CSIRO Verification Services
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Certificate of Conformity

Certificate num.	Registration date	Version Number	Version Issue date	Valid until
afp - 2761	6-Jul-2012	16	2-Apr-2024	30-Apr-2025

Product designation

Syncro, AS Series, fire alarm control and indicating equipment

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

Agent/distributor

Incite Fire
Block Y, Unit 1, Regents Park Estate, 391 Park Road, REGENTS PARK, NSW, AUSTRALIA, 2143

Registrant

Kentec Electronics Limited
Units 25-27 Fawkes Avenue, Questor, DARTFORD, KENT, UNITED KINGDOM, DA1 1JQ

Producer

Kentec Electronics Limited
Units 25-27 Fawkes Avenue, Questor, DARTFORD, KENT, UNITED KINGDOM, DA1 1JQ

Conformance criteria and evaluation

The Syncro, AS Series, fire alarm control and indicating equipment 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 4428.3-2010, 'Fire detection, warning, control and intercom systems - Control and indicating equipment - Fire brigade panel'.
4. Australian Standard AS 7240.13-2006, 'Fire detection and alarm systems - Part 13: Compatibility assessment of system components'.
5. ActivFire Technical Specification AF-TS002, Version 2.0, 3-Oct-2013, 'Input/Output modules for control and indicating equipment'.

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)

i. All parts of this equipment shall be mounted in a single enclosure,

Issued by

Kai Loh
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.

ii. All parts of the power supply equipment shall be mounted in the same enclosure as this equipment.

iii. Labelling for this equipment shall conform to marking requirements of Section 15 and Annex ZA of the AS 7240.2-2004.

iv. Hochiki detectors/modules using ESP protocol can be used with this equipment within compatibility restrictions of AS 7240.13.

v. Compatibility of this equipment with new or existing actuating devices should be verified prior to installation.

Producer's description

The Syncro, AS Series, fire alarm control and indicating equipment with either no zonal LEDs or 16 zonal LED indicators and is available in models with either 1 or 2 detection loops. It can support up to 127 devices for the Hochiki protocol per loop including loop-powered sounders, call points and I/O modules. Any number of devices can be allocated to any zone ensuring that any system configuration can be easily accommodated.

To ensure that the system is installed and commissioned with the minimum of trouble, it should be carefully planned before the installation is begun. This involves allocating an address to each device and allocating a message of up to 40 characters (including spaces) to each address to assist in the location of the devices.

Devices should then be grouped into zones in accordance with the appropriate fire detection systems design standard and building plans.

The control panel can be configured using the switches on the front as described in the menu descriptions at the back of this manual or more comprehensively, using the Loop Explorer PC configuration utility and download lead which is available as a separate item.

This equipment offers an extensive list of features and options for the control and monitoring of plant, equipment and sounders, which can be, configured via the Loop Explorer PC configuration programme or the front panel controls.

The range of actuating devices includes optical and ionisation smoke sensors, heat sensors, multi-sensors, switch monitors, sounders, relay modules and bell controllers. Interfaces to conventional detection systems can also be catered for using zone-monitoring devices.

Technical specification

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

Schedule of variant designations

The following is a schedule of validated variant designations of the certified/listed equipment.

Panel construction variants

1. Key locked main door mounted with key switch enabled, interface and controls.
2. Key locked main door with key locked acrylic access/viewing sub-door and cabinet frame mounted interface and controls.

Equipment configuration

Product code	Protocol	Zones	Loops	Printer	Size	Mounting
HAU80161M2	Hochiki ESP	16	1	No	385 mm x 310 mm x 90 mm	Surface
HAU80162M2	Hochiki ESP	16	2	No	385 mm x 310 mm x 90 mm	Surface
HAU80161M3	Hochiki ESP	16	1	No	385 mm x 520 mm x 110 mm	Surface
HAU80162M3	Hochiki ESP	16	2	No	385 mm x 520 mm x 110 mm	Surface

Schedule to
Certificate of Conformity

Certificate num.	Registration date	Version		Valid until	Page **3** of **7**
		Number	Issue date		
afp - 2761	6-Jul-2012	16	2-Apr-2024	30-Apr-2025	

Schedule of optional functions with requirements

The following schedule of AS 7240.2–2004 optional (or optional-required) functions with requirements have been validated.

