

CESI

CESI
Centro Elettrotecnico
Sperimentale Italiano
Giacinto Motta SpA

Via R. Rubattino 54
20134 Milano - Italia
Telefono +39 022125.1
Fax +39 0221255440
www.cesi.it

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Schema di certificazione
CESI-ATEX
CESI

Il CESI è stato autorizzato dal governo italiano ad operare quale organismo di certificazione di apparecchi e sistemi destinati a essere utilizzati in atmosfera potenzialmente esplosiva con D.M. 1/3/1983, D.M. 19/6/1990, D.M. 20/7/1998, D.M. 27/9/2000 e D.M. 02/02/2006

CERTIFICATE



EC-TYPE EXAMINATION CERTIFICATE

- [1] **EC-TYPE EXAMINATION CERTIFICATE**
- [2] **Equipment or Protective System intended for use in potentially explosive atmospheres**
Directive 94/9/EC
- [3] EC-Type Examination Certificate number:
CESI 09 ATEX 009
- [4] Equipment: Floodlights series SLFE-40..
- [5] Manufacturer: **COR.TEM S.p.A.**
- [6] Address: Via Aquileia 10, I-34070 Villesse (Gorizia), Italy
- [7] This equipment or protective system and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.
- [8] CESI, notified body n. 0722 in accordance with Article 9 of the Council Directive 94/9/EC of 23 March 1994, certifies that this equipment or protective system has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmospheres given in Annex II to the Directive.
- The examination and test results are recorded in confidential report n. EX-A9004722.
- [9] Compliance with the Essential Health and Safety Requirements has been assured by compliance with:
EN 60079-0:2006 EN 60079-1:2004 EN 60079-7 :2007 EN 61241-0:2006 EN 61241-1:2004
- [10] If the sign "X" is placed after the certificate number, it indicates that the equipment or protective system is subject to special conditions for safe use specified in the schedule to this certificate.
- [11] This EC-TYPE EXAMINATION CERTIFICATE relates only to the design, examination and tests of the specified equipment or protective system in accordance to the Directive 94/9/EC. Further requirements of the Directive apply to the manufacturing process and supply of this equipment or protective system. These are not covered by this certificate.
- [12] The marking of the equipment or protective system shall include the following:

II 2GD Ex de IIB T3, T2; Ex tD A21 IP 66 T148°C up to T221°C

This certificate may only be reproduced in its entirety and without any change, schedule included.

Date 17 February 2009 - Translation issued the 17 February 2009

Prepared
Giorgio Chinnici

Giorgio Chinnici

Verified
Mirko Balaz

Mirko Balaz

Approved
Fiorenzo Bregani

CESI S.p.A.
Divisione Energia
"Area Tecnica Certificazione"
Fiorenzo Bregani

[13]

Schedule

[14] EC-TYPE EXAMINATION CERTIFICATE n. CESI 09 ATEX 009

[15] **Description of equipment**

The floodlights series SLFE-40 are made with the rectangular body in aluminium alloy or stainless steel and the transparent part in glass. On the floodlights different types of lamps can be mounted: high pressure sodium, mercury vapour lamp or metal halide lamps.

The floodlights series SLFE with the type of protection Ex de IIB are made with two separate flameproof compartments, one flameproof part containing lamp holder E-40 and lamp and another one containing the electrical supply and control apparatus. In this case the two flameproof compartments are connected through a bushing. The separate Ex-e chamber is added to the electrical supply and control compartment for connecting terminals through a bushing.

The floodlights series SLFE-40 are made in three executions:

- SLFE-40/25 used for tubular vapours lamp up to 250W.
- SLFE-40 used for tubular vapours lamp up to 400W.
- SLFE-40/60 used for vapours lamp up to 600W.

