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 INE 22.0059X**	Page 1 of 3	Certificate history:
Status:	**Current**	Issue No: 0	
Date of Issue:	2023-03-23		
Applicant:	**ZALUX S.A** Avenida Manuel Rodriguez Ayuso, 114 Centro Empresarial Miralbueno Planta 1a, Local P-2 ZARAGOZA 50012 **Spain**		
Equipment:	**Luminaires type STRONGEx1 G2**		
Optional accessory:			
Type of Protection:	**eb, mb, tb**		
Marking:	Ex eb mb IIC T6 or T5 or T4 Gb Ex tb IIIC T85°C Db IP66 The complete marking is detailed in Annex.		

Approved for issue on behalf of the IECEx Certification Body:	**Thierry HOUEIX**	
Position:	**Ex Certification Officer**	Signé électroniquement Digitally signed by Thierry HOUEIX Ex Certification Officer Délégué Certification
Signature: (for printed version)		
Date: (for printed version)	**2023-03-23**	

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

Certificate issued by:

INERIS
Institut National de l'Environnement Industriel et des Risques
BP n2 / Parc Technologique ALATA
F-60550 Verneuil-en-Halatte
France

controlling risks for sustainable development

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Manufacturer:
ZALUX S.A
Avenida Manuel Rodriguez Ayuso, 114
Centro Empresarial Miralbueno
Planta 1a, Local P-2
ZARAGOZA 50012
Spain

Manufacturing locations:

ZALUX S.A
Avenida Manuel Rodriguez Ayuso, 114
Centro Empresarial Miralbueno
Planta 1a, Local P-2
ZARAGOZA 50012
Spain

ZALUX S.A
Avda De Aragón 54
Alhama de Aragón (Zaragoza) 50230
Spain

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 60079-18:2017 Explosive atmospheres - Part 18: Protection by encapsulation "m"
Edition:4.1

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

IEC 60079-7:2017 Explosive atmospheres - Part 7: Equipment protection by increased safety "e"
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 Report:

FR/INE/ExTR22.0046/00

Quality Assessment Report:

FR/INE/QAR20.0006/02

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

The STRONGEx1 G2 luminaires are suitable for gas explosive atmospheres of Group IIC (EPL Gb) protected by “Ex eb mb” and for dust explosive atmospheres Group IIIC (EPL Db) protected by “Ex tb”.

The STRONGEx1 G2 luminaires are designed as follow:

- An enclosure made of an extruded tube in grey and transparent PMMA and two fiber-reinforced polyamide caps sealed on each extremity with a bicomponent PUR. Non sealed caps are designed with two smooth entries to install cable glands or plugs.
- For field connection, "Ex eb" terminals connected to the internal wiring are fixed inside the luminaires on a extruded aluminium tray.
- To change the lighting pattern, an optical diffusor can be affixed on the LED module.

The STRONGEx1 G2 luminaires are intended to receive:

- LED module size 600mm (STRONGEx1 G2: S2 6 * *) or 1200 mm (STRONGEx1 G2 : S2 12 * *) protected by “Ex mb” and covered by the Ex Component Certificate IECEx EXV 19.0027U according to the last editions of the applicable standards.
- LED Driver protected by “Ex eb mb” and covered by the Ex Component Certificate IECEx EXV 22.0018U according to the last editions of the applicable standards.
- Terminals protected by “Ex eb” covered by the Ex Component Certificate IECEx PTB 05.0003U according to the last editions of the applicable standards.
- For the versions STRONGEx1 G2 with option “LV”, an internal wiring up to 5 cables of 2.5 mm² can be installed to connect field terminal from both end of the luminaire. In such case the current passing through those cables must be limited to 10 A.

In addition, the versions STRONGEx1 G2 with option “EB” for emergency function include:

- A battery pack Ni-Cd 7.2V-4.0Ah protected by “Ex eb”
- A LED status indicator VSI protected by “Ex eb mb” and covered by the Ex Component Certificate IECEx EXV 22.0018U according to the last editions of the applicable standards.

The STRONGEx1 G2 luminaires get the protection degrees IP66 according to the standard IEC 60529

SPECIFIC CONDITIONS OF USE: YES as shown below:

- During the installation, the user will take into consideration that the equipment underwent only a shock corresponding to an energy of a low risk.
- For the risk from electrostatic discharge, the user shall read the instructions.
- The luminaires STRONGEx1 G2 shall only be employed with a power supply which has a prospective short circuit current not exceeding 1500A.