1. Indications:
   a. Fault signals from points (Cl. 9.3)
2. Controls:
   a. Delays to outputs (Cl. 7.11)
   b. Disabled condition (Cl. 10)
   c. Disablement of each addressable points (Cl. 10.5)
   d. Test condition, General requirements (Cl. 11.1)
   e. Test condition, Indication of the test condition (Cl. 11.2)
   f. Test condition, Indication of zones in test state (Cl. 11.3)
3. Outputs:
   a. Output to fire alarm devices (Cl. 7.8)
   b. Control of fire alarm routing equipment (Cl. 7.9)
      when ASEIM (PCB-041) module is fitted to panel
4. Operational
   a. Impact (operational) (Annex ZA2 -> Cl. 16.6: not optional)
   b. Vibration, sinusoidal (operational) (Annex ZA2 -> Cl. 16.7: not optional)
5. Marking requirements (Annex ZA2 -> Cl. 15: additional requirements)

The following schedule of AS 7240.4–2004 optional (or optional-required) functions with requirements have been validated.

1. Marking (Annex ZA2 -> Cl. 8 -> Annex ZB: additional requirements)
2. Impact (operational) (Annex ZA2 -> Cl. 9.7: not optional)
3. Vibration, sinusoidal (operational) (Annex ZA2 -> Cl. 9.8: not optional)
4. Vibration, sinusoidal (endurance) (Annex ZA2 -> Cl. 9.11: not optional)

Schedule of properties/characteristics

The following schedule is an extract of physical and operational properties/characteristics of the certified/listed equipment.

Description / property	Value and/or type
Construction:	1.2 mm mild sheet steel
IP rating:	IP30
Finish:	Epoxy powder coated
Colour - lid & box:	BS 00 A 05 grey - fine texture
Colour - controls plate & labels:	RAL 7047 light grey - satin
Display:	8 lines of 40 characters graphic LCD
Mains supply:	230 Vac, 50Hz +10% -15% (100 Watts maximum)
Mains supply fuse:	1.6 A (F1.6 A L250 V)
Power supply rating I_{max} a:	400 mA
Power supply rating I_{max} b:	2.3 A
Operating voltage:	18 to 30 Vdc
Battery charging circuit impedance R_{imax}:	1.35R
Minimum output current for correct operation I_{min}:	130 mA
Maximum ripple current:	1.5+/- 0.3 V
Battery type:	Yuasa NP 7 Ah
Battery charge voltage :	27.6 Vdc nominal (temperature compensated)
Battery charge current:	0.7 A
Battery fuse:	20 mm 3.15 A glass
Maximum current draw from batteries:	3 A
Aux 24 V output rating:	300 mA maximum load (fused at 500 mA)
Sounder output rating (two outputs):	Each rated at 1 A
Relay contacts:	30 Vdc, 1 Amp maximum
Detection loop current:	400 mA maximum
Fault contact rating:	30 Vdc, 1 A
Fire contact rating:	30 Vdc, 1 A
Alarm contact rating:	30 Vdc, 1 A
Detector protocols:	Hochiki ESP or Apollo (S90, XP95, Discovery), Argus Vega
Printer port:	Serial RS232
Serial expansion port:	Serial RS485 (Compatible with all Syncro I/O modules)

Schedule to
Certificate of Conformity

Description / property	Value and/or type
PC port:	Serial RS232
Network connection:	RS485 - Up to 64 panels via fully fault tolerant, optional network card
Remote silence input (SIL):	Switched -ve
Remote fault input (FLT):	Switched -ve
Remote reset input (RES):	Switched -ve
Remote alert input (INT):	Switched -ve
Remote evacuate input (CNT):	Switched -ve
Download lead:	Standard S187, X187LS economy
Configuration:	Via Loop Explorer PC utility
PC graphics:	Via Guide systems
Modem:	Optional dial up modem for remote diagnostics (Can be fitted to M3 size enclosure only)

Schedule of components and/or assemblies

The following is a schedule of validated components and/or assemblies of the certified/listed equipment.

