2-41
BHH-300	Smoke detector head	2-41
BHH-320	MultiSensor detector head	2-41
BHH-500	Smoke detector head	2-41
BHH-500/EX	Smoke detector head, Ex ia version for use in zone 0, 1 and 2	2-41
BHH-500/N	Smoke detector head, Ex ic version for use in zone 2 only	2-41
BHH-520	MultiSensor detector head	2-41
BHH-520/EX	MultiSensor detector head, Ex ia version for use in zone 0, 1 and 2	2-41
BHH-520/N	MultiSensor detector head, Ex ic version for use in zone 2 only	2-41
Sockets		
BWA-100*	Standard base	-
BWP-100/20	Conduit Box	-
BWP-100/25	Conduit Box	-
BWP-143A	Adapter for ventilation duct	-
BWP-143A-SS	Adapter for ventilation duct	-

*BWA-100 standard base (socket) used for all models except BD-200M, BD-501, BD-501/N, and BD-501/Ex