



1 EC TYPE-EXAMINATION CERTIFICATE

- 2 Equipment intended for use in Potentially Explosive Atmospheres Directive 94/9/EC
- 3 Certificate Number: Sira 10ATEX1283X
- 4 Equipment: Laser Distance Meter LM3000XP
- 5 Applicant: CorDEX Instruments Limited
- 6 Address: Unit 1 Owens Road Skippers Lane Industrial Estate Middlesbrough Cleveland TS6 6HE UK
- 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 the confidential reports listed in Section 14.2.

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 60079-0:2006

EN 60079-1:2007

Issue:

3

- 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:

Έx I/II M2/2 G Ex d I/IIC T4 $(Ta = -20^{\circ}C to +50^{\circ}C)$

C. E

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Sira Certification Service

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Project Number 25415

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SCHEDULE

EC TYPE-EXAMINATION CERTIFICATE

Sira 10ATEX1283X Issue 3

13 DESCRIPTION OF EQUIPMENT

The LM3000XP is a flameproof enclosure containing a laser distance meter. The device comprises a main enclosure with a bolt on external battery pack and a non-metallic overmoulding.

The main enclosure comprises three main parts the body, the battery pack and the cover. These are all cast in aluminium 6082T6 and subsequently machined. The main body incorporates a void provided for the installation of the laser distance meter. The end of the main body is machined to allow the installation of a rectangular toughened glass laser window, the joint between the glass window and the main body forming a spigotted flamepath. The window is secured in place by means of a steel retaining plate which in turn is secured by four M3 x 10 mm hexagonal socket cap head screws, the heads of these screws being protected by their location behind the external overmoulding.

The top part of the main enclosure is provided with a cover, the joint between the cover and main body forming a flanged flamepath. The cover is secured to the main body by nine M3 x 8 mm hexagonal socket cap head screws, the heads of these screws being protected by their location in appropriate counter bored holes. The top of the cover is machined to allow the installation of a toughened glass, LCD viewing window, the joint between the glass window and the main body forming a spigotted flamepath. The window is secured in place by means of a steel retaining plate which in turn is secured by four M3 x 10 mm hexagonal socket cap head screws, the heads of these screws being protected by their location behind the external overmoulding.

Located on the side of the main enclosure is a detachable battery pack. The battery pack comprises an aluminium housing contain two rechargeable AAA size batteries and associated circuitry. The joint between the battery pack and the front cover forms a flanged flamepath. The battery cover is secured by six M4 x 12 mm hexagonal socket cap head screws, the heads of these screws being protected by their location in appropriate counter bored holes.

All fasteners are stainless steel to ISO 4762, grade A2-70.

The assembly is provided externally with a permanent, non-metallic, anti-static protective overmoulded case.

Variation 1 - This variation introduced the following changes:

- i. The battery pack part number was changed.
- ii. The fuse details were modified to include the CorDEX fuse part number.
- iii. The flamepath 'A' was changed.
- iv. The standards used to assure compliance with the EHSRs were corrected in line with the original report no. R22395A/00.

Variation 2 - This variation introduced the following change:

i. The company address was changed from Unit 6 Farfield, Main Road, Wykeham, Scarborough YO13 9QD to that currently shown in Section 6.

Variation 3 - This variation introduced the following change:

i. Some non-critical enclosure dimensions were changed.

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SCHEDULE

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Sira 10ATEX1283X Issue 3

14 DESCRIPTIVE DOCUMENTS

14.1 Drawings

Refer to Certificate Annexe.

