



1 **EC TYPE-EXAMINATION CERTIFICATE**

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

3 Certificate Number: Sira 01ATEX1033X

4 Equipment: Petrel Series 7 Luminaire

5 Applicant: PFP Electrical Products Ltd

6 Address: Fortnum Close
Mackadown Lane
Kitts Green
Birmingham
B33 0LB
United Kingdom

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 R51X5211A.

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 (including amendments 1 and 2)
EN 50018:2000
prAA EN 50018:2000
EN 50281-1-1:1998

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 2 G# (# D can be applied to luminaires that are fitted with a glass tube)
EEx d IIB/IIC T6/T5/T4 (Ta = -20°C to +40°C/+52°C/+55°C)

Refer to the table in the schedule to this certificate to find the coding that is relevant to each design of luminaire

Project Number 51X5211
Date 13 March 2001
C. Index 05

M D Shearman
Certification Manager

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Sira Certification Service

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SCHEDULE

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Sira 01A/T⁴EX1033X

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DESCRIPTION OF EQUIPMENT

The Petrel Series 7 Luminaire comprises a lamp tube assembly with two end caps. The design allows the installation of various internal fluorescent bi-pin lamps or compact fluorescent lamps (see table below). The end caps provide access to internal circuitry via removable screwed lids and have threaded cable entry facilities to permit the installation of suitably certified cable entries. The end caps are manufactured in aluminium alloy, LM25TF to BS 1490: 1988.

There is an option to install a remote battery pack in the place of one of the screw-on lids. This battery pack is separated from the main enclosure by means of a potted bush and uses exactly the same screw-on lid facility.

The lamp tube assembly employs a tube that is made from either toughened borosilicate glass or a polycarbonate material, Makralon® 3103 or 3203 manufactured by Bayer AG. The fluorescent lamps are housed within the lamp tube assembly, together with the associated control equipment.

Eccobond® 45 LV cement, manufactured by Emerson and Cumming, is used to seal the end caps to the tube. This is also used as the battery pack bushing potting material. The integrity of the cement seal between the end cap and the tube is maintained by two, 12 mm diameter tie bars. These connect both end caps together, thus compressing the tube and cemented joints between the caps. In the case of the bushing seal, a groove is machined internally, thus effectively locking the potting material in position.

All sizes of luminaires are also fitted with battery backup facilities. These take the form of battery packs mounted on the gear tray or installed within the remote battery housing as indicated below. The range of luminaires are defined as follows:

Size (ft)	Gas Group	T5 Lamps	T8 Lamps	PL# Lamps	Emergency Version (Maximum No of Cells)	Maximum Circuit Watts For:	
						Ta Maximum	Ta Reduced
1	IIB/IIC	1 or 2 8 W		2 26 W	3	T4 @ 32 W Ta 52°C	T5 @ 65 W Ta 40°C
1	IIB/IIC	1 or 2 8 W *			2	T6 @ 19 W Ta 55°C	T5 @ 65 W Ta 40°C
2	IIB/IIC		1 or 2 18 W	2 55 W	5	T5 @ 69.5 W Ta 55°C	T6 @ 126 W Ta 40°C
4	IIB		1 or 2 36 W	2 55 W	6 (remote pack only)	T5 @ 133 W Ta 55°C	T6 @ 133 W Ta 40°C
4	IIC	1 or 2 39 W			6 (remote pack only)	T5 @ 133 W Ta 55°C	T6 @ 133 W Ta 40°C
5	IIB		1 or 2 58 W		6 (remote pack only)	T5 @ 152 W Ta 55°C	T6 @ 152 W Ta 40°C
6	IIB		1 or 2 70W		6 (remote pack only)	T4 @ 175 W Ta 55°C	T5 @ 175 W Ta 40°C

* Only one lamp may be operated at a time.

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Both the IIC and IIB versions of luminaires may be used for emergency lighting, in the case of the IIC, with self-contained battery and inverter units. For the IIB versions, the battery must be installed with a remote battery housing. The remote battery housing is IIC in all instances. The IIC and IIB versions can be wired for non-maintained, maintained or sustained lighting.

There is a mounting lug on each body casting of the luminaires, this can be used for solid fixing of the luminaire or suspending it. The lug can also be used for mounting a guard or an external reflector.

The luminaire is only suitable for dust environments when the toughened borosilicate glass tube is specified.

14 DESCRIPTIVE DOCUMENTS

14.1	Drawing No.	Rev.	Sheet	Date	Title
	60070000	1 of 1	2	12 Feb 01	Petrel 7 Range Enclosures
	60070001	1 of 1	4	12 Feb 01	Petrel Series 7 Geartray Variations
	60070002	1 of 1	2	12 Feb 01	7 Series Variations
	60070010	1 of 1	1	12 Dec 00	Charging Circuit For Series 7 ATEX
	H28247003	1 of 1	1	13 Feb 01	ATEX Certification Plate – Petrelux Series 7

14.2 Report No. R51X5211A

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

15.1 When fitted with a glass tube, the Petrel Series 7 Luminaire shall only be installed in areas where there is a low risk of impact.

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. R51X5211A.

17 CONDITIONS OF CERTIFICATION

17.1 The use of this certificate is subject to the Regulations Applicable to Holders of SCS Certificates.

17.2 Each enclosure shall be subjected to a routine overpressure test in accordance with the table below. In all cases, the pressure shall be maintained 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.

Equipment	Hydrostatic Overpressure Test Pressure Applied IIC		Hydrostatic Overpressure Test Pressure Applied IIB	
	Bar	Lbf/in ²	Bar	Lbf/in ²
1 foot	14.00	203.00	N/A	N/A
2 foot	14.00	203.00	N/A	N/A
4 foot	12.60	182.70	N/A	N/A
5 foot			20.55	297.98
6 foot			14.00	203.00

17.3 The manufacturer shall comply with clause E.6.4 of prAA EN 50018:2000.

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