

# CESI

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Registro Imprese di Milano  
Sezione Ordinaria  
N. R.E.A. 429222  
P.I. IT00793580150

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, D.M. 27/9/2000 e D.M. 02/02/2006

# CERTIFICATE



## EC-TYPE EXAMINATION CERTIFICATE

- [1] **Equipment or Protective System intended for use in potentially explosive atmospheres**  
**Directive 94/9/EC**
- [2] EC-Type Examination Certificate number:  
**CESI 06 ATEX 051**
- [3] Equipment: Fluorescent lighting fitting, type FLX 236
- [4] Manufacturer: TEPEX Ltd.
- [5] Address: Medarska 69, Hr-10090 Zagreb, Croatia
- [6] This equipment or protective system and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.
- [7] 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-A6020279.
- [8] Compliance with the Essential Health and Safety Requirements has been assured by compliance with:  
**EN 60079-0:2004 EN 60079-1:2004 IEC 61241-0:2004 EN 61241-1:2004**
- [9] 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.
- [10] 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.
- [11] The marking of the equipment or protective system shall include the following:  
**⊕ II 2GD Ex d IIC T5 or T6 tD A21 IP 66 T80°C or T95°C**
- [12] This certificate may only be reproduced in its entirety and without any change, schedule included.

Date 07 november 2006 - Translation issued the 07 november 2006

Prepared  
Sergio Mezzetti

Verified  
Mirko Balaz

Approved  
Fiorenzo Bregani

**CESI**  
Centro Elettrotecnico Sperimentale Italiano  
Giacinto Motta SpA  
Business Unit GENERAZIONE  
Il Responsabile

[13]

## Schedule

[14] **EC-TYPE EXAMINATION CERTIFICATE n. CESI 06 ATEX 051**

[15] **Description of equipment**

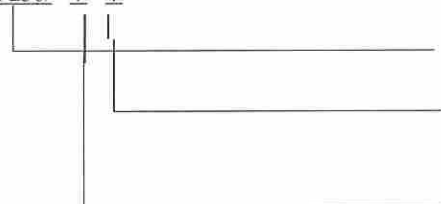
The fluorescent lighting fittings, type FLX 236 are made of corrosion resistant grey polyurethane painted aluminium alloy with sealed high quality borosilicate glass tube. The fitting provides threaded cover for servicing of terminal compartment and lamp guide.

The lighting fitting is normally supplied with two lamps and two starters.

Explosion protected twin lamp lighting fitting series FLX is intended for use with TCL compact fluorescent lamps 36W with 2G11 lamp holder.

The fluorescent lighting fittings, type FLX 236 are defined through a code formed of the following fields (the coding is fully described on the attached drawings):

FLX 236/



**base type description**

**description of the cable entry type:**

- 0 - EEx d cable entry 3 x M20, ISO 965-1, ISO 965-3

- 1 - EEx d cable entry 3 x 3/4"NPT, ANSI/ASME B1.20.1

**description of the ballast type:**

- 0 - inductive ballast with starter (EEI=B2)

- 1 - electronic ballast with preheating catodas (EEI=A2)

**Electrical characteristics**

Rated voltage:	FLX 236/0 .	- 230V (+6% -10%) / 50 Hz
	FLX 236/1 .	- 120...277V / 50....60 Hz, DC
Rated power		2 X 36W
Degree of protection		IP 66
Ambient temperature		- 20 ÷ + 40 °C
		- 20 ÷ + 50 °C

For the type FLX 236/10 and FLX 236/11 - with electronic ballast

Ambient temperature:	-20 °C ÷ +40 °C
Category 2G. - Temperature class:	T6
Category 2.D - Maximum surface temperature:	T80°

For the type FLX 236/00 and FLX 236/01 - with inductive ballast

Ambient temperature:	-20 °C ÷ +50 °C
Category 2G. - Temperature class:	T 5
Category 2.D - Maximum surface temperature:	T 95°

The accessories used for cable entries and for closing unused apertures in the units shall be certified according to EN 60079-0, EN 60079-1 and EN 61241-1 standards. A minimum degree of protection IP 66 shall be guaranteed according to EN 60529 standards.

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.

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

[13]

## Schedule

[14] **EC-TYPE EXAMINATION CERTIFICATE n. CESI 06 ATEX 051**

[15] **Description of equipment** (follows)

### Warning label

For all types:

“Do not open when energized.”

