



Certificate of Compliance

FIRE PROTECTION EQUIPMENT

This certificate is issued for the following equipment: AutoSafe 4 Compliance with ULC S-527-11 Requirements

Equipment Model Designation[s]: AutoSafe 4

Approval Guide Listing: Category: 3010

Fire Protection Electrical Signaling Signaling Systems (Fire) Local Protective Signaling Local Protective Signaling

Autronica Fire and Security AS
Bromstadvegen 59
NO-7047 Trondheim
Norway 000002617-1

This certifies that the equipment described has been found to comply with the applicable requirements, as stated in the Approval Report(s), of the following FM Approval Standards and other documents:

<i>Approval Standards</i>	<i>Date</i>	<i>Other Standards</i>	<i>Date</i>
<i>Class Number</i>		<i>Organization, Designation</i>	
3010	2010	ULC S-527-11	2011

Original Approval Job Identification: 0003040438

Approval Granted: 14 June 2012

Related Report: 0003022074, 0003023568, 0003046915, 0003048361, 0003051984, 0003053331, 0003063008

Subsequent Revisions:

To verify the availability of the Approved product, please refer to www.approvalguide.com

A handwritten signature in dark ink, appearing to read "J. E. Marquedant".

J. E. Marquedant
VP, Manager of Electrical Systems
FM Approvals
1151 Boston-Providence Turnpike,
Norwood MA, 02062 USA

13 July 2020

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Date



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Autro Safe Interactive Fire Detection System

Autro Safe Interactive Fire Detection System consisting of:

Fire Alarm Control Panel BS-420, BS-420M, BS-420G, BS-420G2

control and monitor - alarm and system features

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

Supports - maximum 12 modules, six loops 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 AutroFieldBus (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

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 AutroFieldBus (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:

SLC driver Module, BSD-310(N) / BSD-311, output 24VDC, 100mA/200mA

Output Module, Monitored, BSB-310A, 4 outputs 24VDC 1A, (Max. total 3A

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

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

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

Dual Power monitoring module BSS-311, 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

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



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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 communication [optional for rack mounting]:

SWITCH TYPE	DESCRIPTION
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

Power Supply Unit BPS-410

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

I/O units:

BN-221/01 Extinguishing control unit
 BN-221/02 Monitored output unit, 7A relay
 BN-300 Input unit with SelfVerify
 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
 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 (rack mount), BSD-340/2 (DIN rail mount) Powerloop driver 30V/100W
BN-342/1 (rack mount), BN-342/2 (DIN rail mount) Powerloop 4-20mA Input unit for 3rd party FM approved detectors.

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

Loop units, Field equipment

Heat detectors AL Com addressable initiating BD-series devices rated 130°F (56°C) BD-series:
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.

Detector Bases and accessories:

BWA-100 Detector base
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 Interactive MCP
BF-500V2/EX Interactive MCP Exia
BF-510WP-H Interactive MCP, IP52 [without cover], IP55 with cover]
BF-501/EX Interactive MCP, IP66
BF-502/EX Interactive MCP, IP66
BF-503/EX Interactive MCP, IP66

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.



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☑Electrical Signaling ☑Signaling Systems (Fire) ☑Local Protective Signaling ☑Local Protective Signaling

Autro Safe Interactive Fire Detection System

Autro Safe Interactive Fire Detection System consisting of:

Fire Alarm Control Panel BS-420, BS-420M, BS-420G, 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 AutroFieldBus (AFB) interface

1 AlCom+ 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

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 AutroFieldBus (AFB) interface

1 AlCom+ 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:

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



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Output Module, Monitored, BSB-310A, 4 outputs 24VDC 1A, 3A max.
 Output Module, BSJ-310, 8 x open collector output 24VDC 100mA
 Input Module, BSE-310, 4 x Monitored inputs for signaling normal, alarm, shorted or open line
 Input Module, BSE-320, 8 x Non monitored inputs for clean contact signal.

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
 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)

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
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



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Detector Bases and accessories:

BWA-100 Detector base
BWP-100/20, BWP-100/25 Conduit box for detector base with cable glands 20 / 25m

Manual Call points:

BF-300V2 Manual Call Point with SelfVerify
BF-500V2/EX Manual Call Point with SelfVerify, Exia
BF-510WP-H Manual Call Point with SelfVerify, IP 52 [without cover], IP55 [with cover].

I/O units:

BN-201 Input unit for fault monitoring
BN-221/01 Extinguishing control unit
BN-221/02 Monitored output unit, 7A relay
BN-300 Input unit with SelfVerify
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
BNB-330/01 Conventional loop interface module
BNB-330/A Conventional loop interface

Notification Appliances:

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

Powerloop equipment:

BSD-321 RS485 Protocol converter
BSD-340/1 (rack mount), BSD-340/2 (DIN rail mount) Powerloop driver 30V/100W,
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See also: Automatic Releases for Extinguishing Systems and Other Fire Protection Equipment listing.



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