



Certificate of Conformity

Certificate num.	Registration date	Version	Valid until	
afp - 2816	26-Apr-2013	Number 1	Issue date 26-Apr-2013	30-Apr-2014

Product designation

Spectrex SharpEye™, 40/40 Series, infrared flame detectors
(Refer to the Schedule/enclosures for further specified details)

Agent/distributor

Fire Protection Technologies Pty Ltd
Unit 1 / 251 Ferntree Gully Road, MT WAVERLEY, VIC, AUSTRALIA, 3149

Registrant

Spectrex Inc.
218 Little Falls Road, CEDAR GROVE, NJ, UNITED STATES, 07009

Producer

Spectrex Inc.
218 Little Falls Road, CEDAR GROVE, NJ, UNITED STATES, 07009

Conformance criteria and evaluation

The Spectrex SharpEye™, 40/40 Series, infrared flame detectors has been evaluated and verified as conforming with the relevant requirements of the following criteria.

1. European Standard EN 54-10:2002, 'Fire detection and fire alarm systems. Flame detectors. Point detectors'.
2. Loss Prevention Council - Evaluation, surveillance and approval, 'LPC approval'.

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 with new or existing control and indicating equipment should be verified prior to installation.
- ii. Meets the requirements of EN 54-10: 2002 Class 1 at sensitivity setting 2 (default) only.

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 Spectrex SharpEye™, 40/40 Series, infrared flame detectors are multi spectrum based.

The 40/40I is a conventional Class 1 triple IR (IR₃) flame detector and detects fuel and gas fires at long distances with the high immunity to false alarms.

The 40/40M is a conventional Class 1 quad IR flame detector specifically designed for detection of hydrocarbon and hydrogen flames. It detects hydrocarbon-based fuel and gas fires at long distances with the high immunity to false alarms.

Technical specification

The following details are a representative extract of the technical specification for the Spectrex SharpEye™, 40/40 Series, infrared flame detectors and may be subject to change. Complete and current details should be determined from the designated producer's technical manual/data sheets.

Model	Description
Model 40/40I	Triple Infrared (IR3) Flame Detector
Model 40/40M	Multi Infrared Flame Detector

Property/characteristic	Value(s)			
	Fuel	Model 40/40I		Model 40/40M
Detection range (at highest sensitivity setting for 0.1m ² (1ft ²) pan fire) <small>* 0.5m (20") high, 0.2m (8") width plume fire</small>	n-Heptane	65 m	215 ft	65 m 215 ft
	Gasoline	65 m	215 ft	65 m 215 ft
	Diesel Fuel	45 m	150 ft	45 m 150 ft
	JP5	45 m	150 ft	45 m 150 ft
	Kerosene	45 m	150 ft	45 m 150 ft
	Ethanol 95%	40 m	135 ft	40 m 135 ft
	Methanol	35 m	115 ft	35 m 115 ft
	IPA (Isopropyl Alcohol)	40 m	135 ft	40 m 135 ft
	Hydrogen*	not available		30 m 100 ft
	Methane*	30 m	100 ft	30 m 100 ft
	LPG*	30 m	100 ft	30 m 100 ft
	Polypropylene Pellets	5 m	16 ft	5 m 16 ft
	Office Paper	10 m	33 ft	10 m 33 ft
Field of view	Horizontal 67° Vertical 70° for Gasoline Horizontal 80° Vertical 80° for Hydrogen		Horizontal 100° Vertical 95°	
Spectral response	Multi IR Bands			
Response time	Typically 5 seconds			
Adjustable time delay	Up to 30 seconds			
Sensitivity ranges	4 Sensitive ranges for 0.1 m ² (1 ft ²) n-heptane pan fire from 15 m (50 ft) to 65 m (215 ft)			
Built-in-test (BIT)	Automatic (and Manual)			
Temperature range	Operating: -55°C to +75°C (-67°F to +167°F)			
	Option: -55°C to +85°C (-67°F to +185°F)			
	Storage: -55°C to +85°C (-67°F to +185°F)			
Humidity	Up to 95% non-condensing - withstands up to 100% RH for short periods			
Heated optics	To eliminate condensation and icing on the window			
Operating voltage	24 Vdc nominal (18-32 Vdc)			
Power consumption	Standby: Max. 90 mA (110 mA with heated window)			
	Alarm: Max. 130 mA (160 mA with heated window)			
Cable entries	2 x 3/4" - 14NPT conduits or 2 x M25 x 1.5 mm ISO			
Wiring	12 - 22AWG (2.5 mm ² - 0.3 mm ²)			
Electrical input protection	According to MIL-STD-1275B			
Electromagnetic compatibility	EMI/RFI protected to EN61326-3 and EN61000-6-3			
Electrical interface	The detector includes twelve (12) terminals with five (5) wiring options (factory set)			
Materials Enclosure options	• Stainless Steel 316L with electro polish finish			
	• Heavy duty copper free aluminum (less than 1%), red epoxy enamel finish			
Mounting	Stainless Steel 316L with electro polish finish			
Dimensions	Detector 101.6 x 117 x 157 mm (4" x 4.6" x 6.18")			
Weight	Detector (St.St.) 2.8 kg (6.1 lb) Tilt mount 1.0 kg (2.2 lb)			
	Detector, aluminum 1.3 kg (2.8 lb)			
Environmental standards	Meets MIL-STD-810C for Humidity, Salt & Fog, Vibration, Mechanical Shock, High Temp, Low Temp			

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Property/characteristic	Value(s)
Water and dust	IP66 and IP67 per EN60529, NEMA 250 6P

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.			
Certificate No.	911a-(cl-1)	Flame Detectors EN 54-10: 2011 + A1: 2005 SharpEye 40/40I LPCB Ref. No.: 911a/02 SharpEye 40/40M LPCB Ref. No.: 911a/03 (lpcb_w3_Cert_911a-(cl-1)_v_2013-04-26.pdf)	26-Apr-2013	LPCB, UK
EC-Certificate of Conformity	0832 – CPD – 0977 Issue num. 1	40/40I Conventional Class 1 triple IR (IR3) flame detector for use in fire detection and alarm systems EN 54-10:2002, 'Fire detection and fire alarm systems. Flame detectors. Point detectors'	24-Apr-2009	BRE Global & LPCB, UK
	0832 – CPD – 0972 Issue num. 1	40/40M Conventional Class 1 quad IR 9IR3) flame detector for use in fire detection and alarm systems EN 54-10:2002, 'Fire detection and fire alarm systems. Flame detectors. Point detectors'		
Datasheet	DS-F-40/40I	40/40I Triple IR (IR3) Flame Detector	Nov-2012	Spectrex Inc., NJ, US
	DS-F-40/40M	40/40M Multi IR Flame Detector	Mar-2012	