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

Certificate No.:	IECEx INE 13.0075X issue No.:0	Certificate history:
Status:	**Current**	
Date of Issue:	**2014-01-31**	Page 1 of 3

Applicant: **FEAM**
Via Mario Pagano, 3
I - 20090 Trezzano sul Naviglio (MI)
Italy

Electrical Apparatus: **Lighting fixtures type EVAC...**
Optional accessory:

Type of Protection: **d and tb**

Marking: Ex d IIC T6...T2 Gb
Ex tb IIIC T85°C...T225°C Db IP66

Approved for issue on behalf of the IECEx Certification Body: Thierry HOUEIX

Position: Ex Certification Officer

Signature:
(for printed version)

Date: 2014-01-31

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:

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

INERIS

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IECEx Certificate of Conformity

Certificate No.: IECEx INE 13.0075X

Date of Issue: **2014-01-31** Issue No.: **0**

Manufacturer: **FEAM**
Via Mario Pagano, 3
I - 20090 Trezzano sul Naviglio (MI)
Italy

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 electrical 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:

IEC 60079-0 : 2011 Edition: 6.0	Explosive atmospheres - Part 0: General requirements
IEC 60079-1 : 2007-04 Edition: 6	Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
IEC 60079-31 : 2008 Edition: 1	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:
FR/INE/ExTR13.0075/00

Quality Assessment Report:

IT/CES/QAR09.0003/04

IECEx Certificate of Conformity

Certificate No.: IECEx INE 13.0075X

Date of Issue: **2014-01-31** Issue No.: **0**

Schedule

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

These lighting fixture made in aluminium alloy are intended to receive different type of lamps.
When they are fitted with discharge or certain LED lamps the ballast or the electronic module is installed inside the UNIT PRC covered by IECEx INE 13.0060X or it can be installed inside another enclosure covered by an IECEx certificate for this application the two compartments are separated by a sealed bushing.
These lighting fixtures get the dregrees of protection IP66 in accordance with IEC 60529 standard.

CONDITIONS OF CERTIFICATION: YES as shown below:

The depth engagement of the threaded joints is superior to the value specified in the table of IEC 60079-1 standard.

Annex: IECEx INE 13.0075X-00_Annex.pdf

IECEx Certificate of Conformity

Certificate No.: IECEx INE 13.0075X

Date of Issue: **2014-01-31** Issue No.: **0**

Annexe: IECEx INE 13.0075X-00_Annex.pdf

PARAMETERS RELATING TO THE SAFETY

Maximum supply voltage for ballasts or electronic modules : 230V, 240V or 277 V in accordance with the type of ballast or electronic module and the lamp.

For the different types and powers of lamps see table below.

These Lighting fixtures can be use in the following range ambient temperatures from -20°C or -60°C to +40°C or +60°C.

MARKING

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

- FEAM
- I - 20090 Trezzano sul Naviglio (MI)
- EVAC (*)
- IECEx INE 13.0075X
- (Serial number)
- Ex d IIC T(*) Gb
- Ex tb IIIC T(*) Db IP66
- (*) < Tamb < (*)
- CABLE GLAND : (Type and size)
- WARNINGS : DO NOT OPEN WHEN ENERGIZED
  DO NOT OPEN IF AN EXPLOSIVE ATMOSPHERE MAY BE PRESENT

(*) Type is completed by numbers and letters corresponding to the corresponding to alternatives of execution.

ROUTINE EXAMINATIONS AND TESTS

In accordance with clause 16.1 of the IEC 60079-1 standard each apparatus defined above has to have successfully passed, before delivery, an overpressure test of a period comprised between 10 and 60 seconds under:

- 12.9 bar for using at ambient temperature down to -20°C.
- 14.2 bar for using at ambient temperature down to -60°C.

IECEx Certificate of Conformity

Type EVAC100... or EVAC101...

Type and power of lamp	Ambient temperature range	Concerned explosive atmosphere		Cable temperature
		Gas	Dusts	
100 W Incandescent	-20°C or-60°C/+40°C	T4	T135°C	N.C
	-20°C or-60°C /+60°C			95°C
100 W Halogen	-20°C or-60°C/+40°C	T4	T135°C	N.C
	-20°C or-60°C /+60°C			95°C
12 W LED	-20°C or-60°C/+40°C	T6	T85°C	N.C
	-20°C or-60°C /+60°C			N.C
100 W Metal halide	-20°C or-60°C/+40°C	T3	T140°C	NC
	-20°C or-60°C /+60°C		T160°C	N.C
80 W Mercury vapour	-20°C or-60°C/+40°C	T4	T135°C	N.C
	-20°C or-60°C /+60°C	T3	T160°C	N.C
70 W Sodium vapour	-20°C or-60°C/+40°C	T4	T135°C	N.C
	-20°C or-60°C /+60°C			N.C
15 W Fluorescent	-20°C or-60°C/+40°C	T6	T85°C	N.C
	-20°C or-60°C /+60°C			N.C
25 W AC Incandescent 21 W DC	-20°C or-60°C/+40°C	T6	T85°C	N.C
	-20°C or-60°C /+60°C	T5	T95°C	N.C

N.C. : Not Concerned

IECEx Certificate of Conformity

Type EVAC200... or EVAC201...

