



1 **EC TYPE-EXAMINATION CERTIFICATE**

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

3 Certificate Number: Sira 03ATEX1504

4 Equipment: Fireray 2000 EEx d Smoke Detector

5 Applicant: Fire Fighting Enterprises Limited

6 Address: 5 Wedgewood Court  
Wedgewood Way  
Pin Green Ind Estate  
Stevenage  
Hertfordshire  
SG1 4QR  
UK

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 confidential report number R53A9766A.

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 50014:1997 amendments A1 and A2  
EN 50018:2000 amendment A1

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 2G  
EEx d IIB T6 Tamb = -20°C to +55°C

Project Number 53A9766  
Date 23 January 2004  
C. Index 12

D R Stubbings BA MIEE  
Certification Manager

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**Sira Certification Service**

Rake Lane, Eccleston, Chester, CH4 9JN, England  
Tel: +44 (0) 1244 670900 Fax: +44 (0) 1244 681330  
Email: exhazard@siratc.co.uk



**SCHEDULE**

**EC TYPE-EXAMINATION CERTIFICATE**

Sira 03ATEX1504

**13 DESCRIPTION OF EQUIPMENT**

The Fireray 2000 EEx d Smoke Detector is used for fire detection. It utilises a Transmitter to emit a modulated Infra-Red beam that is then picked up by a Receiver. The Transmitter and Receiver are both rated up to 30 V d.c and 0.3 A, with a maximum internal power dissipation of 10 W.

The Transmitter and Receiver both use a window cover option of a Type SM87 enclosure; this enclosure is manufactured by MEDC Limited and is certified as Baseefa03ATEX0345U. Within the enclosure there is a lens assembly and either a transmitter PCB assembly or a receiver PCB assembly. These assemblies are fitted into the cover and housing respectively, and are located axially by spacers. Up to two cable entries are provided, one is fitted with an appropriately certified blanking plug and the other with a transit protection plug that is replaced with an appropriately certified cable gland.

**14 DESCRIPTIVE DOCUMENTS**

Drawing No.	Sheet	Rev.	Date	Description
23838.00	1 of 1	C	23 Apr 03	Transmitter assembly
23839.00	1 of 1	C	23 Apr 03	Receiver assembly
23840.01	2 of 2	C(3)	23 Apr 03	Ring. Lens mount
23840.02	2 of 2	C(1)	23 Apr 03	Ring. Lens spacer mount
23844.00	3 of 3	D(1)	23 Apr 03	PCB mount
24680	1 of 1	D	20 May 03	General arrangements and label details
24017.01	1 of 1	D(1)	23 May 03	Transmitter Lens assembly
24017.02	1 of 1	D(1)	23 May 03	Receiver Lens assembly

14.2 Report No. R53A9766A

**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 Report No. R53A9766A.

**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 enclosure shall be subjected to a routine overpressure test of 11.52 bar for at least 10 s as required by clause 16.1 of EN 50018:2000. There shall be no permanent deformation or damage to the enclosure.

17.4 The manufacturer shall state in the instructions for the Fireray 2000 EEx d Smoke Detector that "The equipment does not have any user-serviceable parts and must be returned to the manufacturer for servicing and repair", in addition, the manufacturer shall inform the user/installer that the equipment must be returned if the flamepath of the enclosure has been damaged or is in need of repair.

17.5 This certificate relies on the following previously certified products. When used as part of the Fireray 2000 EEx d Smoke Detector, the key attributes listed in the table below shall still be maintained by their original certificate.

Description	Certificate No	Key attributes
MEDC Ltd, SM87 Enclosure	Baseefa03ATEX0345U	II 2G, EEx d IIB, IP67

Date 23 January 2004

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