



# 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](http://www.iecex.com)

Certificate No.: IECEx ULD 19.0006X

Issue No: 1

Certificate history:

Issue No. 1 (2019-06-14)

Issue No. 0 (2019-05-03)

Status: **Current**

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Date of Issue: **2019-06-14**

Applicant: **European Safety Systems Limited**

Impress House  
Units 18 & 20  
Mansell Rd.  
Acton  
London W3 7QH GB UK  
**United Kingdom**

Equipment: **D1xB2 range of signalling Strobe and LED beacons and D1xJ2 Junction Boxes**

*Optional accessory:*

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

Marking:

Ex db IIC T6...T3 Gb

Ex tb IIIC T95°C...T169°C Db

-55°C to +45°C or

-55°C to +50°C or

-55°C to +55°C or

-55°C to +60°C or

-55°C to +65°C or

-55°C to +70°C or

-55°C to +75°C or

-55°C to +80°C

**Please see Annex for additional temperature information**

Approved for issue on behalf of the IECEx  
Certification Body:

Andrew Moffat

Position:

Project Engineer

Signature:  
(for printed version)

Date:

2019-06-14



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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

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Manufacturer: **European Safety Systems Limited**  
Impress House  
Units 18 & 20  
Mansell Rd.  
Acton  
London W3 7QH GB UK  
**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:

<b>IEC 60079-0 : 2017</b> Edition:7.0	Explosive atmospheres - Part 0: Equipment - General requirements
<b>IEC 60079-1 : 2014-06</b> Edition:7.0	Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
<b>IEC 60079-31 : 2013</b> 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/ExTR19.0006/01](#)

Quality Assessment Report:

[GB/SIR/QAR06.0020/07](#)



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## Schedule

### EQUIPMENT:

*Equipment and systems covered by this certificate are as follows:*

D1xB2 series are a range of Electronic Strobe Beacons housed in a flameproof / dust protected aluminium enclosure that are intended to be used as visual warning / signalling devices. The enclosure is accessible via the threaded cover which incorporates a glass dome, the glass dome is cemented into the cover. A stainless steel lens guard and non-metallic lens diffuser are optional. Additionally the 5J, 10J and 15J 24VDC models may be fitted with an additional PCB for SIL monitoring. The range is supplemented by a D1xJ2 Junction Box which is based on the D1xB2 Series enclosure but closed with a single piece moulded threaded cover instead of the beacon lens.

**Please see Annex for additional information.**

### SPECIFIC CONDITIONS OF USE: YES as shown below:

- The enclosure coating is 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.
- Repair of the flamepaths is not permitted.



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

Issue 1: Added D1xJ2 Junction Box models and updated all existing Beacon Models and new Junction box models to IEC 60079-0, 7th Edition.



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**Additional information:**

**Annex:**

[Annex to IECEx ULD 19.0006X Issue 1.pdf](#)



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## TYPE DESIGNATION

D1xB2 series are a range of Electronic Strobe Beacons housed in a flameproof / dust protected aluminium enclosure that are intended to be used as visual warning / signalling devices. The enclosure is accessible via the threaded cover which incorporates a glass dome, the glass dome is cemented into the cover. A stainless steel lens guard and non-metallic lens diffuser are optional. Additionally the 5J, 10J and 15J 24VDC models may be fitted with an additional PCB for SIL monitoring. The range is supplemented by a D1xJ2 Junction Box which is based on the D1xB2 Series enclosure but closed with a single piece moulded threaded cover instead of the beacon lens.

Nomenclature:

Model	Beacon energy (Joules)	Voltage	Suffixes
D1xB2X	05	DC012	Up to 4 alpha numeric characters, not associated with equipment certification
		DC024	
		DC048	
		AC115	
		AC230	
D1xB2X	10	DC024	
		DC048	
		AC115	
		AC230	
D1xB2X	15	DC024	
		DC048	
		AC115	
		AC230	
D1xB2X	21	DC024	
		DC048	
		AC115	
		AC230	
D1xB2LD2 (LED beacon)	-	DC024	
	-	AC115	
	-	AC230	
D1xJ2T01	-	-	-
D1xJ2D01	-	-	-
D1xJ2M01	-	-	-