Type and power of lamp	Ambient temperature range	Concerned explosive atmosphere		Cable temperature
		Gas	Dust	
200 W Incandescent	-20°C or-60°C/+40°C	T4	T135°C	95°
	-20°C or-60°C /+60°C	T3	T160°C	120°C
160 W Blended light	-20°C or-60°C/+40°C	T3	T140°C	95°C
	-20°C or-60°C /+60°C		T160°C	120°C
150 W Halogen	-20°C or-60°C/+40°C	T4	T135°C	N.C.
	-20°C or-60°C /+60°C	T3	T160°C	95°C
125 W Mercury vapour	-20°C or-60°C/+40°C	T3	T140°C	N.C.
	-20°C or-60°C /+60°C		T160°C	N.C.
100 W Sodium vapour	-20°C or-60°C/+40°C	T3	T140°C	N.C.
	-20°C or-60°C /+60°C		T160°C	N.C.
25 W Xenon flash	-20°C or-60°C/+40°C	T6	T85°C	N.C.
	-20°C or-60°C /+60°C			N.C.
23 W Fluorescent	-20°C or-60°C/+40°C	T6	T85°C	N.C.
	-20°C or-60°C /+60°C			N.C.

N.C. : Not Concerned

Type EVAC 200 LED or EVAC 201 LED

Type and power of lamp	Ambient temperature range	Concerned explosive atmosphere		Cable temperature
		Gas	Dust	
95 W LED	-20°C or-60°C/+40°C	T5	T85°C	N.C.
	-20°C or-60°C /+60°C	T4	T105°C	90°C

N.C. : Not Concerned

IECEx Certificate of Conformity

Type EVAC 300 or 301

Type and power of lamp	Ambient temperature range	Concerned explosive atmosphere		Cable temperature
		Gas	Dusts	
300 W Incandescent	-20°C or-60°C/+40°C	T4	T135°C	95°C
	-20°C or-60°C /+60°C	T3	T160°C	120°C
250 W Halogen	-20°C or-60°C/+40°C	T4	T135°C	95°C
	-20°C or-60°C /+60°C	T3	T160°C	120°C
250 W Sodium vapour	-20°C or-60°C/+40°C	T3	T160°C	N.C.
	-20°C or-60°C /+60°C		T190°C	
250 W Metal halide	-20°C or-60°C/+40°C	T3	T140°C	N.C.
	-20°C or-60°C /+60°C		T160°C	
250 W Blended light	-20°C or-60°C/+40°C	T3	T160°C	95°C
	-20°C or-60°C /+60°C		T190°C	120°C
150 W Metal halide	-20°C or-60°C/+40°C	T4	T135°C	N.C.
	-20°C or-60°C /+60°C	T3	T160°C	
150 W Sodium vapour	-20°C or-60°C/+40°C	T4	T135°C	N.C.
	-20°C or-60°C /+60°C			
25 W Rotallarm	-20°C or-60°C/+40°C	T6	T85°C	N.C.
	-20°C or-60°C /+60°C			
3 x 18W Fluorescent	-20°C or-60°C/+40°C	T6	T85°C	N.C.
	-20°C or-60°C /+60°C			

N.C. : Not Concerned

IECEx Certificate of Conformity

Certificate No.: IECEx INE 13.0075X

Date of Issue: **2014-01-31** Issue No.: **0**

Annexe: IECEx INE 13.0075X-00_Annex.pdf

Type EVAC 500 or 501

Type and power of lamp	Ambient temperature range	Concerned explosive atmosphere		Cable temperature
		Gas	Dusts	
500 W Incandescent	-20°C or-60°C/+40°C	T3	T160°C	120°C
	-20°C or-60°C /+60°C		T190°C	140°C
500 W Blended light	-20°C or-60°C/+40°C	T2	T205°C	140°C
	-20°C or-60°C /+60°C		T225°C	160°C
400 W Mercury vapour	-20°C or-60°C/+40°C	T3	T190°C	95°C
	-20°C or-60°C /+60°C	N.A	N.A	N.A.
400 W Sodium vapour	-20°C or-60°C/+40°C	T3	T190°C	85°C
	-20°C or-60°C /+60°C	N.A	N.A	N.A
400 W Metal halide	-20°C or-60°C/+40°C	T3	T160°C	N.C.
	-20°C or-60°C /+60°C		T190°C	85°C
250 W Mercury vapour	-20°C or-60°C/+40°C	T3	T160°C	N.C.
	-20°C or-60°C /+60°C		T190°C	85°C
3 x 36W Fluorescent	-20°C or-60°C/+40°C	T6	T85°C	N.C.
	-20°C or-60°C /+60°C	T5		
60 W Fixed or flashing LED	-20°C or-60°C/+40°C	T6	T85°C	N.C.
	-20°C or-60°C /+60°C	T5		

