



Marine & Offshore

Certificate number: 31088/C0 BV

File number: AP 4339

Product code: 3780H

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

ANCILLARIES FOR FIXED FIRE DETECTION AND FIRE ALARM SYSTEMS

I/O Units: BN-303, BN-304, BN-305, BN-305-D and BN-307

Conventional Loop Interfaces: BNB-330A and BNB-331

End-Of-Line Board: BNY-330

Requirements:

BUREAU VERITAS Rules for the Classification of Steel Ships
EN 54-17:2005, EN 54-18:2005

EC Code: 31

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 Apr 2023,

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:

I/O Units (BN series) and Addressable Conventional Loop Interfaces (BNB series) with Short-circuit Isolator and SelfVerify Communication Loop.

BNY-330 End-of-Line Board (fitted in Detector Socket).

The above modules are intended to be used with AutoSafe or Autoprime Fire Detection Systems.

1.1 - Main Characteristics:

1.1.1 - Addressable Conventional Loop Interfaces: BNB-330A and BNB-331

	BNB-330A	BNB-331
Detection Loop	1xConventional Branch (32 detectors max.)	1xConventional Branch (32 detectors max.)
Output Relay	1xAlarm	1xAlarm & 1xFault
Output	None	1xPSU Fault
Protection Index	IP 20	IP 20
Working Temperature	-25°C to +70°C	-25°C to +70°C
Power Supply	1x24 VDC (20-30 VDC)	2x24 VDC (20-30 VDC)
Software Version	1.4	1.4

1.1.2 - I/O Units: BN-303, BN-304, BN-305 and BN-307

	BN-303	BN-304	BN-307
Type	Single Monitored Input Unit	Single Monitored Input/Output Unit	Monitored Fire Alarm Device Control Unit
Input / Output	1xIn / None	1xIn / 1xRelay	1x24 V In / 1xFAD Out
Protection Index	IP 54*	IP 54*	IP 54*
Working Temperature	-15°C to +70°C	-15°C to +70°C	-15°C to +70°C
Power Supply	1x24 VDC (16-26 VDC)	1x24 VDC (16-26 VDC)	1x24 VDC (20-30 VDC)
Software Version	1.11	1.11	1.8

	BN-305	BN-305-D
Type	Dual Monitored Input/Output Unit	Dual Monitored Input/Output Unit
Input / Output	2xIn / 2xRelay	2xIn / 2xRelay
Protection Index	IP 54* or IP 67**	IP 66**
Working Temperature	-15°C to +70°C	-25°C to +70°C
Power Supply	1x24 VDC (16-26 VDC)	24 VDC
Software Version	1.11	1.11

*Category 1, with membrane gland TSS M20 Grey (AFS Art. Nr 116-6571-011.6020) and ship kabel Shipline Draka01 640M TXOJ 0.75 mm2.

** with provided gland ST-M20*1.5 PG 13.5 Polyamide (Art. Nr. 116-6571-011.1920), gland nut GMP-GL M20*1.5 Polyamide (Art. Nr. 116-6531-006.1920) and ship kabel Shipline Draka01 640M TXOJ 0.75 mm2.

1.1.3- End-Of-Line Board: BNY-330 (To be fitted in Socket of last Detector on the Loop).

2. DOCUMENTS AND DRAWINGS:

Autronica:

Data Sheets Ref. 116-P-BN303/CGB 2011-10-07, Ref. 116-P-BN304/CGB 2011-10-07, Ref. 116-P-BN305/CGB Rev. B 2012-02-07, Ref. 116-P-BN307/CGB Rev. B 2012-01-23, Ref. 116-P-BNB330A/CGB 2012-07-09, Ref. 116-P-BNB331/CGB Rev. B 2012-02-02 and Ref. 116-P-BN305D/CGB Preliminary 2013-02-14.

Electronic Schematics No. BN-100 Rev. C, BN-109 Rev. A, BN-140 Rev. H, BN-142 Rev. D, BN-143 Rev. E, BN-145 Rev. D and M4040 Rev. A.

Autosafe IO Units SW_Changes Ref. 086/5.1/001 Rev. 1.8 dated on 2014-11-07.

3. TEST REPORTS:

Issued by CNPP:

BN-304: Test Reports No. DE 08 00 74 (EN54-17) and No. DE 08 00 74A (EN54-18) both dated 23 Dec. 2008.

Issued by Nemko:

BN-305: Test Report - EN 54-17 No. 187264 and Test Report - EN 54-18 No. 187265 both dated 2011-12-15

BN-307: Test Report - EN 54-17 No. 187266 and Test Report - EN 54-18 No. 187267 both dated 2011-12-15

BNB-331: Test Report - EN 54-17 No. 187270 and Test Report - EN 54-18 No. 187271 both dated 2011-12-15

Conventional Loop Interface: Test Report No. E12044.00, Rev. 00 dated 2012-05-29 (IEC 60092-504 & IEC 60533).

BN-305-D: Test Report No. E14054.00 dated 2014-03-10.

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

Issued by DNV:

Maritime Testing of I/O and A/V Units, Test Report No. 2010-3107 Rev. 01 dated 2010-05-05.

Issued by AFNOR:

Certificate of constancy of performance for products N°0333-CPR-075249 dated on 2018-02-12.

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 - 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 8.

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(s):

Autronica Fire and Security AS
Bromstadveien 59
7483 Trondheim
NORWAY

6. MARKING OF PRODUCT:

According to EN 54-17 and EN 54-18.

7. OTHERS:

7.1 - It is **Autronica Fire and Security AS's** 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.31088/B0 BV issued on 06 Mar 2018 by the Society.

*** END OF CERTIFICATE ***