



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 15.0003X Issue No: 0 Certificate history:
Issue No. 0 (2015-03-19)

Status: **Current** Page 1 of 3

Date of Issue: **2015-03-19**

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

Electrical Apparatus: **Lighting Fixtures type SFD**/SFDE****
Optional accessory:

Type of Protection: **d or d e and tb**

Marking:
Ex d IIB+H2 T(*) Gb or Ex d e IIB+H2 T(*) Gb
Ex tb IIIC T(*) Db IP66

(*) : Temperature class in accordance with the ambient temperature and the type of lamps. See table in annex for details.

Approved for issue on behalf of the IECEx
Certification Body:

Thierry HOUEIX

Position:

Ex Certification Officer

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

Certificate issued by:

INERIS
Institut National de l'Environnement Industriel
et des Risques
BP n2
Parc Technologique ALATA
F-93550 Vermeuil-En-Halatte
France



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Date of Issue: 2015-03-19 Page 2 of 3

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"
IEC 60079-7 : 2006-07 Edition:4	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/ExTR15.0003/00](#)

Quality Assessment Report:

[IT/CES/QAR09.0003/05](#)



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Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

The floodlight type SFD**/SFDE** is constituted by:

•A lamp compartment made in light alloys or stainless steel and with a glass sealed on the cover (for all the versions). The enclosure is closed by screws with quality A2-70 or greater.

•An additional enclosure covered by a separated certificate (protected by "Ex d" or "Ex d e" and "Ex tb"). This additional enclosure is separated from lamp compartment by a sealing bushing and is intended only for SFD** with lamps 250W HPNA, 400W and 600W.

•Terminal box (only for SFDE** version). This terminal box is intended to receive certified terminals as specified in the descriptive documents. The terminal box is separated from the lamp compartment by a sealed bushing.

The lighting fixture is intended to receive different types and power of lamps : See Annex for details.

This equipment gets the degrees 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 tables of IEC 60079-1.
- The widths of the flameproof joints are superior than those specified in tables of IEC 60079-1 standard.

Annex:

[IECEx INE 15.0003X-00_Annex.pdf](#)



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Annexe: IECEx INE 15.0003X-00_Annex.pdf

PARAMETERS RELATING TO THE SAFETY

Maximum supply voltage: 277 V (or lower in accordance the manufacturer's instructions)

The type and maximum power of lamps allowed are specified in the table of the marking paragraph.

These enclosures can be use in the range of ambient temperatures from -20°C up to +60°C.

MARKING

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

- FEAM
- I - 20090 Trezzano sul Naviglio (MI)
- SFD** or SFDE** (1)
- IECEx INE 15.0003X
- (Serial number)
- Ex d IIB+H2 T(2) Gb or Ex d e IIB+H2 T(2) Gb
- Ex tb IIIC T(2) Db IP66
- -20°C < Tamb < (2)
- CABLE GLAND : (Type and size)
- T. cable: (2)
- **WARNINGS:** DO NOT OPEN WHEN ENERGIZED
AFTER DE-ENERGIZING, DELAY 20 MINUTES BEFORE OPENING
USE SCREWS WITH MINIMUM QUALITY : A2-70

(1) The type is completed by a letter and numbers in accordance with the manufacturing variations.
On the lamp compartment : the symbol "d"
On the terminal compartment : the symbol "e"

(2) Temperature class, maximum ambient temperature and temperature of the cable are specified in the table at the end

ROUTINE EXAMINATIONS AND TESTS

In accordance with clause 16.1 of the IEC 60079-1 standard, each apparatus has to have successfully passed, before delivery, an overpressure test of a period comprised between 10 and 60 seconds under 10.4 bar.

For floodlight with a terminal box protected by increased safety:

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, the supply voltage shall applied during one minute.