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## Temperature range

Model	Type of protection	Temperature Class	Associated Maximum Ambient Temperature
D1xB2X05DC012	Ex db IIC	T4	-55°C to +80°C
D1xB2X05DC024		T5	-55°C to +75°C
D1xB2X05DC048		T6	-55°C to +60°C
	Ex tb IIIC	T104°C	-55°C to +80°C
D1xB2X05AC115	Ex db IIC	T4	-55°C to +70°C
D1xB2X05AC230		T5	-55°C to +50°C
	Ex tb IIIC	T116°C	-55°C to +70°C
D1xB2X10DC024	Ex db IIC	T4	-55°C to +80°C
D1xB2X10DC048		T5	-55°C to +45°C
	Ex tb IIIC	T135°C	-55°C to +80°C
D1xB2X10AC115	Ex db IIC	T3	-55°C to +70°C
D1xB2X10AC230		T4	-55°C to +65°C
	Ex tb IIIC	T139°C	-55°C to +70°C
D1xB2X15DC024	Ex db IIC	T3	-55°C to +80°C
D1xB2X15DC048		T4	-55°C to +65°C
	Ex tb IIIC	T146°C	-55°C to +80°C
D1xB2X15AC115	Ex db IIC	T3	-55°C to +70°C
D1xB2X15AC230		T4	-55°C to +65°C
	Ex tb IIIC	T139°C	-55°C to +70°C
D1xB2X21DC024	Ex db IIC	T3	-55°C to +80°C
D1xB2X21DC048		T4	-55°C to +45°C
	Ex tb IIIC	T169°C	-55°C to +80°C
D1xB2X21AC115	Ex db IIC	T3	-55°C to +60°C
D1xB2X21AC230		T4	-55°C to +50°C
	Ex tb IIIC	T141°C	-55°C to +60°C
D1xB2LD2	Ex db IIC	T5	-55°C to +80°C
		T6	-55°C to +70°C
	Ex tb IIIC	T95°C	-55°C to +80°C
D1xJ2***	Ex db IIC	T4	-55°C to +80°C
		T5	-55°C to +70°C
		T6	-55°C to +55°C
	Ex tb IIIC	T106°C	-55°C to +80°C



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## Electrical Data:

Model	Voltage DC	Voltage AC	Freq. Hz	Maximum Current mAmps
D1xB2X05DC012	10-14	-	-	600
D1xB2X05DC024	20-28	-	-	350
D1xB2X05DC048	42-54	-	-	150
D1xB2X05AC115	-	110-120	50/60	200
D1xB2X05AC230	-	220-240	50/60	100
D1xB2X10DC024	20-28	-	-	710
D1xB2X10DC048	42-54	-	-	250
D1xB2X10AC115	-	110-120	50/60	300
D1xB2X10AC230	-	220-240	50/60	180
D1xB2X15DC024	20-28	-	-	920
D1xB2X15DC048	42-54	-	-	360
D1xB2X15AC115	-	110-120	50/60	420
D1xB2X15AC230	-	220-240	50/60	230
D1xB2X21DC024	20-28	-	-	1240
D1xB2X21DC048	42-54	-	-	560
D1xB2X21AC115	-	110-120	50/60	530
D1xB2X21AC230	-	220-240	50/60	270
D1xB2LD2DC024	18-54	-	-	500
D1xB2LD2AC115	-	110-120	50/60	180
D1xB2LD2AC230	-	220-240	50/60	100
D1xJ2***	60VDC Max	260VAC Max	50/60	10 Watts



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## MARKING

### D1xB2 example

**D1xB2X05DC024**  
D1x B2 Xenon Beacon

Nominal Voltage: 24V dc Voltage Range: 20-28V dc  
Nominal Current: 295mA

**ATEX / IECEx**  
Ex db IIC T4 Gb Ta -55°C to +80°C  
Ex db IIC T5 Gb Ta -55°C to +75°C  
Ex db IIC T6 Gb Ta -55°C to +60°C  
Ex tb IIC T104°C Db Ta -55°C to +80°C  
NEC / CEC Class / Div  
Class I Div 1 Group ABCD T5 Ta -55°C to +80°C  
Class I Div 1 Group ABCD T6 Ta -55°C to +65°C  
Class II Div 1 Group EFG T5 Ta -55°C to +80°C  
Class III Div 1 Ta -55°C to +80°C

**NEC Class / Zone**  
Class I Zone 1 AEx db IIC T4 Ta -55°C to +80°C  
Class I Zone 1 AEx db IIC T5 Ta -55°C to +75°C  
Class I Zone 1 AEx db IIC T6 Ta -55°C to +60°C  
Zone 21 AEx tb IIC T99°C Ta -55°C to +80°C

**CEC Class / Zone**  
Ex db IIC T4 Ta -55°C to +80°C  
Ex db IIC T5 Ta -55°C to +75°C  
Ex db IIC T6 Ta -55°C to +60°C  
Ex tb IIC T99°C Ta -55°C to +80°C

Location: Suitable for indoor and outdoor use  
If temperature exceeds 80°C at entry or 60°C at branching point  
use suitably rated cable and cable gland - see Instructions  
Visual Signalling Appliance for use in Hazardous Locations  
Visual Appliance for use in Fire Alarm Systems - Private Mode

