

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 CES 07.0004 issue No.:0 Certificate history:

Status: Current

Date of Issue: 2010-12-30 Page 1 of 3

Applicant: **CORTEM S.p.A.**
Via Aquileia 10
I - 34070 Villesse (GO)
Italy

Electrical Apparatus: **Luminaries (Pendant lighting fixture) series EV..., EW..., EWA..., EVE..., EWE..., EWAE...**
Optional accessory:

Type of Protection: **Flameproof enclosures 'd'; increased safety "e"; Dust ignition protection "tD"**

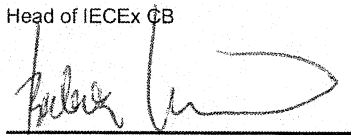
Marking: **Ex d IIC T6 or T5 or T4 or T3 or T2**
Ex de IIC T6 or T5 or T4 or T3 or T2
Ex tD A21 IP 66 T85°C to T220 °C

Approved for issue on behalf of the IECEx Certification Body: Mirko Balaz

Position: Head of IECEx CB

Signature:
(for printed version)

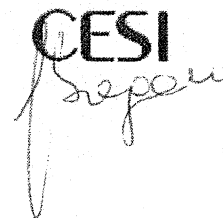
Date:


20-12-2010

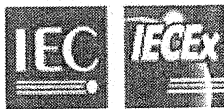
1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting the Official IECEx Website.

Certificate issued by:

CESI
Centro Elettrotecnico
Sperimentale Italiano S.p.A.
Via Rubattino 54
20134 Milano
Italy

CESI


PUBBLICATO B0036718 (PAD - 1445589)



IECEx Certificate of Conformity

Certificate No.: IECEx CES 07.0004

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Issue No.: 0

Page 2 of 3

Manufacturer: **CORTEM S.p.A.**
Via Aquileia 10
I - 34070 Villesse (GO)
Italy

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 : 2004 Edition: 4.0	Electrical apparatus for explosive gas atmospheres - Part 0: General requirements
IEC 60079-1 : 2007-04 Edition: 6	Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
IEC 60079-7 : 2006-07 Edition: 4	Explosive atmospheres - Part 7: Equipment protection by increased safety "e"
IEC 61241-0 : 2004 Edition: 1	Electrical apparatus for use in the presence of combustible dust - Part 0: General requirements
IEC 61241-1 : 2004 Edition: 1	Electrical apparatus for use in the presence of combustible dust - Part 1: Protection by enclosures "tD"

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:

IT/CES/ExTR07.0005/00

Quality Assessment Report:

IT/CES/QAR06.0002/04



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Certificate No.: IECEx CES 07.0004

Date of Issue: 2010-12-30

Issue No.: 0

Page 3 of 3

Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

Luminaires (pendant lighting fixtures) series EV..., EW..., EWA..., are used in hazardous area, indoor and/or outdoor, where inflammable or explosive vapours gas or dust are present.

Lighting fixtures series EV...EW...EWA...are realized in two models: Type A model: series 4; Type B model: series 5.

The luminaires are assembled in two main executions. One single explosion proof housing that contains the lamp holder with lamp and the electrical apparatus (if necessary) or two separate explosion proof housings: one contains lamp holder, and lamp and one contains terminal block and/or electrical apparatus. The bushing between the two housings is sealed by means of two-compound resin.

The EV... (type A and B models) and EW... (type A model only) lighting fixtures (execution Ex-d) are assembled in one Ex d housing that contains lamp holder and lamp.

The EWA... (type A and B models) and EW... (type B model only) lighting fixtures (execution Ex-d) are assembled in two separate Ex d housings: one contains lamp holder, and lamp and one contains terminal block and electrical apparatus used for HID lamps (high intensity discharge).

Execution Ex-de for EV...EW... EWA... are made by means of a Ex-e housing added on top of lighting fixture with internal terminals; the code became EVE... EWE... EWAE.... The cable passage between lighting fixture and Ex-e housing is made by a special bushing.

See annex for further description.

CONDITIONS OF CERTIFICATION: NO



Prot: B0036718

IECEx Certificate of Conformity

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Annex to certificate: IECEx CES 07.0004 Issue No.:0 of 2010-12-30
Applicant: CORTEM S.p.A., Via Aquileia 10,
I - 34070 Villesse (GO), Italy
Electrical Apparatus: Luminaries (Pendant lighting fixture) series EV..., EW..., EWA...,
EVE..., EWE..., EWAE...

