



## 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: **KEMA 01ATEX2126**
- (3) Equipment or protective system: **Lighting Fixtures Series EVF**
- (4) Manufacturer: **CO.SI.ME. S.R.L.**
- (5) Address: **Via Asiago, 51, 20128 Milan, Italy**
- (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) KEMA Quality B.V., notified body number 0344 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.
- (8) The examination and test results are recorded in confidential report no. 2011811.
- (9) Compliance with the Essential Health and Safety Requirements has been assured by compliance with:  
**EN 50014 : 1997    EN 50018 : 2000    EN 50281-1-1 : 1998**
- (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 according 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 2 GD EEx d IIC T6 ... T4    T 80 °C ... T 130 °C

Arnhem, 28 June 2002  
KEMA Quality B.V.

L.M.J. Vries  
Certification Manager

\* This Certificate may only be reproduced in its entirety and without any change

## SCHEDULE

to EC-Type Examination Certificate KEMA 01ATEX2126

### Description

Lighting Fixtures Series EVF, consisting of 2 or 3 metal end boxes with 1 or 2 glass tubes in between, secured by steel tie-rods, suitable for use with the lamps as shown in the table below.

Ambient temperature range: -40 °C ... +60 °C.

Protection degree: IP 67 according to EN 60529.

The relation between the maximum ambient temperature and the maximum surface temperature and temperature class is shown in the table below.

EVF fixture with 1 glass tube	Ballast type (*)	EVF fixture with 2 glass tubes	Temperature class / max. surface temperature T at: T <sub>a</sub> max. = 40 °C    T <sub>a</sub> max. = 60 °C
<b>Lamp T12 caps G13:</b>			
1 x 20 W	I-E	2 x 20 W	T6 / 80 °C
1 x 40 W		2 x 40 W	T5 / 95 °C
1 x 65 W	I-E	2 x 65 W	T4 / 130 °C
<b>Lamp T8 caps G13:</b>			
1 x 18 W	IS-E	2 x 18 W	T6 / 80 °C
1 x 36 W		2 x 36 W	T5 / 95 °C
1 x 58 W	IS-E	2 x 58 W	T4 / 130 °C
<b>Lamp T5 caps G5:</b>			
1 x 4 ... 13 W	IS-E	2 x 4 ... 13 W	T6 / 80 °C
1 x 14 ... 80 W	E	2 x 14 ... 54 W	T6 / 80 °C
2 x 4 ... 13 W	IS-E	2 x 4 ... 13 W	T6 / 80 °C
2 x 14 ... 54 W	E	-	T6 / 80 °C
<b>Lamp TC caps G23 / TC-E caps 2G7:</b>			
1 x 5 ... 11 W	IS-E	2 x 5 ... 11 W	T6 / 80 °C
2 x 5 ... 11 W	IS-E	-	T6 / 80 °C
<b>Lamp TC-L caps 2G11:</b>			
1 x 18 ... 40 W	IS-E	2 x 18 ... 40 W	T6 / 80 °C
1 x 55 W	IS-E	2 x 55 W	T5 / 95 °C
2 x 18 W	IS-E	-	T6 / 80 °C
2 x 24 ... 40 W	IS-E	-	T5 / 95 °C

(\*) : ballast type: I = inductive ballast rapidstart  
IS = inductive ballast with starter  
E = electronic ballast

### Electrical data

Inductive ballast with starter and rapidstart:  
Rated voltage: 220 ... 240 V +/- 10 %  
Frequency: 50 ... 60 Hz  
Rated current: max. 1.5 A with 2 lamps T12 of 65 W, cos φ > 0,47

### Electronic ballast:

Rated voltage: 100 ... 240 Vac/dc +/- 10 %  
12 ... 24 Vdc +/- 10 %  
Frequency: 50 ... 60 Hz (input), 50 kHz (output)  
Rated current: max. 0,52 A with 2 lamps T5 of 54 W, cos φ > 0,90

## SCHEDULE

to EC-Type Examination Certificate KEMA 01ATEX2126

(13)  
(14)

Battery charger/emergency device:

Rated voltage: 100 ... 240 Vac/dc +/- 10 %  
Frequency: 50 ... 60 Hz (input), 50 kHz (output)  
Max. line current battery charger: 1/10 of battery capacity,  $\cos \phi > 0,90$   
Emergency "ON" battery current: max. 2,5 A with lamp T8 of 58 W

### Installation instructions

The installation and maintenance instructions as provided by the manufacturer must be followed in detail to assure proper and safe operation of the lighting fixture.

