



[1]

UNITED KINGDOM CONFORMITY ASSESSMENT
UK-TYPE EXAMINATION CERTIFICATE

[2]

**Product or Protective System Intended for use in Potentially Explosive Atmospheres
UKSI 2016:1107 (as amended by UKSI 2019:696) – Schedule 3A, Part 1**

[3] UK-Type Examination Certificate No.: **UL22UKEX2636X Rev. 0**

[4] Product: **Electronic beacons, Types BExBG05D(-P)(-SIL), BExBG10D(-P)(-SIL), BExBG15D(-P)(-SIL), BExBG21D(-P), BExTBG05D(-P), BExBGL1D, BExBGL2D, BExBG05E(-P)(-SIL), BExBG10E(-P)(-SIL) and BExBG15E(-P)(-SIL)**

[5] Manufacturer: **European Safety Systems Ltd.**

[6] Address: **Impress House, Mansell Road, London, W3 7QH, United Kingdom**

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

[8] UL International (UK) Ltd, Approved Body number 0843, in accordance with Regulation 44 of the Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres Regulations 2016, UKSI 2016:1107 (as amended by UKSI 2019:696), 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 **NL/KEM/ExTR10.0005/05**.

[9] Compliance with the Essential Health and Safety Requirements has been assured by compliance with:




EN IEC 60079-0:2018 EN 60079-1:2014
EN 60079-7:2015 + A1:2018 EN 60079-31:2014

Except in respect of those requirements listed at section 19 of the schedule to this certificate.

[10] If the sign “X” is placed after the certificate number, it indicates that the product is subject to the Specific Conditions of Use specified in the Schedule to this certificate.

[11] This UK-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 the product shall include the following:

 **II 2 G Ex db IIC T6...T3 Gb**
 **II 2 G Ex db eb IIC T5...T4 Gb**
 **II 2 D Ex tb IIIC T60°C...T200°C Db**

Certification Officer
Andrew Moffat

This is to certify that the sample(s) of the Product described herein (“Certified Product”) has been investigated and found in compliance with the Standard(s) indicated on this Certificate, in accordance with the UKEx Product Certification Program Requirements. This certificate and test results obtained apply only to the product sample(s) submitted by the Manufacturer. UL did not select the sample(s) or determine whether the sample(s) provided were representative of other manufactured product. UL has not established Follow-Up Service or other surveillance of the product. The Manufacturer is solely and fully responsible for conformity of all product to all applicable Standards, specifications, requirements or Regulations. The test results may not be used, in whole or in part, in any other document without UL’s prior written approval.

Date of issue: 2022-08-30

Approved Body UL International (UK) Ltd Unit 1-3 Horizon Kingsland Business Park Wade Road, Basingstoke RG24 8AH, UK
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Schedule

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[15] Description of Product

Electronic Beacons, Types BExBG05D(-P)(-SIL), BExBG10D(-P)(-SIL), BExBG15D(-P)(-SIL), BExBG21D(-P), BExTBG05D(-P), BExBGL1D, BExBGL2D, BExBG05E(-P)(-SIL), BExBG10E(-P)(-SIL) and BExBG15E(-P)(-SIL) are used to provide visual warning signals.

The types with Suffix D consists of an aluminium enclosure in type of protection flameproof enclosures "db".

The types with Suffix E consists of an electronic compartment made of aluminium, in type of protection flameproof enclosures "db" and a terminal compartment made of aluminium, in type of protection increased safety "eb".

Both types with suffix D and suffix E satisfy dust ignition protection by enclosure "tb".

Types BExBGL1D and BExBGL2D with LED are provided with a plastic lens cover without any suffix and other types with xenon are provided with a glass dome or optionally with a plastic lens cover and given the suffix: -P to the type designation, e.g. BExBG21D-P.

Types BExBG05D, BExBG10D, BExBG15D, BExBG05E, BExBG10E and BExBG15E with a supply voltage of 24 Vdc have an optional monitoring module. For these the type designation is extended with -SIL, e.g. BExBG05D-P-SIL.

