

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.: **EMA21UKEX0022X (incorporating variations V1)**

4 Product: **Alarm Sounder and Beacon Range
IS-SB-02-XXXX, IS-B-02-XX, IS-S-02-XX**

5 Manufacturer: **Moflash Signalling Limited**

6 Address: **11 Upper Conybere Street, Highgate, Birmingham, B12 0EB,
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 reports

**TRA-026803-33-00A, TRA-036546-33-00A, TRA-043502-33-00A,
TRA-026799-33-00A, TRA-036546-33-02A, TRA-043502-33-02A,
TRA-026802-33-00A, TRA-036546-33-01A, TRA-043502-33-01A,
TRA-054461-33-00A.**

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

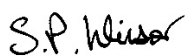
 **I M1 Ex ia I Ma** **-40 °C ≤ Ta ≤ +55 °C**

 **II 1 G D Ex ia IIC T* Ga** **-40 °C ≤ Ta ≤ +55 °C**

Ex ia IIIC T*°C Da

T* See section 15

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, Certification Manager

Issue date: 2023-02-13

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13 SCHEDULE TO UK TYPE EXAMINATION CERTIFICATE

14 CERTIFICATE NUMBER EMA21UKEX0022X (incorporating variations V1)

15 Description of Product

The Moflash IS-SB-02-XXXX, IS-B-02-XX and IS-S-02-XX sounder and beacon are a range of intrinsically safe 'ia' units designed to give visual and / or audible warning signals when activated. The devices either operate as a beacon (IS-B), sounder (IS-S) or combined sounder beacon (IS-SB). The beacon and sounder beacon models contain divergent LEDs to provide a visual warning, the sounder and sounder beacon models contain a transducer to provide an audio warning.

All models are designed for use in hazardous gas environments (Zone 0), dust environments (Zone 20) and mining environments (Group 1 equipment).

Power is supplied by IECEx / ATEX approved barriers only. All enclosures are completely non-metallic and have an IP 66 rating. The enclosure can be of various colours such as red, amber, white or clear. The units are fixed installations.

The optical radiation output of the apparatus with respect to explosion protection is covered in this certificate based on exception 1 to the scope of IEC 60079-28:2015.





Ex Marking	
<u>IS-SB-02-XXXX, IS-B-02-XX</u>	<u>IS-S-02-XX</u>
 I M1  II 1 G D Ex ia I Ma Ex ia IIC T5 Ga Ex ia IIIC T100 °C Da -40 °C ≤ Ta ≤ +55 °C	 I M1  II 1 G D Ex ia I Ma Ex ia IIC T6 Ga Ex ia IIIC T85 °C Da -40 °C ≤ Ta ≤ +55 °C

Table of entity parameters	
Parameter	Barrier supply
Ui	28 V
Ii	93 mA
Pi	660 mW
Li	0
Ci	0

16 Test report No. (associated with this certificate issue): none

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17 Specific Conditions of Use

1. Clean equipment regularly to prevent dust build-up with a damp or anti-static cloth only.
2. Equipment only suitable for fixed installation.
3. It must be ensured that the equipment is installed in accordance with IEC 60079-14 and IEC 60079-25 and that the capacitance and inductance limits are not exceeded by distributed capacitance (C_c) or distributed inductance (L_c) due to cable length.



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)

The test reports were considered to satisfy the requirements of Schedule 1 with the exception of Essential Health and Safety Requirements 5 and 6, which were separately satisfied by the content of the label drawings and the instructions.

Element Materials Technology has conducted a gap analysis between the standards applied within the reports listed under section 8 and the latest versions of the corresponding harmonised standards (as listed in section 9). This analysis has confirmed continued compliance with the Essential Health and Safety Requirements. The analysis is detailed in report: TRA-054461-33-00A.