Description of the equipment:

Luminaries (pendant lighting fixtures) series EV..., EW..., EWA..., are used in hazardous area, indoor and/or outdoor, where inflammable or explosive vapours gas or dust are present.

Lighting fixtures series EV...EW...EWA...are realized in two models:

Type A model: series 4;

Type B model: series 5.

The luminaries are assembled in two main executions.

One single explosion proof housing that contains the lamp holder with lamp and the electrical apparatus

(if necessary) or two separate explosion proof housings: one contains lamp holder, and lamp and one contains terminal block and/or electrical apparatus. The bushing between the two housings is sealed by means of two-compound resin.

The EV... (type A and B models) and EW... (type A model only) lighting fixtures (execution Ex-d) are assembled in one Ex d housing that contains lamp holder and lamp.

The EWA...(type A and B models) and EW... (type B model only) lighting fixtures (execution Ex-d) are assembled in two separate Ex d housings: one contains lamp holder, and lamp and one contains terminal block and electrical apparatus used for HID lamps (high intensity discharge).

Execution Ex-de for EV...EW... EWA... are made by means of a Ex-e housing added on top of lighting fixture with internal terminals; the code became EVE... EWE... EWAE... The cable passage between lighting fixture and Ex-e housing is made by a special bushing..

The series EW...type A model are indicated for HID lamps and the electrical equipment are fixed inside the body. Glass globe is mounted in an appropriate aluminium threaded ring, sealed by means of silicon compound.

The guard is fixed on aluminium ring for globe, by means of screws. For all models. the reflector is inserting and locking. Reflector and guard are external and not influence for Explosion proof protection.

For fixing the EV...EW... EWA... lighting fixtures at external structures are foreseen different components, all the components are interchangeable and can be mounted on all the sizes and models.

Condition of installation

The condition of the installation of the lighting fixtures are included within the safety instructions. In any case, the accessories used for cable entries into enclosures shall be subject of separate certification, suitable for type of protection Ex-d or Ex-e and Ex-tD and guarantee a minimum degree of protection IP 66 in compliance with the IEC 60529 Standard.



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Prod: B0036718

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I - 34070 Villesse (GO), Italy
Electrical Apparatus: Luminaries (Pendant lighting fixture) series EV..., EW..., EWA...,
EVE..., EWE..., EWAE...

Identification of lighting fixtures

EV lamp

EV..

Type of lamp: **EV**

TYPE OF ACCESSORIES FOR MOUNTING

A: Suspension box with one entry
X: Ceiling box with four entries
GC: Suspension box with eyebolt
IX: Wall box 30° bracket
IA: Wall box with 30° entry
Y: Suspension box with two entries

Series: **4** (for type A)
5 (for type B)

0: Without reflector
1: With reflector

Size : **50, 60, 70, 80, 100**

EW Lamp

EW..

Type of lamp: **EW**

TYPE OF ACCESSORIES FOR MOUNTING

WITHOUT CODE: Suspension box with one entry
X: Ceiling mounting with four entries
GC: Suspension box with eyebolt (type A model)
IX: Wall box 30° bracket
IA: Wall box with 30° entry
Y: Suspension box with two entries

Series: **4** (for type A)
3 (for type B)

0: Without reflector
1: With reflector

Size : **60, 70** (for type A)
70 (for type B)



IECEx Certificate of Conformity

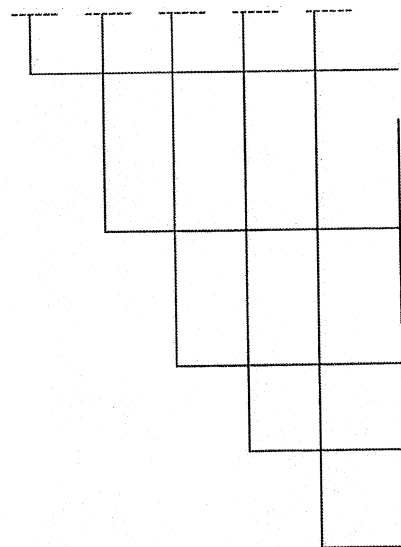
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Electrical Apparatus: Luminaries (Pendant lighting fixture) series EV..., EW..., EWA...,
 EVE..., EWE..., EWAE...

