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BERLIN**FGH**

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Schema di certificazione

**CESI-ATEX****ACCREDIA**  
PUNTO ITALIANO DI ACCREDITAMENTO

PRD N. 018B  
Membro degli Accordi di Mutuo  
Riconoscimento EA, IAF e ILAC  
Signatory of EA, IAF and ILAC  
Mutual Recognition Agreements

**CERTIFICATE****[1] EC-TYPE EXAMINATION CERTIFICATE**

**[2] Component intended for use on/in equipment or protective system  
intended for use in potentially explosive atmospheres  
Directive 94/9/EC**

**[3] EC-Type Examination Certificate number:**

**CESI 13ATEX 034 U**

**[4] Component: Electronic ballast series EBV-1**

**[5] Manufacturer: COR.TEM S.p.A.**

**[6] Address: Via Aquileia 10, I-34070 Villesse (Gorizia), Italy**

**[7] This component 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 component has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of components 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-B3019261.

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

**EN 60079-0: 2012 EN 60079-7: 2007 EN 60079-18: 2009**

**[10] The sign "U" placed after the certificate number indicates that this certificate must not be mistaken for a certificate intended for an equipment or protective system. This partial certification may be used as a basis for certification of an equipment or protective system.**

**[11] This EC-TYPE EXAMINATION CERTIFICATE relates only to the design, examination and tests of the specified component in accordance to the Directive 94/9/EC. Further requirements of the Directive apply to the manufacturing process and supply of this component. These are not covered by this certificate.**

**[12] The marking of the equipment or protective system shall include the following:**

**Ex II 2G Ex e mb IIC Gb**

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

Date 26/07/2013 - Translation issued the 26/07/2013

Prepared  
Sergio Mezzetti

Verified  
Mirko Balaz

Approved  
Fiorenzo Bregani

**CESI S.p.A.**  
Testing & Certification Division  
Business Area Certification  
Responsabile

[13]

## Schedule

[14] **EC-TYPE EXAMINATION CERTIFICATE n. CESI 13 ATEX 034 U**

[15] **Description of component**

Explosion proof electronic ballasts series EBV-1 is suitable to be installed into an increased safety lighting fixture for lighting mono-pin and bi-pin fluorescent tubes. and are rated at 110 to 240 V, 50 or 60 Hz and/or 110 to 240 V dc.

The electronic ballasts series EBV-1 can drive one or two fluorescent tubes from 1x18 W up to 2x36 W. The electronic ballast is composed by an electronic part inserted in a insulating enclosure and encapsulated by melted resin.

At both ends of the enclosure, male contacts type "Faston" are available for the connections to the external line and for the connection to fluorescent tubes. The terminals must be Factory wired.

The electronic ballasts series EBV-1, have adequate protection to prevent lamp cap overheating at the end of the lamp life and have been tested according to annex "H" of IEC 60079-7 regarding End Of Life lamp protection (EOL).

*Electrical characteristics*

CORTEM Code	Model	V in (V)	Frequency (Hz)	Lamp power (W)	I in (A)	Pf (λ)	U-out (V)	IPXX
EBV-1	49100021	110/240	0 50/60	1x18	0.10-0.18	0.80C	250	20
				2x18	0.17-0.36	0.92C		
				1x36	0.16-0.33	0.92C		
				2x36	0.28-0.63	0.95		

Service Temperature range:                      - 40 °C + + 75 °C

[16] **Report n. EX-B3019261**

**Routine tests**

Not applicable

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[13]

## Schedule

[14] **EC-TYPE EXAMINATION CERTIFICATE n. CESI 13 ATEX 034 U**

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### Descriptive documents (prot. EX-B3019269)

- Technical Note A45551 (2 sheets)	Rev. 1	dated	21/02/2013
- Drawing A3-5552 (3 sheets)	Rev. 0	dated	10/05/2011
- Fac-simile attestation of conformity n° 00118	Rev. 0	dated	21/02/2013
- Safety Instruction F 365 (4sheets)	Rev. 0	dated	21/02/2013
- Instruction for sealing F 387	Rev. 0	dated	21/02/2013
- Annex (115 sheets)		dated	21/02/2013

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One copy of all documents is kept in CESI files.

