



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

Certificate No.: **IECEx INE 19.0006X** Page 1 of 4 [Certificate history:](#)  
Issue 0 (2019-03-27)

Status: **Current** Issue No: 1

Date of Issue: 2021-02-17

Applicant: **APPLETON Group - ATX**  
E.I.N.  
35 rue André Durouchez  
CS 98017  
80084 Amiens cedex 2  
France

Equipment: **LED Luminaire type FNLED – Model: FNLED \*\*\*\*\***

Optional accessory:

Type of Protection: **ec, db, mb, tc, tb**

Marking: Ex ec IIC T5 ... T3 Gc for standard version without switch  
Ex db ec IIC T5 ... T3 Gc for standard version with switch  
Ex db ec mb IIC T4 Gc for emergency version  
Ex tc IIIC T60°C ... T80°C Dc IP66  
Ex tb IIIC T60°C ... T80°C Db IP66

Approved for issue on behalf of the IECEx  
Certification Body:

Position:

Signature:  
(for printed version)

Date:

Thierry HOUEIX

Ex Certification Officer



*Thierry Houeix*

Digitally signed by  
Thierry HOUEIX

2021-02-17

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BP n2 / Parc Technologique ALATA  
F-60550 Verneuil-en-Halatte  
France



controlling risks  
for sustainable development



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E.I.N.  
35 rue André Durouchez  
CS 98017  
80084 Amiens cedex 2  
**France**

Additional manufacturing locations:

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 60079-18:2017** 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/ExTR19.0007/01](#)

Quality Assessment Report:

[FR/LCI/QAR07.0008/16](#)



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## **EQUIPMENT:**

Equipment and systems covered by this Certificate are as follows:

This product is a LED Luminaire protected by increased safety "ec" and by enclosure "tb/tc". It exists in standard version (3K to 7K) or emergency maintained and non-maintained versions (3K and 5K only).

For standard version: one "db" positive safety Switch type IS3 certified IECEx LCI 10.0033U or "db" & "eb" switch type XESW... certified IECEx INE 11.0010U can be added as an option to switch the mains off before opening.

For emergency versions, the components below are added:

- "eb" & "mb" Battery Management Module type BMM certified IECEx UL 16.0097U,
- "mb" encapsulated LED indicator,
- "mb" encapsulated fuse,
- "db" positive safety switch type IS3 certified IECEx LCI 10.0033U or "db" & "eb" switch type XESW... certified IECEx INE 11.0010U to switch off the battery.

It comprises a body and a transparent lens with hinges. The sealing is achieved using a gasket fixed in the groove of the lens.

The LED luminaire has two configurations in function of axis and lens gaskets used. The ambient operating temperature range of the luminaire is different according to the configuration. See Annex.

The LED luminaire can be equipped with certified Ex components. The list is provided in Annex.

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

The drivers are factory programmed with required output current within the 'settable output current' range mentioned on the driver label. Programming the drivers on field is strictly prohibited.

Permitted supply short circuit: 500 A.

Beware of electrostatic charges: Wipe / clean only with a moist cloth.



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

For the issue 01 :

- Emergency (maintained and non-maintained) versions added
- Switch added for standard version
- IEC 60079-18 : 2017 added for emergency version
- IEC 60079-1 : 2014 added for switch
- EPL Db added

## **Annex:**

[IECEx INE 19.0006X-01\\_Annex.pdf](#)



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## PARAMETERS RELATING TO THE SAFETY

Standard version				
	MODEL			
	3K	4K	5K	7K
Rated supply voltage	120-277Vac, 50/60 Hz; 125-300Vdc			
Maximum current	0.3 A	0.35 A	0.45 A	0.65 A
Quantity of driver	1	1	1	2
Driver output current	0.52 A <sup>(1)</sup>	0.7 A <sup>(2)</sup>	0.84 A <sup>(3)</sup>	0.6 A <sup>(4)</sup>

(1) 520 mA is nominal value for 3000 lm output. Maxi 630 mA while keeping the same T. rating as 520 mA.

(2) 700 mA is nominal value for 4000 lm output. Minimum 631 mA while keeping the same T. rating as 700 mA.

(3) 840 mA is nominal value for 5000 lm output. Maxi 1 A while keeping the same T. rating as 840 mA.

(4) 600 mA is nominal value for 7000 lm output. Maxi 650 mA while keeping the same T. rating as 600 mA.