N.C. : Not Concerned
N.A. : Not authorized

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

Certificate No.:	IECEx INE 13.0075X	Issue No: 1	Certificate history:
			Issue No. 1 (2015-07-22)
Status:	**Current**	Page 1 of 4	Issue No. 0 (2014-01-31)
Date of Issue:	**2015-07-22**		
Applicant:	**FEAM** Via Mario Pagano, 3 I - 20090 Trezzano sul Naviglio (MI) **Italy**		
Equipment:	**Lighting fixtures type EVAC...**		
Optional accessory:			
Type of Protection:	**d and tb**		
Marking:	Ex d IIC T6...T2 Gb Ex tb IIIC T85°C...T225°C Db IP66		

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:

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:

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

INERIS

IECEx Certificate of Conformity

Certificate No:	IECEx INE 13.0075X	Issue No: 1
Date of Issue:	**2015-07-22**	Page 2 of 4
Manufacturer:	**FEAM** Via Mario Pagano, 3 I - 20090 Trezzano sul Naviglio (MI) **Italy**	
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 electrical 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:

IEC 60079-0 : 2011 Edition:6.0	Explosive atmospheres - Part 0: General requirements
IEC 60079-1 : 2007-04 Edition:6	Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
IEC 60079-31 : 2013 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:

FR/INE/ExTR13.0075/00 FR/INE/ExTR13.0075/01

Quality Assessment Report:

IT/CES/QAR09.0003/04 IT/CES/QAR09.0003/05

IECEx Certificate of Conformity

Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

These lighting fixture made in aluminium alloy are intended to receive different type of lamps.
When they are fitted with discharge or certain LED lamps the ballast or the electronic module is installed inside the UNIT PRC covered by IECEx INE 13.0060X or it can be installed inside another enclosure covered by an IECEx certificate for this application the two compartments are separated by a sealed bushing.
These lighting fixtures get the dregrees of protection IP66 in accordance with IEC 60529 standard.

CONDITIONS OF CERTIFICATION: YES as shown below:

The depth engagement of the threaded joints is superior to the value specified in the table of IEC 60079-1 standard.

During the installation, the user will take into consideration that teh window of EVAC 500 LED or EVAC 501 LED underwent only a shock corresponding to an energy of a low risk at 2J.

IECEx Certificate of Conformity

Certificate No:	IECEx INE 13.0075X	Issue No: 1
Date of Issue:	**2015-07-22**	Page 4 of 4

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

ISSUE 1:

- Addition of new models type EVAC 500 LED and EVAC 501 LED.
- Possibility to install inside the EVAC 501 the following types of lamps:

- 250 W Sodium vapor.
- 250 W Metal halide.

- Possibility to install inside the EVAC 200 or EVAC 201 the following types of lamps:
- Xenon 2J.
- Maxixenon 2J.
- Maxixenon 6J.

Annex:

IECEx INE 13.0075X_Annex-01.pdf

IECEx Certificate of Conformity

Certificate No.: IECEx INE 13.0075X

Annexe: IECEx INE 13.0075X-01_Annex.pdf

PARAMETERS RELATING TO THE SAFETY

Maximum supply voltage for ballasts or electronic modules: 230V, 240V or 277 V in accordance with the type of ballast or electronic module and the lamp.

For the different types and powers of lamps see table below.

The Lighting fixture type EVAC 500 LED and EVAC 501 LED can be use in the following range ambient temperatures:

From -20°C to 40°C or 60°C or from -40°C to +40°C or +60°C.

The other Lighting fixture can be use in the following range ambient temperatures:

From -20°C to 40°C or 60°C or from -60°C to +40°C or +60°C.

MARKING

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

- FEAM
- I - 20090 Trezzano Sul Naviglio (MI)
- EVAC **(1)**
- IECEx INE 13.0075X
- (Serial number)
- Ex d IIC T6...T2 Gb **(*)**
- Ex tb IIIC T85°C...T225°C Db IP66 **(*)**
- ...°C < Tamb < ...C **(2)**
- CABLE GLAND : (type and size)
- **WARNINGS:** DO NOT OPEN WHEN ENERGIZED
  DO NOT OPEN IF AN EXPLOSIVE ATMOSPHERE MAY BE PRESENT

(1) The type is completed by numbers and letters corresponding to the manufacturing variations.
(2) Range of ambient temperatures if different from -20°C to +40°C.

