



UNITED KINGDOM CONFORMITY ASSESSMENT

UK TYPE EXAMINATION CERTIFICATE

Equipment Intended for use in Potentially Explosive Atmospheres

UKSI 2016:1107 (as amended) – Schedule 3A, Part 1

Certificate Number: **CSAE 21 UKEX1579X** Issue: **0**
Product: A Range of Flameproof Alternators
Manufacturer: Pyroban Limited
Address: Endeavour Works
Dolphin Road
Shoreham – by – Sea
West Sussex BN43 6PB
UK

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

CSA Group Testing UK Limited, Approved Body number 0518, in accordance with Regulation 42 of the Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres Regulations 2016, UKSI 2016:1107 (as amended), certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Schedule 1 of the Regulations. The examination and test results are recorded in the confidential reports listed in Section 14.2.

Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN IEC 60079-0:2018
EN ISO 80079-36:2016

EN 60079-1:2014
EN ISO 80079-37:2016 (c)

EN 60079-31:2014

Except in respect of those requirements listed at Section 16 of the schedule to this certificate. The above standards may not appear on the UKAS Scope of Accreditation, but have been added through flexible scope of accreditation, which is available on request.

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

This UK TYPE EXAMINATION CERTIFICATE relates only to the design and construction of the specified product. Further requirements of the Regulations apply to the manufacturing process and supply of this product. These are not covered by this certificate.

The marking of this product shall be in accordance with Regulation 41 and include the following:



FPA16 Refer to the Equipment Schedule for other models

II 2 GD

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

Ex db h IIB T4 Gb (Tamb -20°C to 60°C)

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

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

Name: J A May
Title: Director of Operations



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Certificate No. **CSAE21UKEX1579X**



SCHEDULE

UK TYPE EXAMINATION CERTIFICATE

CSAE 21 UKEX1579X

Issue 0

13 DESCRIPTION OF PRODUCT

FPA30



II 2 GD

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

Ex db h IIB T4 Gb (Tamb -20°C to 60°C)

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

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

FPA45



II 2 GD

Ex db h IIB T4 Gb (Tamb -20°C to 50°C)

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

Ex tb h IIIC T135 Db (Tamb -20°C to 50°C)

Ex tb h 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

Incorporated Amendments:

- i. The introduction of dust explosive atmospheres into the scope of the certification, which introduces Ex tb IIIC T# Db coding within the marking.
- ii. The introduction of the following ambient and associated temperature classes:

FPA16

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

FPA30

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

FPA45

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

14 DESCRIPTIVE DOCUMENTS

14.1 Drawings

Refer to Certificate Annexe.

14.2 Associated Reports and Certificate History

Issue	Date	Report number	Comment
0	11 January 2022	R80100668A	The release of the prime certificate.



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SCHEDULE

UK TYPE EXAMINATION CERTIFICATE

CSAE 21 UKEX1579X

Issue 0

15 **SPECIFIC CONDITIONS OF USE** (denoted by X after the certificate number)

15.1 In accordance with clause 5.1 of EN 60079-1:2014, 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 (REGULATIONS SCHEDULE 1)**

In addition to the Essential Health and Safety Requirements covered by the standards listed in Section 9, all other requirements are demonstrated in the relevant reports.

17 **PRODUCTION CONTROL**

17.1 Holders of this certificate are required to comply with production control requirements defined in Schedule 3A, as applicable, and CSA Group Testing UK Regulations for Certificate Holders



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Certificate Annexe

Certificate Number: CSAE 21 UKEX1579X
Product: A Range of Flameproof Alternators
Manufacturer: Pyroban Limited

Issue 0

Drawing	Sheets	Rev.	Date	Title
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
C0260	1 of 2	11	14 Dec 21	Flameproof Alternator FPA45/FPA30/FPA16
C0260	2 of 2	10	14 Dec 21	Flameproof Alternator FPA45/FPA30/FPA16



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