

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 14.0004X** Page 1 of 5 Certificate history:

Issue 7 (2023-10-18) Issue No: 8 Status: Current Issue 6 (2023-10-17)

Issue 5 (2022-03-28) Date of Issue: 2024-05-31 Issue 4 (2019-11-25)

Issue 3 (2018-06-11) Applicant: **European Safety Systems Limited** Issue 2 (2017-09-29)

Impress House Issue 1 (2015-05-11) Mansell Road Issue 0 (2015-03-03) Acton

London W3 7QH **United Kingdom**

Equipment: Beacons, Sounders, Loudspeakers, Sounder/ Beacon combinations, Junction boxes and Heat Detectors,

D2xS1* (Sounder), D2xS2* (Sounder), D2xL1 (Loudspeaker), D2xL2 (Loudspeaker), D2xC1* (Sounder Beacon),

D2xB1* (Beacon), D2xC2* (Sounder Beacon), D2xJ1* (Junction box), D2xH1-E (Heat Detector)

Optional accessory:

Flameproof "db", Increased Safety "ec" and Dust Ignition Protection by Enclosure "tc" Type of Protection:

Ex ec IIC T6...T1 Gc (D2xS1*, D2xS2*, D2xL1, D2xL2, D2xC1*, D2xB1*, D2xC2* and D2xJ1*) Marking:

> Ex db ec IIC T6 Gc (D2xH1-E) Ex tc IIIC T55°C...T110°C Dc

Please see Annex for additional temperature range information.

Approved for issue on behalf of the IECEx Erin LaRocco

Certification Body:

Position: Staff Engineer

Signature:

Erin Lakocco (for printed version)

2024-05-31

(for printed version)

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Certificate issued by:

UL Solutions (Demko) Borupvang 5A Ballerup DK-2750 **Denmark**





Certificate No.: IECEx ULD 14.0004X Page 2 of 5

Date of issue: 2024-05-31 Issue No: 8

Manufacturer: European Safety Systems Limited

Impress House Mansell Road Acton London

United Kingdom

Manufacturing European Safety Systems Limited

W3 7QH

locations: Impress House 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 Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"

Edition:7.0

Explosive atmospheres – Part 31: Equipment dust ignition protection by enclosure "t"

IEC 60079-31:2022 Edition:3.0

7 Explosive atmospheres - Part 7: Equipment protection by increased safety "e"

IEC 60079-7:2017

Edition:5.1

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/ExTR14.0009/00
 DK/ULD/ExTR14.0009/01
 DK/ULD/ExTR14.0009/02

 DK/ULD/ExTR14.0009/03
 DK/ULD/ExTR14.0009/04
 DK/ULD/ExTR14.0009/05

 DK/ULD/ExTR14.0009/06
 DK/ULD/ExTR14.0009/07
 DK/ULD/ExTR14.0009/08

Quality Assessment Report:

GB/SIR/QAR06.0020/12



Certificate No.: IECEx ULD 14.0004X Page 3 of 5

Date of issue: 2024-05-31 Issue No: 8

EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

D2xS1 (Sounder) comprises an aluminum 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.

D2xS2 (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 three M20 threaded entries may be provided for installation of appropriately certified cable entry devices by the end user.

D2xC1X05 (Sounder Beacon) is the same aluminum 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 aluminum 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 aluminum 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, $\frac{1}{2}$ NPT or $\frac{3}{4}$ 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 aluminum 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.

D2xB1LD3 (Beacon) is the same aluminum 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 "DC" followed by the voltage.

D2xC2X05 (Sounder Beacon) is the same aluminum housing as the D2xB1X05, coupled with the D2xS1 aluminum 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.

See Annex for additional information and see Equipment (continued) section of this CoC.

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.

Specific Conditions of Use for D2xB1LD***** and D2xC2LD******, D2xB1XH1DC024, D2xB1XH2DC024, D2xC2XH1DC024 and D2xC2XH2DC024:

· The equipment shall only be used in an area of at least pollution degree 2, as defined in IEC 60664-1

Specific Conditions of Use for D2xH1-E:

• End of line monitoring diode or an end of line monitoring resistor can be connected across the +ve and –ve terminals. These must maintain creepage and clearance distances to bare conductive parts at different potentials, of at least 1.8mm



Certificate No.: IECEx ULD 14.0004X Page 4 of 5

Date of issue: 2024-05-31 Issue No: 8

Equipment (continued):

D2xC2X10 (Sounder Beacon) is the same aluminum housing as the D2xB1X05, coupled with the D2xS1 aluminum 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 10 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 aluminum housing as the D2xB1X05, coupled with the D2xS1 aluminum 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.

