

EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

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 & accom. spaces, cabin balconies, machinery spaces & unattended machinery spaces: Smoke detectors – Point detectors using scattered or transmitted light or ionization

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) 2019/1397**,
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
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

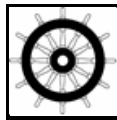
Further details of the equipment and conditions for certification are given overleaf.

This Certificate is valid until **2025-02-13**.

Issued at **Høvik** on **2020-02-14**

DNV GL local station:
Trondheim

Approval Engineer:
Ståle Sneen



Notified Body
No.: **0575**

for **DNV GL AS**

Roald Vårheim
Head of Notified 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-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 This certificate remains valid unless suspended, withdrawn, recalled or cancelled.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:

| | |
|--------------------|---|
| BH-200 (Note 1) | Smoke detector without SelfVerify |
| BH-300 (Note 1) | Smoke detector with SelfVerify |
| BH-500 (Note 1) | Smoke detector with SelfVerify, environmentally protected |
| BH-500/N (Note 1) | Smoke detector with SelfVerify, Exic-version for use in zone 2 only |
| BH-500/EX (Note 1) | Smoke detector with SelfVerify, Exia-version for use in all zones |
| 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 |

Note 1: The detector head carries an additional H in the name. The listed products includes the mandatory socket BWA-100.

Application/Limitation

The equipment are 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 |
|-----------|-------------|-----------|-------|-----------|
| BH-200 | TEM-D | VIB-B | EMC-B | ENC-B |
| BH-300 | TEM-D | VIB-B | EMC-B | ENC-B |
| BH-500 | TEM-D | VIB-B | EMC-B | ENC-B |
| BH-500/N | TEM-D | VIB-B | EMC-B | ENC-B |
| BH-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 |

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-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)

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. |
| BHH-500/EX BHH-520/EX | ⊕ II 1G | Ex ia IIC T5 | Ta: -20°C to +70°C | Nemko 03ATEX218X |
| BHH-500/N BHH-520/N | ⊕ II (3)G | [Ex ic Gc] IIB | Ta: -20°C to +70°C | Nemko 03ATEX217X |
| | ⊕ II 3G | Ex ic IIB T4 Gc | Ta: -20°C to +70°C | |

