

# CERTIFICATE OF CONFORMITY

## 1. FIRE PROTECTION EQUIPMENT

2. **Certificate No:** FM23FPUS0230
3. **Equipment:** **Autro Safe Interactive Fire Detection System**  
(Type Reference and Name)
4. **Name of Listing Company:** **Autronica Fire and Security AS**
5. **Address of Listing Company:** **Bromstadveien 59, Trondheim, Norway**
6. The examination and test results are recorded in confidential report number:

3040438 dated 14<sup>th</sup> June 2012

7. FM Approvals LLC, certifies that the equipment described has been found to comply with the following Approval Standards and other documents:

FM 3010:2021

8. This certificate relates to the design, examination and testing of the products specified herein. The FM Approvals surveillance audit program has further determined that the manufacturing processes and quality control procedures in place are satisfactory to manufacture the product as examined, tested and Approved.

9. Approval Guide Listing Category:

Local Protective Signaling, Fire  
Automatic Releases for Extinguishing Systems and Other Fire Protection Equipment

## Certificate issued by:



J.E. Marquedant  
VP, Manager - Electrical Systems

12 October 2023

Date

To verify the availability of the Approved product, please refer to [www.approvalguide.com](http://www.approvalguide.com)

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## **10. Description of Equipment:**

### **Fire Alarm Control Panel BS-420, BS-420M, BS-420G, BS-420MG, BS-420G2**

control and monitor - alarm and system features

SLC – 6 max., Class X, 512 devices per panel.

Supports - maximum 12 modules, six zones and a total of 512 devices.

2 Ethernet ports

2 USB host ports

1 RS-232, RS-422 or RS-485 serial port for communication with FM Approved third party equipment

1 AutoFieldBus (AFB) interface

1 ACom+ interface

FailSafe relay output, optional NC or NO, 30V/1A

Power redundancy

Modules included in panel:

BSS-310A PSU module 24V/840mA

BSL-310 Communication module, RS-232

### **Controller BC-420, BC-420G2, BC-440 BC-440G2, BS-1346, BS-1346G2**

SLC – 6 max., Class X, 512 devices per panel.

Supports - maximum 12 modules.

2 Ethernet ports

2 USB host ports

1 RS-232, RS-422 or RS-485 serial port for communication with FM Approved third party equipment

1 AutoFieldBus (AFB) interface

1 ACom+ interface

FailSafe relay output, optional NC or NO, 30V/1A

Power redundancy

Modules included in controller:

BSS-310A PSU module 24V/840mA

BSL-310 Communication module, RS-232.

Controller Board BSA-400A 24VDC.

### **Optional Modules:**

BSD-310(N) / BSD-311 SLC driver Module, 1 AL Com, configurable for Class X or Class B signaling, max. 127 devices, output 24VDC, 100mA/200mA

BSB-310A, Output Module, Monitored, 4 outputs 24VDC 1A, 3A max.

BSJ-310 Output Module, 8 open collector output 24VDC 100mA

BSE-310, Input Module, 4 Monitored inputs for signaling normal, alarm, shorted or broken line.

BSE-320 Input Module, 8 Non monitored inputs for clean contact signal.

BSS-311 Dual Power monitoring module, 2 inputs 24VDC, 2 outputs monitored 24VDC

### **Operator Panel BS-430, BS-430G2**

SLC – 6 max., Class X, 512 devices per panel.

Control and monitor - alarm and system features:

2 Ethernet ports

2 USB host ports

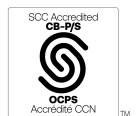
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- 1 serial port for the std. detection loop communication protocol
- 1 RS-232, RS-422 or RS-485 serial port for communication with FM Approved third party equipment
- 1 AutoFieldBus (AFB) interface
- FailSafe relay output, optional NC or NO, 30V/1A

## Repeater Panel BU-BV-420, BU-BV-420G2

Fire Brigade or Information Panel - Dipswitch selectable  
Fire Brigade Panel - displays alarms, control of alarms and receipt added information for operation zone.  
Information Panel provides information related to the defined operation zone(s) only.

