



# 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 INE 18.0037X Issue No: 0 Certificate history:  
Issue No. 0 (2018-12-19)

Status: Current Page 1 of 4

Date of Issue: 2018-12-19

Applicant: TechNed BENELUX BV  
Veersteeg 15  
4212 LR Spijk  
The Netherlands

Equipment: TNAML-LED\*\*\*  
Optional accessory:

Type of Protection: db, eb, mb, op is, tb

Marking:  
Ex db eb mb op is IIC T6 Gb  
Ex op is tb IIIC T85°C Db IP66  
The complete marking is specified in Annex.

Approved for issue on behalf of the IECEX  
Certification Body:

Olivier COTTIN

Position:

Head of Equipment and Corporate Services Unit

Signature:  
(for printed version)



Date:

2018.12.19

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

Certificate issued by:

INERIS  
Institut National de l'Environnement Industriel  
et des Risques, BP n2  
Parc Technologique ALATA  
France



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Page 2 of 4

Manufacturer: **TechNed BENELUX BV**  
Veersteeg 15  
4212 LR Spijk  
The Netherlands

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 : 2011</b> Edition:6.0	Explosive atmospheres - Part 0: General requirements
<b>IEC 60079-1 : 2014-06</b> Edition:7.0	Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
<b>IEC 60079-18 : 2017</b> Edition:4.1	Explosive atmospheres - Part 18: Protection by encapsulation "m"
<b>IEC 60079-28 : 2015</b> Edition:2	Explosive atmospheres - Part 28: Protection of equipment and transmission systems using optical radiation
<b>IEC 60079-31 : 2013</b> Edition:2	Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"
<b>IEC 60079-7 : 2017</b> Edition:5.1	Explosive atmospheres - Part 7: Equipment protection by increased safety "e"

*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:

FR/INE/ExTR18.0039/00

##### Quality Assessment Report:

NL/DEK/QAR11.0036/04



# IECEX Certificate of Conformity

Certificate No: IECEX INE 18.0037X

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Date of Issue: 2018-12-19

Page 3 of 4

## Schedule

### EQUIPMENT:

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

The luminaires type TNAML-LED\*\*\* consist of :

- A main aluminium housing with glass window sealed on the body : 2 sizes of housing are intended, "Size 1" (smallest size) and "Size 2" (biggest size).
- LED module(s) inside the main housing : maximum of 2 encapsulated LED strips for Size 1, and 6 encapsulated LED strips for Size 2. The LED sources including the electrical parameters are specified in the descriptive documents of the manufacturer.
- A ballast housing inside the main housing
- One or two terminal box(es) fixed on the main housing.

For gas explosive atmosphere of Group IIC, the luminaire is protected by :

- "Ex eb" for main housing, terminal box(es) and internal wiring. The terminal box includes terminals covered by the component certificate IECEX PTB 05.0014U. Optional terminals covered by the certificate IECEX PTB 04.0003U could be installed inside the main housing. These terminals are certified in accordance with the standard IEC 60079-1:2011 and IEC 60079-7:2015.
- "Ex db" for the ballast housing composed of an aluminium enclosure with threaded caps and sealed bushings.
- "Ex mb" for the encapsulated LED strip(s) in accordance with the descriptive document of the manufacturer.

For dust explosive atmosphere of Group IIIC, the luminaire is protected "Ex tb" ensured by the main housing and terminal box(es) enclosures.

For gas and dust explosive atmospheres, the luminaire is protected also by the type of protection "op is". After installation, this luminaire is completely sealed: the enclosure cannot be opened.

This equipment gets the degrees of protection IP66 in accordance with IEC 60529 standard.

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

The lighting compartment of the luminaire shall never be opened to avoid humidity closed to the encapsulated LED module.

The lengths of the flameproof joints of the ballast housing are greater than the values stated in the tables of the standard IEC 60079-1. The flameproof joints are not intended to be repaired.

The other specific conditions are stipulated in the user manual.



# IECEX Certificate of Conformity

Certificate No: IECEx INE 18.0037X

Issue No: 0

Date of Issue: 2018-12-19

Page 4 of 4

**Additional information:**

**Annex:**

IECEX INE 18.0037X-00\_Annex.pdf



# IECEX Certificate of Conformity

Certificate No.: IECEX INE 18.0037X

Issue No.: 0

Page 1 of 1

Annex: IECEX INE 18.0037X-00\_Annex.pdf

## PARAMETERS RELATING TO THE SAFETY

Rated supply voltage: From 230 to 250 Vac  $\pm$ 5% (50-60Hz)

Model of the luminaire	Maximum power of luminaire	Ambient temperature	Temperature class		T <sub>cable</sub>
			Gas	Dust	
Size 1 with 1 row of 1 LED strip	12 Watt	From -30°C to +55°C	T6	T85°C	N/A
Size 1 with 2 rows of 1 LED strip	19 Watt				
Size 2 with 1 row of 2 LED strip	21 Watt				
Size 2 with 2 rows of 2 LED strip	42 Watt				
Size 2 with 3 rows of 2 LED strip	63 Watt				

## MARKING

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

TechNed BENELUX BV

The Netherlands

TNAML-LED... (\*)

IECEX INE 18.0037X

(Serial number)

Ex db eb mb op is IIC T6 Gb and/or

Ex op is tb IIIC T85°C Db IP66

T.amb : -30°C up to 55°C

(Rated voltage and rated current and/or rated power)

WARNING:

- o DO NOT OPEN THE ENCLOSURE

(\*) The type is completed by numbers and letters corresponding to the manufacturing variations.

## ROUTINE EXAMINATIONS AND TESTS

- In accordance with clause 16.2 of the IEC 60079-1 standard, the "Ex db" ballast housing is exempted of routine test due to the fact its internal volume is less than 10 cm<sup>3</sup>.
- In accordance with clause 9.1 from the IEC 60079-18 standard, each encapsulated LED module of luminaire shall be subjected to a visual examination of encapsulation.
- In accordance with clause 7.1 of the IEC 60079-7 standard, a dielectric strength test shall be performed according to the relevant standards.