

Katy A. Holdredge

Page 1 of 4

INTERNATIONAL ELECTROTECHNICAL COMMISSION **IEC Certification System for Explosive Atmospheres**

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

IECEX ULD 16.0017X Certificate No.:

Issue No: 4 Status: Current

Date of Issue: 2022-04-26

Applicant: **European Safety Systems Limited**

> Impress House Mansell Road Acton

London W3 7QH **United Kingdom**

Equipment:

Optional accessory:

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

Ex db IIC T6...T3 Gb Marking:

Ex tb III C T82°C...T137°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:

Position: Senior Staff Engineer

Signature:

(for printed version)

2022-04-26 (for printed version)

This certificate and schedule may only be reproduced in full.
This certificate is not transferable and remains the property of the issuing body.
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**



Certificate history: Issue 3 (2021-10-07)

Issue 2 (2021-05-27) Issue 1 (2016-07-28)

Issue 0 (2016-07-01)





Certificate No.: **IECEX ULD 16.0017X** Page 2 of 4

Date of issue: 2022-04-26 Issue No: 4

European Safety Systems Limited Manufacturer:

Impress House Mansell Road

Acton

London W3 7QH **United Kingdom**

Manufacturing **European Safety Systems Limited**

Impress House locations: Mansell Road

Acton

London W3 7QH **United Kingdom**

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 DK/ULD/ExTR16.0017/04

Quality Assessment Report:

DK/ULD/ExTR16.0017/03

GB/SIR/QAR06.0020/09



Certificate No.: IECEx ULD 16.0017X Page 3 of 4

Date of issue: 2022-04-26 Issue No: 4

EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

The STExS1, 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 flamepaths is not permitted.



Certificate No.: IECEx ULD 16.0017X Page 4 of 4

Date of issue: 2022-04-26 Issue No: 4

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.

Issue 3: Updates to the Sounder PCBA's in STExS1*****, STExS2***** and STExC1X05***** models. New Horn size "2H". Update to Installation Instructions and Marking Labels of the affected the models.

Issue 4: Updates to STExS1, STExS2, STExL1, STExL2 and STExC1 Sinter cement material and adds Horn size "S2H".

Annex:

Annex to IECEx ULD 16.0017X Issue 4.pdf



Certificate No.: IECEx ULD 16.0017X

Issue No.: 4

Page 1 of 4

TYPE DESIGNATION

Loudspeakers and Sounders

STEXL1R008, STEXL1R016, STEXL1V070, STEXL1V100, STEXL2R008, STEXL2R016, STEXL2V070, STEXL2V100.

STExS1DC024(-SIL), STExS1AC230, STExS2DC024(-SIL), 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, STExB2X21AC230

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.)									
						(Dust)								
					40	45	50	55	60	65	70	70		
STExS1DC024	15W Sounder (Small Horn)	11.5-54Vdc	221/185 /115	IP66	-	-	-	-	-	Т6	T5	T82		
STExS1DC024-SIL														
STExS1AC230	15W Sounder (Small Horn)	100-240Vac, 50/60Hz	73/48	IP66	-	-	-	-	-	Т6	T5	T82		
STExS2DC024	25W Sounder (Large Horn)	11.5-54Vdc	356/740 /391	IP66	-	-	-	Т6	-	-	T5	T94		
STExS2DC024-SIL														
STExS2AC230	25W Sounder (Large Horn)	100-240Vac, 50/60Hz	282/167	IP66	-	-	-	-	-	Т6	T5	T84		
STExL1R008	15W Loudspeaker (Small Horn)	10.95V	-	IP66	-	-	-	Т6	-	-	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	-	-	-	Т6	-	-	T5	T95		
STExL2R008	25W Loudspeaker	14.14V	-	IP66	-	Т6	-	-	T5	-	T4	T105		