(*) T6...T2 or T85°C...T225°C : For the temperature class see tables below.

ROUTINE EXAMINATIONS AND TESTS

In accordance with clause 16.1 of the IEC 60079-1 standard each apparatus defined above has to have successfully passed, before delivery, an overpressure test of a period comprised between 10 and 60 seconds under:

- 12.3 bar for ambient temperature down to -20°C for type EVAC 500 LED and EVAC 501 LED.
- 17.9 bar for ambient temperature down to -40°C for type EVAC 500 LED and EVAC 501 LED.
- 12.9 bar for ambient temperature down to -20°C for all other types.
- 14.2 bar for ambient temperature down to -60°C for all other types.

IECEx Certificate of Conformity

Certificate No.: IECEx INE 13.0075X

Issue No.: 1

Annexe: IECEx INE 13.0075X-01_Annex.pdf

Type EVAC100... or EVAC101...

Type and power of lamp	Ambient temperature range	Concerned explosive atmosphere		Cable temperature
		Gas	Dusts	
100 W Incandescent	-20°C or-60°C/+40°C	T4	T135°C	N.C
	-20°C or-60°C /+60°C			95°C
100 W Halogen	-20°C or-60°C/+40°C	T4	T135°C	N.C
	-20°C or-60°C /+60°C			95°C
12 W LED	-20°C or-60°C/+40°C	T6	T85°C	N.C
	-20°C or-60°C /+60°C			N.C
100 W Metal halide	-20°C or-60°C/+40°C	T3	T140°C	NC
	-20°C or-60°C /+60°C		T160°C	N.C
80 W Mercury vapor	-20°C or-60°C/+40°C	T4	T135°C	N.C
	-20°C or-60°C /+60°C	T3	T160°C	N.C
70 W Sodium vapor	-20°C or-60°C/+40°C	T4	T135°C	N.C
	-20°C or-60°C /+60°C			N.C
15 W Fluorescent	-20°C or-60°C/+40°C	T6	T85°C	N.C
	-20°C or-60°C /+60°C			N.C
25 W AC Incandescent 21 W DC	-20°C or-60°C/+40°C	T6	T85°C	N.C
	-20°C or-60°C /+60°C	T5	T95°C	N.C

N.C : Not Concerned

IECEx Certificate of Conformity

Certificate No.: IECEx INE 13.0075X

Issue No.: 1

Annexe: IECEx INE 13.0075X-01_Annex.pdf

Type EVAC200... or EVAC201...

Type and power of lamp	Ambient temperature range	Concerned explosive atmosphere		Cable temperature
		Gas	Dust	
200 W Incandescent	-20°C or-60°C/+40°C	T4	T135°C	95°C
	-20°C or-60°C /+60°C	T3	T160°C	120°C
160 W Blended light	-20°C or-60°C/+40°C	T3	T140°C	95°C
	-20°C or-60°C /+60°C		T160°C	120°C
150 W Halogen	-20°C or-60°C/+40°C	T4	T135°C	N.C
	-20°C or-60°C /+60°C	T3	T160°C	95°C
125 W Mercury vapor	-20°C or-60°C/+40°C	T3	T140°C	N.C
	-20°C or-60°C /+60°C		T160°C	N.C
100 W Sodium vapor	-20°C or-60°C/+40°C	T3	T140°C	N.C
	-20°C or-60°C /+60°C		T160°C	N.C
25 W Xenon flash	-20°C or-60°C/+40°C	T6	T85°C	N.C
	-20°C or-60°C /+60°C			N.C
23 W Fluorescent	-20°C or-60°C/+40°C	T6	T85°C	N.C
	-20°C or-60°C /+60°C			N.C
Xenon 2J	-20°C or-60°C/+40°C	T6	T85°C	N.C
	-20°C or-60°C /+60°C			N.C
Maxixenon 2J	-20°C or-60°C/+40°C	T6	T85°C	N.C
	-20°C or-60°C /+60°C			N.C
Maxixenon 6J	-20°C or-60°C/+40°C	T6	T85°C	N.C
	-20°C or-60°C /+60°C			N.C

N.C. : Not Concerned

Type EVAC 200 LED or EVAC 201 LED

Type and power of lamp	Ambient temperature range	Concerned explosive atmosphere		Cable temperature
		Gas	Dust	
95 W LED	-20°C or-60°C/+40°C	T5	T85°C	N.C
	-20°C or-60°C /+60°C	T4	T105°C	90°C