D2xC2LD3 (Sounder Beacon) is the same aluminum housing as the D2xB1X05, coupled with the D2xS1 aluminum 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 "DC" followed by the voltage.

D2xJ1T (Junction Box) is the same aluminum housing as the D2xB1X05 with the junction box lid replacing the lens assembly lid. The enclosure is provided with a 12 Way Terminal Block. The D2xJ1T is approved as an accessory to the D2x product range.

D2xJ1D (Junction Box) is the same aluminum 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 to 12 AKZ 2.5 terminal blocks, and 4 AKE 2.5 Terminal blocks. The D2xJ1D is approved as an accessory to the D2x product range.

D2xB1XH1DC024 (Beacon) is the same aluminum 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 aluminum 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 aluminum housing as the D2xB1X05, coupled with the D2xS1 aluminum 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 aluminum housing as the D2xB1X05, coupled with the D2xS1 aluminum 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.

D2xL1 and D2xL2 (Loudspeaker) comprises an aluminium enclosure housing components to generate selectable tones. Up to three M20 threaded entries may be provided for installation of appropriately certified cable entry devices by the end user. D2xL1 incorporates a 15W driver, D2xL2 incorporates a 25W driver.

D2xH1-E (Heat Detector) utilises DsxJ1 junction box and is fitted with heat detector probe, installed in one of the threaded entries and may be fitted with optional indicator LED module (except for Ex ec models).

Please see Annex for additional information.



Certificate No.: IECEx ULD 14.0004X Page 5 of 5

Date of issue: 2024-05-31 Issue No: 8

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.
- Issue 4: Adds two new models (new LED driver boards), D2XB1LD3-DC024 and D2XC2LD3-DC024 and updates some of the existing models
- Issue 5: Change of protection concept for all models from "nA" to "ec".
- Issue 6: Addition of model D2xL* Loudspeakers. Addition of model D2xS2 sounders. Update to IEC 60079-31, 3rd Edition.
- Issue 7: Replacement of scheduled drawings to address typographical correction of D2xL* label, D2xL* instructions and D2xS2 instructions. No technical changes made.

Issue 8: Addition of D2xH1-E heat detector.

Annex:

Annex to IECEx ULD 14.0004X Issue 8_1.pdf



Annex to Certificate No.: IECEx ULD 14.0004X Issue No.:8

Page 1 of 9

TYPE DESIGNATION

Sounder:

Example - D2xS1DC024A1R

Model	Model Voltage (refer to electrical tables below)	Suffix
D2xS1 (low power)	AC115 AC230 DC024 DC048	Up to 4 alpha numeric characters, not associated with equipment certification
D2xS2F and D2xS2H (medium and high power, F and H	AC230	-A – Normal type. Up to 4 alpha numeric characters, not associated with equipment certification
denote the size of the horn which is a mechanical part outside of the type of protection)	DC024	-A – Normal typeS – SIL type. Up to 4 alpha numeric characters, not associated with equipment certification

Combined sounder beacon:

Example - D2xC1X05DC024AR/C

Model	Beacon energy (Joules)	Model Voltage (refer to electrical tables below)	Suffix
D2xC1X (low power)	05, 10	AC115 AC230 DC024 DC048	
D2xC2X (medium and high power)	05, 10	DC024 DC048 AC115 AC230	Up to 4 alpha numeric
D2xC2LD2 (LED beacon)	-	DC024 DC048 AC115 AC230	characters, not associated with equipment certification
D2xC2LD3 (LED beacon)	-	DC024	
D2xC2XH1 (xenon beacon)	-	DC024	
D2xC2XH2 (xenon beacon)	-	DC024	



Annex to Certificate No.: IECEx ULD 14.0004X Issue No.:8

Page 2 of 9

Beacon:

Example - D2xB1X05DC024

Example DZXDTX00D	0021		
Model	Beacon energy (Joules)	Model Voltage (refer to electrical tables below)	Suffix
		DC024	
D2xB1X	05, 10	DC048	
DZXBTX	05, 10	AC115	
		AC230	
D2xB1LD2	-	DC024	Up to 4 alpha numeric
(LED beacon)	-	AC115	characters, not associated
(LED beacon)	-	AC230	with equipment
D2xB1LD3 (LED beacon)	-	DC024	certification
D2xB1XH1	-	DC024	
(xenon beacon) D2xB1XH2 (xenon beacon)	-	DC024	

Junction Box:

Example - D2xJ1T

Model	Model Voltage (refer to electrical tables below)
D2xJ1T	54Vdc/230Vac
D2xJ1D	─ 50/60Hz Max, 10A Max

Loudspeaker:

