



# Type Approval Certificate

Germanischer Lloyd

This is to certify that the undernoted product(s) has/have been tested in accordance with the relevant requirements of the GL Type Approval System.

Certificate No. 42 823 - 02 HH

Company Autronica Fire and Security AS  
Haakon VII's Gt. 4  
N-7483 Trondheim

Product Description Interactive Fire Alarm System

Type AutoSafe

Environmental Category C, D for detector/call point, EMC1

Technical Data / Range of Application BS-310 / BS-320 Fire alarm control panel, max. 512 detectors with a maximum of 7 modules, 6 of 7 modules can be loop driver modules. Self-verify-function for automatic testing of detectors. Automatic addressing of detectors.  
Software version: 3.5.1; Software Questionnaire acc. class 3 - 2001-09-27.  
BS-310M Stand alone system without LON interface.  
BS-320M Distributed system with LON and Ethernet interface.  
BS-330M Operating panel for one or several defined operation zones.  
BC-320M Controller serves as a connection unit for loop driver modules, I/O modules and power supply.  
BV-320M Information panel serves as an indication device only.  
SY-310 Battery cabinet provides 24 V sealed-lead acid batteries.  
Power supply provides 24V DC/3A to the BS-310/320 or controller BC-320.  
Input 160 -265 V AC, 180 -375 DC, 110 W, 47 -63Hz; Output 22 -30 V DC / 3A  
BSS-103/01 Open circuit board for internal use.  
BSS-103 With a metall front cover for external use.

Test Standard Guidelines for the Performance of Type Approvals, Edition 2003  
Regulations for the Use of Computer and Computer Systems 1994

Documents Test report : DNV No.: 98-1390, 99-1405, 99-1435, 99-1491, 99-1498, 2000-1178, 2000-1190, LPC TE 89702, 89703, 89704, 89797, 89798, 89799, 89808, 89809, 89810, 89823; ANPI-NVBB 1999-12-29-026; System documentation according to submitted files;

Remarks none

Valid until 2007-04-25

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File No. LA.01

Hamburg, 2005-06-10

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This certificate is issued on the basis of "Guidelines for the Performance of Type Approvals Part 1, Procedure".



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## I/O-modules

- BSB-310 Provides 4 monitored output circuits, 24V DC, load 1A each / total 3A.
- BSD-310 Loop driver module for connection of 127 loop units.
- BSE-310 Provides 4 monitored inputs, monitoring R=2k / Signal R=0,25-2K.
- BSE-320 Provides 8 non-monitored and galvanic isolated inputs, 24V DC.
- BSJ-310 Provides 8 open collector non-monitored outputs, load 100mA each.
- BSL-310 Interface RS-232 for internal communication between all I/O modules.
- BSS-310 Converts unregulated battery voltage to 24 V DC/ 5 V DC to all panel mounted I/O-modules.
- BSL-325 Used to boost the data signals on AUTROLON network if larger distances are required.
- EAU-310/B LON interface for communication between the system units.
- EAU-321 Serial port communication board, RS-232, for interfacing AUTROSAFE to other systems.
- EAU-330 Ethernet port to be used with approved hub between AUTROLON rings or interfacing AUTROMASTER 5000.
- BUB-310 Printer for BS-310/320/330.

Fire Alarm Detectors, photoelectric, operating on the light scatter principle, IP44D.

- BH-200 Optical smoke detector, without self verify.
- BH-300 Optical smoke detector, self verify.
- BH-500 Optical smoke detector, self verify, environment protected, \*3.
- BH-500/Ex Optical smoke detector, self verify, \*1, environment protected, \*3.

Fire Alarm Detectors, temperature measurement by means of thermistor; IP44D.

- BD-200 Heat detector, without self verify.
- BD-300 Heat detector, self verify.
- BD-500 Heat detector, self verify, environment protected, \*3.
- BD-500/Ex Heat detector, self verify, \*1, environment protected, \*3.

Fire Alarm Detectors, photoelectric, operating on the light scatter principle and temperature measurement by means of thermistor; IP44D.

- BH-220 Optical smoke and heat detector, without self verify.
- BH-320 Optical smoke and heat detector, self verify.
- BH-520 Optical smoke and heat detector, self verify, environment protected, \*3.
- BH-520/Ex Optical smoke and heat detector, self verify, \*1, environment protected, \*3.
- BH-520/S/Ex Optical smoke and heat detector, self verify, \*1, environment protected, \*3.

Conventional Loop Interface

- BNB-330 Interfaces up to 32 conventional detectors of the 15V or 24V type to the AutoSafe system.  
Galvanic isolation between the AutoSafe detection loop and 24V conventional sub-loop.
- BNY-330 End of line unit.

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## Terminal boxes

- BWP-100/20 Has 4 knock outs for mounting of M20 skintop glands, IP44 with detector.
- BWP-100/25 Has 4 holes diameter 25mm for mounting of glands or blanks, IP44 with detector.
- BWA-100 standard detector base.

## I/O-Units

- BN-300 Single input unit, self verify; monitoring of an input signal such as open or closed contact or by end of line resistor, IP54 / with PG inlets IP67.
- BN-310 Single relay output unit, relay position / operation is monitored, one change-over contact 1A /30 V DC resistive.
- BN-320 I/O unit, two inputs, one output change-over contact 1A /30 V DC resistive, monitoring of input signals such as monitored on/ off function and one relay output, IP54 / with PG inlets IP67.
- BW-200 Disable input unit with push buttons to disable one or a number of detection zones, configurable disablement time, loop powered, IP66.
- BW-201 Disable input unit with timer input to disable one or a number of detection zones, external timer controls the disable time, monitored input for external timer, loop powered, IP66.

## Manual Call Points, break glass operation, releasing alarm switch

- BF-300 Manual call point, self verify, IP44D.
- BF-501 Manual call point, self verify, environment protected, \*3, IP66.
- BF-500/Ex Manual call point self verify, environment protected, \*3, IP44D.
- BF-501/Ex Manual call point self verify, \*1, environment protected, \*3, IP66.

## Electronic Sounder, addressable, loop powered and with configurable sound pattern.

- BBR-200 Typical output at 27 V DC is 100 dB(A) at 1 m and 14 V DC is 93 dB(A) at 1 m. Loop synchronised.

## Ex Barrier Unit, for intrinsically safe installation of AutoSafe detectors in hazardous area zone 0,1 or 2, IP55.

- BZB-500 Interface unit, \*2
- BZ-500 Ex barrier unit, \*2
- BZ-500/2 with two Ex barrier unit, \*2
- BZ-500/3 with three Ex barrier unit, \*2

\*1 = Nemko Nr. Ex 99E004X, code EEx ia IIC T5; \*2 = Nemko Nr. Ex 99E005, code [EEx ia] IIC Tamb: 60°C;

\*3 = environmental category D with cold temperature test at -25°C, additional coating of PCB and sealing of sensing element.

All detectors are of type analogue addressable and with short circuit isolator.

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