



Marine & Offshore

Certificate number: 32071/C1 BV

File number: AP 4371

Product code: 3785H

*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*

**FLAME FIRE DETECTORS**

Flame Detectors BG-201, BG-21, BG-301, BG-301-EXIA and BG-301-EXIC

**Requirements:**

Bureau Veritas Rules for the Classification of Steel Ships  
EN 54-10:2002 + A1: 2005, EN 54-17:2005

EC Code: 31/41SB

*This certificate is issued to attest that Bureau Veritas Marine & Offshore 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: 12 Apr 2028**

**For Bureau Veritas Marine & Offshore,**

At BV OSLO, on 12 Feb 2025,  
Rune MARSTEIN

***This certificate was created electronically and is valid without signature***



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 Marine & Offshore. 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 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 Marine & Offshore 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 June 2017

This certificate consists of 3 page(s)

## THE SCHEDULE OF APPROVAL

### 1. PRODUCT DESCRIPTION:

The **AutroFlame IR Detector** is Point flame detector of fires involving combustion of carbonaceous materials.

Type **BG-21**: can be used for connection to most conventional panels using a loop voltage.

Type **BG-201** : can be used for interactive AI\_Com version for connection to AutroSafe/Autroprime detection.

Type **BG-301, BG-301-EXIA, BG-301-EXIC**: can be used on AI\_Com detection loops for interactive fire detection system.

Specifications	BG-21	BG-201	BG-301, BG-301 Ex ia/ic
Operating voltage	10 to 26 VDC	Supplied from detection loop	non-Ex and Ex ic version: 24VDC Ex ia version (requires Barrier Unit BZ-500): Maximum 15.75 VDC
Current consumption : Stand by	90µA	90µA	0.35mA
Alarm current	2,1 mA	2,1 mA	3 mA
Working Temperature	- 40°C to + 70°C	- 40°C to + 70°C	- 40°C to + 70°C
Performance Classes	All classes	All classes	All classes
Software Program	v1.4	v1.8	v1.1.x
Ingress Protection	IP66/IP67	IP66/IP67	IP66/IP67
Operating Wavelength Band	IR (Infra-Red)	IR (Infra-Red)	IR (Infra-Red)
Ex protection	/	/	BG-301 Ex ia: II 1 G Ex ia IIC T4 Ga BG-302 Ex ic: II 3 G Ex ic IIB T4 Gc

### 2. DOCUMENTS AND DRAWINGS:

#### **Autronica Product Data:**

Data Sheet, ref. 116-P-BG21/CGB, dated 2012-10-10

Data Sheet, ref. 116-P-BG201/CGB, dated 2012-10-10

Mounting Instruction, Instruction Manual, ref. 116-P-BG201-BG21/DGB Preliminary, dated 2012-10-10

BG-201 Software documentation, ref. 850060/4.2/005 V1.0, dated 2012-04-02.

Maritime Flame Detector - SW changes, ref 850060/4.3/001 rev. 1.4 dated 2015-04-21.

BG-301, BG-301-EXIA, BG-301-EXIC Data Sheet, Doc-1005449 rev.5, dated 2024-11-07.

BG-301, BG-301-EXIA, BG-301-EXIC Technical Handbook, Doc-1005448 rev.6, 2024-11-07.

BG-301 schematic drawings Nos. Doc-1004848 rev.5, dated 2024-04-02; Doc-1005010 rev.4, dated 2023-01-18;

Doc-1005361 rev.2, dated 2022-11-30.

BG-301 PCB drawings, No. PCB 116.10001873.4, Doc-1005285 rev.5, dated 2023-08-14; PCB 116-10001596.4, Doc-1005078 rev.7, dated 2022-12-09.

#### **Ex certificate:**

IECEX certificate, No. IECEX DNV 24.0013X, dated 10-09-2024.

IECEX certificate, No. IECEX DNV 23.0068X, dated 22-04-2024.

Type Examination Certificate Number DNV 24 ATEX 03424X, dated 10-09-2024.

Type Examination Certificate Number DNV 23 ATEX 03418X, dated 22-04-2024.

### 3. TEST REPORTS:

BRE Global Test Report TE276617 BG-201 IR Flame Detector, dated 2012-11-05.

BRE Global Test Report TE276617 SW-A1 BG201 IR Flame Detector, dated 2012-10-11.

Nemko Test Report E12044.00 - Maritime Testing BG-201, dated 2012-05-29.

Maritime Low Cost Flame Detector - BG-201 Unit Test SW1.8, ref 850060/7.3/001 rev. 1.3 dated 2015-04-07.

Nemko Test report Environmental and EMC No. E18217.00, dated 15-11-2018.

CNBOP-PIB Test report No. 1381/BA/23, dated 22-02-2024.

Hamilton Test report No. LT/221.1/2024, dated 03-06-2024.

Hamilton Test report No. LT/307/2024, dated 08-07-2024.

**4. APPLICATION / LIMITATION:**

- 4.1 - According to Manufacturer's instructions and BUREAU VERITAS Rules for the Classification of Steel Ships.
- 4.2 - BUREAU VERITAS **Environmental Category: 31/41SB**.
- 4.3 - The equipment fulfils the EMC requirements for an installation on the Bridge and Deck Zone.
- 4.4 - Approval also valid for ships to be granted with the notations: **AUT-UMS, AUT-CCS, AUT-PORT** and **AUT-IMS**.
- 4.5 - Each application and configuration is to be submitted to the Society's examination prior to fitting on board.
- 4.6 - The equipment, once installed on board ship, is to be tested in accordance with the above referred Rules under the supervision of a Society's Surveyor.
- 4.7 - Only Hardware and Firmware / Software successfully tested together in compliance with the rules as referred to in cover page, according to the declaration of the manufacturer are covered by this certificate.
- 4.8 - Any modification of the hardware, firmware or software having an impact on the product performance or functionality has to be validated with type testing.
- 4.9 - Equipment covered by this Type Approval certificate has been tested according to requirements of IACS UR E10 rev 9.

**5. PRODUCTION SURVEY REQUIREMENTS:**

- 5.1 - The above products are to be supplied by **AUTRONICA 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 and as such does not require a BV product certificate.
- 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.
- 5.4 - For information, **AUTRONICA Fire and Security AS** has declared to Bureau Veritas the following production site:

**AUTRONICA Fire and Security AS**  
**Bromstadveien 59**  
**7483 TRONDHEIM - NORWAY**

**6. MARKING OF PRODUCT:**

According to EN 54-10 and EN 54-17 requirements

**7. OTHERS:**

- 7.1 - It is **AUTRONICA Fire and Security AS** responsibility to inform shipbuilders or their sub-contractors of the proper methods of fitting, use and general maintenance of the approved equipment and the conditions of this approval.
- 7.2 - This certificate supersedes the Type Approval Certificate No.32071/C0 BV issued by the Society.

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