Electrical characteristics

Rated voltage	110÷230V; 250V; 277 V
Rated frequency	50 ÷ 60 Hz
Rated power	250 ÷ 600 W (the rated power of each type of lamp is indicated in detail in the following table 1)
Degree of protection (EN 60529)	IP 66
Ambient temperature	- 20 ÷ + 40 °C - 25 ÷ + 55 °C

Temperature class of the floodlights of category II 2 GD: T3, T2 (see table 1).

Maximum surface temperature T of the floodlights of category II 2 GD: from T 148°C to T221°C (see table 1).

Cable entries

The accessories used for cable entries and for unused holes in category II 2 GD equipment shall be subject to separate certification:

- for the floodlights in execution Ex de, in compliance to the following Standards: EN 60079-0; EN 60079-7; EN 61241-0 and EN 61241-1.

They shall guarantee a minimum degree of protection IP 66 according to EN 60529 Standard.

If cylindrical threads are used, the coupling between the cable entry and the enclosure shall be provided with block to prevent loosening, according to the requirements indicated in the documents annexed to this certificate.

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Schedule

[14] EC-TYPE EXAMINATION CERTIFICATE n. CESI 09 ATEX 009

[15] Identification and description of equipment (follows)

Table 1 – TEMPERATURE CLASS AND MAX. SURFACE TEMP. FOR LIGHTING FIXTURES IN AMBIENT TEMPERATURE UP TO +40°C (+55°C)

Model of floodlights	Type of lamp and power in W	Temperature class (for II 2GD luminaries)		Max surface temperature T in °C (for II 2GD luminaries)	
		+40 °C	+55 °C	+40 °C	+55 °C
SLFE-40/25	250W HG	T3	T3	148	163
	250W NA	T3	T3	148	163
	250W HA	T3	T3	148	163
SLFE-40	400W HG	T3	T3	178	193
	400W NA	T3	T3	178	193
	400W HA	T3	T3	178	193
SLFE-40/60	600W HG	T2	T2	206	221
	600W NA	T2	T2	206	221
	600W HA	T2	T2	206	221

NOTES:

The different types of lamps are indicated with the following codes:

HG: mercury vapour lamp

NA: high pressure sodium vapour lamp

HA: metal halide lamp

Warning labels

“Do not open when energised. Wait 15 minutes before opening.”

“Use cables suitable for a minimum temperature of T_c °C.” where T_c has the value of:

- 85 °C for the models with max. ambient temperature of +40°C;
- 100 °C for the models with max. ambient temperature of +55°C.

“Use screws of quality A2-70 according UNI 7323 with ultimate tensile strength of at least 700 N/mm²”

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Schedule

[14] **EC-TYPE EXAMINATION CERTIFICATE n. CESI 09 ATEX 009**

[16] **Report n. EX-A9004722**

Routine tests

The manufacturer shall carry out the routine tests prescribed at paragraph 27 of the EN 60079-0, at par. 24 of the EN 61241-0, at paragraph 16 of the EN 60079-1 and at paragraph 7 of the EN 60079-7 Standards.

The routine overpressure test on the Ex-d enclosures shall be carried out with the static method according to paragraph 15.1.3.1 of the EN 60079-1 standard at the pressure of:

10,5 bar on the lamp compartment
9,0 bar on the electrical supply and control compartment

For the lighting fixture having the minimum ambient temperature of -25°C , the overpressure test shall be carried out at the pressure of:

13,5 bar on the lamp compartment
12,0 bar on the electrical supply and control compartment

For the floodlights having the terminal compartment in execution Ex e (increased safety) the dielectric test with applied voltage shall be performed at $2U + 1000 \text{ V}$ with a minimum value of 1500 V between the supply terminals and earth ($U =$ rated voltage of the lamp).

Descriptive documents (prot. EX-A9004729)

- n° A4-4898 Rev. 0	(2 pg.)	dated	08.01.2007
- n° A1-4897 Rev. 0	(2 sheets)	dated	08.01.2007
- Data sheet Bluetech	(1 sheets)	dated	08.01.2007
- Data sheet Dow Corning	(2 sheets)	dated	08.01.2007
- Safety instructions F-300 Rev.0	(8 pg.)	dated	08.01.2007
- EC declaration of conformity CE n° 0054		dated	08.01.2007

One copy of all documents is kept in CESI files.

