TYPE EXAMINATION CERTIFICATE (MODULE B)

Certificate no.:
MERB0001N6D
Revision no.:
0

This Certificate is issued by DNV UK Limited based on authorisation of the Maritime & Coast Guard Agency (MCA) as an UK Approved Body to undertake conformity assessments on marine equipment in accordance with the requirements of the Merchant Shipping (Marine Equipment) Regulations 2016 as amended.

This is to certify:

that the **Fixed fire detection and fire alarm systems components for control stations, service spaces, accommodation spaces, cabin balconies, machinery spaces and unattended machinery spaces: - heat detectors- point detectors**

with type designation(s)
Interactive Fire Detectors

issued to
Autronica Fire and Security AS
Trondheim, **Norway**

is found to comply with the Regulation **(UK) MSN 1874 Amendment 10** for
Item no. **UK/3.51c** (Row **2 of 2**)
according to the following requirements:
SOLAS 74 Reg. II-2/7, IMO Res. MSC.36(63)-(1994 HSC Code) 7, IMO Res. MSC.97(73)-(2000 HSC Code) 7, IMO Res. MSC.391(95)-(IGF Code) 11, IMO MSC.1/Circ.1242, SOLAS 74 Reg. X/3, IMO Res.MSC.98(73)-(FSS Code) 9

Further details of the equipment and conditions for certification are given overleaf.

Date of issue: **2025-10-02**

Expiry date: **2030-10-01**

DNV local unit:
Trondheim

Approval Engineer:
Ståle Sneen

Approved Body No:: 0097

for **DNV UK Ltd.**

Christine Mydlak-Röder
MER Service Responsible

Maritime & Coastguard Agency
UK Approved Body Authorised by the MCA

This certificate will not be valid if the manufacturer makes any changes or modifications to the approved type of equipment, which have not been notified to, and agreed with the approved body named on this certificate.
During the period of validity of this certificate the applicable regulations (international conventions and the relevant resolutions and circulars of the IMO) and testing standards may change, therefore the product conformity may need to be re-assessed by the Approved Body.
"The Mark of Conformity" may only be affixed to the above type approved equipment and a Manufacturer's Declaration of Conformity issued when the production-control phase module (D, E or F) of Schedule 2 of the Merchant Shipping (Marine Equipment) Regulations 2016, as amended is fully complied with and controlled by a written inspection agreement with an approved body. In case limitations of use apply, these should be indicated in the Annex.

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 USD 300 000.

Product description

Interactive fire detectors designed according to EN54 for use with Autronica's interactive fire detection systems:

BD-200 (Note 1)	Heat detector without SelfVerify, dry areas
BD-300 (Note 1)	Heat detector with SelfVerify, dry areas
BD-500 (Note 1)	Heat detector with SelfVerify, environmentally protected, dry areas
BD-500/N (Note 1)	Heat detector with SelfVerify, Exic-version for use in zone 2 only, dry areas
BD-500/EX (Note 1)	Heat detector with SelfVerify, Exia-version for use in all zones, dry areas
BH-220 (Note 1)	Multisensor detector without SelfVerify
BH-320 (Note 1)	Multisensor detector with SelfVerify
BH-520 (Note 1)	Multisensor detector with SelfVerify, environmentally protected
BH-520/N (Note 1)	Multisensor detector with SelfVerify, Exic-version for use in zone 2 only
BH-520/EX (Note 1)	Multisensor detector with SelfVerify, Exia-version for use in all zones
BD-501	Heat detector without SelfVerify, humid areas
BD-501/N	Heat detector with SelfVerify, Exic-version for use in zone 2 only, humid areas
BD-501/EX	Heat detector with SelfVerify, Exia-version for use in all zones, humid areas
BD-200M	Heat detector without SelfVerify, cold areas
V-430 (Note 2)	AutroGuard® Multicriteria protector
V-430-S (Note 2)	AutroGuard® Multicriteria protector with sounder
V-430-VADW (Note 2)	AutroGuard® Multicriteria protector with white VAD (visual alarm device)
V-430-VADR (Note 2)	AutroGuard® Multicriteria protector with red VAD
V-430-S-VADW (Note 2)	AutroGuard® Multicriteria protector with sounder and white VAD
V-430-S-VADR (Note 2)	AutroGuard® Multicriteria protector with sounder and red VAD
V-430-S-CO	AutroGuard® Multicriteria protector with sounder and integrated CO sensor
V-530 (Note 3)	AutroGuard® Multicriteria protector with SIL2 approval
V-530-S-VADW (Note 4)	AutroGuard® Multicriteria protector with SIL2 approval with sounder and white VAD
V-530-EXIA (Note 3)	AutroGuard® Multicriteria protector with SIL2 approval, intrinsically safe for zone 0, 1 and 2
V-530-EXIC (Note 3)	AutroGuard® Multicriteria protector with SIL2 approval, intrinsically safe for zone 2
V-530-S-CO	AutroGuard® Multicriteria protector with sounder and integrated CO sensor, ex, SIL

Note 1: The detector head carries an additional H in the name. The listed products include the mandatory socket BWA-100.
Note 2: Available with option for Cover Detection & SelfVerify (option /CD). Tested with base V-100.
Note 3: EXIA/EXIC is available with option for High Sensitivity (option /HS). Tested with base V-110 and V-120.
Note 4: SIL2 certification is for detection only, not for sounder and white VAD functions.