Example - D2xL1FV100

Model	
D2xL1FV725	15W, 25V to 70V loudspeaker, small horn
D2xL2FV725	25W, loudspeaker, large horn
D2xL2HV725	25W, loudspeaker, extra-large horn
D2xL1FV100	15W, 100V loudspeaker, small horn
D2xL2FV100	25W, 100V loudspeaker, large horn
D2xL2HV100	25W, 100V loudspeaker, extra-large horn
D2xL1FR008	15W, 8 ohm resistance loudspeaker, small horn
D2xL1FR016	15W, 16 ohm resistance loudspeaker, small horn
D2xL2FR008	25W, 8 ohm resistance loudspeaker, large horn
D2xL2FR016	25W, 16 ohm resistance loudspeaker, large horn
D2xL2HR008	25W, 8 ohm resistance loudspeaker, extra-large horn
D2xL2HR016	25W, 16 ohm resistance loudspeaker, extra-large horn



Annex to Certificate No.: IECEx ULD 14.0004X Issue No.:8

Page 3 of 9

Heat Detector:

Tical Delec	rical Delector.			
Model	Model			
D2xH1-	E = Ex db ec / Ex tc heat detector			

Electrical Ratings:

Model	Electrical Ratings			
	DC	AC	Hz	Max. Amps, mA, (W)
D2xS1DC024	10-30	-	-	313 mA
D2xS1DC048	38-58	-	-	218 mA
D2xS1AC115	-	103.5-126.5	60	91 mA
D2xS1AC230	-	207-253	50	72 mA
D2xS2FDC024-A	11.5-54	-	-	12Vdc - P2: 289 mA, P3: 356 mA
D2xS2HDC024-A				24Vdc - P2: 324 mA, P3: 740 mA
				48Vdc - P2: 195 mA, P3: 391 mA
D2xS2FDC024-S	20-28	-	-	24Vdc - P2: 324 mA, P3: 740 mA
D2xS2HDC024-S				
D2xS2FAC230-A	-	100-240	50/60	115Vac - P2: 193 mA, P3: 479mA
D2xS2HAC230-A				230Vac – P2: 103 mA, P3: 221mA
D2xC1X05DC024	20-28	-	-	521 mA
D2xC1X05DC048	42-58	-	-	328 mA
D2xC1X05AC115	-	115-125	60	183 mA
D2xC1X05AC230	-	215-250	50	77 mA
D2xC1X10DC024	20-28	-	-	876 mA
D2xC1X10DC048	42-58	-	-	475 mA
D2xC1X10AC115	-	115-125	60	343 mA
D2xC1X10AC230	-	215-250	50	115 mA
D2xB1X05DC024	20-28	-	-	296 mA
D2xB1X05DC048	48	-	-	145 mA
D2xB1X05AC115	-	115-120	50/60	80 mA
D2xB1X05AC230	-	220-230	50/60	30 mA
D2xB1X10DC024	20-28	-	-	609 mA
D2xB1X10DC048	48	-	-	260 mA
D2xB1X10AC115	-	115-120	50/60	185 mA
D2xB1X10AC230	-	220-230	50/60	107 mA
D2xB1LD2DC024	18-54	-	-	346 mA
D2xB1LD2AC115	-	115-120	50/60	102.4 mA
D2xB1LD2AC230	-	220-230	50/60	75 mA
D2xB1LD3DC024	16-33	-	-	528 mA
D2xC2X05DC024	20-28	-	-	296+313 mA
D2xC2X05DC048	48	-	-	145+218 mA
D2xC2X05AC115	-	115-120	50/60	80+91 mA
D2xC2X05AC230	-	220-230	50/60	30+72 mA
D2xC2X10DC024	20-28	-	-	609+313 mA
D2xC2X10DC048	48	-	-	260+218 mA
D2xC2X10AC115	-	115-120	50/60	185+91 mA
D2xC2X10AC230	-	220-230	50/60	107+72 mA