Type Examination documentation

| Equipment | Scope | Document | No. |
|--------------|---|--|----------|
| BH-200 | EN 54-7 | ANPI, Test Report, BFS/REDI/154-2005.06.03 | 1 |
| | | ANPI, Test Report, BFS/DE/1057-1999.12.09 incl. ANPI, Addendum, Nr.1 2000-02-25 | 2 |
| | IEC60092-504, IEC60533 | DNV, Test Report, 99-1491, rev.2 | 4 |
| | | DNV, Test Report, 2000-1178, rev.2 Nemko, Test report (supplemental), E18217.00 | 5 152 |
| Product data | Autronica, Data Sheet, 116-P-BH200, rev.C | 14 | |
| BH-300 | EN 54-7 | ANPI, Test Report, BFS/REDI/154-2005.06.03 | 1 |
| | | ANPI, Test Report, BFS/DE/1057-1999.12.09 incl. ANPI, Addendum, Nr.1 2000-02-25 | 2 |
| | IEC60092-504, IEC60533 | DNV, Test Report, 99-1491, rev.2 | 4 |
| | | DNV, Test Report, 2000-1178, rev.2 Nemko, Test report (supplemental), E18217.00 | 5 152 |
| Product data | Autronica, Data Sheet, 116-P-BH300, rev.C | 15 | |
| BH-500 | EN 54-7 | ANPI, Test Report, BFS/REDI/154-2005.06.03 | 1 |
| | | ANPI, Test Report, BFS/DE/1057-1999.12.09 incl. ANPI, Addendum, Nr.1 2000-02-25 | 2 |
| | IEC60092-504, IEC60533 | DNV, Test Report, 99-1491, rev.2 | 4 |
| | | DNV, Test Report, 2000-1178, rev.2 Nemko, Test report (supplemental), E18217.00 | 5 152 |
| Product data | Autronica, Data Sheet, 116-P-BH500, rev.G | 16 | |
| BH-500/N | EN 54-7 | ANPI, Test Report, BFS/REDI/154-2005.06.03 | 1 |
| | | ANPI, Test Report, BFS/DE/1057-1999.12.09 incl. ANPI, Addendum, Nr.1 2000-02-25 | 2 |
| | IEC60092-504, IEC60533 | DNV, Test Report, 99-1491, rev.2 | 4 |
| | | DNV, Test Report, 2000-1178, rev.2 Nemko, Test report (supplemental), E18217.00 | 5 152 |
| Product data | Autronica, Data Sheet, 116-P-BH500N/CGB, rev.A | 125 | |
| BH-500/EX | EN 54-7 | ANPI, Test Report, BFS/REDI/154-2005.06.03 | 1 |
| | | ANPI, Test Report, BFS/DE/1057-1999.12.09 incl. ANPI, Addendum, Nr.1 2000-02-25 | 2 |
| | IEC60092-504, IEC60533 | DNV, Test Report, 2000-1178, rev.2 | 5 |
| | | Nemko, Test report (supplemental), E18217.00 | 152 |
| Product data | Autronica, Data Sheet, 116-P-BH500EX/CGB, rev.H | 124 | |
| BH-220 | EN 54-5/7 | ANPI, Test Report, BFS/REDI/154-2005.06.03 | 1 |
| | | ANPI, Test Report, BFS/DE/1057-1999.12.09 ANPI, Addendum, Nr.1 2000-02-25 | 2 3 |
| | IEC60092-504, IEC60533 | DNV, Test Report, 99-1491, rev.2 | 4 |
| | | DNV, Test Report, 2000-1178, rev.2 Nemko, Test report (supplemental), E18217.00 | 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 | 1 |
| | | ANPI, Test Report, BFS/DE/1057-1999.12.09 ANPI, Addendum, Nr.1 2000-02-25 | 2 3 |
| | IEC60092-504, IEC60533 | DNV, Test Report, 99-1491, rev.2 | 4 |
| | | DNV, Test Report, 2000-1178, rev.2 Nemko, Test report (supplemental), E18217.00 | 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 | 1 |
| | | ANPI, Test Report, BFS/DE/1057-1999.12.09 ANPI, Addendum, Nr.1 2000-02-25 | 2 |
| | IEC60092-504, IEC60533 | DNV, Test Report, 99-1491, rev.2 | 4 |
| | | DNV, Test Report, 2000-1178, rev.2 | 5 |
| | | Nemko, Test report (supplemental), E18217.00 | 152 |

Job Id: **344.1-001925-14**
Certificate No: **MEDB00006DJ**

| Equipment | Scope | Document | No. |
|-----------|------------------------|--|---|
| | 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 | 1 |
| | | ANPI, Test Report, BFS/DE/1057-1999.12.09 | 2 |
| | | ANPI, Addendum, Nr.1 2000-02-25 | |
| | IEC60092-504, IEC60533 | DNV, Test Report, 99-1491, rev.2 | 4 |
| | | DNV, Test Report, 2000-1178, rev.2 | 5 |
| | | Nemko, Test report (supplemental), E18217.00 | 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 | 1 |
| | | ANPI, Test Report, BFS/DE/1057-1999.12.09 | 2 |
| | | ANPI, Addendum, Nr.1 2000-02-25 | |
| | IEC60092-504, IEC60533 | DNV, Test Report, 2000-1178, rev.2 | 5 |
| | | Nemko, Test report (supplemental), E18217.00 | 152 |
| | | Product data | Autronica, Data Sheet, 116-P-BH520EX/CGB, rev.H |

Tests carried out

Applicable tests according to:

- EN 54-5:2000 incl. A1:2002 (for multisensor)
- EN 54-5:2017 incl. A1:2018 (for multisensor)
- EN 54-7:2018
- 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: 0575/2020