N.C. : Not Concerned

IECEx Certificate of Conformity

Certificate No.: IECEx INE 13.0075X

Issue No.: 1

Annexe: IECEx INE 13.0075X-01_Annex.pdf

Type EVAC 300 or 301

Type and power of lamp	Ambient temperature range	Concerned explosive atmosphere		Cable temperature
		Gas	Dusts	
300 W Incandescent	-20°C or-60°C/+40°C	T4	T135°C	95°C
	-20°C or-60°C /+60°C	T3	T160°C	120°C
250 W Halogen	-20°C or-60°C/+40°C	T4	T135°C	95°C
	-20°C or-60°C /+60°C	T3	T160°C	120°C
250 W Sodium vapor	-20°C or-60°C/+40°C	T3	T160°C	N.C
	-20°C or-60°C /+60°C		T190°C	
250 W Metal halide	-20°C or-60°C/+40°C	T3	T140°C	N.C
	-20°C or-60°C /+60°C		T160°C	
250 W Blended light	-20°C or-60°C/+40°C	T3	T160°C	95°C
	-20°C or-60°C /+60°C		T190°C	120°C
150 W Metal halide	-20°C or-60°C/+40°C	T4	T135°C	N.C
	-20°C or-60°C /+60°C	T3	T160°C	
150 W Sodium vapor	-20°C or-60°C/+40°C	T4	T135°C	N.C
	-20°C or-60°C /+60°C			
25 W Rotallarm	-20°C or-60°C/+40°C	T6	T85°C	N.C
	-20°C or-60°C /+60°C			
3 x 18W Fluorescent	-20°C or-60°C/+40°C	T6	T85°C	N.C
	-20°C or-60°C /+60°C			

N.C. : Not Concerned

IECEx Certificate of Conformity

Certificate No.: IECEx INE 13.0075X

Issue No.: 1

Annexe: IECEx INE 13.0075X-01_Annex.pdf

Type EVAC 500 or 501

Type and power of lamp	Ambient temperature range	Concerned explosive atmosphere		Cable temperature
		Gas	Dusts	
500 W Incandescent	-20°C or-60°C/+40°C	T3	T160°C	120°C
	-20°C or-60°C /+60°C		T190°C	140°C
500 W Blended light	-20°C or-60°C/+40°C	T2	T205°C	140°C
	-20°C or-60°C /+60°C		T225°C	160°C
400 W Mercury vapor	-20°C or-60°C/+40°C	T3	T190°C	95°C
	-20°C or-60°C /+60°C	N.A	N.A	N.A
400 W Sodium vapor	-20°C or-60°C/+40°C	T3	T190°C	85°C
	-20°C or-60°C /+60°C	N.A	N.A	N.A
400 W Metal halide	-20°C or-60°C/+40°C	T3	T160°C	N.C
	-20°C or-60°C /+60°C		T190°C	85°C
250 W Mercury vapor	-20°C or-60°C/+40°C	T3	T160°C	N.C
	-20°C or-60°C /+60°C		T190°C	85°C
3 x 36W Fluorescent	-20°C or-60°C/+40°C	T6	T85°C	N.C
	-20°C or-60°C /+60°C	T5		
60 W Fixed or flashing LED	-20°C or-60°C/+40°C	T6	T85°C	NC
	-20°C or-60°C /+60°C	T5		
250 W Sodium vapor	-20°C or-60°C/+40°C	T3	T160°C	95°C
	-20°C or-60°C /+60°C			
250 W Metal halide	-20°C or-60°C/+40°C	T4	T135°C	95°C
	-20°C or-60°C /+60°C	T3		

N.C : Not Concerned
N.A : Not authorized

IECEx Certificate of Conformity

Type EVAC 500 LED or EVAC 501 LED

Type and power of lamp	Ambient temperature range	Concerned explosive atmosphere		Cable temperature
		Gas	Dust	
48 W LED	-20°C or-40°C/+40°C	T6	T95°C	N.C
	-20°C or-40°C /+60°C	T5		
96 W LED	-20°C or-40°C/+40°C	T6	T95°C	N.C
	-20°C or-40°C /+60°C	T5		

N.C : Not Concerned

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

Certificate No.: IECEx INE 13.0075X

Status: **Current**

Date of Issue: **2018-10-24**

Issue No: 2

Page 1 of 5

Certificate history:
Issue No. 2 (2018-10-24)
Issue No. 1 (2015-07-22)
Issue No. 0 (2014-01-31)

Applicant: **FEAM**
Via Mario Pagano, 3
I - 20090 Trezzano sul Naviglio (MI)
Italy

Equipment: **Lighting fixtures type EVAC...**

Optional accessory:

Type of Protection: **db, op is and tb**

Marking:

