



1 **EC TYPE-EXAMINATION CERTIFICATE**

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

3 Certificate Number: **Sira 08ATEX1083X** Issue: **0**

4 Equipment: **A Range of Flameproof Alternators**

**FPA16 24 V 16 A**

**FPA30 12 V 30 A**

**FPA45 12 V 45 A**

5 Applicant: **Pyroban Limited**

6 Address: Endeavour Works  
Dolphin Road  
Shoreham – by – Sea  
West Sussex BN43 6QG  
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 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 60079-1:2007

EN 13463-1:2001

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:

**FPA16**



II 2 G  
Ex d IIB T4  
Tamb = -20°C to +60°C

**FPA30**



II 2 G  
Ex d IIB T4  
Tamb = -20°C to +60°C

**FPA45**



II 2 G  
Ex d IIB T4  
Tamb = -20°C to +50°C

Project Number 51A17803  
C. Index 01

C Ellaby  
Certification Officer

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## SCHEDULE

### EC TYPE-EXAMINATION CERTIFICATE

Sira 08ATEX1083X  
Issue 0

#### 13 DESCRIPTION OF EQUIPMENT

The FPA Alternator uses a cast light alloy enclosure that contains an electrical stator and rotor along with regulation and rectification equipment. The enclosure comprises of two sections that are secured together with six, M5, hexagonal, socket cap head screws, grade 12.9, the joint between the two enclosure parts forming a cylindrical flamepath. The rear part of the enclosure incorporates a threaded entry point, either M20 or M25, to allow the installation of suitably certified cable glands. The front portion of the casing incorporates a bearing housing that allows the alternator shaft to exit the enclosure via a cylindrical flamepath. A pulley is mounted externally. The FPA Alternator range includes:

FPA16	24 V	16 A
FPA30	12 V	30 A
FPA45	12 V	45 A

#### 14 DESCRIPTIVE DOCUMENTS

##### 14.1 Drawings

Refer to Certificate Annexe.

##### 14.2 Associated Sira Reports and Certificate History

Issue	Date	Report no.	Comment
0	30 April 2008	R51A17803A	The release of the prime certificate.

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

15.1 In accordance with clause 5.1 of EN 60079-1, the critical dimensions of the flamepaths are:

Flamepath	Maximum Gap (mm)	Minimum L (mm)
Rear cover/main enclosure	0.2	22.0
Bushing/shaft	Interference fit	8.0
Main enclosure/bushing	0.2	12.5

15.2 A suitable guard will be fitted to protect the FPA Alternator cooling fan from accidental ingress of foreign objects causing mechanical damage to the fan.

15.3 When mounting the FPA Alternator, the user/installer will ensure that a clearance of at least 5.0 mm is maintained between the fan and any other object.

15.4 Use fasteners with a yield stress  $\geq 12.9$  (10800 N/mm<sup>2</sup>), where the 12.9 (10800 N/mm<sup>2</sup>) is determined by applicable testing.

#### 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.

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### Sira Certification Service

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# Certificate Annexe



**Certificate Number:** Sira 08ATEX1083X  
**Equipment:** A Range of Flameproof Alternators  
FPA16 24 V 16 A  
FPA30 12 V 30 A  
FPA45 12 V 45 A  
**Applicant:** Pyroban Limited

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## Issue 0

Number	Sheet	Rev.	Date	Description
C0260	1 of 1	6	15 Apr 08	Flameproof Alternator FPA45/FPA30/FPA16
C0106	1 of 1	5	15 Apr 08	Mounting of cable Glands & Stopping Plugs
805188	1 of 1	F	15 Apr 08	Label ATEX FPA30 Alternator
805539	1 of 1	E	15 Apr 08	Label ATEX FPA45 Alternator
805540	1 of 1	E	15 Apr 08	Label ATEX FPA16 Alternator

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