



**CONTROL AND COMMAND UNITS OR INTERFACE UNITS  
(ASSOCIATED APPARATUS)**

**SERIES CCA...GUB..**

**EXECUTIONS**

**II 2(1)GD Ex d [ia] IIC T6/T5 Ex tD [iaD] A21**

**IP66 T85°C/T100°C**

**II 2(1)G Ex d [ia] IIC T6/T5**

**SAFETY INSTRUCTION**

**IN ACCORDO ALLA DIRETTIVA 94/9/CE  
according to directive 94/9/EC**

**SALES**

Piazzale Dateo, 2  
20129 Milano, Italia

**NATIONAL SALES**

tel. +39 02 76 1103 29  
fax +39 02 73 83 402  
info@cortemmilano.it

**EXPORT SALES**

tel. +39 02 76 1105 01  
fax +39 02 70 00 54 71  
export@cortemmilano.it

**WORKS and HEADQUARTER**

Via Aquileia 10, 34070 Villesse (Gorizia), Italia  
Tel. 0481-964911 fax. 0481-964999

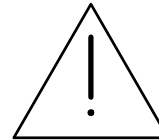
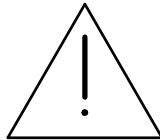


CONFORMITA' ALLE NORMATIVE STANDARD

conformity with standards

CUSTODIE CCA... GUB...  
COSTRUITE IN ACCORDO ALLE NORMATIVE  
EN60079-0, EN60079-1, EN60079-11, EN61241-1, EN61241-0  
ACCORDO ALLA DIRETTIVA 94/9/EC  
DEL 23 MARZO 1994

enclosures CCA... GUB...  
manufactured according to european standards  
EN60079-0, EN60079-1, EN60079-11, EN61241-1, EN61241-0  
according to the European Directive 94/9/EC  
of March 23,1994



ISTRUZIONI DI SICUREZZA

safety instruction

RIVOLTE A PERSONALE QUALIFICATO IN ACCORDO CON  
LE LEGGI NAZIONALI ,INCLUSE LE RELATIVE NORME E,  
DOVE APPLICABILE, IN ACCORDO CON IEC 79.17  
RIGUARDANTE LE APPARECCHIATURE ELETTRICHE PER  
ATMOSFERE POTENZIALMENTE ESPLOSIVE

for skilled electricians and instructed personnel in accordance with  
national legislation, including the relevant standards and, where  
applicable, in accordance with IEC 79.17 on electrical apparatus  
for explosive atmospheres

- LE CUSTODIE NON DEVONO ESSERE INSTALLATE IN  
AREA PERICOLOSA ZONA 0
- DEVONO ESSERE RISPETTATI I DATI TECNICI INDICATI  
SULLE CUSTODIE
- NON SONO AMMESSE MODIFICHE AL PRODOTTO
- LE CUSTODIE POSSONO ESSERE INSTALLATE SOLO SE  
COMPLETAMENTE INTEGRE
- DEVONO ESSERE UTILIZZATE ESCLUSIVAMENTE PARTI  
DI RICAMBIO CORTEM
- LE OPERAZIONI DI MANUTENZIONE ORDINARIE E  
STRAORDINARIE DEVO ESSERE EFFETTUATE SOLO DA  
ELETTRICISTI QUALIFICATI CON L'APPROVAZIONE DI  
PERSONALE "ESPERTO"
- DEVONO ESSERE STRETTAMENTE OSSERVATE LE  
NORME NAZIONALI DI SICUREZZA E PREVENZIONE  
INFORTUNI, E LE PRESCRIZIONI INDICATE CON " ⚠ " NEL  
PRESENTE FASCICOLO TECNICO
- NEL CASO IN CUI IL PRODOTTO VENGA FORNITO  
SENZA PRESSACAVI SARÀ CURA DEL CLIENTE  
ADOPTARE TAPPI O PRESSACAVI IN ACCORDO ALLE  
NORME IMPIANTISTICHE

- the boxes must not be operated in zone 0 hazardous areas
- the technical data indicated on boxes  
are to be observed
- changes of the design and modifications to the equipments are  
not permitted
- the boxes shall be operated as intended and only in  
undamaged and perfect condition
- only genuine CORTEM spare parts may be used for  
replacement
- repairs may only be carried out by qualified electrician and will  
subsequently have to be  
checked by an "expert"
- the national safety rules and regulations for prevention of  
accidents and the following safety instruction which are marked  
with an " ⚠ "  
in these operating instruction, will have to be observed
- in case the product is supplied without cable glands, it is up to  
the customer to adopt plugs or cable glands in accordance with  
the plant engineering rules.

