



Marine & Offshore
Division

Certificate number: 09603/E0 BV

File number: ACI 2500/072/07

Product code: 3779H

This certificate is not valid when presented without the full attached schedule composed of 7 sections

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TYPE APPROVAL CERTIFICATE

This certificate is issued to

Autronica Fire and Security AS
TRONDHEIM - NORWAY

for the type of product

MULTI SENSORS FOR FIRE DETECTION & FIRE ALARM SYSTEMS

Type: BH-220, BH-320, BH-520, BH-520/N and BH-520/EX.

Requirements:

BUREAU VERITAS Rules for the Classification of Steel Ships.
EN 54-5:2000+A1:2002, EN 54-7:2000+A1:2002, EN 54-17:2005.
EN / IEC 60079-0/11/26.

This certificate is issued to attest that BUREAU VERITAS did undertake the relevant approval procedures for the product identified above which was found to comply with the relevant requirements mentioned above.

This certificate will expire on: 08 Jul 2020

For BUREAU VERITAS,
At BV OSLO, on 08 Jul 2015,
Rune MARSTEIN

Rune Marstein



This certificate remains valid until the date stated above, unless cancelled or revoked, provided the conditions indicated in the subsequent page(s) are complied with and the product remains satisfactory in service. This certificate will not be valid if the applicant makes any changes or modifications to the approved product, which have not been notified to, and agreed in writing with BUREAU VERITAS. Should the specified regulations or standards be amended during the validity of this certificate, the product(s) is/are to be re-approved prior to it/they being placed on board vessels to which the amended regulations or standards apply. This certificate is issued within the scope of the General Conditions of BUREAU VERITAS Marine & Offshore Division available on the internet site www.veristar.com. Any Person not a party to the contract pursuant to which this document is delivered may not assert a claim against BUREAU VERITAS for any liability arising out of errors or omissions which may be contained in said document, or for errors of judgement, fault or negligence committed by personnel of the Society or of its Agents in establishment or issuance of this document, and in connection with any activities for which it may provide.

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BV Mod. Ad.E 530 October 2014

This certificate consists of 3 page(s)

THE SCHEDULE OF APPROVAL

1. PRODUCT DESCRIPTION:

AUTRONICA Multisensor (Smoke and Heat) Detectors BH series, addressable, with SelfVerify function (except BH-220) and short-circuit isolator, for connection to AutoSafe alarm systems:

1.1 - Main Characteristics:

	BH-220	BH-320	BH-520, BH-520/N, BH-520/EX
Principle:	Based on scattered light detection combined with a temperature sensor	Based on scattered light detection combined with a temperature sensor	Based on scattered light detection combined with a temperature sensor
Response	Smoke or Heat Smoke (Heat assisted) Heat (Class A1)	Smoke or Heat Smoke (Heat assisted) Heat (Class A1)	Smoke or Heat Smoke (Heat assisted) Heat (Class A1)
Protection Index	IP 44D (Dry Spaces)	IP 44D (Dry Spaces)	IP 44D (Humid Spaces)
Working Temperature	-20°C to +70°C	-20°C to +70°C	-20°C to +70°C
Power Supply	10-27 VDC	10-27 VDC	10-27 VDC
Ex Protection	N/A	N/A	N/A (BH-520) Ex ia IIC T5 Ga (BH-520/EX) Ex ic IIB T4 Gc (BH-520/N)
Software Version	2.4x	2.4x	2.4x
Testing Standards	IEC 60092-504 EN 54-5, 54-7 & 54-17	IEC 60092-504 EN 54-5, 54-7 & 54-17	IEC 60092-504 EN 54-5, 54-7 & 54-17

2. DOCUMENTS AND DRAWINGS:

Autronica:

BH-220 - 116-P-BH220/CGB, Rev. D dated 2010-02-24
 BH-320 - 116-P-BH320/CGB, Rev. D dated 2009-06-24
 BH-520 - 116-P-BH520/CGB, Rev. F dated 2009-06-24
 BH-520/EX - 116-P-BH520EX/CGB, Rev. H dated 2011-04-15
 BH-520/N - 116-P-BH520N/CGB, Rev. B dated 2014-01-06
 AutoSafe Detectors SW Release 2.41, Doc. No. 850045Jan09/4.2/003 Version 1.0 dated 31.08.2010.
 Software documentation ref. 850045Jan09/4.2/003 Ver. 1.0
 Detector software description Ver. 1.0.