Serial Number: YY01DB12XXXXX

Impress House, Mansell Rd, London UK W3 7QH www.e2s.com



INSTRUCTION SHEET  
D191-00-201-1S

**CE** 0518

IP66  
Type 4/4X/3R/13

3/4"NPT M20  
M20 3/4"NPT  
Cable Gland 2-off M20 x 1.5mm / 5-off 3/4" NPT



UL CERTIFIED  
UL 1000  
E26313

DEMKO 19 ATEX 2009X  
IECEx ULD 19.0006X

### D1xJ2 example

**D1xJ2T01**  
D1x J2 Junction Box

Voltage: 60V dc max / 260Vac 50/60Hz max  
Max Current: 20A  
Max Power: 10W

**ATEX / IECEx**  
Ex db IIC T4 Gb Ta -55°C to +80°C  
Ex db IIC T5 Gb Ta -55°C to +70°C  
Ex db IIC T6 Gb Ta -55°C to +55°C  
Ex tb IIC T106°C Db Ta -55°C to +80°C  
NEC / CEC Class / Div  
Class I Div 1 Group ABCD T4A Ta -55°C to +80°C  
Class I Div 1 Group ABCD T5 Ta -55°C to +75°C  
Class I Div 1 Group ABCD T6 Ta -55°C to +60°C  
Class II Div 1 Group EFG T4A Ta -55°C to +80°C  
Class III Div 1 Ta -55°C to +80°C

**NEC Class / Zone**  
Class I Zone 1 AEx db IIC T4 Ta -55°C to +80°C  
Class I Zone 1 AEx db IIC T5 Ta -55°C to +70°C  
Class I Zone 1 AEx db IIC T6 Ta -55°C to +55°C  
Zone 21 AEx tb IIC T106°C Ta -55°C to +80°C

**CEC Class / Zone**  
Ex db IIC T4 Ta -55°C to +80°C  
Ex db IIC T5 Ta -55°C to +70°C  
Ex db IIC T6 Ta -55°C to +55°C  
Ex tb IIC T106°C Ta -55°C to +80°C

Location: Suitable for indoor and outdoor use  
If temperature exceeds 80°C at entry or 60°C at branching point  
use suitably rated cable and cable gland - see Instructions

Serial Number: YY01DJ2XXXXX

Impress House, Mansell Rd, London UK W3 7QH www.e2s.com



INSTRUCTION SHEET  
D191-00-501-IS\_Issue\_1

**CE** 0518

IP66  
Type 4/4X/3R/13

3/4"NPT M20  
3/4" NPT M20 3/4" NPT  
M20 3/4"NPT  
Cable Gland 2-off M20 x 1.5mm / 5-off 3/4" NPT



UL CERTIFIED  
UL 1000  
E26313

DEMKO 19 ATEX 2009X  
IECEx ULD 19.0006X



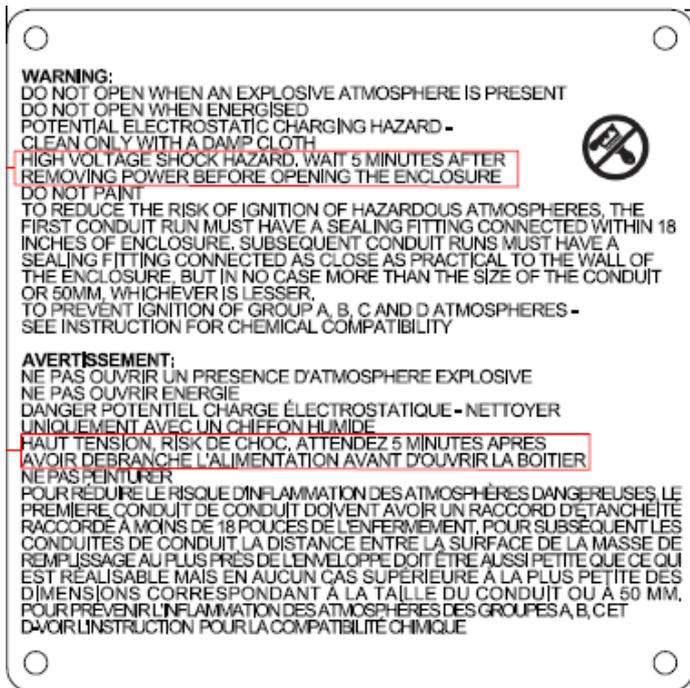
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## Warning Markings Example for all Models



## ROUTINE EXAMINATIONS AND TESTS

Routine tests according to EN/IEC 60079-1, cl. 16 are not required, as the enclosures have been successfully tested at four times the reference pressure.