### Routine tests

Each lighting fixture shall be submitted to a routine overpressure test according to EN 50018, clause 16, using the following test pressures:

- 20 bar during 1 minute in case the lower ambient temperature is  $-20\text{ }^{\circ}\text{C}$
- 25 bar during 1 minute in case the lower ambient temperature is  $-40\text{ }^{\circ}\text{C}$ .

(16) **Report**

KEMA No. 2011811.

(17) **Special conditions for safe use**

None.

(18) **Essential Health and Safety Requirements**

Covered by the standards listed at (9).

(19) **Test documentation**

- |   | <u>dated</u> |
|---|--------------|
| 1. Technical Note AC10002TN, rev. 2 (5 pages)                         | 20.10.2001   |
| 2. Installation and Maintenance Instructions IU-EVF, rev. 1 (2 pages) | 28.06.2001   |
| 3. Drawing No. AC10002  | 31.05.2000   |

Documento / Document			IU-EVF			
N° Pagine / Sheet N°			1	di / of		2
REV	0	1	2	3	4	
DATA	31/05/00	28/06/01				
EXE by	M.T.	M.T.				
CHK by	F.C.	F.C.				
APP by	M.T.	M.T.				

**Apparecchi di illuminazione tipo EVF**  
*Lighting fixtures EVF type*

**Assistenza tecnica – Technical support**  
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**1 Istruzioni di sicurezza**

Queste istruzioni devono essere conservate in luogo sicuro per future consultazioni. Per personale esperto e qualificato in accordo alle Leggi nazionali, in accordo alle relative Norme e, dove applicabile, in accordo alla IEC-79-17 per costruzioni elettriche per atmosfere potenzialmente esplosive. Questa costruzione elettrica deve essere installata solo per l'utilizzo per il quale è destinata. Non è ammessa alcuna modifica alla costruzione elettrica. Rispettare le caratteristiche elettriche indicate sulla costruzione.  
Questa costruzione elettrica non è adatta per l'utilizzo in zona 0 e zona 20

**1 Safety instructions**

*These operating instructions must be kept in safe place for later consultations. For skilled and experienced personnel according with the national laws, the relevant standards and, where applicable, according with IEC-79-17 standards for electrical apparatus for potentially explosive atmospheres. This electrical apparatus must be used for its intended purpose. No modifications to the electrical apparatus shall be allowed. Observe the electrical features indicated on the apparatus.*

*This electrical apparatus is not suitable to be installed in zone 0 and zone 20*

**2 Conformità alle Norme**

La costruzione elettrica è conforme a : Norme EN 50014, EN 50018, EN 50281-1-1 ed alla Direttiva 94/9/EC.

Costruzione per zona 1, zona 2, zona 21 e zona 22 (IEC 79-14 / CEI EN 60079-14).

**2 Conformity with standards**

*The electrical apparatus meet the requirements of: EN 50014, EN 50018, EN 50281-1-1 and Directive 94/9/EC.*

Electrical apparatus for zone 1, zone 2, zone 21 and zone 22 (IEC 79-14 / CEI EN 60079-14).