For conventional model
Ex db IIC T6…T2 Gb
Ex tb IIIC T85°C…T225°C Db IP66
For LED model :
Ex db op is IIC T6 or T5 or T4 Gb
Ex op is tb IIIC T85°C or T100°C or T135°C Db IP66

The complete marking is detailed 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)

ATMOSPHERES EXPLOSIVES Certifié IECEx INERIS IECEx Certified EXPLOSIVE ATMOSPHERES

Date: 2018.10.24

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:

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

INERIS

IECEx Certificate of Conformity

Certificate No: IECEx INE 13.0075X Issue No: 2

Date of Issue: **2018-10-24** Page 2 of 5

Manufacturer: **FEAM**
Via Mario Pagano, 3
I - 20090 Trezzano sul Naviglio (MI)
Italy

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:

IEC 60079-0 : 2011 Edition:6.0	Explosive atmospheres - Part 0: General requirements
IEC 60079-1 : 2014-06 Edition:7.0	Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
IEC 60079-28 : 2015 Edition:2	Explosive atmospheres - Part 28: Protection of equipment and transmission systems using optical radiation
IEC 60079-31 : 2013 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:

FR/INE/ExTR13.0075/02

Quality Assessment Report:

IT/CES/QAR09.0003/10

IECEx Certificate of Conformity

Certificate No: IECEx INE 13.0075X Issue No: 2

Date of Issue: **2018-10-24** Page 3 of 5

Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

These lighting fixtures EVAC... made in aluminum alloy are intended to receive different type of lamps.
Depending on the model, the ballast/driver could be installed either directly inside light housing or in a separated ballast housing. When using a separated ballast housing, the two compartments are separated by a sealed bushing. As specified in the descriptive documents of the manufacturer, the separated ballast housing could be :
- the UNIT PRC covered by IECEx INE 13.0060X or,
- the specific ballast housings model EVAC 201 L and EVAC 501L or,
- other enclosure covered by an IECEx certificate for this application.

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

SPECIFIC CONDITIONS OF USE: YES as shown below:

- The length of the flameproof joints are greater than those specified in tables of IEC 60079-1 standard. For any repair, contact the manufacturer.
- During the installation, the user will take into consideration that the window of the lighting fixture type EVAC 50* LED or EVAC 501 L underwent only a shock corresponding to an energy of a low risk at 2J.

IECEx Certificate of Conformity

Certificate No: IECEx INE 13.0075X Issue No: 2

Date of Issue: **2018-10-24** Page 4 of 5

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

Purpose en the Issue 2:

- New version EVAC 201 L and EVAC 501 L including new ballast housings
- Application of the type of protection « op is » in accordance with the standard IEC 60079-28 :2015 for LED version.
- Application of the standard IEC 60079-1:2014

Purpose of the Issue 1:
- Addition of new models type EVAC 500 LED and EVAC 501 LED.
- Possibility to install inside the EVAC 501 the following types of lamps:250 W Sodium vapor and 250 W Metal halide.
- Possibility to install inside the EVAC 200 or EVAC 201 the following types of lamps: Xenon 2J, Maxixenon 2J, Maxixenon 6J.

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Additional information:

Annex:

IECEx INE 13.0075X-02_Annex.pdf

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Certificate No.: IECEx INE 13.0075X

Issue No.: 2

Annex: IECEx INE 13.0075X-02_Annex.pdf

PARAMETERS RELATING TO THE SAFETY

Maximum supply voltage for ballasts or electronic modules:

- 230V, 240V or 277 V in accordance with the type of ballast or electronic module and the lamp.

Electrical characteristic of the fuse protection for "op is" protection mode: See instructions of the manufacturer

The different types and powers of lamps, the temperature classes following the maximum ambient temperature are detailed in the tables at the end.

The lighting fixtures type EVAC 50* LED and EVAC 501 L* can be used in the range ambient temperatures from -40°C to 60°C. The other lighting fixtures type EVAC (conventional or LED version) can be used in the following range ambient temperatures from -60°C to +60°C.

MARKING

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

1. On the conventional model (all types of lamps excepted LED version) :

FEAM
I - 20090 Trezzano sul Naviglio (MI)
EVAC (1)
IECEx INE 13.0075X
(Serial number)
Ex db IIC T(2) Gb
Ex tb IIIC T(2) Db IP66
...°C < Tamb < ...C (3)
T.cable= ... (4)
CABLE GLAND : (type and size)
WARNINGS: DO NOT OPEN WHEN ENERGIZED
DO NOT OPEN IF AN EXPLOSIVE ATMOSPHERE MAY BE PRESENT

(1) The type is completed by numbers and letters corresponding to the manufacturing variations.
(2) T6...T2 or T85°C...T225°C : according to the versions as defined in tables at the end
(3) Range of ambient temperatures if different from -20°C to +40°C.
(4) T.cable according to the versions as defined in tables at the end.

