IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification Scheme for Explosive Atmospheres

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

Certificate No.: IECEx ULD 14.0004X

Issue No: 3

Certificate history:
Issue No. 3 (2018-06-11)
Issue No. 2 (2017-09-29)
Issue No. 1 (2015-05-11)
Issue No. 0 (2015-03-03)

Status: **Current**

Date of Issue: **2018-06-11**

Applicant: **European Safety Systems (E2S) Limited**
Units 18 & 20,
Impress House,
Mansell Road,
Acton,
London,
W3 7QH
United Kingdom

Equipment: **D2xS1 Sounder, D2xC1 Beacon Sounder, D2xB1 Beacon, D2xC2 Beacon Sounder and D2xJ1 Junction Box**

Optional accessory:

Type of Protection: **Non-Sparking "nA' and Dust Ignition Protection by Enclosure "tc"**

Marking:

Ex nA IIC T6/T4/T3/T2/T1 Gc

Ex tc IIIC T55°C/75°C/80˚C/85˚C/90ºC/95°C/105˚C/110°C Dc

Please see Annex for ambient temperature range

Approved for issue on behalf of the IECEx Certification Body: Andrew Moffat

Position: Process Engineer

Signature:
(for printed version)

Date:

1. This certificate and schedule may only be reproduced in full.
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 the Official IECEx Website.

Certificate issued by:

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

IECEx Certificate of Conformity

Certificate No:	IECEx ULD 14.0004X	Issue No: 3
Date of Issue:	2018-06-11	Page 2 of 5

Manufacturer: **European Safety Systems (E2S) Limited**
Units 18 & 20,
Impress House,
Mansell Road,
Acton,
London,
W3 7QH
United Kingdom

Additional Manufacturing location(s):

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 apparatus 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 : 2011 Edition:6.0	Explosive atmospheres - Part 0: General requirements
IEC 60079-15 : 2010 Edition:4	Explosive atmospheres - Part 15: Equipment protection by type of protection "n"
IEC 60079-31 : 2013 Edition:2	Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"

*This Certificate **does not** indicate compliance with electrical 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 Report:

DK/ULD/ExTR14.0009/03

Quality Assessment Report:

GB/SIR/QAR06.0020/07

IECEx Certificate of Conformity

Certificate No: IECEx ULD 14.0004X Issue No: 3

Date of Issue: 2018-06-11 Page 3 of 5

Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

D2xS1 (sounder) comprises an aluminium enclosure housing components to generate selectable tones. The enclosure is sealed with o-rings to prevent ingress of dust or water. Up to two M20 threaded entries may be provided for installation of appropriately certified cable entry devices by the end user.

D2xC1X05 (sounder beacon) is the same aluminium housing as the D2xS1, except on one end the beacon assembly is mounted. The lamp is protected by a lens and wire guard. The lens and retaining ring screws are sealed with o-rings to prevent ingress of dust or water. Additional electrical components associated with the operation of the 5 Joule beacon, are installed within the housing and reflected by the nomenclature with “AC or DC” followed by the voltage.

D2xC1X10 (sounder beacon) is the same aluminium housing as the D2xS1, except on one end the beacon assembly is mounted. The lamp is protected by a lens and wire guard. The lens and retaining ring screws are sealed with o-rings to prevent ingress of dust or water. Additional electrical components associated with the operation of the 10 Joule beacon, are installed within the housing and reflected by the nomenclature with “AC or DC” followed by the voltage.

D2xB1X05 (beacon) comprises an aluminium enclosure housing components to generate visual outputs. The enclosure is sealed with o-rings to prevent ingress of dust and water. Up to 7 M20, ½ NPT or ¾ NPT threaded entries may be provided for installation of appropriately certified cable entry devices by the end user. The lamp is protected by a lens and an optional wire guard. Additional electrical components associated with the operation of the 5 Joule beacon, are installed within the housing and reflected by the nomenclature with “AC or DC” followed by the voltage.