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



Sounder Beacon or Beacon



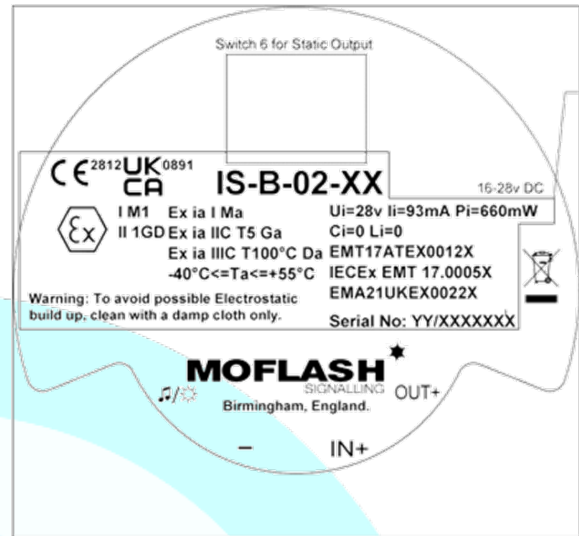
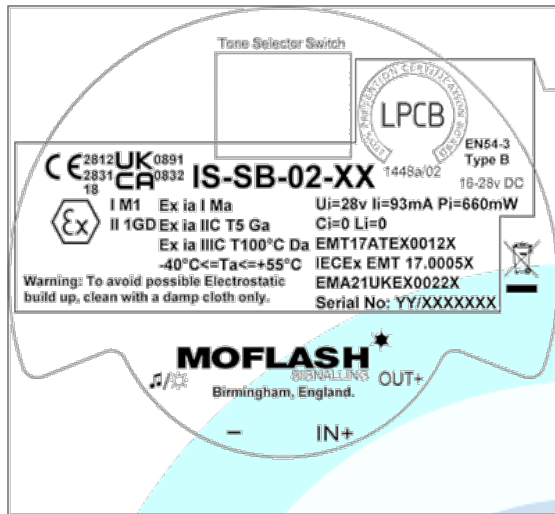
Sounder

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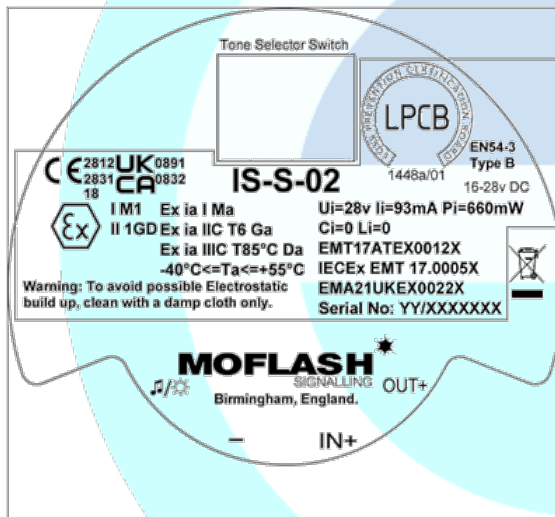
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23 Details of Markings

IS-SB-02-XXXX



IS-SB-02-XX



IS-B-02-XX

IS-S-02-XX

24 Certificate History

Original certificate	2021-12-20	First issue.
Variation V1	2023-02-13	Administrative variation only

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-060191-00 (GU-MOFQ-0004).

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.

TA1 TRA-060191-00

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:
Drawings common to all models:			
Sounder and Sounder Beacon General Assembly (2 sheets – Page 1)	IS-GA001	6	2018-12-17
Circuit Board Potting	XS0200-xxP	3	2017-02-27
Conformal Coating Application	XS0200-xxPC	4	2018-12-05
Critical Spacing	E00607	8	2018-12-05
Intrinsically Safe Potting Jig	M00131	A	2017-01-12
IS O Ring	M00133	1	2017-03-06
Intrinsically Safe Circuit Sounder Beacon	MOF152	9	2018-11-29
Intrinsically Safe Project – BOM	MOF152BOM	9	2018-12-17
92 x 1.8 O-Ring NBR70	18-185852	01	2013-04-16
Wiper Contact	18-185906	01	2013-02-06
Sonos Hole Bung	18-185907	01	2012-11-15
Sonos PCB Holder with Cutout (3 sheets)	18-185959	03	2015-10-19
Sonos Red Deep Base MkII 4 Pin	HSG6890	01	2015-10-23
Drawings specific to IS-SB-02-XXXX and IS-S-02-XX:			
Transducer to Cavity Gasket	M00130	2	2017-02-27
IS Inner Cavity to Cover Gasket	M00132	1	2017-03-06
Intrinsically Safe Transducer Holder	M00134	A	2018-02-21
Transducer	M00427	4	2017-02-27
Sonos Outer Cover (2 sheets)	18-185802	03	2013-01-23
Sonos Inner Cavity	18-185983	02B	2013-01-23
Drawings specific to IS-SB-02-XXXX only:			
Sounder Beacon Product Label	S00153	11	2021-09-09
Moflash Intrinsically Safe Sounder-Beacon Range Installation Booklet (12 pages)	S00605	8	2021-10-19
Drawings specific to IS-S-02-XX only:			
Sounder Product Label	S00151	12	2021-09-09
Moflash Intrinsically Safe Sounder Range Installation Booklet (12 pages)	S00608	8	2021-10-19