EWA Lamp

EWA..



Type of lamp: **EWA**

TYPE OF ACCESSORIES FOR MOUNTING

T: Suspension box with one entry
X: Ceiling mounting with four entries
GC: Suspension box with eyebolt
IX: Wall box 30° bracket (type A model)
IA: Wall box with 30° entry
Y: Suspension box with two entries

Series: **4** (for type A)
3 (for type B)

0: Without reflector
1: With reflector

Size : **60,70,80,100**

Electrical characteristics

Rated voltage	110/220/230/240/250/277 V
Rated frequency	50 ÷ 60 Hz
Rated power	15 ÷ 500 W
Degree of protection (IEC 60529)	IP 66

Ambient temperature (for all models) - 20 ÷ + 40°C ; - 20 ÷ + 55°C ; - 20 ÷ + 60°C

Some types of lighting fixtures can be also used for minimum ambient temperature -50°C

The models suitable for ambient temperature -50°C are:

Type A: EV..-4050; EV..-4060; EV ..-4070; EV..-4080

Type B: EV..-5050; EV..-5060; EV ..-5070; EV..-5080

Type A: EW..-4060; EW..-4070

Type B: EW..-5070

Type A: EWA..-4060; EWA..-4070; EWA..-4080

Type B: EWA..-5060; EWA..-5070; EWA..-5080

Lighting fixtures with "Ex d" protection Model EVIX..., EWIX..., EWAIX... must have sealed joint between lamp housing and wall mounting accessories.

Model EWA.. (Type A and Type B) and Model EW..5070 (Type B) must have sealed joint between lamp housing and ballast housing.

The temperature class and maximum surface temperature T of the units is a function of the enclosure size, of the maximum power dissipated in the inside and of the maximum ambient temperature as specified in the tables below and in the manufacturer documentation.



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 I - 34070 Villesse (GO), Italy
 Electrical Apparatus: Luminaries (Pendant lighting fixture) series EV..., EW..., EWA...,
 EVE..., EWE..., EWAE...

Temperature Class and Maximum Surface Temperature for lighting fixtures in Ambient Temperature up to + 40 °C; + 50 °C; + 60 °C

EV LAMPS

MOD	LAMP.	+40°C TEMP. CLASS / MAX SURFACE TEMP. (°C)	+55°C TEMP. CLASS / MAX SURFACE TEMP. (°C)	+60°C TEMP. CLASS / MAX SURFACE TEMP. (°C)
EV-...50	25/40/60/100W INC	T4 / T131°C	T3 / T146°C	T3 / T151 °C
	28/42/53/70W AL	T4 / T131°C	T3 / T146°C	T3 / T151°C
	5/8/12/15W ELS	T4 / T131°C	T3 / T146°C	T3 / T151°C
	6/7W LED	T4 / T131°C	T3 / T146°C	T3 / T151°C
EV-...60	50/80W HG	T3 / T144°C	T3 / T159°C	T3 / T164°C
	50/70W NA	T3 / T132°C	T3 / T147°C	T3 / T152°C
	200W INC	T3 / T153°C	T3 / T168°C	T3 / T173°C
	105/140W AL	T3 / T153°C	T3 / T168°C	T3 / T173°C
	20/23W EL	T6 / T85°C	T5 / T95°C	T5 / T100°C
	20/23W ELS	T6 / T85°C	T5 / T95°C	T5 / T100°C
	12W LED	T3 / T153°C	T3 / T168°C	T3 / T173°C
EV-...70	80/125W HG	T3 / T152°C	T3 / T167°C	T3 / T172°C
	70W NA	T4 / T118°C	T4 / T133°C	T3 / T138°C
	100/150W NA	T3 / T200°C	T2 / T215°C	T2 / T220°C
	70/100/150W HA	T3 / T200°C	T2 / T215°C	T2 / T220°C
	160W MIX	T3 / T157°C	T3 / T172°C	T3 / T177°C
	200W INC	T3 / T143°C	T3 / T158°C	T3 / T163°C
	27/33W EL	T3 / T143°C	T3 / T158°C	T3 / T163°C
	45W ELS	T3 / T143°C	T3 / T158°C	T3 / T163°C
EV-...80	125/250W HG	T3 / T184°C	T3 / T199°C	T2 / T204°C
	150/250W NA	T3 / T146°C	T3 / T161°C	T3 / T166°C
	100/150/250W HA	T3 / T158°C	T3 / T173°C	T3 / T178°C
	160/250W MIX	T3 / T162°C	T3 / T177°C	T3 / T182°C
	200/300W INC	T3 / T169°C	T3 / T184°C	T3 / T189°C
	65W ELS	T3 / T169°C	T3 / T184°C	T3 / T189°C
EV-...100	400W HG	T3 / 170°C	T3 / T185°C	T3 / T190°C
	400W NA	T3 / 170°C	T3 / T185°C	T3 / T190°C
	400W HA	T3 / 170°C	T3 / T185°C	T3 / T190°C
	500W INC	T3 / 170°C	T3 / T185°C	T3 / T190°C
	80W ELS	T3 / 170°C	T3 / T185°C	T3 / T190°C

