DNV·GL

EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

Certificate No:
MEDB0000646
Revision No:
1

Application of: Directive 2014/90/EU of 23 July 2014 on marine equipment (MED), issued as "Forskrift om Skipsutstyr" by the Norwegian Maritime Authority. This Certificate is issued by DNV GL AS under the authority of the Government of Norway.

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 requirements in the following Regulations/Standards:
Regulation **(EU) 2020/1170,**
item No. MED/3.51c. SOLAS 74 as amended, Regulation II-2/7 & X/3, 1994 HSC Code 7, 2000 HSC Code 7, FSS Code 9 and IMO MSC.1/Circ.1242
item No. MED/3.51d. SOLAS 74 as amended, Regulation II-2/7 & X/3, 1994 HSC Code 7, 2000 HSC Code 7, FSS Code 9, IGF Code 11 and IMO MSC.1/Circ.1242

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

This Certificate is valid until **2025-02-13**.
Issued at **Høvik** on **2021-02-22**

DNV GL local station:
Norway CMC, Mid-North

Approval Engineer:
Ståle Sneen

Notified Body
No.: **0575**

for **DNV GL AS**
Digitally Signed By: Alonso Pontes, Marta
Location: DNV GL Høvik, Norway
On behalf of

Roald Vårheim
Head of Notified Body

NORWEGIAN ACCREDITATION PROD 019

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-surveillance module (D, E or F) of Annex B of the MED is fully complied with and controlled by a written inspection agreement with a Notified Body. The product liability rests with the manufacturer or his representative in accordance with Directive 2014/90/EU.
This certificate is valid for equipment, which is conform to the approved type. The manufacturer shall inform DNV GL AS of any changes to the approved equipment. This certificate remains valid unless suspended, withdrawn, recalled or cancelled.
Should the specified regulations or standards be amended during the validity of this certificate, the product is to be re-approved before being placed on board a vessel to which the amended regulations or standards apply.

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-530 (Note 3)	AutroGuard® Multicriteria protector with SIL2 approval
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

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.

Application/Limitation

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-530	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

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 GL.

Information on Ex-Certification received from manufacturer – Not verified by DNV GL				
Equipment	Certified			Certificate No.
BDH-500/EX BD-501/EX BHH-520/EX	Ⓔx II 1G	Ex ia IIC T5	Ta: -20°C to +70°C	Nemko 03ATEX218X
BDH-500/N BD-501/N BHH-520/N	Ⓔx II (3)G Ⓔx II 3G	[Ex ic Gc] IIB Ex ic IIB T4 Gc	Ta: -20°C to +70°C Ta: -20°C to +70°C	Nemko 03ATEX217X