D2xB1X10 (beacon) is the same aluminium housing enclosure as the D2xB1X05. The lamp is protected by a lens and an optional wire guard. Additional electrical components associated with the operation of the 10 Joule beacon, are installed within the housing and reflected by the nomenclature with “AC or DC” followed by the voltage.

D2xB1LD2 (beacon)) is the same aluminium housing enclosure as the D2xB1X05. The lamp is protected by a lens and an optional wire guard. Additional electrical components associated with the operation of the LED beacon, are installed within the housing and reflected by the nomenclature with “AC or DC” followed by the voltage.

D2xC2X05 (sounder beacon) is the same aluminium housing as the D2xB1X05, coupled with the D2xS1 aluminium enclosure. Two brass connectors with locknuts secure the two housings together with a neoprene foam seal providing the ingress protection. Additional electrical components associated with the operation of the 5 Joule beacon, are installed within the housing and reflected by the nomenclature with “AC or DC” followed by the voltage.

D2xC2X10 (sounder beacon) is the same aluminium housing as the D2xB1X05, coupled with the D2xS1 aluminium enclosure. Two brass connectors with locknuts secure the two housings together with a neoprene foam seal providing the ingress protection. Additional electrical components associated with the operation of the10 Joule beacon, are installed within the housing and reflected by the nomenclature with “AC or DC” followed by the voltage.

D2xC2LD2 (sounder beacon) is the same aluminium housing as the D2xB1X05, coupled with the D2xS1 aluminium enclosure. Two brass connectors with locknuts secure the two housings together with a neoprene foam seal providing the ingress protection. Additional electrical components associated with the operation of the LED beacon, are installed within the housing and reflected by the nomenclature with “AC or DC” followed by the voltage.

D2xJ1T(Junction Box) is the same aluminium housing as the D2xB1X05 with the junction box lid replacing the lens assembly lid. The enclosure is provided with a 12 Way Terminal Block.

D2xJ1D(Junction Box) is the same aluminium housing as the D2xB1X05 with the junction box lid replacing the lens assembly lid. The enclosure is provided with a DIN rail for installation for up to12 AKZ 2.5 terminal blocks, and 4 AKE 2.5 Terminal blocks.

D2xB1XH1DC024 (beacon) is the same aluminium housing enclosure as the D2xB1X05. The lamp is protected by a lens and an optional wire guard. The electronics are similar to that of D2xB1X05DC024, with the addition of a low voltage sub board to control flash rate timing.

D2xB1XH2DC024 (beacon) is the same aluminium housing enclosure as the D2xB1X05. The lamp is protected by a lens and an optional wire guard. The electronics are similar to that of D2xB1X10DC024, with the addition of a low voltage sub board to control flash rate timing.

D2xC2XH1DC024 (sounder beacon) is the same aluminium housing as the D2xB1X05, coupled with the D2xS1 aluminium enclosure. Two brass connectors with locknuts secure the two housings together with a neoprene foam seal providing the ingress protection. The model utilizes the D2xB1XH1DC024 beacon coupled with D2xS1DC024.

D2xC2XH2DC024 (sounder beacon) is the same aluminium housing as the D2xB1X05, coupled with the D2xS1 aluminium enclosure. Two brass connectors with locknuts secure the two housings together with a neoprene foam seal providing the ingress protection. The model utilizes the D2xB1XH2DC024 beacon coupled with D2xS1DC024.

Please see Annex for additional information.

SPECIFIC CONDITIONS OF USE: YES as shown below:

- End user shall adhere to the manufacturer’s installation and instruction when performing housekeeping to avoid the potential for hazardous electrostatic charges during cleaning, by using a damp cloth.
- Not to be mounted with the horn facing upwards. Refer to Manufacturer's Instructions.
- The equipment shall only be used in end use with appropriately certified cable entry devices and blanking plugs.

IECEx Certificate of Conformity

Certificate No: IECEx ULD 14.0004X Issue No: 3

Date of Issue: **2018-06-11**

DETAILS OF CERTIFICATE CHANGES (for issues 1 and above):

Issue 1: Correction of the Nomenclature voltage detail to include AC or DC0 as applicable.

