



IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification Scheme for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.: **IECEx SIR 07.0085** issue No.: **6**

Status: **Current**

Date of Issue: **2012-02-01** Page 1 of 5

Applicant: **Spectrex Ltd**
218 Little Falls Rd
Cedar Grove
NJ 07009
United States of America

Certificate history:

Issue No. 6 (2012-2-1)
Issue No. 5 (2011-5-5)
Issue No. 4 (2010-5-11)
Issue No. 3 (2009-7-14)
Issue No. 2 (2009-1-7)
Issue No. 1 (2008-6-11)
Issue No. 0 (2008-1-25)

Electrical Apparatus: **40/40 Series Flame Detectors**
Optional accessory:

Type of Protection: **Flameproof Increased Safety and Dust**

Marking: **Ex de IIC T5 Ta -55°C to +75°C, Ex tD A21 IP66/X7 T95°C, or,
Ex de IIC T4 Ta -55°C to +85°C, Ex tD A21 IP66/X7 T105°C**

Approved for issue on behalf of the IECEx Certification Body: **C Ellaby**

Position: **Deputy Certification Manager**

Signature:
(for printed version)

Date:

2012-02-01

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting the [Official IECEx Website](http://www.iecex.com).

Certificate issued by:

SIRA Certification Service
Rake Lane
Eccleston
Chester
CH4 9JN
United Kingdom

sira
CERTIFICATION



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Manufacturer: **Spectrex Ltd**
218 Little Falls Rd
Cedar Grove
NJ 07009
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Manufacturing location(s):

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended.

STANDARDS:

The electrical apparatus and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards:

IEC 60079-0 : 2004 Edition: 4.0	Electrical apparatus for explosive gas atmospheres - Part 0: General requirements
IEC 60079-1 : 2003 Edition: 5	Electrical apparatus for explosive gas atmospheres - Part 1: Flameproof enclosure 'd'
IEC 60079-7 : 2006-07 Edition: 4	Explosive atmospheres - Part 7: Equipment protection by increased safety "e"
IEC 61241-0 : 2004 Edition: 1	Electrical apparatus for use in the presence of combustible dust - Part 0: General requirements
IEC 61241-1 : 2004 Edition: 1	Electrical apparatus for use in the presence of combustible dust - Part 1: Protection by enclosures "tD"

This Certificate does not indicate compliance with electrical safety and performance requirements other than those expressly included in the Standards listed above.

TEST & ASSESSMENT REPORTS:

A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in

Test Report:

GB/SIR/ExTR08.0006/00
GB/SIR/ExTR09.0098/00
GB/SIR/ExTR12.0024/00

GB/SIR/ExTR08.0074/00
GB/SIR/ExTR10.0103/00

GB/SIR/ExTR08.0169/00
GB/SIR/ExTR11.0095/00

Quality Assessment Report:

GB/SIR/QAR08.0002/00

GB/SIR/QAR08.0002/02

GB/SIR/QAR08.0002/03



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Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

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 1/4"-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 1/4"-20 UNC-2A socket head cap screws.

The central assembly has either two M25 x 1.5 or 3/4" x 14 NPT threaded holes in its sidewall to allow the fitting of suitably certified cable entry devices.

See Equipment (continued) for Model types and Conditions of Manufacture.

CONDITIONS OF CERTIFICATION: NO



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EQUIPMENT(continued):

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 μ m) 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 μ m) Flame Detector with BIT

Conditions of Manufacture

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 IEC 60079-1:2003. There shall be no permanent deformation or damage to the enclosure.

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 IEC 60079-7:2001. Alternatively, the test voltage may be 600 V for a period of 100 ms.



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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above):

Issue 1 - this Issue introduced the following changes:	
1.	The introduction of minor machining dimension changes and the reformatting of drawing details.
2.	The introduction of a spacing disc on the bushing.
3.	The optional use of aluminium as a material of manufacture of the enclosure.
Issue 2 - this Issue introduced the following changes:	
1.	A change of the aluminium specification.
2.	Minor machining and dimensional changes.
Issue 3 - this Issue introduced the following change:	
1.	The recognition of minor drawing modifications; these changes are administrative and do not affect the aspects of the product that are relevant to explosion safety
Issue 4 - this Issue introduced the following changes:	
1.	Minor dimensional changes to the terminal compartment were endorsed.
2.	The recognition of minor drawing modifications; these changes are administrative and do not affect the aspects of the product that are relevant to explosion safety
Issue 5 - this Issue introduced the following changes:	
1.	The recognition of minor enclosure dimension changes was approved.
2.	Changes to certificate schedule drawings text were endorsed.
3.	The cover securing screws were permitted to be changed from 304 Stainless Steel to 316 Stainless Steel.
Issue 6 - this Issue introduced the following change:	
1.	The gas group was changed from IIB + H ₂ to IIC.