



Certificate of Conformity

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Product designation

AutroSafe 4, fire alarm and control system

(Refer to the Schedule/enclosures for further specified details)

Agent/distributor

Kidde Australia
Unit 3, Ground Floor, 10 Ferntree Place, NOTTING HILL, VIC, AUSTRALIA, 3168

Registrant

Autronica Fire and Security AS
Haakon VII's Gate 4, 7483 Trondheim, TRONDHEIM, NORWAY, NO-7483

Producer

Autronica Fire and Security AS
Haakon VII's Gate 4, 7483 Trondheim, TRONDHEIM, NORWAY, NO-7483

Conformance criteria and evaluation

The AutroSafe 4, fire alarm and control system has been evaluated and verified as conforming with the relevant requirements of the following criteria.

1. Australian Standard AS 7240.2-2004, 'Fire detection and alarm systems - Part 2: Control and indicating equipment (ISO 7240-2:2003, MOD)'.
2. Australian Standard AS 7240.4-2004, 'Fire detection and alarm systems - Part 4: Power supply equipment (ISO 7240-4:2003, MOD)'.
3. Australian Standard AS 7240.13-2006, 'Fire detection and alarm systems - Part 13: Compatibility assessment of system components'.
4. ActivFire Technical Specification AF-TS002, Version 1.0, 23-Jan-2012, 'Input/Output modules for control and indicating equipment'.
5. Australian Standard AS 4428.3-2010, 'Fire detection, warning, control and intercom systems - Control and indicating equipment - Fire brigade panel'.

Limitations/conditions of conformance

Limitations/conditions of conformance, where identified on this certificate, are derived from qualifications from evaluation(s) for conformity and/or other related technical documentation. All details with respect to design, assembly and installation instructions and restrictions should be checked against the producer's current technical manual/data sheets and the requirements of the Authority having Jurisdiction.

Specified limitations/conditions, determined from the evaluation for conformity, include the following.

(Limitations/conditions of conformance continue)

Issued by

David Whittaker
Executive Officer – ActivFire Scheme



This certification is issued within the scope of CSIRO Verification Services – Rules governing ActivFire Scheme and is valid only for the product(s) as submitted for evaluation and verification of conformity, subject to the following conditions.

- Reference to details, limitations and requirements, where documented as a schedule/enclosure with this certificate.
- The Registrant is responsible for their attestation of conformity and ensuring that on-going production complies with the conformance criteria defined in this certificate.
- This certificate will not be valid if any changes or modifications are made to the product which have not been notified and validated by CSIRO Verification Services.
- This certificate is subject to periodical re-validation upon verification that all requirements, as determined by the conformity assessment body, continue to be satisfactorily met by the Registrant.
- This certificate may only be reproduced in its published form, without modification and inclusive of all schedules/enclosures.
- Any changes, errors or omissions, must be submitted in writing and if necessary or requested, substantiated with relevant evidence.
- Any representations, such as advertising or other marketing related activities or articles shall reflect the correct contents of this certificate and conform with all relevant trade practices and consumer protection legislation and regulations.
- Any terms or conditions of use as applicable to content and documentation as published or accessed through web sites administered by the CSIRO Verification Services.

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- i. Compatibility of this equipment with new or existing actuating devices should be verified prior to installation.
- ii. The installation of this equipment shall be in areas appropriate to the lower audible indication level as contemplated in AS 7240.2-2004, clause 13.10.2.

Producer's description

The AutoSafe 4, fire alarm and control system, provides advanced functionality within fire detection for a wide range of applications.

The system is designed to meet requirements in the high-end segment of the land, maritime and offshore market.

The AutoSafe 4, fire alarm and control system operates on a high-speed and fully redundant Ethernet based network solution; AutoNet, providing extremely fast data transmission. A maximum of 64 system units (panels, controllers) can be connected to the AutoNet. A standalone system is also possible, using the Fire Alarm Control Panel BS-420 (the mandatory panel in any system).

The system has a large capacity, and the fact that all types of loop units can be connected to the same detection loop gives large flexibility.

