CESI

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Schema di certificazione CESI ATEX

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 e D.M. 27/9/2000

ATEX E C-02

CERTIFICATE

EC-TYPE EXAMINATION CERTIFICATE

[1]

[2] **Equipment or Protective System intended for use in potentially explosive atmospheres Directive 94/9/EC**

[3] EC-Type Examination Certificate number:

CESI 02 ATEX 143

[4] Equipment: Luminaires series EV, EW, EWA, EWE.

[5] Manufacturer: **FONDISONZO ITALIA S.r.l.**

[6] Address: Via Aquileia Z.I., 34076 Romans d'Isonzo (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-A2/041503.

[9] Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN 50014: 1997 + A1..A2 EN 50018: 2000 + A1 EN 50281-1-1:1999

[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:

Ex **II 2 GD EEx d IIC T3 or T4 or T6 IP 65 T85+200 °C**

Ex **II 2 D IP 65 T85+200°C**

Date December 18th, 2002 translation issued on December 18th, 2002

Prepared
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Approved
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CESI
CENTRO ELETTROTECNICO SPERIMENTALE ITALIANO
Business Unit Certificazione
Il Responsabile

[13] **Schedule**

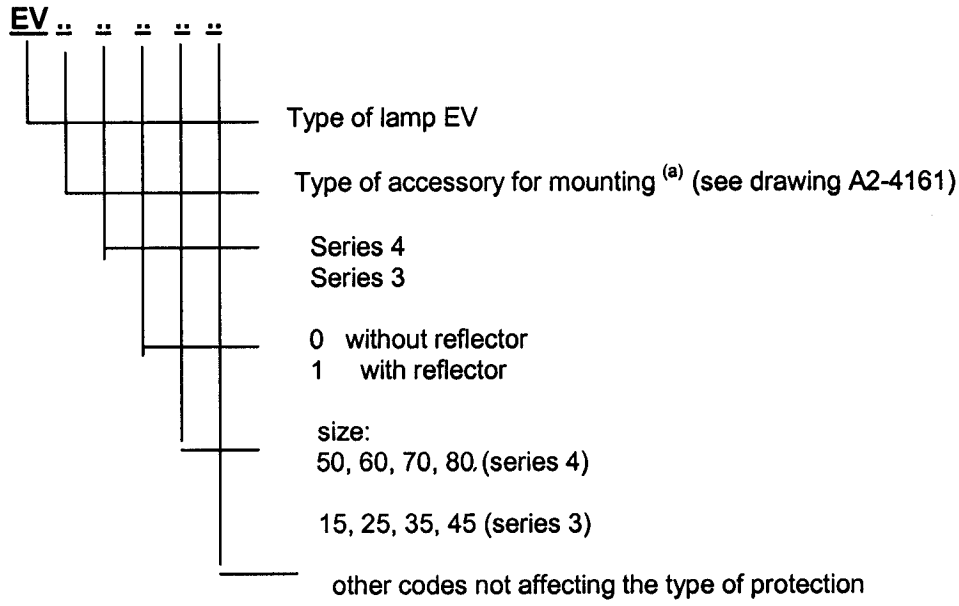
[14] **EC-TYPE EXAMINATION CERTIFICATE n. CESI 02 ATEX 143**

[15] **Identification and description of equipment**

The luminaires series EV..., EW..., EWA... and EWE... are made with the body in aluminium alloy or stainless steel and the transparent part in glass.
On the luminaires different types of lamps can be mounted: incandescent, mercury vapours, high pressure sodium, blended, electronic lamps.
The luminaires are made in two models, series 3 and series 4, and in three principal versions:

- with one single flameproof enclosure including lamp holder, lamp, terminal block and the other electrical apparatus.
- with two separate flameproof enclosures: one enclosure containing lamp holder and lamp and another one containing the terminal block and the electrical apparatus. In this case the two enclosures are connected through a bushing sealed by resin.
- with one flameproof enclosure containing only lamp holder and lamp. In this case the terminal block and the other electrical apparatus shall be installed in a separate flameproof enclosure, certified according to one of the types of protection mentioned in the EN 50014 standard.

