

# INSTRUCTIONS FOR SAFE USE

**INTRINSICALLY SAFE**  
FL4725 WORKLIGHT  
FL4700 LANTERN



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READ THIS FIRST

The CorDEX Instruments FL47xx Intrinsically Safe Portable Lighting is a LED hand-held lantern and transportable floodlight for use in potentially hazardous (explosive) atmospheres. Read and understand all warnings and cautions before using this product.

Safety information

This instruction manual contains information and warnings that must be observed for safe operation under the conditions described.

Faults and damage

If there are any grounds to believe the unit is no longer safe to use, it must be taken out of service and measures taken to prevent its further unintentional use.

**The safety of the device may be impaired if for example:**

External damage to the unit is visible.

The device has not been stored correctly.

The unit has suffered transport damage.

Safety regulations

When using the FL47xx Intrinsically Safe Portable Lighting the appropriate regulations must be observed to avoid incorrect operation of the device.

**ATTENTION! ENSURE THAT THE CASE IS SECURELY FASTENED WHEN USING THE DEVICE.**

Special Conditions of Safe Use


Only the EXIS battery pack can be used.

Do not charge in hazardous areas.



# LABELLING

CorDEX Instruments Ltd. 1 Owens Road, Middlesbrough, TS6 6HE, UK

FL47xx Intrinsically Safe Portable Lighting



Ex II 2G



CE 1725

Ex ib op is IIC T4 Gb Tamb -10C to 40C

ATEX - ExVeritas 15 ATEX 0010

IECEX - IECEX EXV 15.0009X

Serial Number - XXXX-XX-XXXX

Year of construction - YYYY

Powered by – Refer to Manual

DO NOT OPEN WHEN EXPLOSIVE ATMOSPHERE PRESENT

# OPERATIONAL CAUTIONS

The cautions in this section do not relate specifically to safe use in hazardous area applications but should be followed to prevent damage to the device or personnel:

- Keep out of reach of children.
- The FL47xx Intrinsically Safe Portable Lighting is a precision tool. Do not drop it, strike it or cause excessive force when handling.

### Maintenance

For safety critical maintenance, please refer to EN6007017.

EC DECLARATION OF CONFORMITY

CorDEX

CorDEX Instruments Ltd  
Unit 1, Owens Road  
Skippers Lane Industrial  
Estate,  
MIDDLESBROUGH,  
TS6 6HE

Declaration No. SOM14

EC Declaration of Conformity  
in accordance with EEC ATEX Directive 94/9/EC

We,

CorDEX Instruments Ltd.

Hereby declare that the products described below

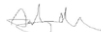
Product: Intrinsically Safe Portable Lighting  
Model: FL47xx

are in conformity with the essential health and safety requirements of Council Directive 94/9/EC relating to equipment intended for use in potentially hazardous atmospheres (ATEX Directive) Ex II 2G , Ex ib op is IIC T4 Gb , Tamb-10C to 40C equipment by the application of the following standards:

- EN 60079-0:2012+A11:2013
- Explosive atmospheres - Part 0: Equipment - General requirements
- EN 60079-11:2012
- Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "I"

as certified by Notified Body Number 0518, ExVeritas Ltd. by EC-Type Examination Certificate ExVeritas 15 ATEX 0010 X and IECEx Certificate; IECEx EXV 15.0009X and are subject to the procedures set out in Annex VII of Directive 94/9/EC and these procedures are in conformity with the requirements of EN80079-34 under the supervision of Notified Body Number 0518, SIRA Certification Ltd Unit 6, Hawarden Industrial Park, Hawarden, Deeside, CH5 3US.

It is ensured though internal measures that the products conform at all times to the requirements of the current EEC Directives and relevant standards.