Emergency versions		
	MODEL	
	3K	5K
Rated supply voltage	120-277Vac, 50/60 Hz;	
Maximum current	0.3 A	0.45 A
Quantity of driver	1	1
Maximum driver output current	0.52 A	0.84 A

## MARKING

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

- APPLETON – ATX and/or EMERSON
- 80084 AMIENS – France
- Type: FNLED
- Model: FNLED\*\*\*\*\* (1)
- IECEX INE 19.0006X
- Serial Number
- Ex ec IIC T5 ... T3 <sup>(2)</sup> Gc for standard version without switch
- Ex db ec IIC T5 ... T3 <sup>(2)</sup> Gc for standard version with switch
- Ex db ec mb IIC T4 <sup>(2)</sup> Gc for emergency version
- Ex tb IIIC T60°C ... T80°C <sup>(2)</sup> Db
- Ex tc IIIC T60°C ... T80°C <sup>(2)</sup> Dc
- IP66
- -40°C or -30°C <sup>(3)</sup> ≤ Ta ≤ +40°C to +55°C <sup>(2)</sup> depending on the model (Standard version without Ex-Tech switch)
- -40°C or -30°C <sup>(3)</sup> ≤ Ta ≤ +40°C to +50°C <sup>(2)</sup> depending on the model (Standard version with Ex-Tech switch)
- -20°C ≤ Ta ≤ +40°C to +50°C <sup>(2)</sup> depending on the model (Emergency version)
- Rated voltage
- Maximum current
- WARNING:
  - DO NOT OPEN WHEN ENERGIZED
  - DO NOT OPEN WHEN AN EXPLOSIVE ATMOSPHERE IS PRESENT
  - BEWARE OF ELECTROSTATIC CHARGES: WIPE / CLEAN ONLY WITH A MOIST CLOTH



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(1) Number Logic:

**FNLED**

X

X

X

X

X

X

X

**Lumen Output\***  
3-3K lm output  
4-4K lm output  
5-5K lm output  
7-7K lm output

**Voltage**  
BU - 120-277 Vac, 50/60  
Hz, 125-300Vdc

**Mounting Version**  
S – Surface/suspension Mount Standard Wiring  
L – Surface/suspension Mount Dual Loop in/out Through Wiring  
(Single phase)  
P – Pole Mounting

**Cable Entry**  
A - Armored M20  
N - Unarmored M25

**LED Position**  
Blank – Direct (with diffuser)  
I – Indirect (without diffuser)

**Color Temperature**  
C - Cool 5000 K  
N - Neutral 4000 K

**Options**  
D – Diffused Lens  
E – 3H Emergency  
F – Cutoff Switch  
V – 0-10 V Dimming

**\* Lumen Output:**

- Standard version: 3K to 7K
- Emergency versions: 3K and 5K only



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(2) Maximum surface temperatures according to Maximum ambient temperature:

Standard version						
Explosive atmosphere			Gas			
Tamb max			+40°C	+45°C	+50°C	+55°C
Model	Position	Diffuser	Temperature class			
2ft 3000Lm	Horizontal	with or without	T4	T4	T4	T4
	Vertical	with or without	T4	T4	T4	T4
2ft 4000Lm	Horizontal	with or without	T4	T4	T3	T3
	Vertical	with or without	T4	T4	T4	T3
4ft 5000Lm	Horizontal	with or without	T5	T4	T4	T4
	Vertical	with or without	T5	T4	T4	T4
4ft 7000Lm	Horizontal	with or without	T4	T4	T4	T4
	Vertical	with or without	T4	T4	T4	T4

Standard version						
Explosive atmosphere			Dust			
Tamb max			+40°C	+45°C	+50°C	+55°C
Model	Position	Diffuser	Tsurface			
2ft 3000Lm	Horizontal	with or without	60	65	70	75
	Vertical	with or without	60	65	70	75
2ft 4000Lm	Horizontal	with or without	60	65	70	75
	Vertical	with or without	60	65	70	75
4ft 5000Lm	Horizontal	with or without	60	65	70	75
	Vertical	with or without	65	70	75	80
4ft 7000Lm	Horizontal	with or without	65	70	75	80
	Vertical	with or without	65	70	75	80



