KEMA

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: **KEMA 01ATEX2244**

(4) Equipment or protective system: **Control units series EFDC**

(5) Manufacturer: **CO.SI.ME. S.R.L**

(6) Address: **Via Asiago, 51, 20128 Milan, 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) 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.

The examination and test results are recorded in confidential report no. 2016570.

(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:

Ex **II 2 GD** **EEx d IIC T3 ... T5**
T 95 °C ... T 195°C

Arnhem, 9 September 2002
KEMA Quality B.V.

T. Pijpker
Certification Manager

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ACCREDITED BY THE DUTCH COUNCIL FOR ACCREDITATION

KEMA

(13)

SCHEDULE

(14) **to EC-Type Examination Certificate KEMA 01ATEX2244**

(15) **Description**

The control unit series EFDC consists of an aluminimum body and aluminium cover. The control unit can be provided with several elements consisting of signal lamps with round cemented glass window or pushing and switching devices, which are to be taken from the manufacturer's installation and maintenance instructions.

The relation between the maximum dissipated power and the number of elements on the control unit is shown in the table below.

Code	Maximum dissipated power
EFDC with 1 element	10 W
EFDC with 2 elements	20 W
EFDC with 3 elements	30 W
EFDC with 4 elements	40 W
EFDC/Q with 1 element	10 W

The relation between ambient temperature range, temperature class and maximimum surface temperature "T" is shown in the table below.

Ambient temperature range	Temperature class	Maximum surface temperature "T"
-45°C ... +40°C	T5	95 °C
-45°C ... +60°C	T4	130 °C
-45°C ... +80°C	T3	195 °C

Electrical data

Rated voltage:	500 - 690 Vac, 110 Vdc, 50/60 Hz
Rated current:	10 – 16 A
Rated power:	See table above
Protection degree:	IP 66 according to EN 60529

Installation instructions

The cable and conduit entry devices shall be of a certified flameproof type EEx d, suitable for the conditions of use and correctly installed. With the use of conduit entries a sealing device shall be provided either in the flameproof enclosure or immediately on the entrance thereto.

Routine tests

Each control unit shall be submitted to an overpressure test according to EN 50018, clause 16 using the following test pressures:
- 22,5 bar during 1 minute in case the lower ambient temperature is -20 °C
- 32 bar during 1 minute in case the lower ambient temperature is -45 °C

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(13) **SCHEDULE**

(14) **to EC-Type Examination Certificate KEMA 01ATEX2244**

(16) **Report**

KEMA No. 2016570

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

None

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

Covered by the standards listed at (9).

(19) **Test documentation**

		dated
1.	Technical Note AC10020TN (3 pages)	08.08.2001
2.	Installation and maintenance instructions IU-EFDC	08.08.2001
3.	Drawing No. AC10020, Rev. 0	08.08.2001

CO.SI.ME.
CO.SI.ME. Srl Milan – ITALY

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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 tipo **EFDC**
*Apparatuses type **EFDC***

ai quali questo attestato si riferisce sono conformi alla Direttiva comunitaria ATEX 94/9/CE
to which this attestation relates are in conformity with the community Directive ATEX 94/9/EC

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
EN 60947-5-1: 1997
EN 60947-3 : 1999

Certificato di esame del prodotto :
Examination certificate of the product :

KEMA 01 ATEX 2244

Nome dell' Organismo incaricato della sorveglianza ai fini della qualità :
Name of Body involved in the production quality system surveillance :

CESI

N° dell' Organismo notificato
N° of the notified Body

0722

Milano, 08 august 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)

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Tel +39 02 25 76 510 – Fax +39 02 25 52 365 – cosime@tin.it

CO.SI.ME.
COSTRUZIONI ELETTRICHE PER ATMOSFERE POTENZIALMENTE ESPLOSIVE
ELECTRICAL APPARATUS FOR POTENTIALLY EXPLOSIVE ATMOSPHERES

ISTRUZIONI DI INSTALLAZIONE E MANUTENZIONE
INSTALLATION AND MAINTENANCE INSTRUCTIONS

Unità di comando, segnalazione e commutazione
Push buttons, signaling and switching control units

Assistenza tecnica–Technical support
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Questo documento non può essere modificato senza l'approvazione dell' Organismo Notificato.
This document cannot be modified without approval of the Notified Body.