Technical specification

The following details are a representative extract of the technical specification for the AutoSafe 4, fire alarm and control system and may be subject to change. Complete and current details should be determined from the designated producer's technical manual/data sheets.

1. Schedule of designated system components

The AutoSafe 4, fire alarm and control system comprises of a number of modules, as detailed below, which mount into the c.i.e. housing or are field mountable.

System component designation			Modules included	Conformance criteria
Ident. type	Ident.	Component type		
Product name (Model)	BS-420	Fire Alarm Control Panel	BSE-310 – Input Module, monitored BSB-310 – Output Module, monitored BSD-310– Loop Driver Module BSL-310- Communication Module BSS-310A – Power Supply Module FL Switch 8TX – 10/100 MBit/s eight Port Ethernet Switch FL Switch 8TX – 10/100 MBit/s eight Port Ethernet Switch BSA-400 – Main board BSR-400 – Front board	AS 7240.2-2004
	BS-420G			
	BS-420G2			
	BS-420M			
Product name (Model)	BC-420	Controller	BSE-320 – Input Module BSJ-310 – Output Module BSD-310– Loop Driver Module BSL-310- Communication Module BSS-310A – Power Supply Module BSA-400 – Main board BSR-400 – Front board	AS 7240.2-2004
Part num.	BN-221/01	Extinguishing Control Unit	BNA-221	AS 7240.2-2004
Part num.	BN-221/02	Monitored Output Unit	BNA-221	AS 7240.2-2004
Product name (Model)	BP-405	Power Cabinet	BPS-405 – Power Unit BSF-400 – Main board MeanWell SC-150-27ME – Power Supply	AS 7240.4-2004
Part num.	BN-300	Input Unit	BNB-300	AF-TS002
	BN-310	Single Relay Output Unit	BNA-320	AF-TS002

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2. Schedule of I/O modules with extended compatibility details

System component designation			Type	Maximum number of devices per addressable loop *	Conformance criteria
Ident. type	Ident.	Component type			
Part num.	BN-303	Single Monitored Input Unit	1	127	AS 7240.13-2006 AF-TS002
	BN-304	Single Monitored Input/Output Unit			
	BN-305	Dual Monitored Input/Output Unit			
	BN-305-2	Dual Monitored Input/Output Unit			
	BN-307	Monitored Fire Alarm Device Control Unit			
	BNB-331	Conventional Interface Unit			
	BZ-500	Galvanic Isolator Barrier Unit		60	

* Maximum number of detectors allowed by loop. Installation standard (AS 1670.1-2004) limits the maximum number of devices per loop to 1000, with a maximum of 40 detectors for one zone.

3. Specified properties for c.i.e. and p.s.e. modules

BP-405

The Power Cabinet BP-405 provides space for two 12 Vdc / 18 Ah batteries (not included). The maximum power available is 24 Vdc / 5 A.

Dimensions (mm)	420 x 346 x 146
Protection class	IP32
Operating Temperature	-15 to +70°C
Current	230VAC 1,6A
Input voltage range	184 – 264 VAC (47 – 63 Hz)
Output	3.5 A (max load) 5 A (max load without batteries)
Battery size	7.2 Ah (min) 18 Ah (max)

BS-420

BS-420 is a complete fire alarm control panel with full operating capabilities. The panel serves as a operating panel for one or several operation zones.

All alarm handling and system features can be controlled and monitored from the panel.

The fire alarm control panel is available in three different variants specifically designed for the land market (BS-420), maritime market (BS-420M) and petrochemical oil & gas market (BS-420G).

Dimensions (mm)	350 x 350 x 161
Protection class	IP32
Operating Temperature:	-15 to 70 °C
Power supply	Nom. 27.2V DC (18-32V DC)

BC-420

The Controller serves as a connection unit for Loop Driver Modules and I/O modules.

Dimensions (mm)	350 x 350 x 161
Protection class	IP32
Operating Temperature:	-15 to 70 °C
Power supply	Nom. 27.2V DC (18-32V DC)

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4. Schedule of optional functions with requirements

The following schedule of AS 7240.2–2004 optional functions with requirements have been validated.

