



Certificate of Conformity

Certificate num.	Registration date	Version	Valid until	
afp - 2938	25-Jul-2014	Number 15	Issue date 2-Apr-2024	30-Apr-2025

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Product designation

Stratos, HSSD-2, high sensitivity smoke detector

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

Agent/distributor

Kidde AirSense®

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

Registrant

Carrier Fire & Security B.V.

Kelvinstraat 7, WEERT, NETHERLANDS, NL-6003 DH

Producer

Carrier CCS Manufacturing Poland Sp. Z.o.o.

Ul. Kolejowa 24, 39-100 Ropczyce, PODKARPACIE, POLAND

Conformance criteria and evaluation

The Stratos, HSSD-2, high sensitivity smoke detector has been evaluated and verified as conforming with the relevant requirements of the following criteria.

1. Australian Standard AS 7240.20-2012, 'Fire detection and alarm systems - Part 20: Aspirating smoke detectors'.

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 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

Kaj Loh

Executive Officer – ActivFire Scheme



Schedule to Certificate of Conformity

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Producer's description

Stratos, HSSD-2, high sensitivity smoke detector has been designed to detect the presence of very low concentrations of smoke in air drawn from the protected area.

Air is drawn into the detector through a sampling pipe network by an integral fan. The detector has four pipe inlets, and a flow sensor to monitor for changes in flow rate. Inside the detector a small portion of the air is passed into the detector head via a filter which removes dust and dirt from the sample before it enters the detector chamber. The detector chamber uses a laser light source to detect the light scattered by any particulates in the air. The signals from the sensor are processed and converted to a smoke density reading, which is compared with pre-set alarm levels.

A display indicates the smoke concentration using a bar graph representation. Fire alarm conditions are indicated using red LEDs. Four alarm levels are provided; Aux, Pre-alarm, Fire 1 and Fire 2. Each indicator illuminates when the appropriate alarm level has been reached and the appropriate time delays have expired. On the stand alone command module the indicators signify an alarm condition from any detector on the communications loop.

The smoke concentration display is in two sections. The first part labelled 1 to 10, is the relatively scaled 'Classifire' bar graph and changes in steps of half a segment. The second part displays absolutely scaled smoke levels above 1% obscuration per metre to a maximum of 25% obs/m. The Fire 2 activation level is programmed to fit within this range.

Technical specification

The following details are a representative extract of the technical specification for the Stratos, HSSD-2, high sensitivity smoke detector 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.

Variant		Description
Type	Ident.	
Part num.	30620	Stratos HSSD 2 Standard Detector fitted with Command Module
	30621	Stratos HSSD 2 Standard Detector

Schedule of properties/characteristics

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

Alarm levels	4 (Fire 2, Fire 1, Pre-Alarm and Aux)
Sensitivity range (%Obs/m)	Min = 25% Max = 0.03% FSD
Maximum sensitivity resolution	0.0015 % obs/m
Particle sensitivity range	0.0003 µm to 10 µm
Detection principle	Laser light scattering mass detection
IP rating	IP50
Supply voltage	21.6 V - 26.4 V dc
Current Consumption	400mA (Detector), 450mA (Stand-alone Command Module), 850mA Command Module Detector)
Relay contact rating	500 mA @ 30 V
Operating temperature range	-10 to +60°C
Operating humidity range	0 - 90% Non Condensing
Size	427 mm W x 327 mm H x 95 mm D
Weight	5.2 kg (Detector), 5.3 kg (Command Module Detector), 6.2 kg (Stand-alone Command Module), 10.1kg + 2 kg (Stand-alone Command Module + batteries)

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Schedule of components

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

Description	Board/part no	Rev/issue no
Detector CPU board	APC 10104	Rev 05
Front panel board	D47148A	Issue 02
LCD display board	PC-16021C4-2S	Rev 01
Flow detector board	APC10108	Issue 04
Optical chamber signal conditioning board	APC10107	Issue 06

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	XF2811/R1	Conformity Evaluation of the Stratos HSSD 2 Aspirating Smoke Detector to the requirements of AS 7240.20-2012	11 June 2014	CSIRO, Infrastructure Technologies, Fire Systems and Acoustics, AU
Test report number	TE 234318-1	Technical evaluation of AirSense Technology Limited, Stratos HSSD-2 high sensitivity addressable aspirating smoke detector to a series of tests taken from EN 54-20: 2006	29-Jul-2008	BRE Testing, UK
Handbook	LM 80004 Issue 10	Installer's Handbook Stratos HSSD 2 High Sensitivity Smoke Detector	2009	AirSense Technology (A division of Kidde Products Ltd), UK