Annex to Certificate No.: IECEx ULD 14.0004X Issue No.:8

Page 4 of 9

Model	Electrical Ratings			
	DC	AC	Hz	Max. Amps, mA, (W)
D2xC2LD2DC024	24	-	-	346+313 mA
D2xC2LD2DC048	48	-	-	115+218 mA
D2xC2LD2AC115	-	115-120	50/60	102.4+91 mA
D2xC2LD2AC230	-	220-230	50/60	75+72 mA
D2xC2LD3DC024	16-33	-	-	528+250 mA
D2xJ1T	54 Max	230 Max	50/60	10A
D2xJ1D	54 Max	230 Max	50/60	10A
D2xB1XH1DC024	20-28	-	-	296 mA
D2xB1XH2DC024	20-28	-	-	609 mA
D2xC2XH1DC024	20-28	-	-	449 mA
D2xC2XH2DC024	20-28	-	-	785 mA
D2xL1FV725	-	25 / 70	signal	15 W
D2xL2FV725	-	25 / 70	signal	25 W
D2xL2HV725	-	25 / 70	signal	25 W
D2xL1FV100	-	100	signal	15 W
D2xL2FV100	-	100	signal	25 W
D2xL2HV100	-	100	signal	25 W
D2xL1FR008	-	10.95V Max	signal	15 W
D2xL1FR016	-	15.49V Max	signal	15 W
D2xL2FR008	-	10.95V Max	signal	25 W
D2xL2FR016	-	15.49V Max	signal	25 W
D2xL2HR008	-	10.95V Max	signal	25 W
D2xL2HR016	-	15.49V Max	signal	25 W

Electrical Ratings Heat Detector:

Electrical Ratings fieat Detector.				
Model	Voltage	Current	Power	
	32Vac, 50/60Hz	5.0A		
D2xH1-E	32Vdc	1A	1.25 W, max	
	24Vdc	2A		

Temperature range and class for each Model Series:

Model	Type of protection	Temperature Class	Associated Ambient Temperature range
D2XS1	Ex ec IIC	T4	-40°C ≤ Tamb ≤ +50°C
DZXST	Ex tc IIIC	T90°C	-40°C ≤ Tamb ≤ +50°C
D2xSF2DC024-A	Ex ec IIC	T3	-55°C ≤ Tamb ≤ +75°C
D2xSH2DC024-A D2xS2FDC024-S	Ex ec IIC	T4	-55°C ≤ Tamb ≤ +55°C
D2xS2HDC024-S	Ex tc IIIC	T95°C	-55°C ≤ Tamb ≤ +75°C
Do 00510000 1	Ex ec IIC	T4	-55°C ≤ Tamb ≤ +75°C
D2xS2FAC230-A D2xS2HAC230-A	Ex ec IIC	T5	-55°C ≤ Tamb ≤ +50°C
B2X021171020071	Ex tc IIIC	T93°C	-55°C ≤ Tamb ≤ +75°C
D2XC1X05	Ex ec IIC	T2	-40°C ≤ Tamb ≤ +50°C
DZACTAUS	Ex tc IIIC	T90°C	-40°C ≤ Tamb ≤ +50°C



Annex to Certificate No.: IECEx ULD 14.0004X Issue No.:8

Page 5 of 9

Model	Type of protection	Temperature Class	Associated Ambient Temperature range
	Ex ec IIC	T2	-40°C ≤ Tamb ≤ +50°C
D2XC1X10	Ex ec IIC	T1	-40°C ≤ Tamb ≤ +50°C
	Ex tc IIIC	T110°C	-40°C ≤ Tamb ≤ +50°C
DO-DAL DO	Ex ec IIC	T4	-40°C ≤ Tamb ≤ +50°C
D2xB1LD2	Ex tc IIIC	T75°C	-40°C ≤ Tamb ≤ +50°C
D2xB1LD3	Ex ec IIC	T4	-40°C ≤ Tamb ≤ +50°C
DZXBTLD3	Ex tc IIIC	T75°C	-40°C ≤ Tamb ≤ +50°C
D2vB4V0EDC024	Ex ec IIC	T2	-40°C ≤ Tamb ≤ +50°C
D2xB1X05DC024	Ex tc IIIC	T80°C	-40°C ≤ Tamb ≤ +50°C
D2xB1X05DC048	Ex ec IIC	T3	-40°C ≤ Tamb ≤ +50°C
D2xB1X05AC115 D2xB1X05AC230	Ex tc IIIC	T95°C	-40°C ≤ Tamb ≤ +50°C
	Ex ec IIC	T1	-40°C ≤ Tamb ≤ +50°C
D2xB1X10DC024	Ex tc IIIC	T105°C	-40°C ≤ Tamb ≤ +50°C
D2xB1X10DC048	Ex ec IIC	T2	-40°C ≤ Tamb ≤ +50°C
D2xB1X10AC115 D2xB1X10AC230	Ex tc IIIC	T95°C	-40°C ≤ Tamb ≤ +50°C
	Ex ec IIC	T3	-40°C ≤ Tamb ≤ +50°C
D2xC2X05DC024	Ex tc IIIC	T75°C	-40°C ≤ Tamb ≤ +50°C
D2xC2X05DC048	Ex ec IIC	T3	-40°C ≤ Tamb ≤ +50°C
D2xC2X05AC115 D2xC2X05AC230	Ex tc IIIC	T95°C	-40°C ≤ Tamb ≤ +50°C
	Ex ec IIC	T2	-40°C ≤ Tamb ≤ +50°C
D2xC2X10DC024	Ex tc IIIC	T85°C	-40°C ≤ Tamb ≤ +50°C
D2xC2X10DC048	Ex ec IIC	T2	-40°C ≤ Tamb ≤ +50°C
D2xC2X10AC115 D2xC2X10AC230	Ex tc IIIC	T95°C	-40°C ≤ Tamb ≤ +50°C
D0C01 D0	Ex ec IIC	T4	-40°C ≤ Tamb ≤ +50°C
D2xC2LD2	Ex tc IIIC	T75°C	-40°C ≤ Tamb ≤ +50°C
DayCal Da	Ex ec IIC	T4	-40°C ≤ Tamb ≤ +50°C
D2xC2LD3	Ex tc IIIC	T75°C	-40°C ≤ Tamb ≤ +50°C
D0v I4T	Ex ec IIC	T6	-40°C ≤ Tamb ≤ +50°C
D2xJ1T	Ex tc IIIC	T55°C	-40°C ≤ Tamb ≤ +50°C
D2v I4D	Ex ec IIC	T6	-40°C ≤ Tamb ≤ +50°C
D2xJ1D	Ex tc IIIC	T55°C	-40°C ≤ Tamb ≤ +50°C
DovD4VLI4DC004	Ex ec IIC	T2	-40°C ≤ Tamb ≤ +50°C
D2xB1XH1DC024	Ex tc IIIC	T80°C	-40°C ≤ Tamb ≤ +50°C
DovD4VLIODO004	Ex ec IIC	T1	-40°C ≤ Tamb ≤ +50°C
D2xB1XH2DC024	Ex tc IIIC	T105°C	-40°C ≤ Tamb ≤ +50°C