The optical radiation output of the product with respect to explosion protection, according to Schedule 1 clause 16 of the Regulation 2016 No. 1107 (as amended by UKSI 2019:696) is not covered in this certificate.

Temperature range

The relation between the electronic beacons, the ambient temperature range and the marking for gas and dust applications is given in the tables below.

GAS					
Ambient temperature	-50 °C to +40 °C	-50 °C to +45 °C	-50 °C to +55 °C	-50 °C to +60 °C	-50 °C to +70 °C
BExBG05D(-P)(-SIL)	Ex db IIC T5 Gb	-	-	-	Ex db IIC T4 Gb
BExBG05E(-P)(-SIL)	Ex db eb IIC T5 Gb	-	-	Ex db eb IIC T4 Gb	-
BExBG10D(-P)(-SIL)	-	-	-	-	Ex db IIC T4 Gb
BExBG10E(-P)(-SIL)	-	-	-	Ex db eb IIC T4 Gb	-
BExBG15D(-P)(-SIL)	-	-	-	-	Ex db IIC T4 Gb
BExBG15E(-P)(-SIL)	-	-	-	Ex db eb IIC T4 Gb	-
BExBG21D	-	-	Ex db IIC T4 Gb	-	Ex db IIC T3 Gb
BExTBG05D	Ex db IIC T6 Gb	-	Ex db IIC T5 Gb	-	Ex db IIC T4 Gb
BExBGL1D	Ex db IIC T5 Gb	-	-	-	Ex db IIC T4 Gb
BExBG21D-P	-	-	-	-	Ex db IIC T3 Gb
BExTBG05D-P	-	Ex db IIC T5 Gb	-	-	Ex db IIC T4 Gb
BExBGL2D	-	-	-	Ex db IIC T6 Gb	Ex db IIC T5 Gb

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DUST				
Ambient temperature	-50 °C to + 40 °C	-50 °C to +55 °C	-50 °C to +60 °C	-50 °C to +70 °C
BExBG05D(-P)(-SIL)	Ex tb IIIC T93 °C Db	Ex tb IIIC T108 °C Db	-	Ex tb IIIC T123 °C Db
BExBG05E(-P)(-SIL)	Ex tb IIIC T93 °C Db	Ex tb IIIC T108 °C Db	Ex tb IIIC T113 °C Db	-
BExBG10D(-P)(-SIL)	Ex tb IIIC T99 °C Db	Ex tb IIIC T114 °C Db	-	Ex tb IIIC T129 °C Db
BExBG10E(-P)(-SIL)	Ex tb IIIC T99 °C Db	Ex tb IIIC T114 °C Db	Ex tb IIIC T119 °C Db	-
BExBG15D(-P)(-SIL)	Ex tb IIIC T99 °C Db	Ex tb IIIC T114 °C Db	-	Ex tb IIIC T129 °C Db
BExBG15E(-P)(-SIL)	Ex tb IIIC T99 °C Db	Ex tb IIIC T114 °C Db	Ex tb IIIC T119 °C Db	-
BExBG21D	-	Ex tb IIIC T135 °C Db	-	Ex tb IIIC T200 °C Db
BExTBG05D	Ex tb IIIC T85 °C Db	Ex tb IIIC T100 °C Db	-	Ex tb IIIC T115 °C Db
BExBGL1D	Ex tb IIIC T95 °C Db	Ex tb IIIC T105 °C Db	-	Ex tb IIIC T120 °C Db
BExBG21D-P	Ex tb IIIC T150 °C Db	Ex tb IIIC T165 °C Db	-	Ex tb IIIC T180 °C Db
BExTBG05D-P	Ex tb IIIC T90 °C Db	Ex tb IIIC T105 °C Db	-	Ex tb IIIC T120 °C Db
BExBGL2D	Ex tb IIIC T60 °C Db	Ex tb IIIC T75 °C Db	-	Ex tb IIIC T90 °C Db

