IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification System for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.: **IECEx ULD 16.0017X**

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Certificate history:
Issue 1 (2016-07-28)
Issue 0 (2016-07-01)

Status: **Current**

Issue No: 2

Date of Issue: 2021-05-27

Applicant: **European Safety Systems Limited**
Impress House
Mansell Road
Acton
London W3 7QH
United Kingdom

Equipment: **Signaling Beacons, Loudspeakers, Sounders and Junction Box, Model STEx**********

Optional accessory:

Type of Protection: **Flameproof "db" and Dust Ignition Protection by Enclosure "tb"**

Marking: Ex db IIC T6...T3 Gb

Ex tb III C T85°C...T135°C Db

-50°C to +70°C (or '+' as specified in Ratings table in Annex.)

Approved for issue on behalf of the IECEx Certification Body: **Katy A. Holdredge**

Position: **Senior Staff Engineer**

Signature: (for printed version)

Date: 2021-05-27

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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 www.iecex.com or use of this QR Code.

Certificate issued by:

UL International DEMKO A/S
Borupvang 5A
DK-2750 Ballerup
Denmark

IECEx Certificate of Conformity

Certificate No.: **IECEx ULD 16.0017X**

Date of issue: 2021-05-27 Issue No: 2

Manufacturer: **European Safety Systems Limited**
Impress House
Mansell Road
Acton
London W3 7QH
United Kingdom

Additional manufacturing locations:

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 equipment 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 60079-0:2017 Explosive atmospheres - Part 0: Equipment - General requirements
Edition:7.0

IEC 60079-1:2014-06 Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
Edition:7.0

IEC 60079-31:2013 Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"
Edition:2

This Certificate **does not** indicate compliance with 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 Reports:

DK/ULD/ExTR16.0017/00 DK/ULD/ExTR16.0017/01 DK/ULD/ExTR16.0017/02

Quality Assessment Report:

GB/SIR/QAR06.0020/09

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

The STExS1, STExS2, STExL1 and STExL2 series products are a range of Sounders and Loudspeakers housed in the same Flameproof / Dust protected, stainless steel enclosure; that are intended to be used as audible warning / signalling devices. The enclosure is accessible via a threaded cover, the opposite end of the enclosure is fitted with pressed wire breathing element incorporating a cemented joint with enclosure. The STExS1 Sounders and STExL1 Loudspeaker models are fitted with a plastic horn that has a short flare whereas the STExS2 Sounders and STExL2 Loudspeaker models are fitted with plastic horn having a longer flare. Alternatively, all Sounders and Loudspeakers maybe fitted with a radial horn. The horns are secured to the end of the enclosure with fasteners.

The STExB2 series products are a range of Electronic Strobe, LED or Rotating Beacons housed in the same Flameproof / Dust protected, stainless steel enclosure; intended to be used as visual warning / signalling devices. The enclosure is accessible via a threaded cover which incorporates a glass dome, the glass dome is cemented into the cover. The glass dome is protected with a stainless steel wire guard which provides for a reduced risk of impact, a plastic lens cover can optionally be fitted over the glass dome without affecting the concept of protection.

The STExC1 series products are a range of combined Sounder with Strobe Beacon housed in the same Flameproof / Dust protected, stainless steel enclosure; intended to be used as audible and visual warning / signalling devices. The enclosure is accessible via a threaded cover which incorporates a glass dome, the glass dome is cemented into the cover. The glass dome is fitted with a stainless steel wire guard which provides for a reduced risk of impact, a plastic lens cover can optionally be fitted over the glass dome without affecting the concept of protection. The opposite end of the enclosure is fitted with pressed wire breathing element incorporating a cemented joint with enclosure, a two piece plastic cover (small horn or radial horn) is fitted over breathing element and secured to the enclosure with fasteners.

Model STExJ2 is a Junction Box which is based on the STExB2 Series Beacon enclosure, the junction box is closed with a single piece stainless steel threaded cover.

All four types of enclosure utilise threaded covers, the specified ingress protection rating is not reliant on the use of an elastomeric O-ring, although one may be fitted.

Please see Annex for additional information.

SPECIFIC CONDITIONS OF USE: YES as shown below:

- Parts of the enclosure are non-conducting and 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 (such as high-pressure steam) which might cause a build-up of electrostatic charges on non-conducting surfaces. Additionally, cleaning of the equipment should be done only with a damp cloth.
- All entries must be fitted with a suitable seal at the interface with enclosure.
- Repair of the flamepath's is not permitted.