IECEx ULD 14.0004X Issue No.:8 Annex to Certificate No.:

Page 6 of 9

Model	Type of protection	Temperature Class	Associated Ambient Temperature range
D2vC2VH4DC024	Ex ec IIC	T3	-40°C ≤ Tamb ≤ +50°C
D2xC2XH1DC024	Ex tc IIIC	T75°C	-40°C ≤ Tamb ≤ +50°C
D2xC2XH2DC024	Ex ec IIC	T2	-40°C ≤ Tamb ≤ +50°C
DZXCZAHZDC024	Ex tc IIIC	T85°C	-40°C ≤ Tamb ≤ +50°C
	Ex ec IIC	T3	-55°C ≤ Tamb ≤ +75°C
D2xL1		T4	-55°C ≤ Tamb ≤ +50°C
	Ex tc IIC	T109°C	-55°C ≤ Tamb ≤ +75°C
Dovi o	Ex ec IIC	T3	-55°C ≤ Tamb ≤ +75°C
D2xL2	Ex tc IIC	T119°C	-55°C ≤ Tamb ≤ +75°C
B0 114 E	Ex db ec IIC	T6	-40°C ≤ Tamb ≤ +50°C
D2xH1-E	Ex tc IIC	T55°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

D2xS1DC024A1R

Voltage: 10-30VDC Alarm Horn Nominal Current: 250mA (Ex)||30 Max Current: 313mA

MMYY @ 24VDC

Ex ec IIC T4 Gc Ta -40°C to +50°C Ex tc IIIC T90°C Dc Ta -40°C to +50°C

Canada Ex ec IIC T4A Gc X Ta -40°C to +50°C Ex tc IIIC T90°C Dc Ta -40°C to +50°C Ta -40°C to +50°C Class II Division 2 EFG T5

2 x cable entries M20 x 1.5mm. Use heat resistant cables and glands (rated 90°C)

DEMKO 14ATEX4786493904X (€ Type 4 / 4X / 13 / 3R IECEx ULD14.0004X

Year / Serial No. 14/01D1200001

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

D2xS1 Product label 2

D2xS1 ALARM HORN

USA / Canada Ta -40°C to +70°C Class I Division 2 ABCD T3C ABCD T4 Class I Division 2 Ta -40°C to +65°C Class I Division 2 ABCD T4A Ta -40°C to +50°C Class II Division 2 FG T5 Ta -40°C to +50°C Class II Division 2 FG Ta -40°C to +45°C Class III Division 1 & 2 Ta -40°C to +50°C

Class I Zone 2 AEx ec IIC T4 Gc Ta -40°C to +50°C Zone 22 AEx tc IIIC T90°C Dc Ta -40°C to +50°C