Type Examination documentation

Equipment	Scope	Document	No.
BD-200	EN 54-5	ANPI, Test Report, BFS/REDI/155-2005.06.16 ANPI, Test Report, BFS/DE/1057-1999.12.09	6 2
	IEC60092-504, IEC60533	DNV, Test Report, 99-1491, rev.2 DNV, Test Report, 2000-1178, rev.2 Nemko, Test report (supplemental), E18217.00	4 5 152
	Product data	Autronica, Data Sheet, 116-P-BD200, rev.D	17
BD-200M	EN 54-5	ANPI, Test Report, BFS/REDI/155-2005.06.16 ANPI, Test Report, BFS/DE/1057-1999.12.09	6 2
	IEC60092-504, IEC60533	DNV, Test Report, 99-1491, rev.2 DNV, Test Report, 2000-1178, rev.2 Nemko, Test report (supplemental), E18217.00	4 5 152
	Product data	Autronica, Data Sheet, 116-P-BD200M/CGB, rev.C	113
BD-300	EN 54-5	ANPI, Test Report, BFS/REDI/155-2005.06.16 ANPI, Test Report, BFS/DE/1057-1999.12.09	6 2
	IEC60092-504, IEC60533	DNV, Test Report, 99-1491, rev.2 DNV, Test Report, 2000-1178, rev.2 Nemko, Test report (supplemental), E18217.00	4 5 152
	Product data	Autronica, Data Sheet, 116-P-BD300, rev.E	18
BD-500	EN 54-5	ANPI, Test Report, BFS/REDI/155-2005.06.16 ANPI, Test Report, BFS/DE/1057-1999.12.09	6 2
	IEC60092-504, IEC60533	DNV, Test Report, 99-1491, rev.2 DNV, Test Report, 2000-1178, rev.2 Nemko, Test report (supplemental), E18217.00	4 5 152
	Product data	Autronica, Data Sheet, 116-P-BD500, rev.I	19
BD-500/N	EN 54-5	ANPI, Test Report, BFS/REDI/155-2005.06.16 ANPI, Test Report, BFS/DE/1057-1999.12.09	6 2
	IEC60092-504, IEC60533	DNV, Test Report, 99-1491, rev.2 DNV, Test Report, 2000-1178, rev.2 Nemko, Test report (supplemental), E18217.00	4 5 152
	Product data	Autronica, Data Sheet, 116-P-BD500N/CGB, rev.C	115
BD-500/EX	EN 54-5	ANPI, Test Report, BFS/REDI/155-2005.06.16 ANPI, Test Report, BFS/DE/1057-1999.12.09	6 2
	IEC60092-504, IEC60533	DNV, Test Report, 2000-1178, rev.2 Nemko, Test report (supplemental), E18217.00	5 152
	Product data	Autronica, Data Sheet, 116-P-BD500EX/CGB, rev.I	114
BH-220	EN 54-5/7	ANPI, Test Report, BFS/REDI/154-2005.06.03 ANPI, Test Report, BFS/DE/1057-1999.12.09 ANPI, Addendum, Nr.1 2000-02-25	1 2 3
	IEC60092-504, IEC60533	DNV, Test Report, 99-1491, rev.2 DNV, Test Report, 2000-1178, rev.2 Nemko, Test report (supplemental), E18217.00	4 5 152
	Product data	Autronica, Data Sheet, 116-P-BH220, rev.D	21
BH-320	EN 54-5/7	ANPI, Test Report, BFS/REDI/154-2005.06.03 ANPI, Test Report, BFS/DE/1057-1999.12.09 ANPI, Addendum, Nr.1 2000-02-25	1 2 3
	IEC60092-504, IEC60533	DNV, Test Report, 99-1491, rev.2 DNV, Test Report, 2000-1178, rev.2 Nemko, Test report (supplemental), E18217.00	4 5 152
	Product data	Autronica, Data Sheet, 116-P-BH320, rev.D	22
BH-520	EN 54-5/7	ANPI, Test Report, BFS/REDI/154-2005.06.03 ANPI, Test Report, BFS/DE/1057-1999.12.09 ANPI, Addendum, Nr.1 2000-02-25	1 2