2. On the LED model:

FEAM
I - 20090 Trezzano sul Naviglio (MI)
EVAC (1)
IECEx INE 13.0075X
(Serial number)
Ex db op is IIC T(2) Gb
Ex op is tb IIIC T(2) Db IP66
...°C < Tamb < ...C (3)
T.cable= ... (4)
CABLE GLAND : (type and size)
WARNINGS: DO NOT OPEN WHEN ENERGIZED
DO NOT OPEN IF AN EXPLOSIVE ATMOSPHERE MAY BE PRESENT

(1) The type is completed by numbers and letters corresponding to the manufacturing variations.
(2) T6 or T5 or T4 or T85°C or T100°C or T135°C: according to the versions as defined in tables at the end.
(3) Range of ambient temperatures if different from -20°C to +40°C
(4) T.cable according to the versions as defined in tables at the end.

IECEx Certificate of Conformity

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Issue No.: 2

Annex: IECEx INE 13.0075X-02_Annex.pdf

ROUTINE EXAMINATIONS AND TESTS

In accordance with clause 16.1 of the IEC 60079-1 standard each apparatus defined below has to have successfully passed, before delivery, an overpressure test of a period comprised between 10 and 60 seconds under:

Type	Minimum ambient temperature :		
	-20°C	-40°C	-60°C
Conventional model EVAC *** LED model EVAC 20* LED LED model EVAC 201 L (light housing)	12.9 bar	N/A	14.2 bar
LED model EVAC 50* LED LED model EVAC 501 L (light housing)	12.3 bar	17.9 bar	N/A
LED model EVAC 201 L (ballast housing)	N/A	16.5 bar	17.5 bar
LED model EVAC 501 L (ballast housing)	N/A	16.5 bar	N/A

TABLES

Table 1: Type EVAC100... or EVAC101...				
Type and maximum power of lamp	Ambient temperature range	Concerned explosive atmosphere		Cable temperature
		Gas	Dusts	
100 W Incandescent	-20°C or-60°C/+40°C	T4	T135°C	N.C
	-20°C or-60°C /+60°C			95°C
100 W Halogen	-20°C or-60°C/+40°C	T4	T135°C	N.C
	-20°C or-60°C /+60°C			95°C
12 W LED	-20°C or-60°C/+40°C	T6	T85°C	N.C
	-20°C or-60°C /+60°C			N.C
100 W Metal halide	-20°C or-60°C/+40°C	T3	T140°C	NC
	-20°C or-60°C /+60°C		T160°C	N.C
80 W Mercury vapor	-20°C or-60°C/+40°C	T4	T135°C	N.C
	-20°C or-60°C /+60°C	T3	T160°C	N.C
70 W Sodium vapor	-20°C or-60°C/+40°C	T4	T135°C	N.C
	-20°C or-60°C /+60°C			N.C
15 W Fluorescent	-20°C or-60°C/+40°C	T6	T85°C	N.C
	-20°C or-60°C /+60°C			N.C
25 W AC Incandescent 21 W DC	-20°C or-60°C/+40°C	T6	T85°C	N.C
	-20°C or-60°C /+60°C	T5	T95°C	N.C

N.C : Not Concerned

IECEx Certificate of Conformity

Certificate No.: IECEx INE 13.0075X

Issue No.: 2

Annex: IECEx INE 13.0075X-02_Annex.pdf

Table 2: Type EVAC200... or EVAC201...				
Type and maximum power of lamp	Ambient temperature range	Concerned explosive atmosphere		Cable temperature
		Gas	Dust	
200 W Incandescent	-20°C or-60°C/+40°C	T4	T135°C	95°C
	-20°C or-60°C /+60°C	T3	T160°C	120°C
160 W Blended light	-20°C or-60°C/+40°C	T3	T140°C	95°C
	-20°C or-60°C /+60°C		T160°C	120°C
150 W Halogen	-20°C or-60°C/+40°C	T4	T135°C	N.C
	-20°C or-60°C /+60°C	T3	T160°C	95°C
125 W Mercury vapor	-20°C or-60°C/+40°C	T3	T140°C	N.C
	-20°C or-60°C /+60°C		T160°C	
100 W Sodium vapor	-20°C or-60°C/+40°C	T3	T140°C	N.C
	-20°C or-60°C /+60°C		T160°C	
25 W Xenon flash	-20°C or-60°C/+40°C	T6	T85°C	N.C
	-20°C or-60°C /+60°C			
23 W Fluorescent	-20°C or-60°C/+40°C	T6	T85°C	N.C
	-20°C or-60°C /+60°C			
Xenon 2J	-20°C or-60°C/+40°C	T6	T85°C	N.C
	-20°C or-60°C /+60°C			
Maxixenon 2J	-20°C or-60°C/+40°C	T6	T85°C	N.C
	-20°C or-60°C /+60°C			
Maxixenon 6J	-20°C or-60°C/+40°C	T6	T85°C	N.C
	-20°C or-60°C /+60°C			