WARNING - POTENTIAL ELECTROSTATIC CHARGING HAZARD - CLEAN ONLY WITH A DAMP CLOTH WARNING - DO NOT OPEN WHEN AN EXPLOSIVE

ATMOSPHERE IS PRESENT AVERTISSEMENT - NE PAS OUVRIR UN PRÉSENCE D'ATMOSPHÈRE

EXPLOSIVE AVERTISSEMENT - DANGER POTENTIEL CHARGE ÉLECTROSTATIQUE NETTOYER UNIQUEMENT AVEC UN CHIFFON HUMIDE

Audible Signalling Appliance For Use In Hazardous Locations



IECEx ULD 14.0004X Annex to Certificate No.: Issue No.:8

Page 7 of 9

D2xS2 Product label 1

Alarm Horn

D2xS2FDC024 Nominal Voltage: 12/24/48Vdc Nominal Current: P2: 289/324/195mA Nominal Current: P3: 356/740/391mA MMYY

(Ex)||;i Voltage: 11.5-54VDC

ATEX / IECEx / UKEx

|| 3G

Ex ec IIC T3 Gc Ta -55°C to +75°C Ex ec IIC T4 Gc Ta -55°C to +55°C Ex to IIIC T95°C Do Ta -55°C to +75°C

2 x cable entries M20 x 1,5mm / Single 1/2" NPT Use heat resistant cables and glands (rated 90°C)

DEMKO 14ATEX4786493904X IECEx ULD14,0004X

Type 4 / 4X / 13 / 3R UL21UKEX2131X

Year / Serial No. 23/01D2200001

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

D2xS2 Product label 2

D2xS2FDC024

ALARM HORN

WARNING - POTENTIAL ELECTROSTATIC CHARGING HAZARD - CLEAN ONLY WITH A DAMP CLOTH WARNING - DO NOT OPEN WHEN AN EXPLOSIVE

ATMOSPHERE IS PRESENT

AVERTISSEMENT - NE PAS OUVRIR UN PRÉSENCE D'ATMOSPHÈRE

AVERTISSEMENT - DANGER POTENTIEL CHARGE ÉLECTROSTATIQUE NETTOYER UNIQUEMENT AVEC UN CHIFFON HUMIDE

Audible Signalling Appliance For Use In Hazardous Locations

D2xB1 Product label 1

D2xB1X05DC024

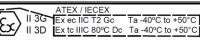
Voltage: 24VDC Max Current: 296mA Range: 20-28VDC

For detailed current & light output ratings, see instructions D211-00-251-IS-SC Cable entries: 2-off M20 x 1.5mm, 2-off $\frac{1}{2}$ " NPT & 1-off $\frac{3}{4}$ " NPT;

DEMKO 14 ATEX 4786493904X

Year / Serial No. 17/1DH22XXXXXX erial No. 17/1DH22XXXXXX — — — — — — — — — — — — Impress House, Mansell Rd, London UK W3 7QH

D2xB1 Product label 3



NEC / CEC Class / Div
Class I Division 2 ABCD T2D Ta -40°C to +50°C Class I Division 2 ABCD T3 Ta -40°C to +45°C Class II Division 2 FG T6 Ta -40°C to +50°C

Class III Div 1 & 2 Ta -40°C to +50°C
Use Heat Resistant Cables and Glands (rated 85°C)

D2xC1X05 Product label 1

D2xC1X05DC024A1R/C ALARM HORN/STROBE



Voltage: 20-28VDC

Nominal Current: 513mA Max Current: 521mA @ 20VDC

Ex ec IIC T2 Gc Ta -40°C to +50°C Ex tc IIIC T90°C Dc Ta -40°C to +50°C

Canada

Ex ec IIC T2B Gc X Ta -40°C to +50°C Ex ec IIC T2C Gc X Ta -40°C to +45°C Ex tc IIIC T120°C Dc Ta -40°C to +50°C Class II Division 2 EFG T4A Ta -40°C to +50°C

2 x cable entries M20 x 1.5mm.

Use heat resistant cables and glands (rated 90°C)

DEMKO 14ATEX4786493904X **(6** Type 4 / 4X / 13 / 3R IECEx ULD14.0004X

Year / Serial No. 14/01D5200001

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

D2xC1X05 Product label 2

D2xC1X05 ALARM HORN/STROBE

USA / Canada

Class I Division 2 ABCD T2B Ta -40°C to +70°C Class I Division 2 ABCD T2C Ta -40°C to +50°C Ta -40°C to +40°C ABCD T2D Class I Division 2 Class II Division 2 FG Ta -40°C to +50°C Class III Division 1 & 2 Ta -40°C to +50°C USA

Class I Zone 2 AEx ec IIC T2 Gc Ta -40°C to +50°C AEx tc IIIC T120°C Dc Ta -40°C to +50°C Zone 22