Certificate No.: IECEx ULD 16.0017X

Issue No.: 4

Page 2 of 4

Type Designation	Description	Rated	Rated	IP	T Class @ Ambient temperature °C (-50°C to +70°C Max.)								
		Voltage	Current	Rating				(Gas)				(Dust)	
		Range	(mA)	J	40	45	50	55	60	65	70	70	
STExL2R016	25W Loudspeaker (Large Horn)	20.00V	-	IP66	-	Т6	-	-	T5	-	T4	T105	
STExL2V070	25W Loudspeaker (Large Horn)	70V	-	IP66	-	Т6	-	-	T5	-	T4	T105	
STExL2V100	25W Loudspeaker (Large Horn)	100V	-	IP66	-	T6	-	-	T5	-	T4	T105	
STExC1X05DC012	Combined Sounder/ Xenon Strobe	11.5-14Vdc	885	IP66	-	-	T5	-	-	-	T4	T114	
STExC1X05DC024	Combined Sounder/ Xenon Strobe	20-28Vdc	508	IP66	-	-	T5	-	-	-	T4	T114	
STExC1X05DC048	Combined Sounder/ Xenon Strobe	42-54Vdc	325	IP66	-	-	T5	-	-	-	T4	T114	
STExC1X05AC230	Combined Sounder/ Xenon Strobe	220-240Vac 50/60Hz	127	IP66	-	T5	-	-	-	-	T4	T117	
STExB2X05DC012	5J Xenon Strobe 12Vdc	10-14Vdc	585	IP6X	-	-	-	T6	-	-	T5	T92	
STExB2X05DC024	5J Xenon Strobe 24Vdc	20-28Vdc	295	IP6X	-	-	-	Т6	-	-	T5	T92	
STExB2X05DC024 -SIL	5J Xenon Strobe 24Vdc	20-28Vdc	295	IP6X	-	-	-	Т6	-	-	T5	T92	
STExB2X05DC048	5J Xenon Strobe 48Vdc	42-54Vdc	145	IP6X	-	-	-	Т6	-	-	T5	T92	
STExB2X05AC115	5J Xenon Strobe 115Vac	110-120Vac 50/60Hz	140	IP6X	Т6	-	-	T5	-	-	T4	T110	
STExB2X05AC230	5J Xenon Strobe 230Vac	220-240Vac 50/60Hz	70	IP6X	Т6	-	-	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	Т3	T131	
STExB2X15AC230	15J Xenon Strobe 230Vac	220-240Vac 50/60Hz	170	IP6X	-	-	-	-	-	T4	Т3	T131	
STExB2X21DC024	21J Xenon Strobe 24Vdc	20-28Vdc	1130	IP6X	-	-	-	-	-	T4	Т3	T131	
STExB2X21DC048	21J Xenon Strobe 48Vdc	42-54Vdc	530	IP6X	-	-	-	-	-	T4	Т3	T131	
STExB2X21AC115	21J Xenon Strobe 115Vac	110-120Vac 50/60Hz	500	IP6X	-	-	-	T4	-	Т3	-	T137 (65°C Amb)	
STExB2X21AC230	21J Xenon Strobe 230Vac	220-240Vac 50Hz	195	IP6X	-	-	-	T4	-	Т3	-	T137 (65°C 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	-	-	-	-	-	Т6	T5	T85	
STExB2LD2AC115	LED Beacon, 115ac, 50/60Hz	103.5- 126.5Vac 50/60Hz	95	IP6X	-	-	-	-	-	Т6	T5	T85	



Certificate No.: IECEx ULD 16.0017X

Issue No.: 4

Page 3 of 4

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	
STExB2LD2AC230	LED Beacon, 230ac, 50/60Hz	207-253Vac 50/60Hz	48	IP6X	-	-	1	1	1	Т6	T5	T85	
STExJ2	STEx Junction Box	260Vac, 60V dc	5W	IP6X	-	-	-	-	1	Т6	T5	T85	

MARKING

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









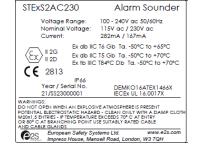












Note: See labels drawings under "Manufacturer's Documents" for model range variants.



Certificate No.: IECEx ULD 16.0017X

Issue No.: 4

Page 4 of 4

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.

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.