14.2 Associated Sira Reports and Certificate History

| Issue | Date | Report no. | Comment |
|-------|------------------|------------|---------------------------------------|
| 0 | 15 November 2010 | R22395A/00 | The release of the prime certificate. |
| 1 | 8 February 2011 | R24273A/00 | The introduction of Variation 1. |
| 2 | 20 June 2011 | R25304A/00 | The introduction of Variation 2. |
| 3 | 3 November 2011 | R25415A/00 | The introduction of Variation 3 |

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

15.1 In accordance with clause 5.1 of EN 60079-1, the critical dimensions of the flamepaths are:

| Flamepath | Maximum Gap (mm) | Minimum L (mm) |
|-------------------------|------------------|----------------|
| Main body/cover | 0.04 | 11.0 |
| Main body/ battery pack | 0.04 | 10.0 |
| Front lens/main body | 0.10 | 13.8 |
| Top lens/main body | 0.10 | 13.8 |

15.2 This equipment shall only be used where there is a low risk of mechanical impact. The equipment is manufactured in aluminium alloy, in Group I applications this equipment must not be utilised where there is a risk of thermite reaction frictional ignition.

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 the reports listed in Section 14.2.

17 CONDITIONS OF CERTIFICATION

- 17.1 The use of this certificate is subject to the Regulations Applicable to Holders of Sira Certificates.
- 17.2 Holders of EC type-examination certificates are required to comply with the production control requirements defined in Article 8 of directive 94/9/EC.

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Certificate Annexe

| Certificate Number: | Sira 10ATEX1283X |
|---------------------|-------------------------------|
| Equipment: | Laser Distance Meter LM3000XF |
| Applicant: | CorDEX Instruments Limited |



Issue 0

| Drawing No. | Sheets | Rev. | Date (Sira Stamp) | Title |
|--------------|--------|------|-------------------|---|
| CDX3000-002C | 1 of 1 | А | 21 Oct 10 | Lens Retaining Plate-Front |
| CDX3000-003C | 1 of 1 | Α | 21 Oct 10 | Case |
| CDX3000-004C | 1 of 1 | Α | 21 Oct 10 | Lens Retaining Plate-Top |
| CDX3000-006C | 1 of 1 | А | 21 Oct 10 | Front lens glass |
| CDX3000-007C | 1 of 1 | А | 21 Oct 10 | Battery Pack G.A. |
| CDX3000-010C | 1 of 1 | А | 21 Oct 10 | case |
| CDX3000-011C | 1 of 1 | Α | 21 Oct 10 | LCD lens glass |
| CDX3000-013C | 1 of 1 | Α | 15 Nov 10 | Battery Protection Circuit |
| CDX3000-014C | 1 of 1 | Α | 15 Nov 10 | Parts List – Battery Protection Circuit |
| CDX3000-019C | 1 of 1 | Α | 21 Oct 10 | Flamepath detail |
| CDX3000-020C | 1 of 1 | А | 21 Oct 10 | Rating Plates |
| CDX3000-021C | 1 of 1 | Α | 21 Oct 10 | Outer case |
| CDX3000-022C | 1 of 1 | Α | 21 Oct 10 | Outer case |

Issue 1

| Drawing No. | Sheets | Rev. | Date (Sira Stamp) | Title |
|--------------|--------|------|-------------------|---|
| CDX3000-007C | 1 of 1 | В | 08 Feb 11 | Battery Pack G.A. |
| CDX3000-014C | 1 of 1 | В | 08 Feb 11 | Parts List – Battery Protection Circuit |
| CDX3000-019C | 1 of 1 | В | 08 Feb 11 | Flamepath Detail |
| CDX3000-020C | 1 of 1 | В | 08 Feb 11 | Rating Plates |

Issue 2

| Drawing No. | Sheets | Rev. | Date (Sira stamp) | Title |
|---------------|--------|------|-------------------|-----------------------------|
| CDX 3000-020C | 1 of 1 | С | 20 Jun 11 | Rating Plate |
| CDX-3000-021C | 1 of 1 | В | 20 Jun 11 | Outer Case General Assembly |

Issue 3

| Drawing No. | Sheets | Rev. | Date (Sira stamp) | Title |
|--------------|--------|------|-------------------|-------|
| CDX3000-003C | 1 of 1 | В | 19 Sep 11 | Case |
| CDX3000-010C | 1 of 1 | В | 19 Sep 11 | Case |

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