3. TEST REPORTS:

Issued by **LPC:**

BH-320 Test report EN54 LPC N° TE 89810
 BH-520 Test report EN54 LPC N° TE 89808.

Issued by **ANPI:**

EC-Certificate of Conformity No. 1134-CPD-017 dated 13.02.09.

Issued by **DNV:**

Environmental and Testing of Autosafe System, Test Report No. 99-1491 Rev. 02 dated 03 December 1999
 Maritime Testing of I/O and A/V Units, Test Report No. 2010-3107 Rev. 01 dated 2010-05-05.

Issued by **Nemko:**

EC-Type Examination Certificate No. Nemko 03ATEX 218X, Issue 6 dated 2011-09-15
 EC-Type Examination Certificate No. Nemko 03ATEX 217X, Issue 6 dated 2014-09-16
 IECEX Certificate No. IECEX NEM 11.0009X dated 2011-09-14
 IECEX Certificate No. IECEX NEM 11.0017X dated 2012-03-08.

4. APPLICATION / LIMITATION:

- 4.1 - BUREAU VERITAS Rules for the Classification of Steel Ships.
- 4.2 - Approval valid for ships intended to be granted with the following additional class notations: **AUT-UMS, AUT-CCS, AUT-PORT and AUT-IMS.**
- 4.3 - BUREAU VERITAS Environmental Category, **EC Code: 31**
- 4.4 - The equipment fulfils the EMC requirements for installation on the Bridge and Deck Zone.
- 4.5 - **BH-520/EX** must be connected to the approved AutoSafe barrier **BZ-500**.
- 4.6 - **BH-520/N** must be connected to the approved AutoSafe Loop Driver **BSD-310N**.
- 4.7 - Only Hardware and Software successfully tested together in compliance with the regulations as referred to in page one, according to the declaration of the manufacturer are covered by this certificate.
- 4.8 - Each application and configuration is to be submitted to the Society's examination prior to fitting on board.
- 4.9 - The equipment, once installed on board ship, is to be tested in accordance with the above referred Regulations under the

supervision of a Society's Surveyor.

5. PRODUCTION SURVEY REQUIREMENTS:

5.1 - The **AUTRONICA Multisensors of BH series** are to be supplied by **utronica Fire and Security AS** in compliance with the type described in this certificate.

5.2 - This type of product is within the category HBV of Bureau Veritas Rule Note NR320.

5.3 - **Autronica Fire and Security AS** has to make the necessary arrangements to have its works recognised by Bureau Veritas in compliance with the requirements of NR320 for HBV products :

Autronica Fire and Security AS
Haakon VII's gate 4
7483 TRONDHEIM
NORWAY

6. MARKING OF PRODUCT:

6.1 - Maker's name or trademark,

- Serial number of the units,
- Equipment type number or model identification under which it was type-tested.
- Type designation
- Standard N°
- Specification of terminals
- Software version N°

6.2 - According to EN 54-5, EN 54-7 and EN 54-17

6.3 - Ex marking as relevant, if applicable.

7. OTHERS:

7.1 - This approval is given on the understanding that the Society reserves the right to require check tests to be carried out on the units at any time and that **Autronica Fire and Security AS** will accept full responsibility for informing shipbuilders, shipowners or their sub-contractors of the proper methods of use and general maintenance of the units and the conditions of this approval.

7.2 - This certificate supersedes the Type Approval Certificate N° 09603/D2 BV issued on 09.05.2012. by the Society.

***** END OF CERTIFICATE *****