1. Indications:
 - a. Fault signals from points (Cl. 9.3)
2. Controls:
 - a. Disabled condition (Cl. 10)
 - b. Disablement of each addressable points (Cl. 10.5)
 - c. Test condition (Cl. 11)
3. Outputs:
 - a. Output to fire alarm devices (Cl. 7.8)
 - b. Control of fire alarm routing equipment (Cl. 7.9)
 - c. Output to fire protection equipment (Cl. 7.10) *see Note 1
 - d. Output to fault warning routing equipment (Cl. 9.9)
4. Operational
 - a. Impact (operational) (Cl. 16.6, Annex ZA2: not optional)
 - b. Vibration, sinusoidal (operational) (Cl. 16.7, Annex ZA2: not optional)
 - c. Dry Heat, Steady State (Operational) (Cl. Annex ZC)
5. Marking requirements (Cl. 15, Annex ZA2: not optional)

Note 1: Output to Fire Protection Equipment may be provided by either BSB-310, BN-221/01 or BN-221/02.

The following schedule of AS 7240.4–2004 optional functions with requirements have been validated.

1. Battery function check (Cl. 5.5)
2. Marking (Cl.8, Annex ZA2: not optional)
3. Impact (operational) (Cl. 9.7, Annex ZA2: not optional)
4. Vibration, sinusoidal (operational) (Cl. 9.8, Annex ZA2: not optional)
5. Vibration, sinusoidal (endurance) (Cl. 9.11, Annex ZA2: not optional)

Supplementary information

Schedule of relevant articles

The following schedule is an extract of articles significant and/or related as evidence of conformity.

Reference		Title / description	Date issued (or date validated)	Source
Ident. type	Ident.			
Report Number	XF2709/R1	Conformity Evaluation of the AutoSafe 4 Fire Detection System to the requirements of AS 7240.2 2004 and AS 7240.4 2004	7-Mar-2012	CSIRO, Materials Science and Engineering, Fire Systems, AU
Report No.	2010-3107	Technical Report – Autronica Fire and Security AS – Maritime Testing of I/O- and A/V Units	5-May-2010	Det Norske Veritas, NO
	2009-3710 Rev. 01	Technical Report – Autronica Fire & Security AS – AutoSafe Release 4 EN 54-2 & EN 54-4 Testing	19-Feb-2010	
	2009-3691 Rev. 02	Technical Report – Autronica Fire & Security AS – EMC and Environmental Testing of AutoSafe 4 Components (Maritime Testing)	21-Dec-2009	
	2009-3664 Rev. 01	Technical Report – Autronica Fire & Security AS – EMC and Environmental Testing of AutoSafe 4 Components (CE Marking)	11-Dec-2009	
	2002-3146 Rev. 01	Technical Report – Autronica Fire and Security AS – Type Test of I/O Units	26-Feb-2002	
Report Number	XF2709/R2	Conformity Evaluation of the AutoSafe BN 300 and BN 310 I/O Modules to the requirements of ActivFire Technical Specification AF TS002 Issue 1.0	23-Feb-2012	CSIRO, Materials Science and Engineering, Fire Systems, AU
Report No.	2001-3252 Rev. 01	Technical Report – Autronica Fire and Security AS – Type Approval Testing of I/O Units	12-Jul-2001	Det Norske Veritas, NO

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Reference		Title / description	Date issued <small>(or date validated)</small>	Source
Ident. type	Ident.			
Report Number	XF2875/R1	Evaluation for Conformity of the Autronica BU-110AUS Fire Brigade Loop Panel to the requirements of AS 7240.2-2004 and AS 4428.3-2010	26-Aug-2015	CSIRO, Infrastructure Technologies, Fire Systems and Acoustics
Report	XF2887/R1	Compatibility Assessment of the Autronica Input/Output modules and AutoSafe 4, fire alarm and control system to the requirements of AS 7240.13-2006	4-Nov-2015	CSIRO, Fire Systems and Acoustics