NOTE:

HG mercury vapours lamp
 NA high pressure sodium lamp
 HA metal halide lamp
 MIX blended lamp
 INC incandescent lamp
 EL compact electronic lamp
 ELS compact electronic lamp spiralled type
 AL halogen lamp
 LED Led bulb lamp



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 EVE..., EWE..., EWAE...

Temperature Class and Maximum Surface Temperature for lighting fixtures in Ambient Temperature up to + 40 °C; + 50 °C; + 60 °C

EW, EWA, Lamps

MOD	LAMP.	+40°C TEMP. CLASS / MAX SURFACE TEMP. (°C)	+55°C TEMP. CLASS / MAX SURFACE TEMP. (°C)	+60°C TEMP. CLASS / MAX SURFACE TEMP. (°C)
EW-...60	50/80W HG	T4 / T132°C	T3 / T147°C	T3 / T152°C
	50/70W NA	T4 / T122°C	T3 / 137°C	T3 / T142°C
	100W MIX	T3 / T200°C	T2 / T215°C	T2 / T220°C
EW-...70	80W HG	T3 / T170°C	T3 / T185°C	T3 / T190°C
	125W HG	T3 / T170°C	T3 / T185°C	T3 / T190°C
	70W NA	T4 / T114°C	T4 / T129°C	T4 / T134°C
	100/150W NA	T3 / T200°C	T2 / T215°C	T2 / T220°C
	100/160W MIX	T3 / T167°C	T3 / T182°C	T3 / T187°C
EWA-...60	50/80W HG	T3 / T144°C	T3 / T159°C	T3 / T164°C
	50W NA	T4 / T132°C	T3 / T147°C	T3 / T152°C
	70W NA	T3 / T200°C	T2 / T215°C	T2 / T220°C
EWA-...70	80/125W HG	T3 / T152°C	T3 / T167°C	T3 / T172°C
	70W NA	T4 / T118°C	T4 / T133°C	T3 / T138°C
	100W NA	T3 / T200°C	T2 / T215°C	T2 / T220°C
EWA-...80	125/250W HG	T3 / T184°C	T3 / T199°C	T2 / T204°C
	100/150/250W NA	T3 / T146°C	T3 / T161°C	T3 / T166°C
	100/150/250W HA	T3 / T158°C	T3 / T173°C	T3 / T178°C
EWA-...100	250W HG	T4 / T110°C	T4 / T125°C	T4 / T130°C
	250W NA	T4 / T110°C	T4 / T125°C	T4 / T130°C
	250W HA	T4 / T110°C	T4 / T125°C	T4 / T130°C
	400W HG	T3 / 170°C	T3 / T185°C	T3 / T190°C
	400W NA	T3 / 170°C	T3 / T185°C	T3 / T190°C
	400W HA	T3 / 170°C	T3 / T185°C	T3 / T190°C

NOTE:

HG mercury vapours lamp
 NA high pressure sodium lamp
 HA metal halide lamp
 MIX blended lamp
 INC incandescent lamp
 EL compact electronic lamp
 ELS compact electronic lamp spiralled type
 AL halogen lamp



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EVE..., EWE..., EWAE...

Warning label

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

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

150 °C for the models with temperature class T2

145 °C for the models with temperature class T3

105 °C for the models with temperature class T4

95°C for the models with temperature class T5

No warning for the lamps with temperature class T6.

No warning for the lamps type EL.