1 **EU-TYPE EXAMINATION CERTIFICATE**

2 Equipment intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU

3 Certificate Number: **Sira 15ATEX2345X** Issue: **0**

4 Equipment: **X24-Hx-yy Telemetry Handheld Display**

5 Applicant: **Mantracourt Electronics Ltd**

6 Address: The Drive
Farringdon
Exeter
Devon EX5 2JB
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 Articles 17 and 21 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, 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 60079-0:2012/A11:2013 EN 60079-11:2012

The above list of documents may detail standards that do not appear on the UKAS Scope of Accreditation, but have been added through Sira's flexible scope of accreditation, which is available on request.

10 If the sign 'X' is placed after the certificate number, it indicates that the equipment is subject to Specific Conditions of Use identified in the schedule to this certificate.

11 This EU-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:

I M2
Ex ib I

II 2G
Ex ib IIC T4 Gb
Ta = -20°C to +50°C

Project Number 70028152

N Jones
Certification Manager

Sira Certification Service
Unit 6, Hawarden Industrial Park,
Hawarden, CH5 3US, United Kingdom

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Fax: +44 (0) 1244 539 301
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SCHEDULE

EU-TYPE EXAMINATION CERTIFICATE **Sira 15ATEX2345X**
Issue 0

13 **DESCRIPTION OF EQUIPMENT**

The X24-Hx-yy is battery powered, handheld equipment for radio data capture and display. It comprises an enclosure accommodating two Ex certified AA cells (Baseefa 14ATEX0107U), an antenna printed circuit board, a printed circuit board with a liquid crystal data display and radio module. The printed circuit board is connected by ribbon cable to the front panel of the enclosure which contains six membrane switches.

The character x denotes functionality. The characters yy denotes front panel graphic variations

Data transmission and reception is by radio. Entity parameters are not required because there are no external connections.

14 **DESCRIPTIVE DOCUMENTS**

14.1 **Drawings**

Refer to Certificate Annexe.

14.2 **Associated Sira Reports and Certificate History**

Issue	Date	Report number	Comment
0	08 August 2016	R70028152A	The release of the prime certificate.

15 **SPECIFIC CONDITIONS OF USE** (denoted by X after the certificate number)

15.1 The permitted cell type is Energizer Lithium L91, size AA (Baseefa 14ATEX0107U).

15.2 No precautions against electrostatic discharge are necessary for portable equipment that has an enclosure made of plastic, metal or a combination of the two, except where a significant static-generating mechanism has been identified. Activities such as placing the item in a pocket or on a belt, operating a keypad or cleaning with a damp cloth, do not present a significant electrostatic risk. However, where a static-generating mechanism is identified, such as repeated brushing against clothing, then suitable precautions shall be taken, e.g. the use of anti-static footwear.

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 MANUFACTURE**

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

17.2 Holders of EU-Type Examination Certificates are required to comply with the conformity to type requirements defined in Article 13 of Directive 2014/34/EU.

17.3 The resistance of fuse F1 must be not less than 0.517Ω at -20°C.

17.4 The Model X24-HX-YY incorporates Ex component certified Lithium cells (Baseefa 14ATEX0107U). It is therefore the responsibility of the manufacturer to continually monitor the status of the certification associated with this device. The manufacturer shall inform Sira of any modifications to the device that may impinge upon the explosion safety design of the X24-HX-YY.