Electrical data

Beacon type	Supply voltage	Voltage range	Supply current	...SIL types
BExBG05D(-SIL) BExBG05D-P(-SIL) BExBG05E(-SIL) BExBG05E-P(-SIL)	12 / 24 / 48 Vdc or 115 / 230 Vac	-	750 / 300 / 180 mA or 140 / 55 mA	24 Vdc – 325 mA
BExBG10D(-SIL) BExBG10D-P(-SIL) BExBG10E(-SIL) BExBG10E-P(-SIL)	12 / 24 / 48 Vdc or 115 / 230 Vac	-	1.45 A / 660 mA / 340 mA or 250 / 110 mA	24 Vdc – 685 mA
BExBG15D(-SIL) BExBG15D-P(-SIL) BExBG15E(-SIL) BExBG15E-P(-SIL)	24 / 48 Vdc or 115 / 230 Vac	-	860 / 480 mA or 360 / 170 mA	24 Vdc – 885 mA
BExTBG05D, BExTBG05D-P	115 / 230 Vac	-	140 / 55 mA	N/A
BExBGL1D	10-50 Vdc or 10-35 Vac or 115 / 230 Vac	-	400 mA (24 Vdc) or 812 mA (20 Vac) or 135 / 65 mA	N/A
BExBG21D, BExBG21D-P	24 / 48 Vdc or 115 / 230 Vac	-	1.2 A / 600 mA or 560 / 280 mA	N/A
BExBGL2D	24 Vdc or 115 / 230 Vac	18-54 Vdc or 103.5-126 Vac / 207-253 Vac	240 mA or 85 mA / 48 mA	N/A

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Routine tests

The dielectric strength test according to clause 6.1 of IEC 60079-7 shall be performed. The test shall be conducted according to the following the manufacturer's document no. T1229.

[16]

Test Report No. (associated with this certificate issue)

The test report no. is provided under item no. [8] on page 1 of this UK-Type Examination Certificate.

[17]

Specific conditions of use:

- Flameproof joints are not intended to be repaired.
- The enclosure may generate an ignition-capable level of electrostatic charges under certain extreme conditions. The user should ensure that the equipment is not installed in a location where it may be subjected to external conditions that might cause a build-up of electrostatic charges on non-conducting surfaces.

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Conditions of certification:

Where ATEX certified Ex Components or Ex Equipment are used, it is the responsibility of the manufacturer to ensure that only Ex Components or Ex Equipment having equivalent UKEx certification are used after the permission to accept such ATEX certified Ex Component or Ex Equipment is withdrawn.

[19]

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 reports.

Additional information

The products have in addition passed the tests for Ingress Protection to IP66/67 in accordance with EN60529:1991+A1:2000+A2:2013.

The manufacturer shall inform the approved body concerning all modifications to the technical documentation as described in Annex III to UKSI 2016:1107 (as amended by UKSI 2019:696) – Schedule 3A, Part 1.