Equipment	Scope	Document	No.
	IEC60092-504, IEC60533	DNV, Test Report, 99-1491, rev.2 DNV, Test Report, 2000-1178, rev.2 Nemko, Test report (supplemental), E18217.00	4 5 152
	Product data	Autronica, Data Sheet, 116-P-BH520, rev.F	23
BH-520/N	EN 54-5/7	ANPI, Test Report, BFS/REDI/154-2005.06.03 ANPI, Test Report, BFS/DE/1057-1999.12.09 ANPI, Addendum, Nr.1 2000-02-25	1 2
	IEC60092-504, IEC60533	DNV, Test Report, 99-1491, rev.2 DNV, Test Report, 2000-1178, rev.2 Nemko, Test report (supplemental), E18217.00	4 5 152
	Product data	Autronica, Data Sheet, 116-P-BH520N/CGB, rev.A	127
BH-520/EX	EN 54-5/7	ANPI, Test Report, BFS/REDI/154-2005.06.03 ANPI, Test Report, BFS/DE/1057-1999.12.09 ANPI, Addendum, Nr.1 2000-02-25	1 2
	IEC60092-504, IEC60533	DNV, Test Report, 2000-1178, rev.2 Nemko, Test report (supplemental), E18217.00	5 152
	Product data	Autronica, Data Sheet, 116-P-BH520EX/CGB, rev.H	126
BD-501	EN 54-5	ANPI, Test Report, BFS/REDI/155-2005.06.16 ANPI, Test Report, BFS/DE/1057-1999.12.09	6 2
	IEC60092-504, IEC60533	DNV, Test Report, 99-1491, rev.2 LPC, Test Report, TE200205 2001-01-11 Nemko, Test report (supplemental), E18217.00	4 50 152
	Product data	Autronica, Data Sheet, 116-P-BD501/CGB, rev.F	116
BD-501/N	EN 54-5	ANPI, Test Report, BFS/REDI/155-2005.06.16 ANPI, Test Report, BFS/DE/1057-1999.12.09	6 2
	IEC60092-504, IEC60533	DNV, Test Report, 99-1491, rev.2 LPC, Test Report, TE200205 2001-01-11 Nemko, Test report (supplemental), E18217.00	4 50 152
	Product data	Autronica, Data Sheet, 116-P-BD501N/CGB, rev.D	118
BD-501/EX	EN 54-5	ANPI, Test Report, BFS/REDI/155-2005.06.16 ANPI, Test Report, BFS/DE/1057-1999.12.09	6 2
	IEC60092-504, IEC60533	DNV, Test Report, 99-1491, rev.2 LPC, Test Report, TE200205 2001-01-11 Nemko, Test report (supplemental), E18217.00	4 50 152
	Product data	Autronica, Data Sheet, 116-P-BD501EX/CGB, rev.H	117
V-430	EN 54-5	Intertek, Test Report, 103874656LHD-021, Issue 1	162
	EN 54-7	Intertek, Test Report, 103874656LHD-022, Issue 1	163
	EN 54-29	Intertek, Test Report, 103874656LHD-024, Issue 1	
	IEC60092-504, IEC60533	Intertek, Test Report, 103874656LHD-025, Issue 1	167
	Product data	Autronica, Data Sheet, Doc-1004268.2, 2020-06-08	172
V-430-S	EN 54-3	Intertek, Test Report, 103963397LHD-021, Issue 1	161
	EN 54-5	Intertek, Test Report, 103874656LHD-021, Issue 1	162
	EN 54-7	Intertek, Test Report, 103874656LHD-022, Issue 1	163
	EN 54-29	Intertek, Test Report, 103874656LHD-024, Issue 1	166
	IEC60092-504, IEC60533	Intertek, Test Report, 103874656LHD-025, Issue 1	167
	Product data	Autronica, Data Sheet, Doc-1004268.2, 2020-06-08	172
V-430-VADW, V-430-VADR	EN 54-5	Intertek, Test Report, 103874656LHD-021, Issue 1	162
	EN 54-7	Intertek, Test Report, 103874656LHD-022, Issue 1	163
	EN 54-23	Intertek, Test Report, 103963397LHD-022, Issue 1	165
	EN 54-29	Intertek, Test Report, 103874656LHD-024, Issue 1	166
	IEC60092-504, IEC60533	Intertek, Test Report, 103874656LHD-025, Issue 1	167
	Product data	Autronica, Data Sheet, Doc-1004268.2, 2020-06-08	172

Equipment	Scope	Document	No.
V-430-S-VADW, V-430-S-VADR	EN 54-3	Intertek, Test Report, 103963397LHD-021, Issue 1	161
	EN 54-5	Intertek, Test Report, 103874656LHD-021, Issue 1	162
	EN 54-7	Intertek, Test Report, 103874656LHD-022, Issue 1	163
	EN 54-23	Intertek, Test Report, 103963397LHD-022, Issue 1	165
	EN 54-29	Intertek, Test Report, 103874656LHD-024, Issue 1	166
	IEC60092-504, IEC60533	Intertek, Test Report, 103874656LHD-025, Issue 1	167
	Product data	Autronica, Data Sheet, Doc-1004268.2, 2020-06-08	172
V-530, V-530-EXIA, V-530-EXIC	EN 54-5	Intertek, Test Report, 103874656LHD-021, Issue 1	162
	EN 54-7	Intertek, Test Report, 103874656LHD-022, Issue 1	163
	EN 54-29	Intertek, Test Report, 103874656LHD-024, Issue 1	166
	IEC60092-504, IEC60533	Intertek, Test Report, 103874656LHD-025, Issue 1	167
	Product data	Autronica, Data Sheet, Doc-1004269.2, 2020-06-08	173
V-100,	EN 54-17	Intertek, Test Report, 103874656LHD-023, Issue 1	164
	IEC60092-504, IEC60533	Intertek, Test Report, 103874656LHD-024, Issue 1	167
	Product data	Autronica, Data Sheet, Doc-1004270.2, 2020-06-08	174
V-110, V-110	EN 54-17	Intertek, Test Report, 103874656LHD-023, Issue 1	164
	IEC60092-504, IEC60533	Intertek, Test Report, 103874656LHD-025, Issue 1	167
	Product data	Autronica, Data Sheet, Doc-1004271.1, 2020-05-19	175

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 (wheel mark), followed by
    - identification number of the NoBo involved in production control (MED D)
    - the year the mark is affixed
    - Example: 0575/2021