Description	Reference	Issue
Main PCB	D1052	5
Loop card	D1053	3
4 Way Conventional card	K6014	4
6 Way Sounder card	K6010	5
16 Channel I/O card	K6006	7
8 Way Relay card	K6011	3
Network card	K6005	4
Hochiki Dual Zone Monitor	CHQ-Z	-
Hochiki Single Zone Monitor with Short Circuit Isolator	CHQ-SZM (SCI)	-
Hochiki Short Circuit Isolator	CHQ-SCI/DIN	-
Hochiki Single Input Module with Short Circuit Isolator	CHQ-SIM	-
Hochiki Power Output Module	CHQ-POM	-
Hochiki Dual Sounder Controller with Short Circuit Isolator	CHQ-DSC (SCI)	-
Hochiki Mains Relay Controller with Short Circuit Isolator	CHQ-MRC (SCI)	-
Hochiki Dual Relay Controller with Short Circuit Isolator	CHQ-DRC (SCI)	-
Hochiki Dual Input Module with Short Circuit Isolator	CHQ-DIM (SCI)	-
Hochiki Addressable Beacon	CHQ-AB	-
Hochiki Photoelectric Smoke Detector	ALG-AS	-
Syncro View Repeater	P/N K6017 Issue 04	-
Syncro Focus Repeater	P/N K6013 Issue 05	-
Incite Alarm Signalling Equipment Interface Module (ASEIM)	PCB-041	

Schedule to
Certificate of Conformity

Certificate num.	Registration date	Version		Valid until	Page **5** of **7**
		Number	Issue date		
afp - 2761	6-Jul-2012	16	2-Apr-2024	30-Apr-2025	

Schedule of compatible devices

Actuating device	Maximum number of devices per addressable loop	Reference
Hochiki, Model ALK-ASN, photoelectric smoke sensor	127 [1]	XF2766/R1, 5-Apr-2013
Hochiki, Model ALK-AS, photoelectric smoke detector	127 [1]	
Hochiki, Model ACA-ASN, smoke (photoelectric) and Class P (A1 or B) heat, multisensor fire detector	127 [1]	
Hochiki, Model ACA-E, photoelectric and heat type B, multi-sensor fire detector	127 [1]	
Hochiki, Model ACB-ASN, Class P (A1, B or C), heat sensor	127 [1]	
The above Hochiki detectors with YBN-R/4A or YBO R/4A bases		
Hochiki, Model ACB-ASNW, weatherproof, Class P (A1, B or C), heat sensor	127 [1]	

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

Actuating device		Maximum number of devices per addressable loop	Reference
Hochiki, CHQ-SZM (SCI) single zone monitor		36 [1]	XF2807/R7, 22-May-2014
Hochiki, CHQ-DIM (SCI) dual input module		127 [2]	
Hochiki, CHQ-DSC (SCI), dual sounder controller		127 [3]	
Hochiki, CHQ-DRC (SCI), dual relay controller		127 [1]	
Hochiki, CHQ-DZM (SCI), dual zone module		127 [3]	
Hochiki, CHQ-POM, powered output module		12 [1]	
		127 [4]	
Hochiki, CHQ-SIM, single input module		127 [2]	
Hochiki, CHQ-WS2, wall sounder	102 dBA	50 [1]	
	90 dBA	127 [2]	
Hochiki, CHQ-WSB, wall sounder beacon	102 dBA	30 [1]	
	90 dBA	127 [1]	
Hochiki, YBO-BS, base sounder	98 dBA	25 [1]	
	85 dBA	127 [2]	
Hochiki, YBO-BSB, base sounder beacon	98 dBA	19 [1]	
	85 dBA	127 [2]	
Hochiki, Model YBO-R/SCI, isolator base		127 [2]	