**Ethernet switches for inter panel [Class A] communication requires use of the appropriate Ethernet switches, and at least two fiber optic communication lines between the panels from among the following:**

Switch Type	Description
FL SWITCH SFNT 5TX	5 RJ45 ports
FL SWITCH SFNT 4TX/FX	4 RJ45 ports, 1 fiber optic multi-mode port (SC)
FL SWITCH SFNT 8TX	8 RJ45 ports
FL SWITCH SFNT 7TX/FX	7 RJ45 ports, 1 fiber optic multi-mode port (SC)
FL SWITCH LM 5TX	5 RJ45 ports
FL SWITCH LM 4TX/FX	4 RJ45 ports, 1 fiber optic multi-mode port (SC)
FL SWITCH LM 4TX/2FX	4 RJ45 ports, 2 fiber optic multi-mode port (SC)
FL SWITCH LM 4TX/FX SM	4 RJ45 ports, 1 fiber optic single-mode port (SC)
FL SWITCH LM 4TX/2FX SM	4 RJ45 ports, 2 fiber optic single-mode port (SC)
FL SWITCH SFNB 8TX	8 RJ45 ports
FL SWITCH SFN 7TX/FX	7 RJ45 ports, 1 multimode port
FL SWITCH SFN 6TX/2FX	6 RJ45 ports, 2 multimode ports

## Repeater Panel BU-110, BV-110, loop powered

Fire Brigade Panel BU-110 powered from detector loop, displays alarms, control of alarms and receipt added information for operation zone.

Information Panel BV-110 powered from detector loop provides information related to the defined operation zone(s) only.

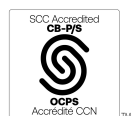
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## **Power Cabinet BP-405**

Supervised PSU 24V/5A,  
6 outputs 24VDC, max 2A each (max. 5A total)  
115VAC/230VAC input  
1 fault relay output, optional NC or NO, 30V/1A  
2x12V, 18Ah batteries [field installed]

## **Power Supply Unit BPS-405**

Supervised PSU 24V/5A,  
6 outputs 24VDC, max 2A each (max. 5A total)  
115VAC /230VAC input  
1 fault relay output, 30V/1A, optional NC or NO.

## **Power Supply Unit BPS-410**

24V/10A power supply  
116-4550-012.2410 power supply 27.4V DC/10A  
Power Board BSF-400:  
AutroFieldBus interface  
115VAC /230VAC input  
6 outputs 24VDC (max. 2A each)  
1 fault relay output, optional NC or NO, 30V/1A

## **SLC Devices, Appliances, Field equipment**

Heat detectors AL Com addressable initiating BD-series devices rated 130°F (56°C):  
BD-200 interactive heat detector  
BD-300 interactive heat detector with SelfVerify function  
BD-500 interactive heat detector with SelfVerify function  
BD-501 interactive heat detector with SelfVerify function, IP56  
RTI classification when detector set to fixed is Quick with 6m x 6m spacing (20 x 20 ft)  
RTI classification when detector set to rate compensated is V2Fast with 10m x 10m spacing (35 x 35 ft)

## **Smoke detectors BH-series:**

BH-200 interactive photoelectric smoke detector  
BH-300, BH-500, BH-500/S, BH-500/N interactive photoelectric smoke detectors with SelfVerify function  
Multisensor detectors BH-series:  
BH-220 interactive smoke detector with thermistor heat detection  
BH-320 interactive smoke detector with thermistor heat detection. With SelfVerify function.  
BH-520 interactive smoke detector with thermistor heat detection. With SelfVerify function.

## **Flame detectors:**

BG-201 interactive dual IR flame detector  
BG-21 conventional dual IR flame detector

## **Detector Bases and accessories:**

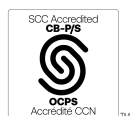
BWA-100 Detector base

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BWP-100/20, BWP-100/25 Conduit box for detector base with cable glands 20 / 25m  
BWP-143A Duct sampling unit, for use with smoke BH – series smoke detectors  
BJ-358/100 Pipe Kit, sampling pipe

## **Manual Call points:**

BF-300V2 Manual Call Point with SelfVerify  
BF-500V2/EX Manual Call Point with SelfVerify, Ex ia  
BF-500V2/N Manual Call Point with SelfVerify, Ex ic  
BF-510WP-H Manual Call Point with SelfVerify, IP 52 [without cover], IP55 [with cover].  
BF-501 Manual Call Point with SelfVerify  
BF-501/EX Interactive MCP, Ex ia IP66BF-501/N Manual Call Point with SelfVerify, Ex ic  
BF-502 Manual Call Point with SelfVerify  
BF-502/EX Interactive MCP, Ex ia IP66BF-502/N Manual Call Point with SelfVerify, Ex ic  
BF-503 Manual Call Point with SelfVerify  
BF-503/EX Interactive MCP, Ex ia, IP66BF-503/N Manual Call Point with SelfVerify, Ex ic