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Type of the lamps power	Maximum Ambient temperature	Temperature class		Cable temperature
		Gas	Dust	
150W HPNA	+40°C or +50°C or +60°C	T3	T200°C	NA
250W HPNA	+40°C or +50°C	T3	T200°C	NA
	+60°C	T2	T210°C	90°C
400W HPNA	+40°C	T3	T200°C	NA
	+50°C	T2	T210°C	80°C
	+60°C	T2	T220°C	90°C
150W MH	+40°C or +50°C or +60°C	T3	T200°C	NA
250W MH	+40°C or +50°C	T3	T200°C	NA
	+60°C	T3	T200°C	90°C
400W MH	+40°C	T3	T200°C	NA
	+50°C	T2	T210°C	80°C
	+60°C	T2	T220°C	90°C
175W HG	+40°C or +50°C	T3	T200°C	NA
	+60°C	T3	T200°C	90°C
250W HG	+40°C or +50°C	T3	T200°C	NA
	+60°C	T3	T200°C	90°C
400W HG	+40°C	T3	T200°C	NA
	+50°C	T2	T210°C	80°C
	+60°C	T2	T220°C	90°C
250W BL	+40°C or +50°C	T3	T200°C	NA
	+60°C	T3	T200°C	90°C
500W BL	+40°C	T2	T217°C	NA
	+50°C	T2	T230°C	100°C
	+60°C	T2	T240°C	110°C
300W IA	+40°C	T3	T200°C	NA
	+50°C	T2	T210°C	80°C
	+60°C	T2	T220°C	90°C
500W IA	+40°C	T2	T217°C	NA
	+50°C	T2	T230°C	100°C
	+60°C	T2	T240°C	110°C
250W HPNA	+40°C or +50°C or +60°C (without internal ballast)	T3	T200°C	100°C
400W MH		T3	T200°C	100°C
400W HG		T3	T200°C	100°C
400W HPNA		T3	T200°C	100°C
600W MH		T3	T200°C	100°C
600W HPNA		T3	T200°C	100°C
LED MAX 250W	+40°C or +50°C or +60°C	T4	T135°C	NA



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INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification Scheme for Explosive Atmospheres

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Certificate No.: IECEx INE 15.0003X Issue No: 1 Certificate history:
Issue No. 1 (2015-07-31)
Status: Current Page 1 of 4 Issue No. 0 (2015-03-19)
Date of Issue: 2015-07-31
Applicant: FEAM
Via Mario Pagano, 3
I - 20090 Trezzano sul Naviglio (MI)
Italy
Electrical Apparatus: Floodlights type SFD**/SFDE** and SFD**-LED/SFDE**-LED
Optional accessory:
Type of Protection: d o r d e and tb
Marking: Ex d IIB+H2 T(*) Gb or Ex d e IIB+H2 T(*) Gb
Ex tb IIIC T(*) Db IP66
(*) : Temperature class in accordance with the ambient temperature and the type of lamps. See table in annex for details.

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:

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Certificate issued by:

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



IECEX Certificate of Conformity

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Issue No: 1

Date of Issue: **2015-07-31**

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

Additional Manufacturing
location(s):

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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"
IEC 60079-7 : 2006-07 Edition:4	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/ExTR15.0003/01](#)

Quality Assessment Report:

[IT/CES/QAR09.0003/05](#)



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Issue No: 1

Date of Issue: 2015-07-31

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Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

The floodlight type SFD**/SFDE** and SFD**-LED/SFDE**-LED is constituted by :

•A lamp compartment made in light alloys or stainless steel and with a glass sealed on the cover (for all the versions). The enclosure is closed by screws with quality A2-70 or greater.

•An additional enclosure covered by a separated certificate (protected by "Ex d" or "Ex d e" and "Ex tb"). This additional enclosure is separated from lamp compartment by a sealing bushing and is intended only for SFD** with lamps 250W HPNA, 400W and 600W and for all SFD**-LED/SFDE**-LED.

•Terminal box (only for SFDE** version). This terminal box is intended to receive certified terminals as specified in the descriptive documents. The terminal box is separated from the lamp compartment by a sealed bushing.

The lighting fixture SFD**/SFDE** is intended to receive different types and power of lamps : See Annex for details

The lighting fixture SFD**-LED/SFDE**-LED is intended to receive only LED light sources : See Annex for details

This equipment gets the degrees 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 tables of IEC 60079-1.
- The widths of the flameproof joints are superior than those specified in tables of IEC 60079-1 standard.

For SFD**-LED/SFDE**-LED:

During the installation, the user will take into consideration that the equipment underwent only a shock corresponding to an energy of a low risk.



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

For the Issue 1:

Introduction of new types, SFD**-LED/SFDE**-LED intended to receive only LEDs lighting source.

Annex:

[IECEx INE 15.0003X-01_Annex.pdf](#)



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Annexe: IECEx INE 15.0003X-01_Annex.pdf

PARAMETERS RELATING TO THE SAFETY

Maximum supply voltage: 277 V (or lower in accordance the manufacturer's instructions)

The type and maximum power of lamps allowed are specified in the table of the marking paragraph.

These enclosures can be use in the range of ambient temperatures from -20°C up to +60°C.