1. Maximum number of devices is limited by alarm current combined with a maximum rated load of 400 mA. The maximum number of wall sounders, wall sounder beacons, base sounder, and base sounder beacons which can be connected to each loop depends on the volume setting used. Use the Hochiki Loop Calculator for intermediate settings.
2. When mixing device types, use Hochiki Loop Calculator to ensure loading limits are not exceeded. The figures stated in this table assume that only the one device type is connected to the loop (based upon maximum loop load). Installation standard (AS 1670.1) limits the maximum number of devices per loop to 1000, with a maximum of 40 detectors for one zone.
3. Maximum limits specified assumes that an external supplementary AS 7240.4 compliant power supply is used.
4. Maximum number if all such devices are set to minimum power setting; as determined by Hochiki Loop Calculator.

Schedule to
Certificate of Conformity

Certificate num.	Registration date	Version		Valid until	Page **6** of **7**
		Number	Issue date		
afp - 2761	6-Jul-2012	16	2-Apr-2024	30-Apr-2025	

Device	Maximum number of devices allowed per CHQ-Z / CHQ-DZM zone module	Reference
Hochiki, DCA-B-60R Mk V, Heat Type A	40 [1]	
Hochiki, DCC-A, Heat Type A	40 [1]	
Hochiki, DFE-60B, Heat Type B	40 [1]	
Hochiki, DCA-B-90R Mk I, Heat Type C	40 [1]	
Hochiki, DCC-C, Heat Type C	40 [1]	
Hochiki, DFE-90D, Heat Type D	40 [1]	
Hochiki, SIH-AM, smoke ionization	40 [1]	
Hochiki, SIH-AMB, smoke ionization	40 [1]	
Hochiki, SLK-A, smoke photoelectric	40 [1]	
The above Hochiki detectors with YBF-RL/4AH4M base.		
Hochiki, DCD-A, Heat Type A	40 [1]	
Hochiki, DFJ-60B, Heat Type B	40 [1]	
Hochiki, DCD-C, Heat Type C	40 [1]	
Hochiki, DFJ-90D, Heat Type A	40 [1]	XF1894/R2, March 2003
Hochiki, SIJ-AS, smoke ionisation	40 [1]	
Hochiki, SIJ-ASN, smoke ionisation	40 [1]	
Hochiki, SLR-AS, smoke photoelectric	40 [1]	
The above Hochiki detectors with YBN-R/4A and YBO-R/4A bases		
Apollo Series 60, 55000-105AUS, Heat Type A	23	
Apollo Series 60, 55000-106AUS, Heat Type B	23	
Apollo Series 60, 55000-107AUS, Heat Type C	10	
Apollo Series 60, 55000-108AUS, Heat Type D	10	
Apollo Series 60, 55000-240AUS, Smoke Ionisation	22	
Apollo Series 60, 55000-310AUS, Smoke Photoelectric	33	
The above Apollo detectors with P/N 45681-205 base		
Hochiki, DCA-B-60R Mk V, Heat Type A	40 [1]	
Hochiki, DCC-A, Heat Type A	30	
Hochiki, DFE-60B, Heat Type B	40 [1]	
Hochiki, DCA-B-90R Mk I, Heat Type C	40 [1]	
Hochiki, DCC-C, Heat Type C	30	
Hochiki, DFE-90D, Heat Type D	40 [1]	
Hochiki, HF-24A Mk I, Ultraviolet Flame	16	
Hochiki, SIH-AM, smoke ionisation	30	
Hochiki, SIH-AMB, smoke ionisation	30	
Hochiki, SLK-A, smoke photoelectric	30	
The above Hochiki detectors with YBF RL/4AH4M base.		XF1637/R2, Sep-2000
Hochiki, DCD-A, Heat Type A	30	
Hochiki, DFJ-60B, Heat Type B	30	
Hochiki, DCD-C, Heat Type C	30	
Hochiki, DFJ-90D, Heat Type A	30	
Hochiki, SIJ-AS, smoke ionisation	30	
Hochiki, SIJ-ASN, smoke ionisation	30	
Hochiki, SLR-AS, smoke photoelectric	10	
The above Hochiki detectors with YBN-R/4A or YBO R/4A bases		
Hochiki SPA-AB beam	2	
Hochiki SPB-AN beam	2	