Application/Limitation

Please see Appendix: Application/Limitation

Type Examination documentation

Tests carried out

Applicable tests according to:
- EN 54-3:2014 incl. A1:2019 (for optional sounder)
- EN 54-5:2017 incl. A1:2018
- EN 54-7:2018 (for multisensor/multicriteria)
- EN 54-17:2005 incl. AC:2007 (for base)
- EN 54-23:2010 (for optional VAD)
- EN 54-29:2015 (for multisensor/multicriteria)
- IEC 60092-504:2016
- IEC 60533:2015

Marking of product

For identification to this type examination certificate the products shall be marked with:

- Manufacturer's name or trade mark
- Type designation
- Mark of Conformity (UK Conformity Mark), followed by
    - identification number of the Approved Body involved in production control (MER D)
    - the year the mark is affixed
    - Example: 0097/2025

APPENDIX
Application/Limitation

Certificate no.:
MERB0001N6D
Revision no.:
0

The equipment is found to comply with following location/application dependent requirements
(for definition of each of the location classes, see below the table):

MODEL	TEMPERATURE	VIBRATION	EMC	ENCLOSURE
BD-200	TEM-D	VIB-B	EMC-B	ENC-B
BD-300	TEM-D	VIB-B	EMC-B	ENC-B
BD-500	TEM-D	VIB-B	EMC-B	ENC-B
BD-500/N	TEM-D	VIB-B	EMC-B	ENC-B
BD-500/EX	TEM-D	VIB-B	EMC-B	ENC-B
BH-220	TEM-D	VIB-B	EMC-B	ENC-B
BH-320	TEM-D	VIB-B	EMC-B	ENC-B
BH-520	TEM-D	VIB-B	EMC-B	ENC-B
BH-520/N	TEM-D	VIB-B	EMC-B	ENC-B
BH-520/EX	TEM-D	VIB-B	EMC-B	ENC-B
BD-501	TEM-D	VIB-B	EMC-B	ENC-C
BD-501/N	TEM-D	VIB-B	EMC-B	ENC-C
BD-501/EX	TEM-D	VIB-B	EMC-B	ENC-C
BD-200M	TEM-D	VIB-B	EMC-B	ENC-C
V-430	TEM-D	VIB-A	EMC-B	ENC-B
V-430-S	TEM-D	VIB-A	EMC-B	ENC-B
V-430-VADW	TEM-D	VIB-A	EMC-B	ENC-B
V-430-VADR	TEM-D	VIB-A	EMC-B	ENC-B
V-430-S-VADW	TEM-D	VIB-A	EMC-B	ENC-B
V-430-S-VADR	TEM-D	VIB-A	EMC-B	ENC-B
V-430-S-CO	TEM-D	VIB-A	EMC-B	ENC-B
V-530	TEM-D	VIB-A	EMC-B	ENC-B
V-530-S-VADW	TEM-D	VIB-A	EMC-B	ENC-B
V-530-EXIA	TEM-D	VIB-A	EMC-B	ENC-B
V-530-EXIC	TEM-D	VIB-A	EMC-B	ENC-B
V-530-S-CO	TEM-D	VIB-A	EMC-B	ENC-B

Definition of the location classes with reference to relevant standards:
- Temperature: TEM-D – Location (-25°C-70°C) (ref. IEC 60092-504:2016 table 1 item 6-7)
- Vibration: VIB-A – For general applications (ref. IEC 60092-504:2016 table 1 item 10)
  VIB-B – On reciprocating machines etc. (ref. IEC 60092-504:2016 table 1 item 10)
- EMC: EMC-B – Bridge and open deck zone (ref. IEC 60092-504:2016 table 1 item 13-20)
- Enclosure: ENC-B – Engine room (IP44) (ref. IEC 60092-201:1994 table 5)
  ENC-C – Open deck (IP56) (ref. IEC 60092-201:1994 table 5)

Ex installations to be approved in each case according to the Rules and Ex-Certification/ Special Condition for Safe Use listed in valid Ex-certificate issued by a notified/recognized Certification Body.

Ex-certification is not covered by this certificate and the following paragraph, which is for information only, is based on information received from the manufacturer, but not verified by DNV.

Information on Ex-Certification received from manufacturer – Not verified by DNV				
Equipment	Certified			Certificate No.
BDH-500/EX BD-501/EX BHH-520/EX	Ⓔx II 1G	Ex ia IIC T5 Ga	Ta: -20°C to +70°C	Nemko 03ATEX218X
BDH-500/N BD-501/N BHH-520/N	Ⓔx II 3G	Ex ic IIB T4 Gc	Ta: -20°C to +70°C	Nemko 03ATEX217X
V-530-EXIA V-530-EXIA/HS	Ⓔx II 1 G	Ex ia IIC T5 Ga	Ta: -30°C to +70°C	DNV 21 ATEX 14779X
V-530-EXIC V-530-EXIC/HS	Ⓔx II 3 G	Ex ic IIB T5 Gc	Ta: -30°C to +70°C	DNV 22 ATEX 13772X