Documento / *Document*			IU-EFDC		
N° Pagine / *Sheet N°*			1	di / *of*	1
REV	0	1	2	3	4
DATA	08/08/01				
EXE by	M.T.				
CHK by	F.C.				
APP by	M.T.				

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

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).

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 : *Protection mode :*	EEx d IIC T5÷T3 (EN 50014) T95°C÷T195°C (EN 50281-1-1)	II 2 G D (Directive 94/9/EC)
Grado di protezione : *Protection degree :*	IP 66 (EN 60529)	
Certificato di esame CE del tipo : *EC-type examination certificate :*	KEMA 01ATEX2244	Coppia serraggio viti di chiusura [Nm] : 15 *Fastening screws torque [Nm] :*
Temperatura ambiente [°C] : -20 ÷ +40 *Ambient temperature [°C] :*	Temperatura ambiente speciale [°C] :-45 ÷ +80 *Special ambient temperature [°C] :*	Temperatura immagazzinaggio [°C] : -45 ÷ +80 *Storage temperature [°C] :*
Tensione nominale [V] : 500÷690 [Vac] *Rated voltage [V] :* 110 [Vdc]	Corrente nominale [A] : 10 ÷ 16 *Rated current [A] :*	Frequenza [Hz] : 50 ÷ 60 *Frequency [Hz] :*
Entrate di cavo : EEx d IIC (EN 50018) *Cable entry :*	Grado di protezione minimo IP 66 *Minimum protection degree IP 66*	Potenza max dissipabile [W] : vedi tabella *Max power* dissipabile *[W] : see table below*

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 verificare che i giunti siano lubrificati ed esenti da corpi estranei e difetti. Sostituire la guarnizione durante la manutenzione periodica dell'apparecchio. Le entrate di cavo con grado di protezione inferiore a IP 66 riducono il grado di protezione dell'intero apparecchio. Cavo di alimentazione richiesto per temperatura ambiente +80°C : temperatura di esercizio >= +115°C.

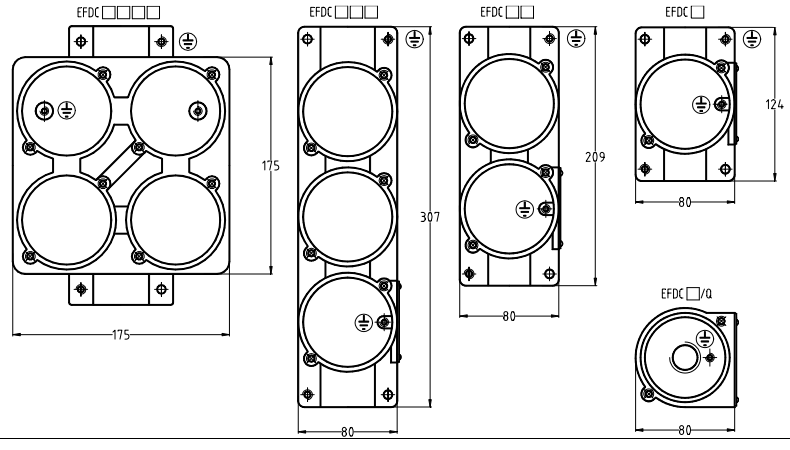
4 Installation *: The electrical apparatus shall be installed in absence of damages. Observe the national standards concerning electrical apparatus for potentially explosive atmospheres. Utilize the installation accessories supplied by CO.SI.ME.*
Before closing the enclosure, check that joints were lubricated and free of foreign matters and deformations. Replace gasket during periodical maintenance. Cable entries with protection degree lower than IP 66 reduce the whole protection of the apparatus.
Conductor required for ambient temperature +80°C : operating temperature >= +115°C.

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*

6 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.

6 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.



Codice *Code*	Potenza max dissipabile [W] *Max power dissipated [W]*	Peso max [Kg] *Max Weight [Kg]*
EFDC □	10	800
EFDC □ □	20	1400
EFDC □ □ □	30	2200
EFDC □ □ □ □	40	3600
EFDC □ /Q	10	1000

Temp. amb. **+40°C** *Ambient temp. **+40°C***	Temp. amb. **+60°C** *Ambient temp. **+60°C***	Temp. amb. **+80°C** *Ambient temp. **+80°C***
Classe di temperatura *Temperature class*	Classe di temperatura *Temperature class*	Classe di temperatura *Temperature class*
T5 - (T 95 °C)	**T4 - (T 130 °C)**	**T3 - (T 195 °C)**