MARKING

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

- FEAM
- I - 20090 Trezzano sul Naviglio (MI)
- SFD** or SFD**-LED or SFDE** or SFDE**-LED(1)
- IECEx INE 15.0003X
- (Serial number)
- Ex d IIB+H2 T(2) Gb or Ex d e IIB+H2 T(2) Gb
- Ex tb IIIC T(2) Db IP66
- -20°C < Tamb < (2)
- CABLE GLAND : (Type and size)
- T. cable: (2)
- **WARNINGS:** DO NOT OPEN WHEN ENERGIZED
AFTER DE-ENERGIZING, DELAY 20 MINUTES BEFORE OPENING
USE SCREWS WITH MINIMUM QUALITY : A2-70

(1) The type is completed by a letter and numbers in accordance with the manufacturing variations.
On the lamp compartment : the symbol "d"
On the terminal compartment : the symbol "e"

(2) Temperature class, maximum ambient temperature and temperature of the cable are specified in the table at the end

ROUTINE EXAMINATIONS AND TESTS

For floodlight type SFD**/SFDE***:

In accordance with clause 16.1 of the IEC 60079-1 standard, each apparatus has to have successfully passed, before delivery, an overpressure test of a period comprised between 10 and 60 seconds under 10.4 bar.

For floodlight type SFD**-LED/SFDE***-LED:

In accordance with clause 16.1 of the IEC 60079-1 standard, each apparatus has to have successfully passed, before delivery, an overpressure test of a period comprised between 10 and 60 seconds under 11.9 bar.

For floodlight with a terminal box protected by increased safety:

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, the supply voltage shall applied during one minute.



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Certificate No.:

IECEx INE 15.0003X

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Annexe: IECEx INE 15.0003X-01_Annex.pdf

Table of the temperature classes for the floodlight type SFD/SFDE****

Type of the lamps power	Maximum Ambient temperature	Temperature class		Cable temperature
		Gas	Dust	
150W HPNA	+40°C or +50°C or +60°C	T3	T200°C	NA
250W HPNA	+40°C or +50°C	T3	T200°C	NA
	+60°C	T2	T210°C	90°C
400W HPNA	+40°C	T3	T200°C	NA
	+50°C	T2	T210°C	80°C
	+60°C	T2	T220°C	90°C
150W MH	+40°C or +50°C or +60°C	T3	T200°C	NA
250W MH	+40°C or +50°C	T3	T200°C	NA
	+60°C	T3	T200°C	90°C
400W MH	+40°C	T3	T200°C	NA
	+50°C	T2	T210°C	80°C
	+60°C	T2	T220°C	90°C
175W HG	+40°C or +50°C	T3	T200°C	NA
	+60°C	T3	T200°C	90°C
250W HG	+40°C or +50°C	T3	T200°C	NA
	+60°C	T3	T200°C	90°C
400W HG	+40°C	T3	T200°C	NA
	+50°C	T2	T210°C	80°C
	+60°C	T2	T220°C	90°C
250W BL	+40°C or +50°C	T3	T200°C	NA
	+60°C	T3	T200°C	90°C
500W BL	+40°C	T2	T217°C	NA
	+50°C	T2	T230°C	100°C
	+60°C	T2	T240°C	110°C
300W IA	+40°C	T3	T200°C	NA
	+50°C	T2	T210°C	80°C
	+60°C	T2	T220°C	90°C
500W IA	+40°C	T2	T217°C	NA
	+50°C	T2	T230°C	100°C
	+60°C	T2	T240°C	110°C
250W HPNA	+40°C or +50°C or +60°C (without internal ballast)	T3	T200°C	100°C
400W MH		T3	T200°C	100°C
400W HG		T3	T200°C	100°C
400W HPNA		T3	T200°C	100°C
600W MH		T3	T200°C	100°C
600W HPNA		T3	T200°C	100°C
LED MAX 250W		+40°C or +50°C or +60°C	T4	T135°C



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Issue No.: 1

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Annexe: IECEx INE 15.0003X-01_Annex.pdf

Table of the temperature classes for the floodlight type SFD**-LED/SFDE**-LED

Type of the lamps power	Maximum Ambient temperature	Temperature class		Cable temperature
		Gas	Dust	
20LED (160W)	+40° C	T6	T85° C	NA
	+50° C	T5	T100° C	NA
	+60° C	T4	T135° C	NA
28LED (240W)	+40° C	T6	T85° C	NA
	+50° C	T5	T100° C	NA
	+60° C	T4	T135° C	NA