WARNING - POTENTIAL ELECTROSTATIC CHARGING HAZARD - CLEAN ONLY WITH A DAMP CLOTH WARNING - DO NOT OPEN WHEN AN EXPLOSIVE

ATMOSPHERE IS PRESENT AVERTISSEMENT - NE PAS OUVRIR UN PRÉSENCE D'ATMOSPHÈRE **EXPLOSIVE**

AVERTISSEMENT - DANGER POTENTIEL CHARGE ÉLECTROSTATIQUE NETTOYER UNIQUEMENT AVEC UN CHIFFON HUMIDE

Audible & Visual Signalling Appliance For

Use In Hazardous Locations

Not To Be Used As A Visual Public Mode Alarm Notification Appliance



Annex to Certificate No.: IECEx ULD 14.0004X Issue No.:8

Page 8 of 9

D2xC1X10 Product label 1

D2xC1X10DC024R/C ALARM HORN/STROBE



 $\langle \mathcal{E}_{\mathbf{x}} \rangle_{\text{II 3D}}^{\text{II 3G}}$ Max Current: 876mA @ 20VDC Ta -40°C to +50°C Ex ec IIC T1 Gc Ex ec IIC T2 Gc Ta -40°C to +40°C Ex tc IIIC T110°C Dc Ta -40°C to +50°C

Canada Ex ec IIC T1 Gc X Ta -40°C to +50°C Ex ec IIC T2 Gc X Ta -40°C to +40°C Ex tc IIIC T120°C Dc Ta -40°C to +50°C Class II Division 2 EFG T4A Ta -40°C to +50°C

2 x cable entries M20 x 1.5mm.

Use heat resistant cables and glands (rated 90°C)

DEMKO 14ATEX4786493904X (E **IP66** Type 4 / 4X / 13 / 3R IECEx ULD14.0004X

Year / Serial No. 14/01D6200001

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

D2xC1X10 Product label 2

D2xC1X10 ALARM HORN/STROBE USA / Canada

Class I Division 2 ABCD T1 Ta -40°C to +70°C Ta -40 $^{\circ}$ C to +50 $^{\circ}$ C Class I Division 2 ABCD T2 Class II Division 2 FG Ta -40°C to +50°C Class II Division 2 FG Ta -40°C to +40°C Class III Division 1 & 2 Ta -40 $^{\circ}$ C to +50 $^{\circ}$ C

Class I Zone 2 AEx ec IIC T1 Gc Class I Zone 2 AEx ec IIC T2 Gc Ta -40°C to +40°C Zone 22 AEx tc IIIC T120°C Dc Ta -40°C to +50°C

WARNING - POTENTIAL ELECTROSTATIC CHARGING HAZARD - CLEAN ONLY WITH A DAMP CLOTH WARNING - DO NOT OPEN WHEN AN EXPLOSIVE

ATMOSPHERE IS PRESENT

AVERTISSEMENT - NE PAS OUVRIR UN PRÉSENCE D'ATMOSPHÈRE EXPLOSIVE

AVERTISSEMENT - DANGER POTENTIEL CHARGE ÉLECTROSTATIQUE -NETTOYER UNIQUEMENT AVEC UN CHIFFON HUMIDE

Audible & Visual Signalling Appliance For

Use In Hazardous Locations

Not To Be Used As A Visual Public Mode Alarm Notification Appliance

D2xL Product label 1

D2xL1FV725 70 / 25V Loudspeaker 15W

Input: 70 / 25V Line

Power: 15W $\langle \mathcal{E}_{\mathbf{x}} \rangle \parallel 3 \overline{\mathsf{D}}$

Max I/P Voltage: 70.7 / 25VDC

ATEX / IECEx / UKEx

Ta -55°C to +75°C Ex ec IIC T3 Gc Ex ec IIC T4 Gc Ta -55°C to +50°C Ex tc IIIC T109°C Dc Ta -55°C to +75°C

2 x cable entries M20 x 1.5mm / Single 1/2" NPT Use heat resistant cables and glands (rated 90°C)