“Do not open when an explosive dust atmosphere may be present.”

For type FLX 236/0.

“After de-energizing, delay 30 minutes before opening.”

“Use cable suitable for a temperature of at least:

for  $-20^{\circ}\text{C} < T_a < 35^{\circ}\text{C}$  without a limit

for  $-20^{\circ}\text{C} < T_a < 40^{\circ}\text{C}$  thermal stability  $85^{\circ}\text{C}$

for  $-20^{\circ}\text{C} < T_a < 50^{\circ}\text{C}$  thermal stability  $95^{\circ}\text{C}$ .”

[16] **Report n. EX-A6020279**

### Routine tests

The manufacturer shall carry out the routine tests prescribed at paragraph 27 of the EN 60079-0 standard and at paragraph 16 of the EN 60079-1 standard.

The routine overpressure test on the Ex-d lamps shall be carried out at 19,1 bar, with the static method according to paragraph 15.1.3.1 of the EN 60079-1 standard.

### Descriptive documents (prot. EX-A6020286)

- Technical Description (3 pg.)	dated	18.09.2006
- n. T 12.50.00.00-1	dated	18.09.2006
- n. T 12.50.00.00-2	dated	18.09.2006
- Certified Drawing Description T12.50.00.00-1/-2 (4 pg.)	dated	18.09.2006
- User Manual (2 pg.)	dated	2006
- EC declaration of conformity	dated	06.11.2006

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. 01/09

to EC-Type Examination Certificate CESI 06 ATEX 051



Equipment: Fluorescent lighting fitting series FLX

Manufacturer: **TEPEX Ltd.**

Address: Medarska 69, Hr-10090 Zagreb – Croatia

### Admitted variation

- Adding models with one or two lamps of 18, 24, 40, 55W.
- New Ex de version.

### Marking

The equipment shall be marked as follows:

 II 2G Ex d IIC T5 or T6  
II 2D Ex tD A21 IP66 T80°C or T95°C

or

 II 2G Ex de IIC T5 or T6  
II 2D Ex tD A21 IP66 T80°C or T95°C

This extension and annexed descriptive documents must be annexed to the EC-Type Examination Certificate CESI 06 ATEX 051.

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date 20 July 2009 - translation issued the 20<sup>th</sup> July 2009

prepared Maurizio Toninelli

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approved Fiorenzo Bregani

**CESI** S.p.A.  
Divisione Energia  
"Area Tecnica Certificazione"  
Responsabile

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## EXTENSION n. 01/09

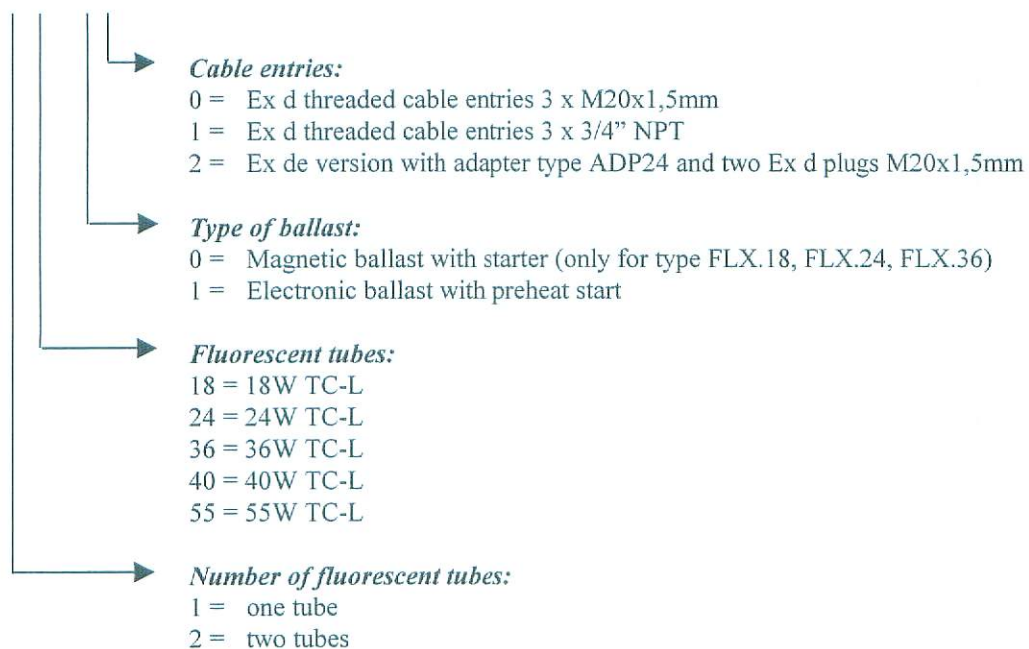
to EC-Type Examination Certificate CESI 06 ATEX 051

