



Certificate of Conformity

Certificate num.	Registration date	Version	Valid until	
afp - 1089	6-May-1997	Number 9	Issue date 30-Apr-2015	30-Apr-2016

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Product designation

Hochiki, ALG-AS Series, high sens. photoelectric smoke detector

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

Agent/distributor

Fire & Safety Products (A/Asia) Pty. Ltd.
41-45 Richmond Road, KESWICK, SA, AUSTRALIA, 5035

Registrant

Fire & Safety Products (A/Asia) Pty. Ltd.
41-45 Richmond Road, KESWICK, SA, AUSTRALIA, 5035

Producer

Hochiki Corporation
10 - 43, Kamiosaki 2-Chome, SHINAGAWA-KU, TOKYO, JAPAN, 141

Conformance criteria and evaluation

The Hochiki, ALG-AS Series, high sens. photoelectric smoke detector has been evaluated and verified as conforming with the relevant requirements of the following criteria.

1. Australian Standard AS 1603.2-1990, 'Automatic fire detection and alarm systems - Point type smoke detectors' incl. Amdt 1 (September 1990) / Amdt 2 (April 1995).

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.

- i. Compatibility of this fire detector and its base assembly with new or existing control and indicating equipment should be verified prior to installation.

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.

Issued by

David Whittaker
Executive Officer – ActivFire Scheme



Schedule to Certificate of Conformity

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Producer's description

The Hochiki, ALG-AS Series, high sens. photoelectric smoke detector has been developed to operate with a new transmission protocol. The detectors will not operate with a different protocol. Each Model ALG-AS Photoelectric Smoke Detector is assigned an address, 1 to 127, which is programmed into non volatile memory of the detector using a dedicated Hochiki programmer, model TCH-A100. The Hochiki, ALG-AS Series, high sens. photoelectric smoke detector has a 4-bit microprocessor and can read transmission signals from the Fire Indicator Panel (FIP), including paging signals, fire test signals, and base alarm lamp turn-on signals. These transmission signals are transmitted as digital signals which change the power source voltage between 39.5 Vdc (high) and 31.0 Vdc (low).

The Hochiki, ALG-AS Series, high sens. photoelectric smoke detector senses the presence of smoke using the light scattering principle. In the normal installation, the smoke detector is polled from the FIP and returns an analogue value corresponding to the smoke density to the FIP. The analogue value that corresponds to the smoke density is a digital signal which changes the current flowing into the transmission line between 22 mA (high) and 0 to 9 mA (low).

A microprocessor has been incorporated in the smoke detector to read the transmission signals from the FIP and act according to the information contained within the transmission. When the analogue sensor reads the A/D conversion signals (approximately every second) as distinguished from the normal poll, the infrared LED is turned on. If smoke panicles are present in the optical chamber, the photodiode receives scattered light and the signal is amplified and applied to the microprocessor. The signal has an A/D conversion within the microprocessor. When the smoke detector is next polled by the FIP, this value will be transmitted to the FIP. The fire alarm threshold is sent from the FIP to the analogue detector when the FIP initialises the detector. When the detected smoke density exceeds this level, the detector sends a fire signal to the FIP. Polling of the detectors ceases as the FIP performs the fire detection processing by priority.

Technical specification

The following details are a representative extract of the technical specification for the Hochiki, ALG-AS Series, high sens. photoelectric smoke detector and may be subject to change. Complete and current details should be determined from the designated producer's technical manual/data sheets.

Operating Voltage Range:	Vhigh (Max) - 41 Vdc Vlow = 17V - 31 Vdc
Typical current consumption:	Typical 300 µA (when not called) Low Power Mode: Typ. 120 µA (at 0.75sec) Typ. 110 µA (at 1.5sec) 2 mA (when called)
Alarm Indicator LED current:	8 mA (typical)
Operating smoke density range:	0 to 5.5 %0b/m
Operating temperature range:	-10° to +50°C (this device is not designed for outdoor usage)
Address setting:	1 to 127 by Address Programmer

ALG-AS (White Moulding)

Tested base designation	Base + detector circuit type
Hochiki, Model YBN-R/2NA	Analogue Addressable

ALG-AS (Black Moulding)

Tested base designation	Base + detector circuit type
Hochiki, Model YBN-R/4	Analogue Addressable

Supplementary information

The YBN-R/2NA base assembly is not addressable, has no electronic components, and only has terminals for interconnection with other base assemblies and remote LED. If the supply wires to the base assembly are reversed, a fault state will be generated at the control panel.