DEMKO 14 ATEX 4786493904X

IECEx ULD14.0004X IP66 UL21UKEX2131X

Year / Serial No. 23/1D3500001

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

D2xL Product label 2

D2xL2FV725 70 / 25V Loudspeaker 15W

WARNING - POTENTIAL ELECTROSTATIC CHARGING HAZARD - CLEAN ONLY WITH A DAMP CLOTH WARNING - DO NOT OPEN WHEN AN EXPLOSIVE

ATMOSPHERE IS PRESENT

AVERTISSEMENT - NE PAS OUVRIR UN PRÉSENCE D'ATMOSPHÈRE **EXPLOSIVE**

AVERTISSEMENT - DANGER POTENTIEL CHARGE ÉLECTROSTATIQUE - NETTOYER UNIQUEMENT AVEC UN CHIFFON HUMIDE

D2xH1-E Product label 2

Audible Signalling Appliance For Use In Hazardous Locations

D2xH1-E Product label 1

HEAT DETECTOR D2xH1-E

Maximum Wattage 1.25W

Year / Serial No. 24/D2H1EXXXXXX

WARNINGS
DO NOT OPEN WHEN AN EXPLOSIVE ATMOSPHERE IS PRESENT
DO NOT OPEN WHEN AN EXPLOSIVE ATMOSPHERE IS PRESENT
POTENTIAL ELECTROSTATIC CHARGING HAZARD - CLEAN ONLY WITH A DAMP CLOTH
ENTRIES: 2 x M20x1.5; 2 x 1/2 NPT

ATEX / IECEx / UKEx: Ex db ec IIC T6 Gc (Ta -40°C to +50°C) Ex did ec ilic 18 Gc (1a -40 °C to +50 °C)

Ex did ec ilic 18 Gc (1a -40 °C to +50 °C)

Ex did ec ilic 18 Gc (1a -40 °C to +50 °C)





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Annex to Certificate No.: IECEx ULD 14.0004X Issue No.:8

Page 9 of 9

D2x Warning label (all xenon units)

WARNING:

DO NOT OPEN WHEN AN EXPLOSIVE ATMOSPHERE IS PRESENT

PRESENT DO NOT OPEN WHEN ENERGISED POTENTIAL ELECTROSTATIC CHARGING HAZARD - CLEAN ONLY WITH A DAMP CLOTH HIGH VOLTAGE SHOCK HAZARD, WAIT 5 MINUTES AFTER REMOVING POWER BEFORE OPENING THE ENCLOSURE

DO NOT PAINT

AVERTISSEMENT:
NE PAS OUVRIR UN PRESENCE D'ATMOSPHERE EXPLOSIVE
NE PAS OUVRIR ENERGIE

DANGER POTENTIEL CHARGE ÉLECTROSTATIQUE NETTOYER UNIQUEMENT AVEC UN CHIFFON HUMIDE HAUT TENSION, RISK DE CHOC. ATTENDEZ 5 MINUTES

AVOIR DEBRANCHE L'ALIMENTATION AVANT D'OUVRIR LA

NE PAS PEINTURER

D2x Warning label (all LED units)

WARNING:

DO NOT OPEN WHEN AN EXPLOSIVE ATMOSPHERE IS PRESENT

DO NOT OPEN WHEN ENERGISED

POTENTIAL ELECTROSTATIC CHARGING HAZARD - CLEAN ONLY WITH A DAMP CLOTH

DO NOT PAINT

AVERTISSEMENT:

NE PAS OUVRIR UN PRESENCE D'ATMOSPHERE EXPLOSIVE NE PAS OUVRIR ENERGIE DANGER POTENTIEL CHARGE ÉLECTROSTATIQUE -NETTOYER UNIQUEMENT AVEC UN CHIFFON HUMIDE **NE PAS PEINTURER**

ROUTINE EXAMINATIONS AND TESTS

The xenon lamp assembly shall be routinely dielectrically strength tested. Tests shall be performed as described in IEC 60079-7, clause 6.1, at 1200Vac for a minimum of 1 second.

All models shall be routinely dielectrically strength tested. The tests shall be performed as described in IEC 60079-7, clause 6.1, at 1200Vac for a minimum of 1 second.

Heat Detector probe integrity of welds are to be verified by one of the inspection methods in accordance with Clause 16.3 of IEC 60079-1, 7th Edition.

All D2xH1-E shall be routinely dielectrically strength tested between live/neutral and earth/enclosure. The tests shall be performed as described in IEC 60079-7, clause 6.1, at 500V rms for at least 1 minute (or 600V rms for at least 100 ms).

LIST OF CERTIFIED EQUIPMENT AND/OR COMPONENTS

The following additional previous editions of Standards noted under the "Standards" section of this Certificate were applied to integral Components as itemized below. There are no significant safety related changes between these previous editions and the editions noted under the "Standards" section.

Product	Certificate Number	Standards
AR series reducers	IECEx CML 19.0022X Issue 1	IEC 60079-7:2015 (Ed 5.0)
		IEC 60079-31:2013 (2nd)
476 Adapters and reducers	IECEx BAS 11.0037X Issue 4	IEC 60079-31:2013 (2nd)
737 / 797 Adapters and reducers	IECEx CML 18.0177X Issue 2	IEC 60079-31:2013 (2nd)