**3 Dati Tecnici – Technical data**

Modo di protezione : <i>Protection mode :</i>	EEx d IIC T6+T5 (EN 50014) T amb max +40°C EEx d IIC T5+T4 (EN 50014) T amb max +60°C	II 2 G D (Directive 94/9/EC) T 80°C + T 130°C (EN 50281-1-1)
Grado di protezione : <i>Protection degree :</i>	IP 67 (EN 60529)	
Certificato di esame CE del tipo : <i>EC-type examination certificate :</i>	KEMA 01ATEX2126	Coppia serraggio viti di chiusura [Nm] : 15 <i>Fastening screws torque [Nm] :</i>
Temperatura ambiente [°C] : -20 ÷ +40 <i>Ambient temperature [°C] :</i>	Temperatura ambiente speciale [°C] : -40 ÷ +60 <i>Special ambient temperature [°C] :</i>	Temp. di immagazzinaggio [°C] : -40 ÷ +60 <i>Storage temperature [°C] :</i>
Tubi fluorescenti bispina tipo : <i>Bi-pin fluorescent tube type :</i>	G13-G5-2G7-G23-2G11: Si consiglia l'utilizzo di tubi di costruttori primari <i>G13-G5-2G7-G23-2G11: We suggest to use lamps by primary manufacturer</i>	
Tensione nominale [Vac,dc] :100÷240 <i>Rated voltage [Vac,dc] :</i>	Vedi targa custodia reattore <i>See plate on ballast enclosure</i>	Frequenza [Hz] : 50 ÷ 60 <i>Frequency [Hz] :</i>
Entrate di cavo : <i>Cable entry :</i>	EEx d IIC (EN 50018)	Grado di protezione minimo IP 67 <i>Minimum protection degree IP 67</i>
Morsetti di connessione [mm <sup>2</sup> ] : 2,5 <i>Terminals connections [mm<sup>2</sup>] :</i>	Coppia serraggio morsetti-vite di terra [Nm] : 3,5 <i>Terminals-earth screw Torque [Nm] :</i>	Peso [Kg] : ~ 5 ÷ 20 <i>Weight [Kg] :</i>



**4 Installazione**

La costruzione elettrica può essere installata solo se esente da danni. Rispettare le Norme nazionali in materia di costruzioni elettriche per atmosfera potenzialmente esplosiva. Utilizzare solo accessori forniti da CO.SI.ME. per l'installazione della costruzione elettrica. Prima di chiudere la custodia del reattore verificare che il giunto sia lubrificato ed esente corpi estranei e difetti.

**4 Installation**

*The electrical apparatus shall be installed in absence of damages. Observe the national standards concerning electrical apparatus for potentially explosive atmospheres. Utilize the installation accessories supplied by CO.SI.ME. Before closing the ballast enclosure, check that joint were lubricated and free of foreign matters and deformations.*

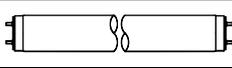
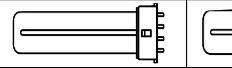
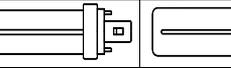
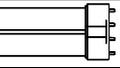
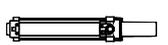
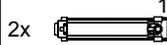
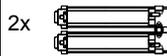
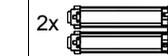
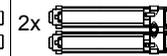
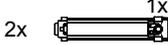
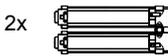


**5 Manutenzione**

Le riparazioni o sostituzioni di parti danneggiate o non funzionanti possono essere effettuate solo da personale esperto e qualificato con parti di ricambio fornite da CO.SI.ME. Le riparazioni che influiscono sul modo di protezione antideflagrante possono essere effettuate solo da CO.SI.ME.

**5 Maintenance**

*Repairs and replacements of damaged or faulty parts must be carried out by skilled and experienced personnel with spare parts supplied by CO.SI.ME. Repairs that affect explosion proof protection may only be carried out by CO.SI.ME.*

					
G13 (ø38)	G13 (ø26)	G5 (ø16)	2G7	2G7	2G11
20 – 40 – 65 [W]	18 – 36 – 58 [W]	4–6–8–13–14–21 [W] 24-28-35–39–54-80 [W]	5 – 7 – 9 – 11 [W]	5 – 7 – 9 – 11 [W]	18 – 24 – 36 [W] 40 – 55 [W]
1x  2x 	1x  2x 	2x  2x 	2x  2x 	2x  2x 	2x  2x 



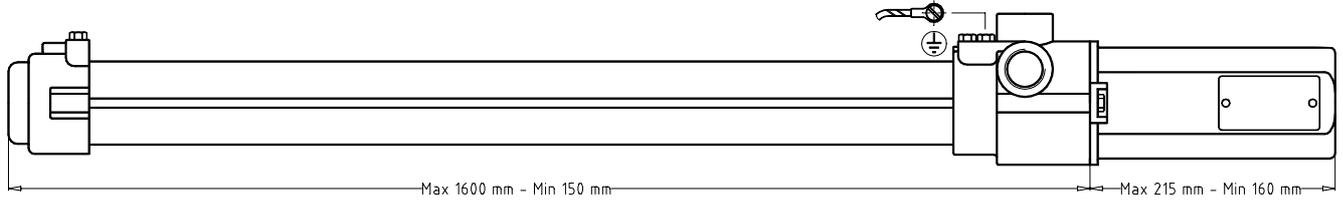
**Con temperatura ambiente > 40°C utilizzare cavi di alimentazione con temperatura di esercizio > 115°C.**  
**For ambient temperature > 40°C use feeding cables with operating temperature > 115°C.**