Signature:  Authorised Person  
Position: Manging Director on behalf of CorDEX Instruments Ltd  
Date: 01/12/2015

Product Serial number



CERTIFICATION



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](http://www.iecex.com)

Certificate No.:

IECEx EXV 15.0009X

Issue No: 0

Certificate history:  
[Issue No. 0 \(2016-01-20\)](#)

Status:

Current

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Date of Issue:

2016-01-20

Applicant:

CorDEX Instruments Ltd  
Unit 1 Owens Road,  
Skippers Lane Industrial Estate,  
Middlesbrough, Cleveland  
TS6 6HE  
United Kingdom

Electrical Apparatus:

LED hand-held lantern and transportable floodlight

Optional accessory:

Type of Protection:

Intrinsic Safety "I" Optical Radiation "op is"

Marking:

Ex ib op is IIC T4 Gb (Ta = -10°C to +40°C)

Approved for issue on behalf of the IECEx  
Certification Body:

S. D'Henin

Position:

Certification Manager

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:

ExVeritas Limited  
Units 16-18 Abernethy Way  
Wrexham Ind. Est.  
Wrexham LL13 9UZ  
United Kingdom





IECEX Certificate  
of Conformity

Certificate No:IECEX EXV 15.0009XIssue No: 0

Date of Issue:2016-01-20Page 2 of 4

Manufacturer:CorDEX Instruments Ltd  
Unit 1 Owens Road,  
Skippers Lane Industrial Estate,  
Middlesbrough, Cleveland  
TS6 6HE  
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 electrical 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:

<b>IEC 60079-0 : 2011</b> Edition:6.0	Explosive atmospheres - Part 0: General requirements
<b>IEC 60079-11 : 2011</b> Edition:6.0	Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "I"
<b>IEC 60079-28 : 2006-08</b> Edition:1	Explosive atmospheres - Part 28: Protection of equipment and transmission systems using optical radiation



*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/EXV/ExTR15.0010/00](#)

Quality Assessment Report:  
[GB/SIR/QAR10.0010/06](#)



IECEX Certificate  
of Conformity

Certificate No:IECEX EXV 15.0009XIssue No: 0

Date of Issue:2016-01-20Page 3 of 4

Schedule

**EQUIPMENT:**

*Equipment and systems covered by this certificate are as follows:*

The CorDEX FL47xx LED can be provided in two different variations as follow:

- Hand-held lantern
- Transportable floodlight



All version are based in the same core LED floodlight, which is comprise of an aluminium enclosure with a lighting window made in glass, inside of this enclosure is situated the PCB where the safety critical components and the LED's are soldered. This LED Light includes also a push-button that is directly actioned in the transportable version or is actioned through a mechanical assembly in the hand-held version.

This product is powered through the rechargeable battery pack model EXIS approved as an intrinsically safe Ex Component (IECEX EXV 15.0008U).

**CONDITIONS OF CERTIFICATION: YES as shown below:**

Only the EXIS battery pack can be used (IECEX EXV 15.0008U).

It is not allowed to charge the battery pack in hazardous area.



IECEX Certificate  
of Conformity

Certificate No:

IECEX EXV 15.0009X

Issue No: 0

Date of Issue:

2016-01-20

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Additional information:

See Annex for the approval drawings.

Annex:

IECEX 15.0009 X - Annex\_Issued.pdf



1EC - Type Examination Certificate

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

3Certificate Number: ExVeritas 15 ATEX 0010 X Issue: 1

4Equipment: LED hand-held lantern and transportable floodlight

5Manufacturer: CorDEX Instruments Ltd

6Address: Unit 1 Owens Road, Skippers Lane Industrial Estate,  
Middlesbrough, Cleveland  
TS6 6HE – UK

7This equipment and any acceptable variation thereto are specified in the schedule to this certificate and the documents therein referred to.

8ExVeritas, Notified Body number 2585 in accordance with Article 9 of the Council Directive 94/9/EC of 23 March 1994, certifies that this equipment or protective system has been found to comply with the Essential Health and Safety Requirements relating to design and construction of equipment and protective systems for use in potentially explosive atmospheres given in Annex II to the Directive

9Compliance with the applicable Essential Health and Safety Requirements has been assured by compliance with the following Standards and section 16 of this certificate:  
  
EN 60079-0:2012+A11:2013 EN 60079-28:2007  
EN 60079-11:2012

10If 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.