N.C: Not Concerned

Table 3: Type EVAC 200...LED or EVAC 201...LED or EVAC 201L...				
Type and maximum power of lamp	Ambient temperature range	Concerned explosive atmosphere		Cable temperature
		Gas	Dust	
48W LED	-20°C or-60°C/+40°C	T5	T85°C	N.C
	-20°C or-60°C /+60°C	T4	T105°C	90°C

N.C: Not Concerned

Table 4: Type EVAC 300... or 301...				
Type and maximum power of lamp	Ambient temperature range	Concerned explosive atmosphere		Cable temperature
		Gas	Dusts	
300 W Incandescent	-20°C or-60°C/+40°C	T4	T135°C	95°C
	-20°C or-60°C /+60°C	T3	T160°C	120°C
250 W Halogen	-20°C or-60°C/+40°C	T4	T135°C	95°C
	-20°C or-60°C /+60°C	T3	T160°C	120°C
250 W Sodium vapor	-20°C or-60°C/+40°C	T3	T160°C	N.C
	-20°C or-60°C /+60°C		T190°C	
250 W Metal halide	-20°C or-60°C/+40°C	T3	T140°C	N.C
	-20°C or-60°C /+60°C		T160°C	
250 W Blended light	-20°C or-60°C/+40°C	T3	T160°C	95°C
	-20°C or-60°C /+60°C		T190°C	120°C
150 W Metal halide	-20°C or-60°C/+40°C	T4	T135°C	N.C
	-20°C or-60°C /+60°C	T3	T160°C	
150 W Sodium vapor	-20°C or-60°C/+40°C	T4	T135°C	N.C
	-20°C or-60°C /+60°C			
25 W Rotallarm	-20°C or-60°C/+40°C	T6	T85°C	N.C
	-20°C or-60°C /+60°C			
3 x 18W Fluorescent	-20°C or-60°C/+40°C	T6	T85°C	N.C
	-20°C or-60°C /+60°C			

N.C: Not Concerned

IECEx Certificate of Conformity

Certificate No.: IECEx INE 13.0075X

Issue No.: 2

Annex: IECEx INE 13.0075X-02_Annex.pdf

Table 5: Type EVAC 500... or 501...				
Type and maximum power of lamp	Ambient temperature range	Concerned explosive atmosphere		Cable temperature
		Gas	Dusts	
500 W Incandescent	-20°C or-60°C/+40°C	T3	T160°C	120°C
	-20°C or-60°C /+60°C		T190°C	140°C
500 W Blended light	-20°C or-60°C/+40°C	T2	T205°C	140°C
	-20°C or-60°C /+60°C		T225°C	160°C
400 W Mercury vapor	-20°C or-60°C/+40°C	T3	T190°C	95°C
	-20°C or-60°C /+60°C	N.A	N.A	N.A
400 W Sodium vapor	-20°C or-60°C/+40°C	T3	T190°C	85°C
	-20°C or-60°C /+60°C	N.A	N.A	N.A
400 W Metal halide	-20°C or-60°C/+40°C	T3	T160°C	N.C
	-20°C or-60°C /+60°C		T190°C	85°C
250 W Mercury vapor	-20°C or-60°C/+40°C	T3	T160°C	N.C
	-20°C or-60°C /+60°C		T190°C	85°C
3 x 36W Fluorescent	-20°C or-60°C/+40°C	T6	T85°C	N.C
	-20°C or-60°C /+60°C	T5		
60 W Fixed or flashing LED	-20°C or-60°C/+40°C	T6	T85°C	NC
	-20°C or-60°C /+60°C	T5		
250 W Sodium vapor	-20°C or-60°C/+40°C	T3	T160°C	95°C
	-20°C or-60°C /+60°C			
250 W Metal halide	-20°C or-60°C/+40°C	T4	T135°C	95°C
	-20°C or-60°C /+60°C	T3		

N.C : Not Concerned - N.A : Not authorized

Table 6: Type EVAC 500...LED or EVAC 501...LED or EVAC 501 L...				
Type and maximum power of lamp	Ambient temperature range	Concerned explosive atmosphere		Cable temperature
		Gas	Dust	
48 W LED	-20°C or-40°C/+40°C	T6	T95°C	N.C
	-20°C or-40°C /+60°C	T5		
96 W LED	-20°C or-40°C/+40°C	T4	T135°C	N.C
	-20°C or-40°C /+60°C			

N.C : Not Concerned