The luminaires subject of this certificate are identified by the following codes for the different models:



(a) A: suspension box with one entry
X: suspension box with 4 entries
GC (series 4) or H (series 3): suspension box with eyebolt
IX (series 4) or I (series 3): wall box with 30 ° bracket
IA: wall box with 30° entry
Y: suspension box with two entries

The complete code of all the units of the series EV is reported in the drawing A1-3923 sheet 1/3 annexed to this certificate.

Prot. A2/041502 P: 7
Keywords 13010R 21420O 48010M 54250O 66540E

[13] **Schedule**

[14] **EC-TYPE EXAMINATION CERTIFICATE n. CESI 02 ATEX 143**

[15] **Identification and description of equipment** (follows)

EWE

EW .. ..

- Type of lamp: EW (series 4) EWE (series 3)
- Type of accessory for mounting (b)
- Series 4 / Series 3
- 0 without reflector / 1 with reflector
- size: 60, 70 (series 4) / 35 (series 3)
- other codes not affecting the type of protection

EWA

EW .. ..

- Type of lamp: EWA (series 4) EW (series 3)
- Type of accessory for mounting (b)
- Series 4 / Series 3
- 0 without reflector / 1 with reflector
- size: 60, 70, 80 (series 4) / 45 (series 3)
- other codes not affecting the type of protection

(b) Types of accessories for mounting (see drawing A2-4161 annexed to this certificate)
X: suspension box with 4 entries
GC (series 4) or H (series 3): suspension box with eyebolt
IX (series 4) or I (series 3): wall box with 30 ° bracket
IA: wall box with 30° entry
Y: suspension box with two entries

[13] **Schedule**

[14] **EC-TYPE EXAMINATION CERTIFICATE n. CESI 02 ATEX 143**

[15] **Identification and description of equipment** (follows)

The complete code of all the units of the series EW, EWE, EWA is reported in the drawing A1-3923 (sheets 2/3 and 3/3) annexed to this certificate.
In the drawing A1-3923 the electrical and constructional characteristics of the different types of luminaires are also reported.

The different types of accessories used for mounting are reported in the drawing A2-4161.

The luminaires of category II 2 GD are conforming to the specifications of the standards EN 50018 and EN 50281-1-1.
The luminaires of category II 2 D are conforming to the specifications of the standard EN 50281-1-1.

Electrical characteristics

Rated voltage	110/240 V
Rated frequency	50 ÷ 60 Hz
Rated power	20 ÷ 300 W (the rated power of each type of lamp is indicated in detail in the following table 1)
Degree of protection	IP 65

Temperature class of the luminaires of category II 2 GD: see table 1.
Maximum surface temperature T of the luminaires of category II 2 GD and II 2 D: see table 1.

The accessories used for cable entry shall be certified according to the standards EN 50014, EN 50018 and EN 50281-1-1 and shall guarantee a degree of protection of at least IP 65.

[13] **Schedule**

[14] **EC-TYPE EXAMINATION CERTIFICATE n. CESI 02 ATEX 143**

Table 1 – Temperature class and maximum surface temperature T of the enclosure for the different types of luminaires and for the different types of lamps used

Model	**Type of lamp And power in W**	**Temperature class** (luminaires II 2GD)	**Max. surface temperature T in °C** (luminaires II 2GD e II 2 D)
EV..50	25/40/60/100 W INC	T4	131
EV..60	50 W Hg	T3	144
	80 W Hg	T3	144
	50/70 W Na	T4	132
	200 W INC	T3	153
	20/23 W EL	T6	85
EV..70	80/125 W Hg	T3	152
	70 W Na	T4	118
	100/150 W Na	T3	200
	70/100/150 W Ha	T3	200
	160 W Mix	T3	157
	200 W INC	T3	143
EV..80	125/250 W Hg	T3	184
	150/250 W Na	T3	146
	100/150/250 W Ha	T3	158
	160/250 W Mix	T3	162
	200/300 W INC	T3	169

(follows at page 6)