11This EC-Type Examination Certificate relates only to the design, construction, examination and tests of the specified equipment or protective system in accordance to the Directive 94/9/EC. Further requirements of the Directive apply to the manufacturing process and supply of this equipment or protective system. These are not covered by this certificate.

12The marking of the equipment shall include the following:  
  
 II 2 G Ex ib op is IIC T4 Gb (Ta = -10°C to +40°C)



On behalf of ExVeritas



Stephen D'Henin  
Certification Manager

No. 8613

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RUGGED AUTHORITY

Document Reference FL4700/4725SOM Rev. A 11

**Schedule**13 Description of Equipment or Protective System

The CorDEX FL47xx LED can be provided in two different variations as follow:

## 1. Hand-held lantern



## 2. Transportable floodlight



All version are based in the same core LED floodlight, which is comprise of an aluminium enclosure with a lighting window made in glass, inside of this enclosure is situated the PCB where the safety critical components and the LED's are soldered. This LED Light includes also a push-button that is directly actioned in the transportable version or is actioned through a mechanical assembly in the hand-held version. This product is powered through the rechargeable battery pack model EXIS approved as an intrinsically safe Ex Component (ExVeritas 15 ATEX 0009 U).

14 Descriptive Documents

## 14.1 Associated Report and Certificate History:

Report Number	Cert Issue Date	Issue	Comment
R0603/A/1	29/09/2015	0	Initial issue of the Prime Certificate
R0787/A/1	19/01/2016	1	Marking corrected to include "op is" according to the standard EN 60079-26

## 14.2 Compliance Drawings:

**Issue 0**

Number	Date	Issue	Description
CDX1000-250	2015/05/20	1.3	CorDEX EXIS Host Connector Board
CDX-1000-253	2015/03/31	1.3	CorDEX EXIS Host connector PCB
CDX-1000-254	2015/03/31	1.3	CorDEX EXIS Host connector PCB Assembly
CDX1000-260	2015/03/25	1.0	CorDEX EXIS Host FFC Board
CDX-1000-263	2015/03/25	1.0	CorDEX EXIS Host FFC Flexi PCB
CDX-1000-264	2015/03/25	1.0	CorDEX EXIS Host FFC Flexi PCB Assembly
CDX4700-200	2015/03/19	2.1d	CorDEX IS LED Lamp System - IS LED Lamp

Certificate ExVeritas 15 ATEX 0010 X Issue 1

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**Schedule**

Number	Date	Issue	Description
CDX-4700-201	2015/05/20	2.1d	CorDEX IS LED Lamp System Schematic BOM
FL4700_4725SOM	-	A	Instructions for Safe Use Intrinsically Safe LED hand-held lantern and transportable floodlight
CDX4700-019	2015/01/05	A	IS Light General Assembly
CDX4700-020	2015/01/05	A	Lantern General Assembly
CDX4700-021	2015/07/18	C	Floodlight General Assembly
CDX4700-406	2015/01/15	A	Button Assembly
CDX-4700-441	2015/08/06	C	Rating plate
CDX4700-471	2015/01/15	A	Internal Connections
CDX4700-200	2015/03/19	2.1d	CorDEX IS LED Lamp – Top, LED Array, LED Driver
CDX4700-207	2015/05/20	2.1	CorDEX IS LED Lamp Board BOM
CDX-4700-208	2015/03/23	2.1	CorDEX HIR IS LED Lamp PCB
CDX-4700-209	2015/03/23	2.1	CorDEX HIR IS LED Lamp Assembly

**Issue 1**

Number	Date	Issue	Description
CDX4700-410	2015/05/20	A	Front Glass

15 Conditions of Certification

## 15.1 Special Conditions for Safe Use

- Only the EXIS battery pack can be used.
- It is not allowed to charge the battery pack in hazardous area.

15.2 Conditions for Use  
(Routine Tests)

None.

16 Essential Health and Safety Requirements

Essential Health and Safety Requirements are addressed by the standards listed in section 9 and where required the report listed in section 14.1

The manufacturer shall inform the Notified Body of any modifications to the design of the product described by this schedule.

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## NOTES