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Emergency versions					
Explosive atmosphere			Gas		
Tamb max			+40°C	+45°C	+50°C
Model	Position	Diffuser	Temperature class		
2ft 5000K or 4000K 3000Lm	Horizontal	with or without	T4	T4	T4
	Vertical	with or without	T4	T4	T4
4ft 5000K or 4000K 5000Lm	Horizontal	with or without	T4	T4	T4
	Vertical	with or without	T4	T4	T4

Emergency versions					
Explosive atmosphere			Dust		
Tamb max			+40°C	+45°C	+50°C
Model	Position	Diffuser	Tsurface		
2ft 5000K or 4000K 3000Lm	Horizontal	with or without	60	65	70
	Vertical	with or without	60	65	70
4ft 5000K or 4000K 5000Lm	Horizontal	with or without	60	65	70
	Vertical	with or without	65	70	75

(3) Minimum ambient temperatures configurations:

Configuration	Configuration 1	Configuration 2
Type of axis gasket	NBR 70sh 36624	EPDM 55914
Type of lens gasket	EPDM BK1101	XIAMETER Silicon
Minimum ambient temperature	-30°C	-40°C

## ROUTINE EXAMINATIONS AND TESTS

Each piece of equipment defined above must have successfully passed before delivery:

- In accordance with clause 7.1 of IEC 60079-7 standard, a test of dielectric strength on each of the different circuits.
- In addition, for the encapsulated LED Indicator and the encapsulated Fuse:

Each pieces of equipment defined above:

- shall be subjected to a visual inspection according to 9.1 of IEC 60079-18;
- shall be subjected to a dielectric strength test to test the isolation of circuits from each other and from their environment according to 9.2 of IEC 60079-18.





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## CONFIGURATION OF THE AXIS AND LENS GASKET

Configuration	Configuration 1	Configuration 2
Type of axis gasket	NBR 70sh 36624	EPDM 55914
Type of lens gasket	EPDM BK1101	XIAMETER Silicon
Ambient temperature range	-30°C up to +55°C (standard version without Ex-Tech switch) -30°C up to +50°C (standard version with Ex-Tech switch) -20°C up to +50°C (emergency versions)	-40°C up to +55°C (standard version without Ex-Tech switch) -40°C up to +50°C (standard version with Ex-Tech switch) -20°C up to +50°C (emergency versions)

## LIST OF Ex COMPONENTS

Designation of component	Manufacturer	Type	Certificate	Standards	Ex marking
LED Driver	Appleton Group - ATX	APMS050C135UD	IECEx ITS 17.0014U	IEC 60079-0 : 2011 <sup>(3)</sup> IEC 60079-7 : 2015 <sup>(3)</sup>	Ex ec IIC Gc
Feed through and protective conductor terminal blocks	Weidmüller Interface GmbH & Co. KG	WDU-WPE	IECEx ULD 14.0005U	IEC 60079-0:2017 IEC 60079-7:2015 <sup>(1)</sup>	Ex eb IIC Gb
Terminal Strips	Weidmüller Interface GmbH & Co	MK 3	IECEx SIR 05.0036U	IEC 60079-0:2004 <sup>(2)</sup> IEC 60079-7:2001 <sup>(2)</sup>	Ex e II
Switch	Appleton - ATX	IS3	IECEx LCI 10.0033U	IEC 60079-0:2017 IEC 60079-1:2014	Ex db IIC Gb
Switch	Ex-tech solution	XESW...	IECEx INE 11.0010U	IEC 60079-0:2017 IEC 60079-1:2014 IEC 60079-7: 2017	Ex db eb IIC Gb

(1) The Ex component is not impacted by the major technical changes of IEC 60079-7:2017

(2) The Ex component is not impacted by the major technical changes of IEC 60079-0:2007, IEC 60079-0:2011, IEC 60079-0:2017, IEC 60079-7:2006, IEC 60079-7:2015 and IEC 60079-7:2017

(3) The Ex component is not impacted by the major technical changes of IEC 60079-0:2017 and IEC 60079-7:2017

In addition, the emergency versions are equipped with the following certified component:

Designation of component	Manufacturer	Type	Certificate	Standards	Ex marking
Emergency Lighting and Power Equipment Component	Appleton - ATX	BMM	IECEx UL 16.0097U	IEC 60079-0 : 2011 <sup>(4)</sup> IEC 60079-18 : 2017 IEC 60079-7: 2017	Ex eb mb IIC Gb

(4) The Ex component is not impacted by the major technical changes of IEC 60079-0:2017