Correction of the Conditions of Certification to match installation instructions.,

Issue 2: Addition of D2xB1 beacons, D2xC2 sounder beacon combinations and D2xJ1 Junction boxes.

Issue 3: Adds new models and sub board assembly.

Annex:

Annex to IECEx ULD 14.0004X Issue 3.pdf

IECEx Certificate of Conformity

Certificate No.: IECEx ULD 14.0004X

Issue No.: 3

TYPE DESIGNATION

Nomenclature:

Model	Beacon energy (Joules)	Rated Voltage	Suffix
D2xS1 (Sounder)		AC115	Up to 4 alpha numeric characters, not associated with equipment certification
		AC230	
		DC024	
		DC048	
D2xC1X (sounder beacon)	05, 10	AC115	
		AC230	
		DC024	
		DC048	
D2xB1X (beacon)	05	DC024	
		DC048	
		AC115	
		AC230	
	10	DC024	
		DC048	
		AC115	
		AC230	
D2xB1LD2 (LED beacon)	-	DC024	
	-	AC115	
	-	AC230	
D2xC2X	05	DC024	
		DC048	
		AC115	
		AC230	
D2xC2X	10	DC024	
		DC048	
		AC115	
		AC230	
D2xC2LD2	-	DC024	
		DC048	
		AC115	
		AC230	
D2xJ1T	-	-	
D2xJ1D	-	-	
D2xB1XH1DC024	-	DC024	
D2xB1XH2DC024	-	DC024	
D2xC2XH1DC024	-	DC024	
D2xC2XH2DC024	-	DC024	

PARAMETERS RELATING TO THE SAFETY

Electrical Ratings:

Model	Electrical Ratings			
	DC	AC	Hz	Max. Amps, mA
D2xS1DC024	10-30	-	-	313
D2xS1DC048	38-58	-	-	218
D2xS1AC115	-	103.5-126.5	60	91
D2xS1AC230	-	207-253	50	72
D2xC1X05DC024	20-28	-	-	521
D2xC1X05DC048	42-58	-	-	328
D2xC1X05AC115	-	115-125	60	183
D2xC1X05AC230	-	215-250	50	77
D2xC1X10DC024	20-28	-	-	876
D2xC1X10DC048	42-58	-	-	475
D2xC1X10AC115	-	115-125	60	343
D2xC1X10AC230	-	215-250	50	115
D2xB1X05DC024	24	-	-	275
D2xB1X05DC048	48	-	-	145
D2xB1X05AC115	-	115-120	50/60	80
D2xB1X05AC230	-	220-230	50/60	30
D2xB1X10DC024	24	-	-	560
D2xB1X10DC048	48	-	-	260
D2xB1X10AC115	-	115-120	50/60	185
D2xB1X10AC230	-	220-230	50/60	107
D2xB1LD2DC024	18-54	-	-	346
D2xB1LD2AC115	-	115-120	50/60	102.4
D2xB1LD2AC230	-	220-230	50/60	75
D2xC2X05DC024	24	-	-	275+313
D2xC2X05DC048	48	-	-	145+218
D2xC2X05AC115	-	115-120	50/60	80+91
D2xC2X05AC230	-	220-230	50/60	30+72
D2xC2X10DC024	24	-	-	560+313
D2xC2X10DC048	48	-	-	260+218
D2xC2X10AC115	-	115-120	50/60	185+91
D2xC2X10AC230	-	220-230	50/60	107+72
D2xC2LD2DC024	24	-	-	346+313
D2xC2LD2DC048	48	-	-	115+218
D2xC2LD2AC115	-	115-120	50/60	102.4+91
D2xC2LD2AC230	-	220-230	50/60	75+72
D2xJ1T	54 Max	230 Max	50/60	10A Max
D2xJ1D	54 Max	230 Max	50/60	10A Max
D2xB1XH1DC024	20-28	-	-	296
D2xB1XH2DC024	20-28	-	-	609
D2xC2XH1DC024	20-28	-	-	449
D2xC2XH2DC024	20-28	-	-	785