NOTES:

a) The models of the enclosures are indicated by the code used for series 4 (see drawing A1-3923 annexed to this certificate).
b) The different types of lamps are indicated with the following codes:
Hg: mercury vapour lamp
Na: high pressure sodium lamp
Ha: metal halide lamp
Mix: blended lamp
INC: incandescent lamp
EL: electronic lamp

[13] **Schedule**

[14] **EC-TYPE EXAMINATION CERTIFICATE n. CESI 02 ATEX 143**

Table 1 – Temperature class and maximum surface temperature T of the enclosure for the different types of luminaires and for the different types of lamps used (follows)

Model	Type of lamp and power in W	Temperature class (luminaires II 2 GD)	Max. surface temperature T in °C (luminaires II 2GD e II 2 D)
EW..60	50/80 W Hg	T4	132
	50/70 W Na	T4	122
	100 W Mix	T3	200
	200 W INC	T3	148
EW..70	80 W Hg	T4	170
	125 W Hg	T3	170
	70 W Na	T4	114
	100/150 W Na	T3	200
	100/160 W Mix	T3	167
	200 W INC	T3	137
EWA..60	50 W Hg	T3	144
	80 W Hg	T3	144
	50 W Na	T4	132
	70 W Na	T3	200
EWA..70	80/125 W Hg	T3	152
	70 W Na	T4	118
	100 W Na	T3	200
EWA..80	125/250 W Hg	T3	184
	100/150/250 W Na	T3	146
	100/150/250 W Ha	T3	158

Plate warnings

"Do not open when energised. Wait 20 minutes before opening."

"Use cables suitable for a minimum temperature of T_c °C." where T_c has the value of:
- 95 °C for the models EV.4.80; EVIX.4..; EWIX.4..; EV.3..; EWE.3.35; EW.3.45
- 105 °C for the models EWA.4..; EW.4..; EWX.4..; EWGC.4.. with lamps 70 W Na, 50/80/125 W Hg, 200 W INC
- 110 °C for the models EV.4.50/60/70 with lamps 80 W HG e 70 W Na
- 125 °C for the models EW.4..; EWX.4..; EWGC.4.. with lamps 100/150 W Na and 100/160 W Mix
- 140 °C for the other models EV.4..

No warning for the lamps type EL.

[13] **Schedule**

[14] **EC-TYPE EXAMINATION CERTIFICATE n. CESI 02 ATEX 143**

[16] **Report n. EX-A2/041503**

Routine tests

The manufacturer shall carry out the routine tests prescribed at clause 24 of the EN 50014 standard.

The routine overpressure test shall be carried out with the static method (clause 15.1.3.1 of EN 50018 standard) at the pressure of:

- 15,6 bar for the models EV.4.50/60/70/80
- 21 bar for the models EW.4.60/70
- 23 bar for the models EWA.4.60/70

For the models having two separate compartments, that is for the models EWA.4.80; EW.3.35; EWE.3.35; EV.3.15/25/35/45 the overpressure test shall be carried out at the pressure of:

- 15,6 bar on the lamp compartment
- 12,4 bar on the terminal block or reactor compartment

Descriptive documents (prot. EX-A2/041504)

- n° A4-3924 Rev. 0 (7 p.)	dated	20.06.2002
- n° A1-3923 Rev. 0 (3 p.)	dated	20.06.2002
- n° A2-4161 Rev. 0	dated	20.06.2002
- n° A3-4237 Rev. 0	dated	20.06.2002
- n° A4-1279 Rev. 0 (2 p.)	dated	20.06.2002
- n° A4-4129 Rev. 0	dated	25.01.2001
- Safety instructions SAF006-02 Rev. 0 (9 p.)	dated	20.06.2002
- Instructions for resin application SAF007-02 Rev. 0 (2 p.)	dated	20.06.2002
- EC declaration of conformity n° DEC006-02	dated	20.06.2002

One copy of all documents is kept in CESI files.

[17] **Special conditions for safe use**

None.

[18] **Essential Health and Safety Requirements**

Covered by standards.