



IECEX Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification Scheme for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.: IECEx CML 16.0149X

Issue No: 3

Certificate history:

Status: **Current**

Issue No. 3 (2018-07-31)

Issue No. 2 (2018-06-06)

Date of Issue: **2018-07-31**

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Issue No. 1 (2017-11-27)

Issue No. 0 (2017-03-28)

Applicant: **Petrel Ltd.**
22, Fortnum Close,
Kitts Green
Birmingham
B33 0LB
United Kingdom

Equipment: **Series 9 LED luminaire**

Optional accessory:

Type of Protection: **Increased safety, encapsulation, dust, optical radiation**

Marking:

Ex eb mb op is IIC T4/T5 Gb

Ex tc op is IIIB T86°C Dc IP54

Ta: (-20°C ≤ Ta ≤ +25°C) (T5 variants)

Ta: (-20°C ≤ Ta ≤ +55°C) (T4 variants)

*Approved for issue on behalf of the IECEx
Certification Body:*

D R Stubbings MIET

Position:

Technical Director

*Signature:
(for printed version)*

Date:

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting the [Official IECEx Website](#).

Certificate issued by:

Certification Management Limited
Unit 1, Newport Business Park
New Port Road
Ellesmere Port, CH65 4LZ
United Kingdom





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Manufacturer: **Petrel Ltd.**
Kitts Green
Birmingham
B33 0LB
United Kingdom

Additional Manufacturing location(s):

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended.

STANDARDS:

The apparatus and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards:

IEC 60079-0 : 2011 Edition:6.0	Explosive atmospheres - Part 0: General requirements
IEC 60079-18 : 2014 Edition:4.0	Explosive atmospheres – Part 18: Equipment protection by encapsulation "m"
IEC 60079-28 : 2015 Edition:2	Explosive atmospheres - Part 28: Protection of equipment and transmission systems using optical radiation
IEC 60079-31 : 2013 Edition:2	Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"
IEC 60079-7 : 2015 Edition:5.0	Explosive atmospheres – Part 7: Equipment protection by increased safety "e"

*This Certificate **does not** indicate compliance with electrical safety and performance requirements other than those expressly included in the Standards listed above.*

TEST & ASSESSMENT REPORTS:

A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in

Test Report:

[GB/CML/ExTR16.0191/00](#) [GB/CML/ExTR17.0102/00](#) [GB/CML/ExTR18.0130/00](#)
[GB/CML/ExTR18.0166/00](#)

Quality Assessment Report:

[GB/SIR/QAR08.0014/09](#)



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Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

The Petrel 9 Series LED Luminaries are a range of portable luminaires for use in explosive atmospheres, consisting of encapsulated driver circuits, encapsulated LED strip units and connecting devices for a supply cables.

Refer to Annex for full description and Conditions of Manufacture.

SPECIFIC CONDITIONS OF USE: YES as shown below:

1. Due to the risk of static hazards, the equipment should only be cleaned with a damp cloth.



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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above):

For issue change details, see Annex

Annex:

[IECEX CML 16.0149X Certificate Annex Iss. 3.pdf](#)

Annexe to: IECEx CML 16.0149X Issue 3
Applicant: Petrel Ltd
Apparatus: 9 Series Luminaire



Description

The Petrel 9 Series LED Luminaires are a range of portable luminaires for use in explosive atmospheres, consisting of encapsulated driver circuits, encapsulated LED strip units and connecting devices for a supply cables. These are built onto a gear tray within an enclosure comprising a clear polycarbonate cover fitted on to a metallic base, between shock absorbing and dissipative plastic endplates.

The luminaire is fitted with a supply cable through a suitably certified cable gland or socket and plug receptacle.

An emergency option is also available powered via an encapsulated battery pack and inverter.

The range of luminaires are rated at 110 or 230 V 50/60 Hz.

Conditions of Manufacture

The following are conditions of manufacture:

- i. Where the product incorporates certified components, the manufacturer shall ensure that any changes to those components do not affect the compliance of the certified product that is the subject of this certificate.
- ii. A dielectric strength test shall be carried out on all units manufactured in accordance with IEC 60079-7:2015 clause 7.1 and IEC 60079-18:2015 clause 9.2 at 1500 V AC or 2100 DC (circuit voltage 90V and over) or 500 V AC or 700 DC (circuit voltages up to 90V) for 1 minute. No breakdown shall occur. Tests shall be carried out between each circuit and earth and between each circuit and the surface of encapsulated parts.
- iii. A visual inspection shall be carried out on the encapsulated parts to check for damage in accordance with IEC 60079-18, clause 9.1.

Conditions of Certification/Special Conditions for Safe Use

The following are conditions of certification:

- i. Due to the risk of static hazards, the equipment should only be cleaned with a damp cloth.





Issue changes

Issue 1

- i. The option of including a new driver, charger and battery assembly.

Issue 2

- i. Alternative LED lighting strips
- ii. Alternative emergency LED driver
- iii. Alternative encapsulant for electronic circuits
- iv. Update to routine testing in conditions of manufacture in line with all options

Issue 3

The following changes were made under this issue:

1. To allow an alternative construction of a current LED Emergency driver module.