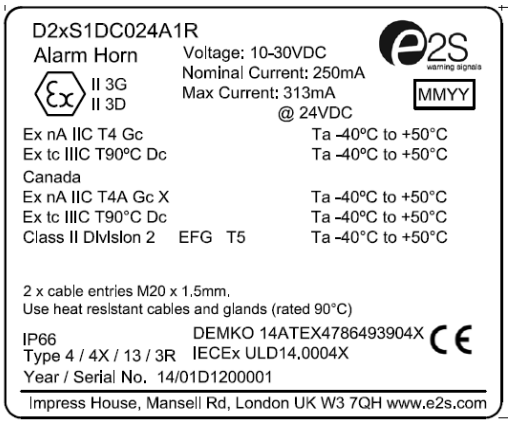
Temperature Range and Class for each model series:

Equipment Group	Type of protection	Temperature Class	Associated Maximum Ambient Temperature
D2XS1	Ex nA IIC	T4 (<135°C)	-40°C ≤ Tamb ≤ +50°C
	Ex tc IIIC	T90°C	-40°C ≤ Tamb ≤ +50°C
D2XC1X05	Ex nA IIC	T2 (<300°C)	-40°C ≤ Tamb ≤ +50°C
	Ex tc IIIC	T90°C	-40°C ≤ Tamb ≤ +50°C
D2XC1X10	Ex nA IIC	T2 (<300°C)	-40°C ≤ Tamb ≤ +40°C
	Ex nA IIC	T1 (<450°C)	-40°C ≤ Tamb ≤ +50°C
	Ex tc IIIC	T110°C	-40°C ≤ Tamb ≤ +50°C
D2xB1LD2	Ex nA IIC	T4(<135°C)	-40°C ≤ Tamb ≤ +50°C
	Ex tc IIIC	T75°C	-40°C ≤ Tamb ≤ +50°C
D2xB1X05	Ex nA IIC	T3(<200°C)	-40°C ≤ Tamb ≤ +50°C
	Ex tc IIIC	T95°C	-40°C ≤ Tamb ≤ +50°C
D2xB1X10	Ex nA IIC	T2(<300°C)	-40°C ≤ Tamb ≤ +50°C
	Ex tc IIIC	T95°C	-40°C ≤ Tamb ≤ +50°C
D2xC2X05	Ex nA IIC	T3(<200°C)	-40°C ≤ Tamb ≤ +50°C
	Ex tc IIIC	T95°C	-40°C ≤ Tamb ≤ +50°C
D2xC2X10	Ex nA IIC	T2(<300°C)	-40°C ≤ Tamb ≤ +50°C
	Ex tc IIIC	T95°C	-40°C ≤ Tamb ≤ +50°C
D2xC2LD2	Ex nA IIC	T4(<135°C)	-40°C ≤ Tamb ≤ +50°C
	Ex tc IIIC	T75°C	-40°C ≤ Tamb ≤ +50°C
D2xJ1T	Ex nA IIC	T6(<85°C)	-40°C ≤ Tamb ≤ +50°C
	Ex tc IIIC	T55°C	-40°C ≤ Tamb ≤ +50°C
D2xJ1D	Ex nA IIC	T6(<85°C)	-40°C ≤ Tamb ≤ +50°C
	Ex tc IIIC	T55°C	-40°C ≤ Tamb ≤ +50°C
D2xB1XH1DC024	Ex nA IIC	T2(<300°C)	-40°C ≤ Tamb ≤ +50°C
	Ex tc IIIC	T80ºC	-40°C ≤ Tamb ≤ +50°C
D2xB1XH2DC024	Ex nA IIC	T1 (<450°C)	-40°C ≤ Tamb ≤ +50°C
	Ex tc IIIC	T105°C	-40°C ≤ Tamb ≤ +50°C
D2xC2XH1DC024	Ex nA IIC	T3(<200°C)	-40°C ≤ Tamb ≤ +50°C
	Ex tc IIIC	T75°C	-40°C ≤ Tamb ≤ +50°C
D2xC2XH2DC024	Ex nA IIC	T2(<300°C)	-40°C ≤ Tamb ≤ +50°C
	Ex tc IIIC	T85°C	-40°C ≤ Tamb ≤ +50°C