Documento / Document			IU-EVF		
N° Pagine / Sheet N°			2	di / of	2
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**Apparecchi di illuminazione tipo EVF**  
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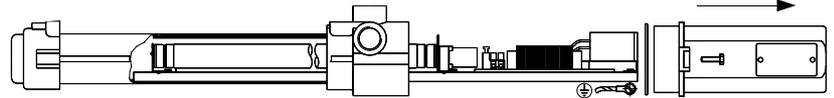


**6 Apertura dell'apparecchio**

Rimuovere le viti di chiusura ed estrarre la custodia nel senso della freccia (vedi fig. 1).

**6 Opening the apparatus**

Remove the screws and pull enclosure according to arrow direction (see fig. 1).

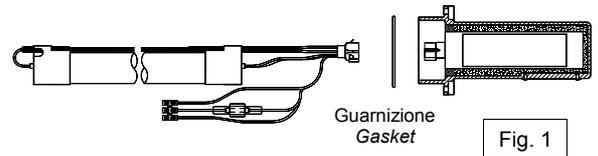


**7 Chiusura dell'apparecchio**

Lubrificare il giunto cilindrico della custodia, sostituire le guarnizioni difettose, inserire la custodia e serrare a fondo le viti.

**7 Closing the apparatus**

Lubricate the cylindrical joint of the enclosure, replace damaged gasket, insert the enclosure and tight down the screws.



Guarnizione Gasket

Fig. 1

**8 Entrate di cavo**

Sono ammesse entrate di cavo (vedi fig. 2) con dispositivi certificati in accordo alla norma EN 50018. Le entrate di cavo con grado di protezione inferiore a IP 67 riducono il grado di protezione dell'intero apparecchio.

**8 Cable entries**

Only certified cable entries (see fig. 2) according to EN 50018 are permitted for use. Cable entries with protection degree lower than IP 67 reduce the whole protection of the apparatus.

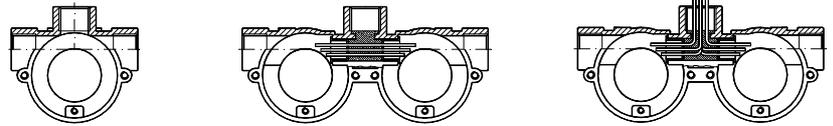


Fig. 2

**Apparecchi con reattore elettronico**

Ripartire l'alimentazione su tre fasi, utilizzando interruttori differenziali trifase insensibili a correnti impulsive. In un circuito di apparecchi di illuminazione alimentati con reattori elettronici tutte le lampade fluorescenti si inseriscono contemporaneamente, pertanto si consiglia di limitare il numero di apparecchi collegati ad ogni singolo interruttore magnetotermico.

In caso di guasto o esaurimento del tubo fluorescente, il reattore mantiene uno stato di interdizione senza consumo di corrente sino alla sostituzione del tubo fluorescente.

**Apparatus with electronic ballast**

Divide the feeding line into three phase, use 3-phases circuit breakers indifferent to impulse current. The circuit with lighting fixtures equipped with electronic ballasts all the lamps turn on at the same time, therefore we suggest to limit the number of fixtures connected to each circuit breaker. When fluorescent tube go wrong or fail, the electronic ballast hold a rest mode without energy consumption until the replacement on the fluorescent tube.