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Certificate Annexe

Certificate Number: **Sira 15ATEX2345X**

Equipment: **X24-Hx-yy Telemetry Handheld Display**

Applicant: **Mantracourt Electronics Ltd**

Issue 0

Drawing no.	Sheets	Rev	Date (Sira stamp)	Description
RAD24-ATEX-PCB	1 of 1	1	07 Jun 16	RAD24 2.4GHz Radio module PCB details
RAD24-ATEX-SCH-1	1 of 1	2	07 Jun 16	RAD24 2.4GHz Radio module schematic
X24-Hx-yy-ATEX-GAD	1 of 1	3	14 Jul 16	X24-Hx-yy General assembly
X24-Hx-yy-ATEX-SCH	1 of 1	9	07 Jun 16	X24-Hx-yy Schematic
X24-Hx-yy-ATEX-PCB	1 of 1	4	07 Jun 16	X24-Hx-yy PCB details
X24-Hx-yy-ATEX-POT	1 of 1	3	07 Jun 16	X24-Hx-yy PCB component encapsulation
X24-Hx-yy-ATEX-MEM	1 of 1	1	07 Jun 16	Front panel membrane switches
RAD24-ATEX-POT	1 of 1	2	07 Jun 16	RAD24 Module Potting Details
900-015-ATEX-ENC	1 of 1	3	04 Jul 16	Enclosure details
900-015-ATEX-GAS	1 of 1	1	07 Jun 16	Enclosure gasket
X24-ANTA-ATEX-GEN-2	1 of 1	2	07 Jun 16	Antenna + cable information
X24-Hx-yy-ATEX-BATT	1 of 1	1	07 Jun 16	Battery connection PCBs
X24-Hx-yy-ATEX-LAB	1 of 1	6	15 Jul 16	Certification Label
X24-Hx-yy-ATEX-BUZ	1 of 1	2	05 Jul 16	Buzzer mounting details

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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 SIR 15.0125X issue No.:0

Certificate history:

Status: **Current**

Date of Issue: **2016-08-08** Page 1 of 4

Applicant: **Mantracourt Electronics Ltd**
The Drive
Farringdon
Exeter
Devon EX5 2JB
United Kingdom

Equipment: **X24-Hx-yy Telemetry Handheld Display**
Optional accessory:

Type of Protection: **Intrinsically Safe**

Marking: Ex ib I
Ex ib IIC T4 Gb
Ta = -20°C to +50°C

Approved for issue on behalf of the IECEx Certification Body: N Jones

Position: Certification Manager

Signature:
(for printed version)

Date: 2016-08-08

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:

SIRA Certification Service
CSA Group
Unit 6, Hawarden Industrial Park
Hawarden, Deeside, CH5 3US
United Kingdom

IECEx Certificate of Conformity

Certificate No.: IECEx SIR 15.0125X

Date of Issue: **2016-08-08** Issue No.: **0**

Manufacturer: **Mantracourt Electronics Ltd**
The Drive
Farringdon
Exeter
Devon EX5 2JB
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:

IEC 60079-0 : 2011 Edition: 6.0	Explosive atmospheres - Part 0: General requirements
IEC 60079-11 : 2011 Edition: 6.0	Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"

*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/SIR/ExTR16.0179/00

Quality Assessment Report:

GB/EMT/QAR16.0002/00

IECEx Certificate of Conformity

Certificate No.: IECEx SIR 15.0125X

Date of Issue: **2016-08-08** Issue No.: **0**

Schedule

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

The X24-Hx-yy is battery powered, handheld equipment for radio data capture and display. It comprises an enclosure accommodating two Ex certified AA cells (Baseefa 14ATEX0107U), an antenna printed circuit board, a printed circuit board with a liquid crystal data display and radio module. The printed circuit board is connected by ribbon cable to the front panel of the enclosure which contains six membrane switches. The character x denotes functionality. The characters yy denotes front panel graphic variations
Data transmission and reception is by radio. Entity parameters are not required because there are no external connections.

CONDITIONS OF CERTIFICATION: YES as shown below:

1. The permitted cell type is Energizer Lithium L91, size AA (Baseefa 14ATEX0107U).
2. No precautions against electrostatic discharge are necessary for portable equipment that has an enclosure made of plastic, metal or a combination of the two, except where a significant static-generating mechanism has been identified. Activities such as placing the item in a pocket or on a belt, operating a keypad or cleaning with a damp cloth, do not present a significant electrostatic risk. However, where a static-generating mechanism is identified, such as repeated brushing against clothing, then suitable precautions shall be taken, e.g. the use of anti-static footwear.

IECEx Certificate of Conformity

Certificate No.: IECEx SIR 15.0125X

Date of Issue: **2016-08-08** Issue No.: **0**

EQUIPMENT(continued):

Conditions of manufacture

The Manufacturer shall comply with the following:

1. The resistance of fuse F1 must be not less than 0.517Ω at -20°C
2. The Model X24-HX-YY incorporates Ex component certified Lithium cells (Baseefa 14ATEX0107U). It is therefore the responsibility of the manufacturer to continually monitor the status of the certification associated with this device. The manufacturer shall inform Sira of any modifications to the device that may impinge upon the explosion safety design of the X24-HX-YY.