



Certificate of Conformity

Certificate num.	Registration date	Version	Valid until	
afp - 2186	18-Apr-2008	Number 9	Issue date 23-Apr-2014	30-Apr-2015

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Product designation

Hochiki, Model SPC-AS, optical beam 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, Model SPC-AS, optical beam smoke detector has been evaluated and verified as conforming with the relevant requirements of the following criteria.

1. Australian Standard AS 7240.7-2004, 'Fire detection and alarm systems - Point-type smoke detectors using scattered light, transmitted light or ionization (ISO 7240-7:2003, MOD)'.

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. the detector is used in indoor dry environments,
- ii. Compatibility of this fire detector 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, Model SPC-AS, optical beam smoke detector generates a near infra red pulsed beam by the emitter which is sensed by the photodiode of the receiver, where it is converted into an electrical signal. This signal is then amplified and applied via an A/D converter to a microprocessor. The normal state signal (the initial beam data) once stored in the microprocessor is used as a reference for comparison with subsequent beam signals.

When there is sufficient difference between actual beam strength and stored reference data to indicate the occurrence of a fire, then a fire signal is produced. A fault signal together with a fire signal is generated if the axis of the beam is completely obstructed (as opposed to partial obscuration due to smoke).

The microprocessor also provides compensation for a change in received signal with time, caused by contamination of the optics or slight alignment changes. The processed signal is adjusted at a rate of $\pm 1\%$ towards the reference data every 30 minutes. When the limit of compensation is reached the microprocessor will automatically produce a fault signal.

In order to improve the performance of the detector and to enhance the rejection of noise the emitter and receiver are synchronized.

Technical specification

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

The Hochiki, Model SPC-AS, optical beam smoke detector is the 4 wire version with voltage free relay contacts for Fire and Fault.

Compensation limits	+50% and -50% of the initial value
Supply voltage	
– Emitter	15 to 41 Vdc. (24 Vdc. nominal)
– Receiver	15 to 33 Vdc. (24 Vdc. nominal)
Quiescent current	
– Emitter	50 μ A (@ 24 Vdc.)
– Receiver	200 μ A (@ 24 Vdc.)
Rated current	50 mA
Operating temperature range	-10 to +50 °C
Maximum humidity	95%
Maximum misalignment angle	
– Emitter	$\pm 0.5^\circ$
– Receiver	$\pm 1.0^\circ$
Beam path length	5 m to 100 m
Alarm sensitivity settings	25%, 50%, and 60% (obscuration)
Reset voltage	7 V and below
Reset time	100ms and above

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.	XF2408/R1	Evaluation for Conformity Hochiki Model SPC-AS Optical beam smoke detector to AS 7240.12-2007	April 2008	CSIRO, Materials Science and Engineering, Fire Systems, AU