**Apparecchi collegati a dispositivi di emergenza : Apparatus connected to emergency device :**

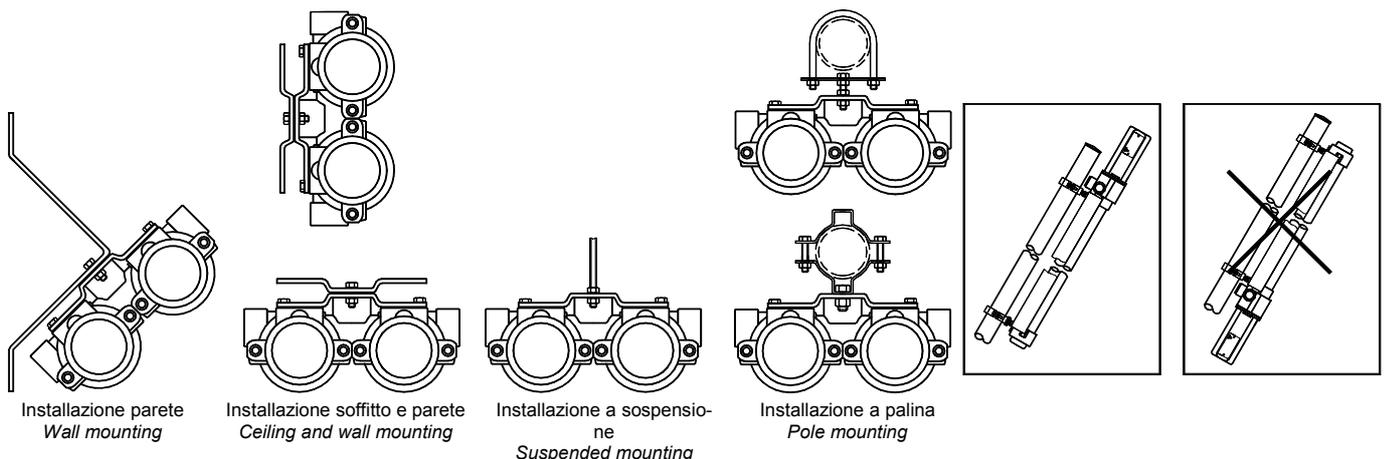
 **ATTENZIONE**  
 DISINSERIRE LA BATTERIA PRIMA DI APRIRE  
**WARNING**  
 DISCONNECT BATTERY BEFORE OPENING

Schemi di collegamento allegati al dispositivo di emergenza

Wiring scheme enclosed to emergency device

 **9 Eliminazione / Riciclaggio** : L'eliminazione e riciclaggio del prodotto deve essere effettuata in accordo alle Norme nazionali in materia di rifiuti. **ATTENZIONE : NON DISPERDERE L'APPARECCHIO ED I SUOI COMPONENTI NELL'AMBIENTE.**

**9 Disposal / Recycling** : Disposal and recycling of the apparatus according to national regulations for waste disposal and recycling . **WARNING : DO NOT DISPOSE THE APPARATUS AND HIS COMPONENTS IN THE ENVIROMENT.**



Installazione parete  
 Wall mounting

Installazione soffitto e parete  
 Ceiling and wall mounting

Installazione a sospensione  
 Suspended mounting

Installazione a palina  
 Pole mounting

## Dichiarazione CE di conformità EC Declaration of conformity

Noi  
We



CO.SI.ME. Srl  
Via Asiago, 51  
20128 Milan  
ITALY

Dichiariamo sotto la nostra esclusiva responsabilità che i prodotti :  
*Declare under our sole responsibility that the products :*

Apparecchi di illuminazione  
tipo **EVF**  
*Lighting fixtures*  
type **EVF**

ai quali questo attestato si riferisce sono conformi a :

- Direttiva ATEX 94/9/CE : apparecchi e sistemi di protezione destinati ad essere utilizzati in atmosfera potenzialmente esplosiva.
- Direttiva 89/336/CE : compatibilità elettromagnetica

*to which this attestation relates are in conformity with :*

- *Directive ATEX 94/9/EC : equipment and protective systems intended for use in potentially explosive atmospheres.*
- *Directive 89/336/EC : Electromagnetic compatibility*

e sono costruiti in accordo alle seguenti Norme :

*and they are manufactured in conformity with the following Standards :*

**EN 50014 : 1997 + A1/A2 : 1999**

**EN 50018 : 2000**

**EN 50281-1-1 : 1998**

**EN 60529 : 1991**

Certificato di esame del prodotto :

*Examination certificate of the product :*

**KEMA 01 ATEX 2126**

Nome dell' Organismo incaricato della sorveglianza ai fini della qualità : **CESI**

*Name of Body involved in the production quality system surveillance :*

N° dell' Organismo notificato

*N° of the notified Body*

**0722**

Milano, 10 aprile 2001

(luogo e data)

*(place and date of issue)*

Ing. Massimo Tonetti

(nome e firma o timbratura equivalente della persona autorizzata)

*(name and signature or equivalent marking of authorised person)*

A handwritten signature in black ink, appearing to read 'M. Tonetti', is written over the signature line.