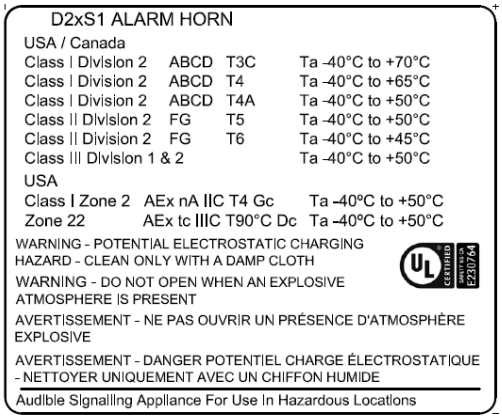
MARKING

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

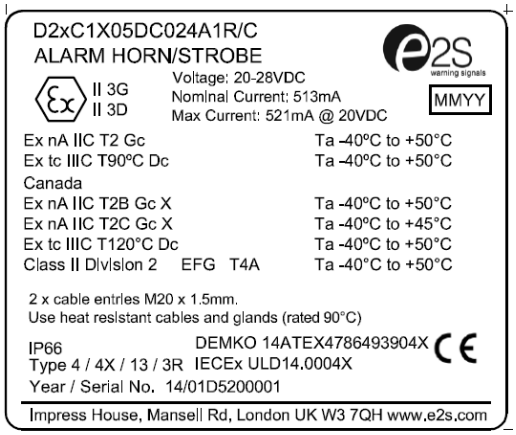
Note: Label 1 & 2 are both applied to the appropriate equipment incorporating relevant protection concept information, warning and cautionary markings.



