

# EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

Certificate No:  
**MEDB000011J**  
Revision No:  
**2**

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 AS under the authority of the Government of Norway.

## This is to certify:

**That the Fixed hydrocarbon gas detection system**

with type designation(s)  
**Fixed hydrocarbon gas detection system type BS-420MG**

Issued to

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

is found to comply with the requirements in the following Regulations/Standards:

Regulation (EU) 2023/1667,

**item No. MED/3.65. SOLAS 74 as amended, Regulation II-2/4 and IMO FSS Code 16 and IMO MSC.1/Circ.1370, Circular MSC.1/Circ.1527.**

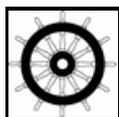
Further details of the equipment and conditions for certification are given overleaf.

This Certificate is valid until **2028-11-14**.

Issued at **Høvik** on **2023-11-15**

DNV local unit:  
**East & South Norway CMC**

Approval Engineer:  
**Ståle Sneen**



Notified Body  
No.: **0575**

for **DNV AS**

**Sverre Olav Bergli**  
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 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 This certificate remains valid unless suspended, withdrawn, recalled or cancelled.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.

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 300,000 USD.



## Product description

BS-420MG, BSD-340/xx and Autopoint Maritime Gas detector constitute the core hydrocarbon gas detection system.

The gas detection control panel 420MG supports maximum 30 modules, of which maximum 12 can be loop driver modules. Utilizing a redundant Ethernet network, AutoNet, the control panel can communicate with other system units. A maximum number of 64 system units can be connected to each AutoNet.

The fixed hydrocarbon gas detection panel type BS-420MG communicates with the gas detectors through the Power Loop Driver type BSD-340/Ex, BSD-340/1 or BSD-340/2.

The Autopoint Maritime Gas detector communicates with BS-420MG via the Power Loop.

Other MED approved gas detectors with 4-20 mA output signalling can be connected through BN-342/Ex, BN-342/1 or BN-342/2 Power Loop 4-20 mA Input Unit.

BS-420MG main panel consists of the following parts:

- Panel front BSV-420M
- Cabinet UEA-400
- Power supply module BSS-310A
- Communication module BSL-310
- Text foils E-2879

The system consists of the following parts:

- BS-420MG main control panel
  - AutoPoint Maritime Gas Detector Power Loop
  - BSD-340/xx PowerLoop Driver
  - BN-342/xx Powerloop 4-20 mA Input Unit
- where xx can be EX, 1 or 2.

## Application/Limitation

The equipment are found to comply with following location/application dependent requirements:

- EMC: Bridge and open deck zone (ref. IEC 60092-504:2016 table 1 item 13-20)
- Enclosure: Protected locations (IP32) (ref. IEC 60092-201:1994 table 5)
- Temperature: -25°C to 70°C (ref. IEC 60092-504:2016 table 1 item 6-7)
- Vibration: For general applications (ref. IEC 60092-504:2016 table 1 item 10)

Ex-certification is not covered by this certificate. Application in hazardous area 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.

## Type Examination documentation

| Equipment  | Scope                            | Document  | No. |
|------------|----------------------------------|---|-----|
| BS-420MG   | Product data                     | Autronica, Doc-1000421 rev.1                                  | 8   |
|            | Wall chart (user man.)           | Autronica, Doc-1004711 rev.1                                  | 3   |
|            | System description and operation | Autronica, Doc-1004753 rev.1                                  | 23  |
|            | EN 60079-29-1                    | FTZU Test Report 15.0415-84, 2016-02-03                       | 16  |
|            | EN 60079-29-1                    | FTZU Test Report 20.0027-81, 2020-03-20                       | 24  |
|            | IEC 60092-504, 60533             | DNV Test Report 2009-3691, rev.6                              | 14  |
|            | IEC 60092-504, 60533             | Applica Test Report 21439, rev.0                              | 25  |
| BSD-340/xx | IEC 60092-504 (cold test)        | Applica Test Report 20887, rev.8                              | 26  |
|            | Product data                     | Autronica, Doc-1000435 rev.2                                  | 12  |
|            | Product data                     | Autronica, Doc-1000434 rev.3                                  | 11  |
|            | Product data                     | Autronica, Doc-1000433 rev.3                                  | 10  |
|            | System description and operation | Autronica, Doc-1004753 rev.1                                  | 23  |
|            | EN IEC 60079-0                   | Nemko 04 ATEX 1566, 2008-09-15                                | 28  |
|            |                                  | Autronica Technical assessment, Doc-1016441 rev.1, 2023-09-08 | 32  |
|            | EN 60079-29-1                    | FTZU Test Report 15.0415-84, 2016-02-03                       | 16  |
|            | EN 60079-29-1                    | FTZU Test Report 20.0027-81, 2020-03-20                       | 24  |
| BN-342/xx  | IEC 60092-504, 60533             | DNV Test Report 2003-3169, rev.2                              | 19  |
|            | IEC 60092-504, 60533             | Applica Test Report 21439, rev.0                              | 25  |
|            | Product data                     | Autronica, Doc-1000390 rev.2                                  | 7   |
| BN-342/xx  | Product data                     | Autronica, Doc-1000389 rev.1                                  | 6   |
|            | Product data                     | Autronica, Doc-1000387 rev.1                                  | 5   |

| Equipment                                 | Scope                                      | Document  | No. |
|---|--|---|-----|
|   | System description and operation           | Autronica, Doc-1004753 rev.1                                  | 23  |
|   | EN IEC 60079-0                             | Nemko 03 ATEX 222 issue 4, 2021-03-09                         | 30  |
|   |  | Autronica Technical assessment, Doc-1016442 rev.1, 2023-09-08 | 31  |
|   |  | FTZU Test Report 15.0415-84, 2016-02-03                       | 16  |
|   | EN 60079-29-1                              | FTZU Test Report 20.0027-81, 2020-03-20                       | 24  |
|   | IEC 60092-504, 60533                       | DNV Test Report 2003-3169, rev.2                              | 19  |
| IEC 60092-504, 60533                      | Applica Test Report 21439, rev.0           | 25  |     |
| Autropoint<br>Maritime<br>Gas<br>Detector | Product data                               | 116-P-MARGASDET/CGB, rev.C, 2015-09-03                        | 18  |
|   | System description and operation           | Autronica, Doc-1004753 rev.1                                  | 23  |
|   | EN IEC 60079-0                             | DEMKO 01 ATEX 129485X rev.11, 2023-02-27                      | 29  |
|   |  | Autronica Technical assessment, Doc-1016442 rev.1, 2023-09-08 | 31  |
|   | EN 60079-29-1                              | FTZU Test Report 15.0415-84, 2016-02-03                       | 16  |
|   | EN 60079-29-1                              | FTZU Test Report 20.0027-81, 2020-03-20                       | 24  |
|   | IEC 60092-504, 60533                       | DNV Test Report 2005-3105, rev.5                              | 20  |
| MED B cert.                               | MEDB00002YG (for equivalent unit HC-300PL) | -   |     |

### Tests carried out

- IMO MSC.1/Circ.1370,
- EN IEC 60079-0:2018 incl. AC:2020\*,
- EN 60079-29-1:2016 / IEC 60079-29-1:2016+AMD1:2020,
- IEC 60092-504:2016,
- IEC 60533:2015.

\* The standard identified by asterisk (\*) has been found not applicable for BS-420MG, BSD-340/1, BSD-340/2, BN-342/1 and BN-342/2.

### 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: 0575/2023