



1 **EU-TYPE EXAMINATION CERTIFICATE**

2 Equipment intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU

3 Certificate Number: **Sira 08ATEX1083X**

Issue 2

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 CSA Group Netherlands B.V., notified body number 2813 in accordance with Articles 17 and 21 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, 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 60079-0:2012 EN 60079-1:2014 EN 60079-31:2014 EN 13463-1:2009 EN 13463-5:2011

10 If the sign 'X' is placed after the certificate number, it indicates that the equipment is subject to Specific Conditions of Use identified in the schedule to this certificate.

11 This EU-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 Refer to the Equipment Schedule for other models



II 2 GDc

Ex db IIB T5 Gb (Tamb -20°C to 40°C)

Ex db IIB T4 Gb (Tamb -20°C to 60°C)

Ex tb IIIC T100 Db (Tamb -20°C to 40°C)

Ex tb IIIC T135 Db (Tamb -20°C to 60°C)

Project Number **0630**

Signed: 

Title: Director of Operations

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CSA Group Netherlands B.V.
Utrechtseweg 310,
6812 AR, Arnhem,
Netherlands



SCHEDULE

EU-TYPE EXAMINATION CERTIFICATE

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13 DESCRIPTION OF EQUIPMENT

FPA30



II 2 GDc
Ex db IIB T5 Gb (Tamb -20°C to 40°C)
Ex db IIB T4 Gb (Tamb -20°C to 60°C)
Ex tb IIIC T100 Db (Tamb -20°C to 40°C)
Ex tb IIIC T135 Db (Tamb -20°C to 60°C)

FPA45



II 2 GDc
Ex db IIB T4 Gb (Tamb -20°C to 50°C)
Ex db IIB T3 Gb (Tamb -20°C to 60°C)
Ex tb IIIC T135 Db (Tamb -20°C to 50°C)
Ex tb IIIC T200 Db (Tamb -20°C to 60°C)

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

Variation 1 - This variation introduced the following changes:

- Following appropriate assessment to demonstrate compliance with the latest technical knowledge EN 60079-0:2006, EN 60079-1:2007 and EN 13463-1:2001 were replaced by EN 60079-0:2012, EN 60079-1:2014, EN 60079-31:2014, EN 13463-1:2009 and EN 13463-5:2011, the markings in section 12 were updated accordingly and the Specific Conditions of Use were amended to recognise the new standards.
- The introduction of dust explosive atmospheres into the scope of the certification, which introduces Ex tb IIIC T# Db coding within the marking.
- The introduction of the following ambient and associated temperature classes:

FPA16
Ex db IIB T5 Gb (Tamb -20°C to 40°C)

FPA30
Ex db IIB T5 Gb (Tamb -20°C to 40°C)

FPA45
Ex db IIB T3 Gb (Tamb -20°C to 60°C)



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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 number	Comment
0	30 April 2008	R51A17803A	The release of the prime certificate.
1	08 January 2018	R70073066A	This Issue covers the following changes: <ul style="list-style-type: none">• EC Type-Examination Certificate in accordance with 94/9/EC updated to EU Type-Examination Certificate in accordance with Directive 2014/34/EU. <i>(In accordance with Article 41 of Directive 2014/34/EU, EC Type-Examination Certificates referring to 94/9/EC that were in existence prior to the date of application of 2014/34/EU (20 April 2016) may be referenced as if they were issued in accordance with Directive 2014/34/EU. Variations to such EC Type-Examination Certificates may continue to bear the original certificate number issued prior to 20 April 2016.)</i>• The introduction of Variation 1.
2	31st October 2019	0630	<ul style="list-style-type: none">• Transfer of certificate Sira 08ATEX1083X from Sira Certification Service to CSA Group Netherlands B.V..

15 SPECIFIC CONDITIONS OF 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 must be fitted to protect the FPA Alternator cooling fan from accidental ingress of foreign objects or mechanical damage to the fan.

15.3 In mounting the FPA Alternator measures must be taken to 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 ≥ 12.9 (10800 N/mm²), where the 12.9 (10800 N/mm²) is determined by applicable testing.

15.5 This equipment includes a non-metallic outer protective coating. To avoid the possibility electrostatic charges, cleaning must only be carried out with a damp cloth.

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

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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.

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

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

Issue 1

Drawing	Sheets	Rev.	Date(Sira stamp)	Title
C0260	1 to 2	9	27 Nov 17	Flameproof Alternator FPA45/FPA30/FPA16

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