## **I/O units:**

BN-201 Input unit for fault monitoring  
BN-221/01 Extinguishing control unit  
Compatible Solenoids: Kidde-Fenwal 890181 Control Head  
Kidde-Fenwal 486500 Control Head  
BN-221/02 Monitored output unit, 7A relay  
BN-300 Input unit with SelfVerify  
BN-300M Input Unit with SelfVerify  
BN-303 Single monitored input unit  
BN-304 Single monitored Input/Output unit  
BN-310 Single Relay Output unit  
BNB-331 Conventional loop interface  
BN-320 Interface unit with SelfVerify  
BN-320/02 Door control unit  
BN-320,04 Monitoring and control unit  
BN-320/05 Sprinkler control unit  
BN-342/EX POWER LOOP 4-20mA input unit  
BN-500/EX Input Unit with SelfVerify Ex ia  
BN-500/N Input Unit with SelfVerify Ex ic Zone 2  
BNB-330/01 Conventional loop interface module  
BNB-330/A Conventional loop interface

## **Ancillary devices**

BU-47 Remote alarm indicator, parallel indicator to detector alarm LED

## **Notification Appliances:**

BBR-200 Addressable loop sounder  
BBR-110 Addressable socket sounder

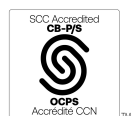
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## **Powerloop equipment:**

BSD-321 RS485 Protocol converter  
BSD-340/1 Powerloop driver 30V/100W rack mount,  
BSD-340/2 Powerloop driver 30V/100W DIN rail mount,  
BN-342/1 PowerLoop 4-20 mA input unit rack mount,  
BN-342/2 PowerLoop 4-20 mA input unit DIN rail  
BN-342/EX PowerLoop 4-20mA input unit Ex eb

The following have been FM Approvals tested for compatibility with Autrosafe 4 System.

Addressable detectors can be optionally configured to drive a BU-47 remote addressable indicator. Optional addressable sounder/indicator BBQ-230/CL, connects and programmed to the SLC to operate in parallel with one or several (a group of) detectors. Neither indicator is intended for evacuation signaling.

BS-420 system firmware version 4.4.X [includes optional panels: BS-430 or BS-430G2 Operator Panel, BU-BV-420 or BU-BV-420G2 Repeater Panel, BU-110 Fire Brigade Loop Panel and BV-110 Information Loop Panel] BX-4XX [X=alpha designation] controls are suitable for operation in ambient temperatures from 32° to 140°F (0° to 60°C); the BD series heat detectors operate from -4° to 125°F (-20° to 52°C); all other peripheral devices are rated at -4° to 158°F (-20° to 70°C).

See also: Automatic Releases for Extinguishing Systems and Other Fire Protection Equipment listing.

AutroSafe Integrated Fire and Gas Alarm Control System 4 consists of either a single control panel or networked configuration from a selection of five different panels. A single BS-420, BS-420M, BS-420MG, BS-420G, or BS-420G2 Fire Alarm Control using software designated 4.4.x requires a power supply, either a BP-405 Power Cabinet, or a BPS-405 or BPS-410. It can accommodate a maximum of 12 modules. Controls are limited to six loops and a total of 512 devices. Loops can contain initiating devices or notification appliances. System power from the BP-405 is a supervised 5.0 A at 24 Vdc from 115/230 Vac or a 24 Vdc from a two 18 Ah battery bank provided internally to the BP-405. Optional battery banks of up to 115 Ah are available for a multi-panel AutroSafe Fire Alarm Control System may include a BC-420, BC-420G2, BC-440, BC-440G2, BS-1346, BS-1346G2. Control panel using the same software and power as the BS-420 and optional panels: BS-430 or BS-430G2 Operator Panel, BU-BV-420 or BU-BV-420G2 Repeater Panel. BX-4XX controls are suitable for operation in ambient temperatures from 32° to 140°F (0° to 60°C); the BD series heat detectors operate from -4° to 125°F (-20° to 52°C); all other peripheral devices are rated at -4° to 158°F (-20° to 70°C). The BN-221/01 and BN-221/02 Interface units provide 6 A dc at 27 V dc to drive releasing devices. Kidde Fenwal solenoids 486500 and 890181 can be connected to BN-221/01. See also LOCAL PROTECTIVE SIGNALING listing.

## **11. Test and Assessment Procedure and Conditions:**

This Certificate has been issued in accordance with FM Approvals US Certification Requirements.

## **12. Schedule Drawings**

A copy of the technical documentation has been kept by FM Approvals.

## **13. Certificate History**

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Details of the supplements to this certificate are described below:

Date	Description
12 October 2023	Original Issue. reference RR238087

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