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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)
Issue 1: Added Large LED Beacon model numbers STExB2LD2DC024, STExB2LD2AC115 and STExB2LD2AC230 to the certified range and updated minor typographical errors.

Issue 2: Updates to large beacon (B2) range electronics; introduction of 5 Joule models to the large beacon (B2) housing; marking plates, installation instructions and drawings have been updated; removal of a specific condition of use.

Annex:

Annex to IECEx ULD 16.0017X Issue 2_1.pdf

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TYPE DESIGNATION

Loudspeakers and Sounders

STExL1R008, STExL1R016, STExL1V070, STExL1V100, STExL2R008, STExL2R016, STExL2V070, STExL2V100.

STExS1DC024, STExS1AC230, STExS2DC024, STExS2AC230.

Sounder Beacons

STExC1X05DC012, STExC1X05DC024, STExC1X05DC048, STExC1X05AC230.

Large Xenon Strobe Beacons and Rotating Halogen Beacons

STExB2X05DC012, STExB2X05DC024, STExB2X05DC024-SIL, STExB2X05DC048, STExB2X05AC115, STExB2X05AC230, STExB2X10DC024, STExB2X10DC024-SIL, STExB2X10DC048, STExB2X10AC115, STExB2X10AC230, STExB2X15DC024, STExB2X15DC024-SIL, STExB2X15DC048, STExB2X15AC115, STExB2X15AC230, STExB2X21DC024, STExB2X21DC048, STExB2X21AC115, STExB21AC230

STExB2RT1DC012, STExB2RT1DC024, STExB2RT1AC115, STExB2RT1AC230

Large LED Beacons
STExB2LD2DC024, STExB2LD2AC115, STExB2LD2AC230

Large Junction Box

STExJ2

PARAMETERS RELATING TO THE SAFETY

Ratings:

Type Designation	Description	Rated Voltage Range	Rated Current (mA)	IP Rating	T Class @ Ambient temperature °C (-50°C to +70°C Max.)							
					(Gas)							(Dust)
					40	45	50	55	60	65	70	70
STExS1DC024	15W Sounder (Small Horn)	10-30Vdc	217	IP66	-	-	-	-	-	T6	T5	T85
STExS1AC230	15W Sounder (Small Horn)	110-240Vac, 50/60Hz	77/53	IP66	-	-	-	-	-	T6	T5	T85
STExS2DC024	25W Sounder (Large Horn)	10-30Vdc	924	IP66	-	T6	-	-	T5	-	T4	T105
STExS2AC230	25W Sounder (Large Horn)	110-240Vac, 50/60Hz	268/159	IP66	-	T6	-	-	T5	-	T4	T105
STExL1R008	15W Loudspeaker (Small Horn)	10.95V	-	IP66	-	-	-	T6	-	-	T5	T95
STExL1R016	15W Loudspeaker (Small Horn)	15.49V	-	IP66	-	-	-	T6	-	-	T5	T95
STExL1V070	15W Loudspeaker (Small Horn)	70V	-	IP66	-	-	-	T6	-	-	T5	T95
STExL1V100	15W Loudspeaker (Small Horn)	100V	-	IP66	-	-	-	T6	-	-	T5	T95
STExL2R008	25W Loudspeaker (Large Horn)	14.14V	-	IP66	-	T6	-	-	T5	-	T4	T105
STExL2R016	25W Loudspeaker (Large Horn)	20.00V	-	IP66	-	T6	-	-	T5	-	T4	T105