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[20] Drawings and Documents

Title:	Drawing No.:	Rev. Level:	Date:
BExCTS110-05D DC SONTEL/BEACON BLOCK DIAGRAM	CD2446-40	B	18-01-12
BExCTS110-05D AC SONTEL/BEACON BLOCK DIAGRAM	CD2446-41	B	18-01-12
BExCTV110-05D DC Vershoven/BEACON BLOCK DIAGRAM	CD2446-50	A	18-01-12
BExCTV110-05D AC Vershoven/BEACON BLOCK DIAGRAM	CD2446-51	A	18-01-12
Parts List - BExBG05D-SIL, BExBG05D-P-SIL	D2448-20-BM-SC	C	07/12/18
Parts List - BExBG10D-SIL, BExBG15D-SIL, BExBG10D-P-SIL, ExBG15D-P-SIL	D2448-34-BM-SC	C	07/12/18
Parts List - BExBG10D, BExBG15D, BExBG10D-P, BExBG15D-P	PL2448-02-SC	C	07/12/18
Parts List - BExBG05D, BExBG05D-P	PL2448-03-SC	C	07/12/18
Parts List - BExTBG05D, BExTBG05D-P	PL2448-08-SC	C	07/12/18
Parts List - BExBGL1D	PL2448-25-SC	C	25/10/18
Parts List - BExBG21D, BExBG21D-P	PL2448-31-SC	C	07/12/18
BEX BEACON GUARD AND LENS FLASH DOME ASSEMBLY	D2448-40	A	05-06-2015
BExBG--D (GLASS DOME) BEACON Ex 'd' UNITS FLAMEPROOF JOINT DETAIL	D2448-01	F	17-07-2020
BExBG15D and BExBG10D Ex 'd' (GLASS DOME) BEACONS INTERNAL ASSEMBLY	D2448-02	B	14-08-09
BExBG05D (GLASS DOME) Ex 'd' BEACON INTERNAL ASSEMBLY	D2448-03	B	14-08-09
BExBG--D and BExBG--E Ex WELLGLASS FLANGED FLASHDOME	D2448-04	A	03-03-00
BExBG--D and BExBG--E (GLASS DOME) BEACON GUARD ASSEMBLY	D2448-05	A	03-03-00
BExTBG05D Ex 'd' FLASHTEL INTERNAL ASSEMBLY	D2448-08	B	14-08-09
BExBGL1D (GLASS DOME) Ex 'd' BEACON INTERNAL ASSEMBLY	D2448-25	B	14-08-09
BExBGL1D BExBG05D BExTBG05D BExBG05E (GLASS DOME) BEACON GUARD AND PRISMATIC FLASH DOME ASSEMBLY	D2448-26	A	26-10-05
BExBG21D Ex 'd' BEACON INTERNAL ASSEMBLY	D2448-31	B	14-08-09
BExBG BEACON GLASS DOME GUARD	D2489	B	04-01-02
BExBG05D and BExBG05E DC BEACONS BLOCK DIAGRAM	CD2420	A	03-03-00
BExBG05 (D & E) 230V and 115V AC BEACONS BLOCK DIAGRAM	CD2421	A	03-03-00
BExBG15 and BExBG10 (D & E) DC BEACONS Ex 'd' and Ex 'de' BLOCK DIAGRAM	CD2422	A	03-03-00
BExBG15 and BExBG10 (D & E) 230V and 115V AC BEACONS BLOCK DIAGRAM	CD2423	A	03-03-00
BExTBGD05D FLASHTEL BLOCK DIAGRAM	CD2425	A	24-07-00
Block Diagram BExBGL1 BEACON 10-50V DC	CD2432	A	26-10-05
Block Diagram BExBGL1 BEACON 10-35V AC	CD2433	A	26-10-05
Block Diagram BExBGL1 BEACON 115V and 230V AC	CD2434	A	26-10-05
Block Diagram DC Beacon SIL Module	D197-15-101-CD-SC	A	01-04-14
BExBGL2D LED Beacon Internal Assembly	D201-00-001-SC	A	03-11-15
Ex d LED Beacon BExBGL2D Parts list	D201-00-001-BM-SC	B	07/12/18
Circuit/Block diagram BEx L2 LED Beacon	D201-00-001-CD-SC	A	27-10-15
GAS/DUST Label (ATEX/IECEX) BExBGL2D Ex 'd' Beacons	D201-99-001-SC	E	01-12-2021
BExBGL2D Instruction Sheet (3 pages)	D201-00-001-IS-SC	C	18/02//2019
Ex 'e' Chamber Casting and Line Bushing	D2445-30	B	19-12-19
Ex 'd' BExBG--E BEACON Ex 'de' FLAMEPROOF JOINT DETAIL	D2449-01	F	17-07-2020
BExBG15E and BExBG10E Ex 'de' (GLASS DOME) BEACON INTERNAL ASSEMBLY	D2449-02	C	24-04-20

