

# EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

Application of: Council Directive 96/98/EC of 20 December 1996 on Marine Equipment as amended by directive (EU) 2015/559, issued as "Forskrift om Skipsutstyr" by the Norwegian Maritime Directorate. This Certificate is issued by DNV GL AS under the authority of the Government of the Kingdom 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:

**Annex A.1, item No. A.1/3.65 and Annex B, Module B in the Directive; SOLAS 74 as amended, Regulation II-2/4 and IMO FSS Code and IMO MSC.1/Circ.1370**

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

This Certificate is valid until **2021-05-22**.

Issued at **Høvik** on **2016-05-23**

DNV GL local station:  
**Trondheim**



for **DNV GL AS**

Approval Engineer:  
**Nils Jarem**

Notified Body  
No.: **0575**

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**Vidar Dolonen**  
**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 Council Directive 96/98/EC, as amended.

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.

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

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 consist 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 (2001) table 1 item 19-20)
- Enclosure: Protected locations (IP32) (ref. IEC 60092-201 table 5)
- Temperature: Location (5°C-70°C) (ref. IEC 60092-504 (2001) table 1 item 6-7), low temperature tested to -15°C
- Vibration: For general applications (ref. IEC 60092-504 (2001) 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	116-P-BS200M/XGB rev.E, 2016-02-11	9
	EN 60079-29-1	FTZU Test Report: 15.0415-84, 2016-02-03	16
	IEC60092-504, 60533	DNV Test Report, 2009-3691, rev.6	14
	User Manual	116-P-BS420MG/CGB rev. 2016-02-10	8
	Wall chart (user man.)	P-116-ASAFEGAS-WALLCHA/LGB rev. 2016-01-25	3
BSD-340/xx	Product data	P-BSD340/EX/CE rev. A, 2008-05-27	12
	Product data	P-BSD340/2/CE rev. B, 2004-10-19	11
	Product data	P-BSD340/1/CE rev. B, 2004-10-19	10
	EN 60079-29-1	FTZU Test Report: 15.0415-84, 2016-02-03	16
	IEC60092-504, 60533	DNV Test Report 2003-3169, rev. 2.	19
BN-342/xx	Product data	116-P-BN342EX/CGB rev. B, 2014-03-11	7
	Product data	116-P-BN342/2/CGB rev. A, 2014-03-11	6

Job Id: **344.1-005451-1**  
Certificate No: **MEDB000011J**

<b>Equipment</b>	<b>Scope</b>	<b>Document</b>	<b>No.</b>
	Product data	116-P-BN342/1/CGB rev. A, 2014-03-11	5
	EN 60079-29-1	FTZU Test Report: 15.0415-84, 2016-02-03	16
	IEC60092-504, 60533	DNV Test Report 2003-3169, rev. 2.	19
Autopoint Maritime Gas Detector	Product data	116-P-MARGASDET/CGB rev. C, 2015-09-03	18
	EN 60079-29-1	FTZU Test Report: 15.0415-84, 2016-02-03	16
	IEC60092-504, 60533	DNV Test Report 2005-3105 rev. 05	20
	MED B cert.	MED-B-9906 (for equivalent unit HC-300PL)	-

### Tests carried out

- IEC 60092-504 (2001) including IEC 60092- 504 Corrigendum 1 (2011)
- IEC 60533 (2015)
- EN 60079-0 (2012) including A11:2013
- EN 60079-29-1 (2007)

### Marking of product

In general and for identification to this type examination certificate the products shall be marked with:

- Manufacturer's name or trade mark
- Type designation
- Mark of Conformity (see below)

### Mark of Conformity

The manufacturer is allowed to affix the Mark of Conformity according to Article 11 in the Council Directive 96/98/EC on Marine Equipment and shall issue a Declaration of Conformity, only when the module D, E or F of Annex B in the same directive is fully complied with.

- Module D: The quality system for production and testing shall be approved by the Notified Body.  
Module E: The quality system for inspection and testing shall be approved by the Notified Body.  
Module F: Compliance of the products to type as described in this EC Type-Examination Certificate must be verified by the Notified Body who also shall issue a of Certificate Conformity.