

1 **UNITED KINGDOM CONFORMITY ASSESSMENT**

UK TYPE EXAMINATION CERTIFICATE

2 **Product or Protective System Intended for use in Potentially Explosive Atmospheres**
SI 2016:1107 (as amended) – Schedule 3A, Part 1

3 Type Examination Certificate No.: **EMA22UKEX0049X**

4 Product: **Hand-held electromagnetic receiver, model EMRx Ex**

5 Manufacturer: **Online Electronics Limited**

6 Address: **Online House, Blackburn Business Park, Woodburn Road,
Blackburn, Aberdeen, AB21 0PS, United Kingdom**

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

8 Element Materials Technology, Approved Body number 0891, in accordance with Regulation 42 of the Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres Regulations 2016, SI 2016:1107 (as amended), certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Schedule 1 of the Regulations.

The examination and test results are recorded in the confidential report **TRA-051807-33-00A**

9 Compliance with the Essential Health and Safety Requirements has been assured by compliance with:
EN IEC 60079-0:2018 EN IEC 60079-11:2012

Except in respect of those requirements listed at section 18 of the schedule.

10 If the sign “X” is placed after the certificate number, it indicates that the product is subject to specific conditions of use specified in the schedule to this certificate.

11 This TYPE EXAMINATION CERTIFICATE relates only to the design and construction of the specified product. Further requirements of the Regulations apply to the manufacturing process and supply of this product. These are not covered by this certificate.

12 The marking of this product shall include the following:

 **II 1 G Ex ia IIC T4 Ga** T_{amb} see description

This certificate and its schedules may only be reproduced in its entirety and without change. This certificate is issued in accordance with the Element Materials Technology Ex Certification Scheme.

S.P. Winsor

S P Winsor, Certification Manager

Issue date: 2022-11-02

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13 SCHEDULE TO UK TYPE EXAMINATION CERTIFICATE

14 CERTIFICATE NUMBER EMA22UKEX0049X

15 Description of Product

The equipment is a hand-held, battery powered, electromagnetic (EM) receiver intended for locating lost or stalled pipeline inspection gauges (PIG's) fitted with EM transmitters. It is intended for indoor and outdoor use in all weather conditions.

An EMRx Ex contains a single push-button for switching the unit on and off, as well as to allow gain adjustment. Three colour coded LED bargraphs each consisting of 20x separate LEDs display the signal strength of the detected transmitter, and each can be individually configured via Bluetooth to display signals over a range of frequencies between 10 Hz and 30 Hz. Additional LEDs display the remaining battery power and the activity of the Bluetooth connection. The EMRx Ex has no signal transmit functionality and is only used to receive signals from a separate transmitting device.

A fully non-metallic enclosure consists of a cylindrical polycarbonate housing capped off at both ends and fitted with rubber bumpers to protect against drops or impacts, as well as preventing the unit from rolling. A plastic grooved chassis houses the main PCB which is fully encapsulated in place other than for a glass window in direct contact with the surface of the LEDs. A shoulder strap is permitted to be used with the equipment as an accessory.

Six primary 1.5 V AA cells are pushed in series into a cavity running along the cylindrical length of the equipment to provide power. The end caps each contain a groove for an O-ring seal for the purposes of ingress protection and house a PCB containing a limited amount of wiring and tracks to connect to the power switch and main encapsulated circuitry. Three different cell types are permitted to be used and the type determines the permitted ambient temperature range of the equipment as shown in the table below:

Cell type fitted	Duracell MN1500	Energizer E91	Energizer L91
Permitted ambient temperature range	-20 °C to +54 °C	-18 °C to +55 °C	-40 °C to +60 °C

16 Test report No. (associated with this certificate issue): TRA-051807-33-00A

17 Specific Conditions of Use

1. WARNING – Do not open when an explosive atmosphere may be present.
2. WARNING – Use only one of the cell types from the table below. Do not install a mixture of cell types in the equipment.
3. WARNING – Allowable ambient temperature is dependent on the cell type used. See 'General Product Information' for details.
4. WARNING – Observe correct battery polarity as indicated on the device.



Attention is drawn to the operating and installation instructions which may contain useful information in relation to conditions of use.

18 Essential Health and Safety Requirements (Regulations Schedule 1)

In addition to the Essential Health and Safety Requirements covered by the standards listed at item 9, all other requirements are demonstrated in the relevant test reports.

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19 Drawings and Documents

The list of controlled technical documentation is given in Appendix A to this schedule.

20 Routine Tests

None.

21 Specific Conditions for Manufacture

None.

22 Photographs



23 Details of Markings



24 Certificate History

Original certificate 2022-11-02 First issue.

This certificate is a consolidated certificate and reflects the latest status of the certification, including all variations and amendments.