### Description of equipment

The fluorescent lighting fittings type FLX are made in aluminium alloy with sealed borosilicate glass tube. Ex de version is realised with an Ex de IIC adapter type ADP24 with a M25 cable gland for non-armoured cable suitable only for use with permanently installed cables.

The fluorescent lighting fittings, type FLX, are identified by the following code:

FLX \_ \_ / \_ \_



The accessories used for Ex d cable entries and unused holes shall be certificate according to EN60079-0, EN60079-1, EN61241-0 and EN61241-1 standard. A minimum degree of protection IP66 shall be guaranteed according to EN60529 standard. If cylindrical threads are used, the coupling between the cable entry and the enclosure shall be provided with block to prevent loosening.

With Ex de adapter type ADP24 the installer shall ensure adequate clamping of the cable.

### Electrical characteristics

Rated voltage	: 230 / 240 Vac (+6%, -10%), 50Hz	(with magnetic ballast)
	220 Vac (+6%, -10%), 60Hz	(with magnetic ballast)
	100 ÷ 280 Vac, 50÷60Hz	(with electronic ballast)
	100 ÷ 280 Vdc	(with electronic ballast)
Fluorescent lamps	: TC-L (18÷55W)	
Operating temperature range	: from -20°C to +40°C	(with electronic ballast)
	from -20°C to +50°C	(with magnetic ballast)

Temperature class with ambient temperature from -20°C to +40°C is T6 and maximum surface temperature is T80°C.  
 Temperature class with ambient temperature from -20°C to +50°C is T5 and maximum surface temperature is T95°C.

All others electrical characteristics are unchanged.

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## EXTENSION n. 01/09

to EC-Type Examination Certificate CESI 06 ATEX 051

### Warning label

For all types:

- Do not open when energized.
- Do not open when an explosive dust atmosphere may be present.

For version with magnetic ballast:

- After be-energizing, delay 30 minutes before opening.
- Use cable suitable for a temperature of at least 95°C.

Report n. EX-A9018074

### Routine tests

The manufacturer shall carry out the routine tests prescribed at clause 27 of the EN60079-0 standard and at clause 24 of EN61241-0 standard. The routine overpressure test, according to clause 15.1.3.1 of the EN 60079-1, shall be carried out at 19,1 bar on FLX \*18, FLX \*24, FLX \*36 models and at 13,7 on FLX \*40, FLX \*55 models.

On the lighting fixtures having the adapter in execution Ex de the dielectric test with applied voltage shall be performed (according to clause 7.1 of the EN 60079-7) at  $2U + 1000$  V with a minimum value of 1500 V between the supply terminals and earth ( $U$  = rated voltage of the lamp).

### Descriptive documents (prot. EX-A9018079)

- |   |           |                  |
|---|-----------|------------------|
| - Technical description of the explosion protected fluorescent lighting fitting | (pages 5) | dated 04.2009    |
| - User manual TEPEX.RS.005 – rev.2  | (pages 3) | dated 28.04.2009 |
| - Certificated drawing description T12.51.00.00-1/-2                            | (pages 4) | dated 04.2009    |
| - Technical description of the explosion protected adapter Ex de, type ADP      | (pages 2) | dated 07.2009    |
| - Certificated drawing description C72.01.01.00                                 | (pages 4) | dated 07.2009    |
| - drawing T12.51.00.00-1  |           | dated 04.2009    |
| - drawing T12.51.00.00-2  |           | dated 04.2009    |
| - drawing C72.01.01.00  |           | dated 07.2009    |
| - Declaration of conformity   |           | dated 07.2009    |

One copy of all documents is kept in CESI files.

### 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 explosion proof "d".
- EN 60079-7: 2007 - 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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