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Title:	Drawing No.:	Rev. Level:	Date:
BExBG05E (GLASS DOME) Ex 'de' BEACON INTERNAL ASSEMBLY	D2449-03	C	23-04-20
BExBG--E (GLASS DOME) Ex 'de' BEACON TERMINAL CHAMBER ASSY.	D2449-04	A	03-03-00
BExBG--E BEACON Ex 'e' COVER DETAIL	D2449-05	A	03-03-00
Parts List – BExBG05E-SIL, BExBG05E-P-SIL	D2449-15-BM-SC	D	23/04/2020
Parts List – BExBG10E-SIL, BExBG15E-SIL, BExBG10E-P-SIL, BExBG15E-P-SIL	D2449-34-BM-SC	D	23/04/2020
Parts List – BExBG10E, BExBG15E, BExBG10E-P, BExBG15E-P	PL2449-02-SC	D	23/04//2020
Parts List – BExBG05E, BExBG05E-P	PL2449-03-SC	D	23/04//2020
Test instruction BEx E range- Dielectric withstand test (2 pages)	TI229	2	13-01-2020
Instructions - BExBG21D or BExBG21D-P	IS 2492-SC-UK	A	22/03/2022
Instruction Manual - BExBGL1D	IS 2468-SC-UK	A	22/03/2022
Instruction Manual - BExTBG05D, BExTBG05D-P	IS 2462-SC-UK	A	22/03/2022
Instruction Manual - BExBG15E, BExBG15E-P, BExBG10E or BExBG10E-P	IS 2461-SC-UK	A	22/03/2022
Instruction Manual - BExBG05E, BExBG05E-P	IS 2460-SC-UK	A	22/03/2022
Instruction Manual - BExBG15D, BExBG10D, BExBG15D-P or BExBG10D-P	IS 2459-SC-UK	A	22/03/2022
Instruction Manual - BExBG05D, BExBG05D-P	IS 2458-SC-UK	A	22/03/2022
Instruction Manual - BExBG05D-SIL, BExBG05D-P-SIL, BExBG05E-SIL or BExBG05E-P-SIL	D197-00-101-IS-SC-UK	A	22/03/2022
Instruction Manual - BExBG15D-SIL, BExBG10D-SIL, BExBG15D-P-SIL, BExBG10D-P-SIL, BExBG15E-SIL, BExBG15E-P-SIL, BExBG10E-SIL or BExBG10E-P-SIL	D197-00-111-IS-SC-UK	A	22/03/2022
Instruction Manual - BExBGL2D	D201-00-001-IS-SC-UK	A	14/07/2022
Label Drawing - GAS / DUST LABEL (UKEx) BExBGL2D Ex 'd' BEACONS	D201-99-001-SC-UK	A	14-07-2022
Label Drawing - GAS / DUST LABEL (UKEx) BExBG15D AND BExBG10D Ex 'd' BEACONS	D2448-19-SC-UK	A	14-07-2022
Label Drawing - GAS / DUST LABEL (UKEx) BExBG05D Ex 'd' BEACONS	D2448-20-SC-UK	A	14-07-2022
Label Drawing - GAS / DUST LABEL (UKEx) BExTBG05D Ex 'd' FLASHTEL	D2448-21-SC-UK	A	14-07-2022
Label Drawing - GAS / DUST LABEL (UKEx) BExBGL1D Ex 'd' BEACONS	D2448-27-SC-UK	A	14-07-2022
Label Drawing - GAS / DUST LABEL (UKEx) BExBG21D Ex 'd' BEACONS	D2448-32-SC-UK	A	14-07-2022
Label Drawing - LABEL (UKEx) BExBG05E / BExBG10E / BExBG15E / BExBG05E-SIL / BExBG10E-SIL / BExBG15E-SIL / & ALL -P' VARIANTS	D2449-14-SC-UK	A	14-07-2022