25 Notes to UKCA marking

In respect of UKCA Marking, Element Materials Technology accepts no responsibility for the compliance of the product against all applicable Regulations in all applications.

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26 Notes to this certificate

Element Materials Technology certification reference: TRA-051807-01 i2 (GU-ONLQ-0023).

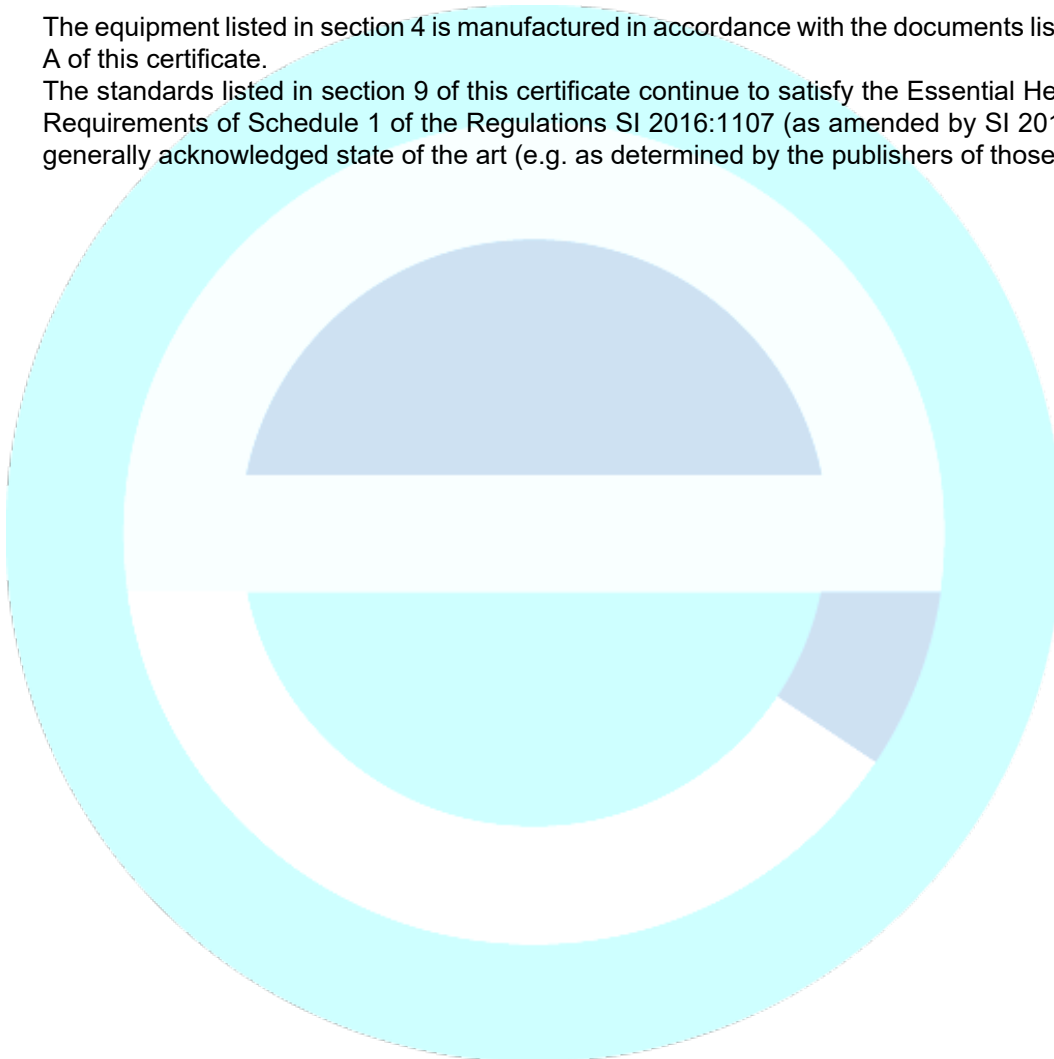
Throughout this certificate, the date format yyyy-mm-dd (year-month-day) is used.

Approved Body 0891 is the designation for Element Materials Technology Warwick Ltd.

27 Conditions for the validity of this certificate

This certificate remains valid for so long as:

- (i) The equipment listed in section 4 is manufactured in accordance with the documents listed in Appendix A of this certificate.
- (ii) The standards listed in section 9 of this certificate continue to satisfy the Essential Health and Safety Requirements of Schedule 1 of the Regulations SI 2016:1107 (as amended by SI 2019:696) and the generally acknowledged state of the art (e.g. as determined by the publishers of those standards).



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APPENDIX A - TECHNICAL DOCUMENTS

Title:	Drawing No.:	Rev. Level:	Date:
EMRxEEx Safety Critical Technical File (17 sheets)	EMRxEEx_X001	C03	2022-09-16