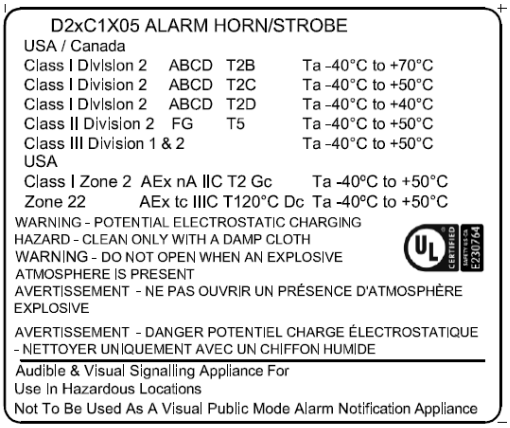
D2xS1 PRODUCT LABEL 1



D2xS1 PRODUCT LABEL 2



D2xC1X05 PRODUCT LABEL 1

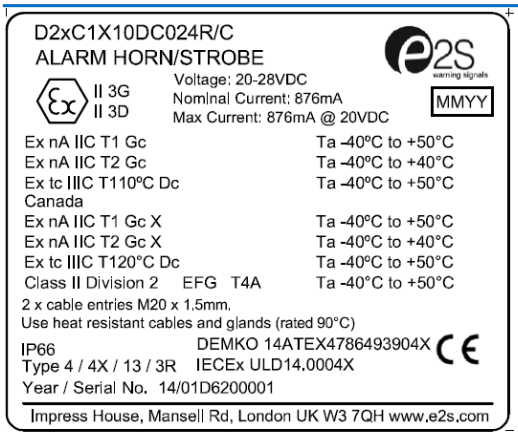


D2xC1X05 PRODUCT LABEL 2

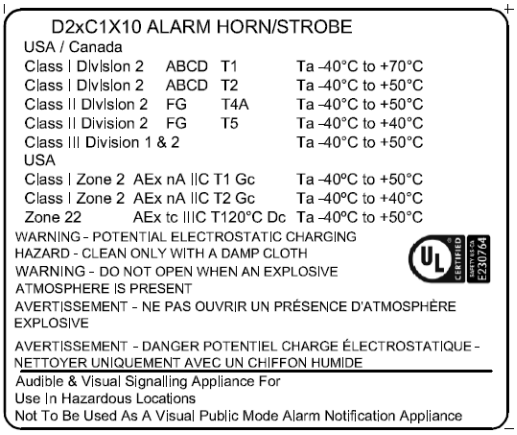
IECEx Certificate of Conformity

Certificate No.: IECEx ULD 14.0004X

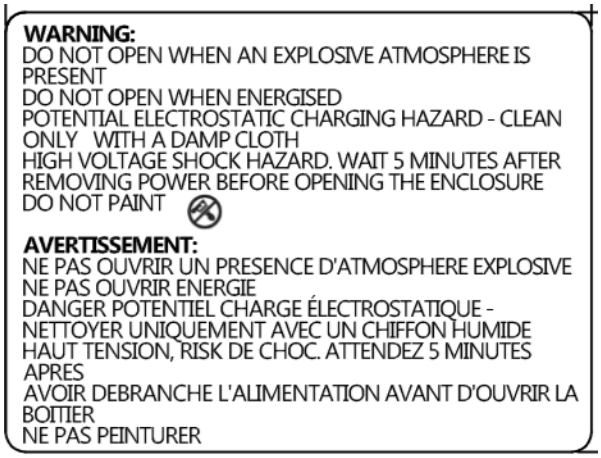
Issue No.: 3

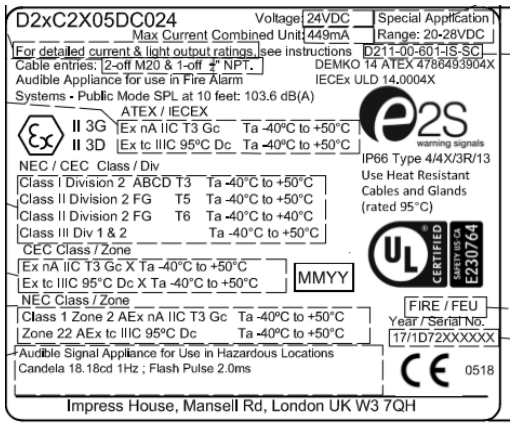


D2xC1X10 PRODUCT LABEL 1



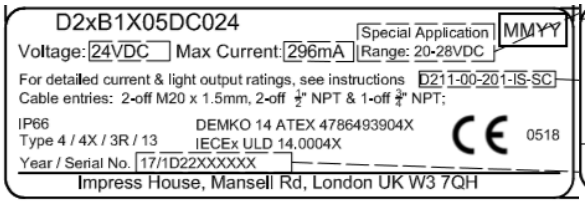
D2xC1X10 PRODUCT LABEL 2



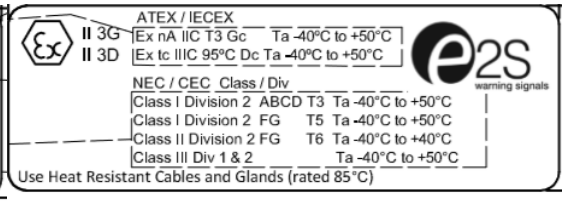


D2xC2 / D2xJ1 PRODUCT LABEL 1

D2xB1 , D2xC2 and D2xJ1 Warning label



D2xB1 PRODUCT LABEL 1



D2xB1 PRODUCT LABEL 3

ROUTINE EXAMINATIONS AND TESTS

The xenon lamp assembly shall be routinely dielectrically strength tested.
Tests shall be performed as described in IEC 60079-15 clause 6.5.1.

The D2xJ1 assembly shall be routinely dielectrically strength tested.
The tests shall be performed as described in IEC 60079-15 clause 6.5.1.