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Type Designation	Description	Rated Voltage Range	Rated Current (mA)	IP Rating	T Class @ Ambient temperature °C (-50°C to +70°C Max.)							
					(Gas)							(Dust)
					40	45	50	55	60	65	70	70
STExL2V070	25W Loudspeaker (Large Horn)	70V	-	IP66	-	T6	-	-	T5	-	T4	T105
STExL2V100	25W Loudspeaker (Large Horn)	100V	-	IP66	-	T6	-	-	T5	-	T4	T105
STExC1X05DC012	Combined Sounder/ Xenon Strobe	10-14Vdc	944	IP66	T6	-	-	T5	-	-	T4	T110
STExC1X05DC024	Combined Sounder/ Xenon Strobe	20-28Vdc	540	IP66	T6	-	-	T5	-	-	T4	T110
STExC1X05DC048	Combined Sounder/ Xenon Strobe	42-54Vdc	332	IP66	T6	-	-	T5	-	-	T4	T110
STExC1X05AC230	Combined Sounder/ Xenon Strobe	220-240Vac 50/60Hz	132	IP66	T6	-	-	T5	-	-	T4	T110
STExB2X05DC012	5J Xenon Strobe 12Vdc	10-14Vdc	585	IP6X	-	-	-	T6	-	-	T5	T92
STExB2X05DC024	5J Xenon Strobe 24Vdc	20-28Vdc	295	IP6X	-	-	-	T6	-	-	T5	T92
STExB2X05DC024 -SIL	5J Xenon Strobe 24Vdc	20-28Vdc	295	IP6X	-	-	-	T6	-	-	T5	T92
STExB2X05DC048	5J Xenon Strobe 48Vdc	42-54Vdc	145	IP6X	-	-	-	T6	-	-	T5	T92
STExB2X05AC115	5J Xenon Strobe 115Vac	110-120Vac 50/60Hz	140	IP6X	T6	-	-	T5	-	-	T4	T110
STExB2X05AC230	5J Xenon Strobe 230Vac	220-240Vac 50/60Hz	70	IP6X	T6	-	-	T5	-	-	T4	T110
STExB2X10DC024	10J Xenon Strobe 24Vdc	20-28Vdc	605	IP6X	-	T5	-	-	-	-	T4	T118
STExB2X10DC024 -SIL	10J Xenon Strobe 24Vdc	20-28Vdc	605	IP6X	-	T5	-	-	-	-	T4	T118
STExB2X10DC048	10J Xenon Strobe 48Vdc	42-54Vdc	230	IP6X	-	T5	-	-	-	-	T4	T118
STExB2X10AC115	10J Xenon Strobe 115Vac	110-120Vac 50/60Hz	220	IP6X	-		-	-	-	-	T4	T128
STExB2X10AC230	10J Xenon Strobe 230Vac	220-240Vac 50/60Hz	130	IP6X	-		-	-	-	-	T4	T128
STExB2X15DC024	15J Xenon Strobe 24Vdc	20-28Vdc	835	IP6X	-		-	-	-	-	T4	T127
STExB2X15DC024 -SIL	15J Xenon Strobe 24Vdc	20-28Vdc	835	IP6X	-	-	-	-	-	-	T4	T127
STExB2X15DC048	15J Xenon Strobe 48Vdc	42-54Vdc	330	IP6X	-		-	-	-	-	T4	T127
STExB2X15AC115	15J Xenon Strobe 115Vac	110-120Vac 50/60Hz	310	IP6X	-	-	-	-	-	T4	T3	T131
STExB2X15AC230	15J Xenon Strobe 230Vac	220-240Vac 50/60Hz	170	IP6X	-	-	-	-	-	T4	T3	T131
STExB2X21DC024	21J Xenon Strobe 24Vdc	20-28Vdc	1130	IP6X	-	-	-	-	-	T4	T3	T131
STExB2X21DC048	21J Xenon Strobe 48Vdc	42-54Vdc	530	IP6X	-	-	-	-	-	T4	T3	T131
STExB2X21AC115	21J Xenon Strobe 115Vac	110-120Vac 50/60Hz	500	IP6X	-	-	-	T4	-	T3	-	T137 (65ºC Amb)
STExB2X21AC230	21J Xenon Strobe 230Vac	220-240Vac 50Hz	195	IP6X	-	-	-	T4	-	T3	-	T137 (65ºC Amb)
STExB2RT1DC012	12Vdc Rotating Beacon	12Vdc	1730	IP6X	T5	-	-	-	-	-	T4	T125
STExB2RT1DC024	24Vdc Rotating Beacon	24Vdc	970	IP6X	T5	-	-	-	-	-	T4	T125
STExB2RT1AC115	115Vac Rotating Beacon	115-120Vac 50/60Hz	216	IP6X	T5	-	-	-	-	-	T4	T125
STExB2RT1AC230	230Vac Rotating Beacon	230Vac 50/60Hz	111	IP6X	T5	-	-	-	-	-	T4	T125
STExB2LD2DC024	LED Beacon, 24Vdc	18-54Vdc	240	IP6X	-	-	-	-	-	T6	T5	T85
STExB2LD2AC115	LED Beacon, 115ac, 50/60Hz	103.5-126.5Vac 50/60Hz	95	IP6X	-	-	-	-	-	T6	T5	T85
STExB2LD2AC230	LED Beacon, 230ac, 50/60Hz	207-253Vac 50/60Hz	48	IP6X	-	-	-	-	-	T6	T5	T85

