



1 **EC TYPE-EXAMINATION CERTIFICATE**

2 Equipment intended for use in Potentially Explosive Atmospheres Directive 94/9/EC

3 Certificate Number: **Sira 07ATEX1250** Issue: **2**

4 Equipment: **40/40 Series Flame Detectors**

5 Applicant: **Spectrex Limited**

6 Address: 218 Little Falls Road
Cedar Grove
NJ 07009
USA

7 This equipment and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

8 Sira Certification Service, notified body number 0518 in accordance with Article 9 of Directive 94/9/EC of 23 March 1994, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in the confidential reports listed in Section 14.2.

9 Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the schedule to this certificate, has been assured by compliance with the following documents:

EN 60079-0:2006 EN 61241-0:2006
EN 60079-1:2007 EN 61241-1:2006
EN 60079-7:2007

10 If the sign 'X' is placed after the certificate number, it indicates that the equipment is subject to special conditions for safe use specified in the schedule to this certificate.

11 This EC type-examination certificate relates only to the design and construction of the specified equipment. If applicable, further requirements of this Directive apply to the manufacture and supply of this equipment.

12 The marking of the equipment shall include the following:



II 2 G D
Ex de IIB+H₂ T5 Ta -55°C to +75°C
Ex tD A21 IP66/X7 T95°C
or
Ex de IIB+H₂ T4 Ta -55°C to +85°C
Ex tD A21 IP66/X7 T105°C

Project Number 51A17913
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D R Stubbings BA MIET
Certification Manager



SCHEDULE

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13 DESCRIPTION OF EQUIPMENT

The 40/40 Series Flame Detectors are manufactured from stainless steel. They are cylindrical in shape and are of three-part construction. They comprise a central assembly that is divided into two compartments, an electronics compartment and a terminal compartment, each with their own cover. The electronics compartment cover contains a circular glass window that allows the equipment to provide its monitoring function, The cover is secured by three ¼"-20 UNC-2A socket head cap screws. The cover window aperture has two moulded lugs that, along with a flat bar which is secured by cement and a No. 4-40 UNC-2A screw, provide protection of the window against impact. The terminal compartment, which contains Bartec Ex e component approved terminals and which communicates with the electronics compartment via a potted bushing, has its cover secured by three ¼"-20 UNC-2A socket head cap screws. The central assembly has either two M25 x 1.5 or ¾" x 14 NPT threaded holes in its sidewall to allow the fitting of suitably certified cable entry devices.

The 40/40 Series Flame Detectors comprise the following models:

40/40I-XXXXC	-	IR3 Flame Detector
40/40M-XXXXC	-	Combined Hydrocarbon & Hydrogen Flame Detector
40/40R-XXXXC	-	Single IR Detector
40/40L-XXXXC	-	UV/IR Flame Detector without BIT
40/40L4-XXXXC	-	UVIR (4.5 µm) Flame Detector without BIT
40/40U-XXXXC	-	UV Flame Detector without BIT
40/40UB-XXXXC	-	UV Flame Detector with BIT
40/40LB-XXXXC	-	UV/IR Flame Detector with BIT
40/40L4B-XXXXC	-	UV/IR (4.5 µm) Flame Detector with BIT

Variation 1 - This variation introduced the following changes:

- i. The introduction of minor machining dimension changes and the reformatting of drawing details.
- ii. The introduction of a spacing disc on the bushing.
- iii. The optional use of aluminium as a material of manufacture of the enclosure.



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14 DESCRIPTIVE DOCUMENTS

14.1 Drawings

Refer to Certificate Annexe.

14.2 Associated Sira Reports and Certificate History

Issue	Date	Report no.	Comment
0	4 January 2008	R51A14361A	The release of the prime certificate.
1	2 April 2008	R51A14361B	Report number R51A14361B replaced R51A14361A.
2	11 June 2008	R51L17905A	The introduction of Variation 1.

14.3 Certificate number Sira 07ATEX2149 last amended 11 June 2008

15 SPECIAL CONDITIONS FOR SAFE USE (denoted by X after the certificate number)

None

16 ESSENTIAL HEALTH AND SAFETY REQUIREMENTS OF ANNEX II (EHSRs)

The relevant EHSRs that are not addressed by the standards listed in this certificate have been identified and individually assessed in the reports listed in Section 14.2.

17 CONDITIONS OF CERTIFICATION

17.1 The use of this certificate is subject to the Regulations Applicable to Holders of Sira Certificates.

17.2 Holders of EC type-examination certificates are required to comply with the production control requirements defined in Article 8 of directive 94/9/EC.

17.3 Each 40/40 Series Flame Detector shall be subject to a routine pressure test of 19.0 bar for at least 10 s as required by clause of 16.1 EN 60079-1:2007. There shall be no permanent deformation or damage to the enclosure.

17.4 Each 40/40 Series Flame Detector shall be subject to a routine dielectric strength test of 500 V rms applied between the terminal block and the enclosure for a period of 60 s as required by clause 6.1 of EN 60079-7:2007. Alternatively, the test voltage may be 600 V for a period of 100 ms

Certificate Annexe

Certificate Number: Sira 07ATEX1250
Equipment: 40/40 Series Flame Detectors
Applicant: Spectrex Limited



Issue 0

Number	Sheet	Rev.	Date	Description
777117	1 of 1	C	(Sira stamp) 07 Nov 07	Label
777127	1 of 1	-	07 Nov 07	Label

Issue 1: No new drawings were introduced.

Issue 2

Drawing No.	Sheet	Rev.	Date	Description
777327	1 of 1	-	(Sira Stamp) 06 Mar 08	Label
777337	1 of 1	-	06 Mar 08	Label

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