1. Maximum number of detectors per AZF/AZC allowed by code.

Schedule to
Certificate of Conformity

Certificate num.	Registration date	Version Number	Version Issue date	Valid until	Page **7** of **7**
afp - 2761	6-Jul-2012	16	2-Apr-2024	30-Apr-2025	

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	XF3023/R1	Evaluation for conformity of the Syncro, AS Series, Fire Alarm Control and Indicating Equipment to the requirements of AS 7240.2-2004 and AS 4428.3-2010	1-May-2017	CSIRO, Fire Systems Laboratory, AU
Report No.	XF2704/R1	Conformity Evaluation of the Syncro AS Series Analogue Addressable Fire Control Panel to the requirements of AS 7240.2-2004 and AS 7240.4-2004	30-May-2012	CSIRO, Materials Science and Engineering, Fire Systems, AU
Report	XF2807/R3	Evaluation for conformity of the Hochiki model CHQ-POM powered output module and Hochiki model CHQ-SIM single input module to the requirements of AF TS-002 Version 2.0	16-Apr-2014	
	XF2807/R4	Evaluation for conformity of the Hochiki model CHQ-WS2 wall sounder and Hochiki model CHQ-WSB wall sounder beacon to the requirements of AF TS-002 Version 2.0		
	XF2807/R5	Evaluation for conformity of the Hochiki model YBO-BS base sounder and Hochiki model YBO-BSB base sounder beacon to the requirements of AF TS-002 Version 2.0		
	XF2807/R7	Compatibility assessment of Hochiki addressable modules, wall sounders, sounder and isolator bases and Syncro, AS Series, c.i.e. to the requirements of AS 7240.13-2006 (incorporating amendment 1)	22-May-2014	CSIRO, Infrastructure Technologies, Fire Systems and Acoustics, AU
	XF2766/R1	Compatibility assessment of Hochiki addressable detectors in combination with Hochiki bases and Syncro, AS Series, c.i.e. to the requirements of AS 7240.13-2006 (incorporating amendment 1)	5-Apr-2013	
Report No.	XF1894/R2	Assessments of Chubb NFP2/FireNet CIE to AS 4428.1	14-Mar-2003	Scientific Services Laboratory, AU
	XF1637/R2	Compatibility assessment of Hochiki detectors with Hochiki CHQ-Z zone module	Sep-2000	
Manual	AUS-Man-1096_SyncroAS_09-AUS.doc Issue 01	Syncro AS Analogue Addressable Fire Control Panel Product Manual (AUS-Man-1096_SyncroAS_09-AUS.doc)	Nov-2011	Kentec Electronics Limited, UK Incite Fire, AU
	Syncro_AS_AUS v2.01.pdf	Incite fire Syncro AS Analogue Addressable Fire Control Panel Product Manual (Syncro_AS_AUS v2.01.pdf)	Sep-2016	Incite Fire, NSW, AU
	PCB-041 ASE Interfaceconfig V2_0.pdf	Incite ASE Interface Configuration Manual Rev 2.0 – September 2016 (PCB-041 ASE Interfaceconfig V2_0.pdf)		