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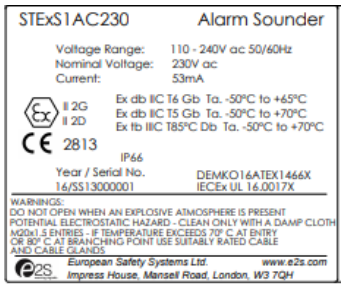
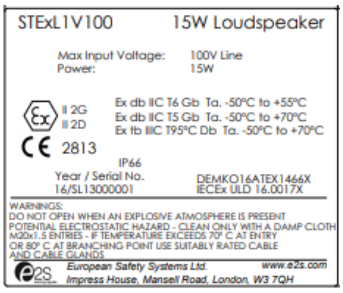
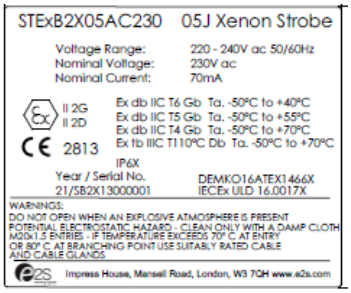
Type Designation	Description	Rated Voltage Range	Rated Current (mA)	IP Rating	T Class @ Ambient temperature °C (-50°C to +70°C Max.)							
					(Gas)							(Dust)
					40	45	50	55	60	65	70	70
STExJ2	STEx Junction Box	260Vac, 60V dc	5W	IP6X	-	-	-	-	-	T6	T5	T85

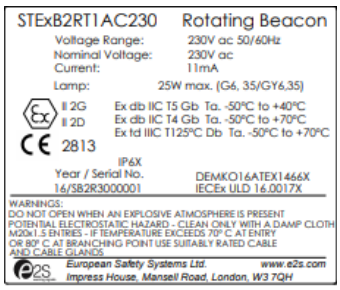
MARKING

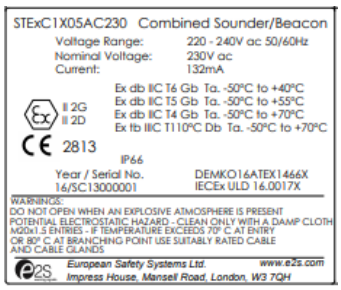
Marking has to be readable and indelible; it has to include the following indications:

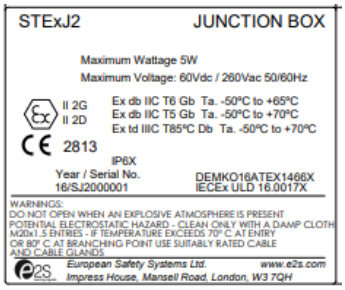


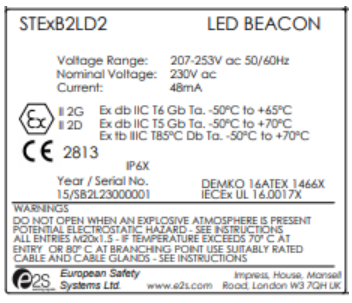












Note: See labels drawings under “Manufacturer’s Documents” for model range variants.

ROUTINE EXAMINATIONS AND TESTS

Each STExC1 enclosure shall be subjected to a routine overpressure test of at least 21.21 bar / 308 psi for at least 10 s as required by clause 16.1 of IEC 60079-1 7th Edition. There shall be no sign of damage, deformation or rupture that will invalidate the concept of protection.

Each STExB2 enclosure shall be subjected to a routine overpressure test of at least 18.32 bar / 266 psi for at least 10 s as required by clause 16.1 of IEC 60079-1 7th Edition. There shall be no sign of damage, deformation or rupture that will invalidate the concept of protection.

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Each STExB2RT1 enclosure shall be subjected to a routine overpressure test of at least 19.65 bar / 285 psi for at least 10 s as required by clause 16.1 of IEC 60079-1 7th Edition. There shall be no sign of damage, deformation or rupture that will invalidate the concept of protection.

STExL1, STExL2, STExS1, STEx2 and STExJ2 enclosures are exempt from routine overpressure testing, since they comply with the overpressure test equal to four time reference pressure in accordance with clause 16.2 of IEC 60079-1 7th Edition.