[17] **Schedule of limitation**

- The conditions of the use of the ballast are included within the manufacturer safety instructions.
- The max. operating temperature for ballasts shall not exceed + 75 °C.
- The operation of the EBV-1 ballast are guaranteed by CORTEM at a minimum temperature of -25°C.
- The EBV-1 ballast shall be installed into a suitably approved Ex enclosures having a minimum degree of protection IP54.

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

Covered by compliance to the following standards:

- EN 60079-0 : 2012 - Explosive atmospheres: General requirements
- EN 60079-7: 2007 - Explosive atmospheres: protection by increased safety "e"
- EN 90079-18: 2009 - Explosive atmospheres: protection by encapsulation "m"

**EXTENSION n. 01/15**

to EC-Type Examination Certificate CESI 13 ATEX 034U

Component: Electronic ballasts series EBV-1

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

Address: Via Aquileia 10, - I 34070 Villesse (GO), Italia


**Admitted variation**

- New maximum service temperature  $T = + 90^{\circ}\text{C}$
- Updating of nameplate

**Component description**

The electronic ballasts series EBV-1 is suitable to be installed into an increased safety lighting fixture for lighting one or two fluorescent tubes from 1x18 W up to 2x36 W mono-pin and bi-pin. The electronic ballast is composed by an electronic part inserted in a insulating enclosure and encapsulated by melted resin.

The electronic ballasts series EBV-1, shall be marked as follows:

 II 2G Ex e mb IIC Gb

This extension and annexed descriptive documents must be annexed to the EC-Type Examination Certificate CESI 13 ATEX 034U

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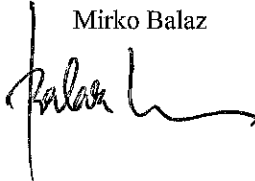
Date 27/03/2015 - translation issued the 27/03/2015

**Prepared**

Sergio Mezzetti

**Verified**

Mirko Balaz

**Approved**

Roberto Piccin

  
**CESI** S.p.A.  
 Testing & Certification Division

**EXTENSION n. 01/15**

to EC-Type Examination Certificate CESI 13 ATEX 034U

**Electrical characteristics**

- Service temperature range of the encapsulated component : - 40 °C + + 90 °C

Unchanged the other characteristics

Report n. EX-B5006531

**Routine Tests**

Not applicable

**Descriptive documents (Prot. EX- B5006538)**

- |  |        |       |            |
|--|--------|-------|------------|
| - Technical Note A46338 (3 sheets)             | Rev. 0 | dated | 19/02/2015 |
| - Safety Instruction F 365 (4 sheets)          | Rev. 1 | dated | 19/02/2015 |
| - Fac-simile attestation of conformity n° 0118 |        | dated | 19/02/2015 |

One copy of all the documents mentioned above is kept in CESI files.

**Schedule of limitations**

- The conditions of the use of the ballast are included within the manufacturer safety instructions.
- The max. operating temperature for ballast shall not exceed + 90 °C.
- The min. temperature of ballast installation is - 40°C; the operations of the EBV-1 ballast is guaranteed by CORTEM at a minimum temperature of - 25°C.
- The EBV-1 ballast shall be installed into a suitably approved Ex enclosures having a minimum degree of protection IP54.

**Essential Health and Safety Requirements**

Covered by compliance to the following standards:

- EN 60079-0: 2012 - Electrical apparatus for explosive gas atmospheres: General requirements
- EN 60079-7: 2007- Explosive atmospheres: increased safety "e"
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**EXTENSION n. 01/15**

to EC-Type Examination Certificate CESI 13 ATEX 034U

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 Manufacturer: **COR.TEM S.p.A.**  
 Address: Via Aquileia 10, - I 34070 Villesse (GO), Italia


**Admitted variation**

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- Updating of nameplate

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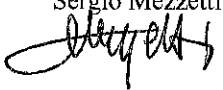
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**Prepared**  
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**EXTENSION n. 01/15**

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