[17] **Special conditions for safe use**
None.

[18] **Essential Health and Safety Requirements**
Assured by compliance to the Standards.

EXTENSION n. 01/10



to EC-Type Examination Certificate CESI 09 ATEX 009

Equipment: Floodlights series SLFE-40..

Manufacturer: **COR.TEM S.p.A.**

Address: Via Aquileia 10, Villesse (Gorizia), ITALY

Admitted variation:

- Constructional modification
- New minimum ambient temperature up to -50°C .

Equipment description

The floodlights series SLFE-40.. when designed for -50°C , are manufactured by materials, components and accessory suitable to be used at minimum ambient temperature up to -50°C .

Electrical characteristics

Ambient temperature $-20 \div +40^{\circ}\text{C}$
 $-20 \div +55^{\circ}\text{C}$
 $-50 \div +40^{\circ}\text{C}$
 $-50 \div +55^{\circ}\text{C}$

Other electrical characteristics: unchanged

This extension and annexed descriptive documents must be annexed to the EC-Type Examination Certificate CESI 09 ATEX 009.

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date 4 February 2010 - Translation issued 4 February 2010

prepared Giorgio Chinnici

verified Mirko Balaz

approved Fiorenzo Bregani



CESI S.p.A.
Energy Division
"Certification Technical Department"
The Manager


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EXTENSION n. 01/10

to EC-Type Examination Certificate CESI 09 ATEX 009

Installation condition

The characteristics of cables and of the accessories used for cable entries shall be suitable to be used in the range of the ambient temperature of the floodlights series SLFE-40.. .

Report n. EX-B0003504

Routine tests

The manufacturer shall carry out the routine tests prescribed at paragraph 27 of the EN 60079-0, at par. 24 of the EN 61241-0, at paragraph 16 of the EN 60079-1 and at paragraph 7 of the EN 60079-7 Standards.

The routine overpressure test on the Ex-d enclosures shall be carried out with the static method according to paragraph 15.1.3.1 of the EN 60079-1 standard at the pressure of:

11,0 bar on the lamp compartment
10,5 bar on the electrical supply and control compartment

For the lighting fixture having the minimum ambient temperature of $-50\text{ }^{\circ}\text{C}$, the overpressure test shall be carried out at the pressure of:

14,5 bar on the lamp compartment
15,5 bar on the electrical supply and control compartment

For the floodlights having the terminal compartment in execution Ex e (increased safety) the dielectric test with applied voltage shall be performed at $2U + 1000\text{ V}$ with a minimum value of 1500 V between the supply terminals and earth (U = rated voltage of the lamp).

Descriptive documents (prot. EX-B0003502)

- n° A4-4898 Rev. 1	(5 pg.)	dated	02.12.2009
- n° A1-4897 Rev. 1	(2 sheets)	dated	02.12.2009
- Safety instructions F-300 Rev.1	(8 pg.)	dated	02.12.2009
- EC declaration of conformity CE n° 0054		dated	02.12.2009

Essential Health and Safety Requirements

The Essential Health and Safety Requirements are assured by compliance to the following standards:

- EN 60079-0: 2006 - Electrical apparatus for explosive gas atmospheres - Part 0: general requirements.
- EN 60079-1: 2007 - Explosive atmosphere - Part 1: Equipment protection by flameproof "d".
- EN 60079-7: 2007 - Explosive atmosphere - Part 7: Equipment protection by increased safety "e".
- EN 61241-0: 2006 - Electrical apparatus for use in the presence of combustible dust - Part 0: general requirements.
- EN 61241-1: 2004 - Electrical apparatus for use in the presence of combustible dust - Part 1: protection by enclosures "tD".

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