Annex:

IECEx INE 22.0059X-00_Annex.pdf

IECEx Certificate of Conformity

Certificate No.: IECEx INE 22.0059X

Issue No.: 0

Annex: IECEx INE 22.0059X-00_Annex.pdf

PARAMETERS RELATING TO THE SAFETY

Equipment code:

	STRONGEx1 G2: S2	xx	xxx	xx	-	xxx	xxxx		xx	xx
Size: led module length in dm	6 - 12									
Optics	no optic - PVW - XW									
Luminous flux	x 100 lumen									
Color Rending Index	830-840-850-857									
Electronic control	ET - ETDD									
Options										
- Passthrough cable	LV									
- Emergency 3 hours	EB3									

Ambient temperatures:

The luminaires can be used in the following ambient temperature range considering that the maximum ambient temperature could be reduced depending on the maximum power and the mounting positions:

- From -20°C to +35°C for emergency versions (Option “EB”)
- From -35°C to +55°C for standard versions.

Electrical parameters:

Supply Voltage: 220-240 Vac 50/60 Hz

Maximum power depending on the ambient temperature and mounting positions (as detailed in the instruction manual):

- For standard versions:

Variants STRONGEx1 G2 600 mm : S2 6 * * *					
Ta max.	+25°C	+40°C	+45°C	+50°C	+55°C
Ceiling mounting (except Pass through version)	27 W	27 W	27 W	21 W	N/A
Pole mounting				26 W	19 W
Vertical mounting				27 W	18 W
Ceiling mounting - Pass through version			23 W	16 W	N/A
Variants STRONGEx1 G1 1200 mm : S2 12 * * *					
Ta max.	+25°C	+40°C	+45°C	+50°C	+55°C
Ceiling mounting (except Pass through version)	51 W	51 W	51 W	44 W	34 W
Pole mounting				45 W	36 W
Vertical mounting				44 W	36 W
Celling - Pass through			48 W	40 W	30 W

- For emergency versions (Option “EB”)

Variants STRONGEx1 G2 600 mm : S2 6 * * EB			
Ta max.	+25°C	+30°C	+35°C
Ceiling mounting (except Pass through version)	31 W	31 W	31 W
Pole mounting			
Vertical mounting			
Variants STRONGEx1 G2 1200 mm : S2 12 * * EB			
Ta max.	+25°C	+30°C	+35°C
Ceiling mounting (except Pass through version)	55 W	55 W	N/A
Pole mounting			N/A
Vertical mounting			55 W

MARKING

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

- ZALUX
- 50230 ZARAGOZA – SPAIN
- STRONGEx1 G2: S2 *** (1)
- IECEx INE 22.0059X
- (Serial number)
- Ex eb mb IIC T4 Gb
- Ex tb IIIC T85°C Db
- IP66
- …°C ≤ Tamb ≤ …°C (2)
- **WARNINGS:**
  - DO NOT OPEN WHEN AN EXPLOSIVE ATMOSPHERE IS PRESENT
  - POTENTIAL ELECTROSTATIC CHARGING HAZARD – SEE INSTRUCTIONS
  - USE ONLY WITH ZALUX BATTERY PACK REF.10284497 (3)
  - REPLACE ONLY WHEN AN EXPLOSIVE ATMOSPHERE IS NOT PRESENT (3)

Additional marking on the battery pack foreseen for emergency versions:

- ZALUX
- TYPE : 10284497
- NiCd 7.2V - 4Ah
- ONLY USE ON LUMINAIRES STRONGEx1 G2

(1) The type is completed by a codification according to the manufacturing variations.

(2) Indication of the range of ambient temperature if different from -20°C to +40°C : See PARAMETERS RELATING TO THE SAFETY.

(3) Required only for the luminaires versions emergency (Option “EB”)

ROUTINE EXAMINATIONS AND TESTS

Each piece of equipment defined above has to have successfully passed; before delivery, in accordance with clause 7.1 of the IEC 60079-7 standard, a dielectric strength test on each of the different circuits of the connection units, performed according to the relevant standards.