



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 ITS 18.0032X

Issue No: 0

Certificate history:

[Issue No. 0 \(2018-09-04\)](#)

Status: **Current**

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Date of Issue: **2018-09-04**

Applicant: **Pharos Marine Automatic Power Ltd**
Lancelot Road
Beacon Business Park
Great Yarmouth
NR31 7BF
United Kingdom

Equipment: **FD-410Ex-MINI Fog Detector**

Optional accessory:

Type of Protection: **Flameproof Ex db**

Marking:

Ex db IIB T6 Gb

Ta -40°C to +55°C

IECEX ITS 18.0032X

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

P Moss

Position:

Certification Officer

*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:

Intertek Testing & Certification Limited
ITS House, Cleeve Road,
Leatherhead,
Surrey, KT22 7SA
United Kingdom





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Manufacturer: **Pharos Marine Automatic Power Ltd**
Lancelot Road
Beacon Business Park
Great Yarmouth
NR31 7BF
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 : 2017 Explosive atmospheres - Part 0: Equipment - General requirements

Edition:7.0

IEC 60079-1 : 2014-06 Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"

Edition:7.0

*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/ITS/ExTR18.0015/00](#)

Quality Assessment Report:

[GB/EXV/QAR17.0023/00](#)



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Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

The FD410Ex-MINI is a visibility sensor that can detect fog in the range of 20m to 4Km. The FD410Ex-MINI consist of a stainless steel enclosure that holds the electronic Fog Detector module with approximate dimensions of 120mm x 86mm x 60mm. The enclosure base forms a flanged joint with the cover which is secured with Qty 10 M3x0.5 socket head cap screws. An O-ring is fitted between the cover and base for IP purposes only. In the bottom of the base of the enclosure are fitted two glass lenses, forming a cemented joint with the base. In the cover of the enclosure are two M16 cable entries into which are fitted certified Ex d IIB Gb cable glands.

External earthing connection facility is provided.

Note: The optical radiation output of the apparatus with respect to explosion protection is covered in this certificate based on Exception 3 to the scope of IEC 60079-28:2015 Ed 2.

SPECIFIC CONDITIONS OF USE: YES as shown below:

1. No modification must be made to the flamepaths of the enclosure without prior consultation with the manufacturer.
2. Fasteners used to secure cover of the Fog Detector must be stainless steel grade 70 with a minimum yield stress of 410MPa.
3. The 24V supply line must be suitably fused. A fuse rated equal or in excess of 2A but less than 3A fitted in series with the positive voltage connection wires is required to prevent the apparatus from risk of short circuit.

Annex:

[Annex to IECEx ITS 18.0032X Issue 0.pdf](#)



Annex to IECEx Certificate of Conformity

Certificate No:	IECEX ITS 18.0032X	Issue No. 0
Annex No. 1		

Technical Documents			
Title:	Drawing No.:	Rev. Level:	Date:
LENS GUIDE	FD-410EX-MK2-LENSG-002	R1	03/09/2018
FOG DETECTOR HOUSING (2 sheets)	FD-410EX-MK2-BASE-0001	R1	03/09/2018
FOG DETECTOR GENERAL ARRANGEMENT	FD-410EX-MK2-ENC-0001	R1	03/09/2018
FOG DETECTOR LABEL PLATE	FD-410-EX-MK2-LAB-0001	R1	03/09/2018
SILICA GLASS LENS	FD-410EX-MK2-LENS-0001	R1	03/09/2018
LENS	FD-410EX-MK2-LENS-0002	R1	03/09/2018
FOG DETECTOR LID	FD-410EX-MK2-LID-0001	R1	03/09/2018
FD410Ex-MINI Operation Manual (Annex A)	V-72048	1.0/A1	June 2018