**COR.TEM è da sempre impegnata nella salvaguardia dell'ambiente ed in tal senso raccomanda di smaltire i contenitori e gli imballaggi usati secondo le prescrizioni e le normative vigenti nel Paese di destinazione, evitando di disperderli nell'ambiente dopo l'utilizzo.**

***COR.TEM cares for the environmental protection and recommends therefore to dispose properly of the packing and wrapping of its goods, according to the prescriptions and regulations in force in the destination country. The differentiated waste disposal is strongly recommended.***

## INFORMAZIONE AGLI UTENTI DI APPARECCHIATURE DOMESTICHE O PROFESSIONALI



***Ai sensi dell'art. 13 del Decreto Legislativo 25 luglio 2005, n. 151 "Attuazione delle Direttive 2002/95/CE, 2002/96/CE e 2003/108/CE, relative alla riduzione dell'uso di sostanze pericolose nelle apparecchiature elettriche ed elettroniche, nonché allo smaltimento dei rifiuti"***

Il simbolo del cassonetto barrato riportato sull'apparecchiatura o sulla sua confezione indica che il prodotto alla fine della propria vita utile deve essere raccolto separatamente dagli altri rifiuti. L'utente dovrà, pertanto, conferire l'apparecchiatura giunta a fine vita agli idonei centri di raccolta differenziata dei rifiuti elettronici ed elettrotecnici, oppure riconsegnarla al rivenditore al momento dell'acquisto di una nuova apparecchiatura di tipo equivalente, in ragione di uno a uno.

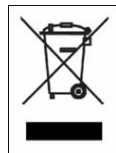
Nel caso di utenti professionali (aziende o enti), ai sensi della normativa sopra citata, la raccolta differenziata della presente apparecchiatura giunta a fine vita è organizzata e gestita:

- a) direttamente dall'utente, nel caso in cui questo decida di disfarsi dell'apparecchiatura senza sostituirla con una apparecchiatura nuova equivalente ed adibita alle stesse funzioni;
- b) dal produttore, inteso come il soggetto che ha per primo introdotto e commercializzato in Italia o rivende in Italia col proprio marchio l'apparecchiatura nuova che ha sostituito la precedente, nel caso in cui, contestualmente alla decisione di disfarsi dell'apparecchiatura a fine vita, l'utente effettui un acquisto di un prodotto di tipo equivalente ed adibito alle stesse funzioni. In tale ultimo caso, l'utente potrà richiedere al produttore il ritiro della presente apparecchiatura entro e non oltre 15 giorni naturali consecutivi dalla consegna della suddetta apparecchiatura nuova.

L'adeguata raccolta differenziata per l'avvio successivo dell'apparecchiatura dismessa al riciclaggio, al trattamento e allo smaltimento ambientalmente compatibile contribuisce ad evitare possibili effetti negativi sull'ambiente e sulla salute e favorisce il reimpiego e/o riciclo dei materiali di cui è composta l'apparecchiatura.

Lo smaltimento abusivo del prodotto da parte dell'utente comporta l'applicazione delle sanzioni di cui alla corrente normativa di legge.

## INFORMATION TO USERS OF DOMESTIC AND PROFESSIONAL EQUIPMENT



***According to art. 13 of Legislative Decree dated 25 July 2005 No. 151 "Putting into effect Directives 2002/95/CE, 2002/96/CE and 2003/108/CE, aimed to limit the use of dangerous substances in electronic and electrical equipment, and related to waste disposal"***

The symbol of the crossed dustbin shown on the equipment or on its package indicates that the product must be collected separately from other waste, at the end of its lifetime. The user shall bring the equipment at the end of its lifetime in places dedicated to collect electrical and electronic waste, or he shall return it to a dealer, buying equivalent equipment (one back, one in).

In the case of professional users (companies or organizations), the subject equipment collection at the end of its lifetime is managed as following indicated:

- a) Directly by the user, if he decides to throw the equipment away and not to replace it with a new equivalent one with the same functions;
- b) By the manufacturer (i.e. he who first introduced and put on the Italian market, or he who resells in Italy with his brand the new equipment that replaced the previous one), in case the user decides to throw away the old equipment and to replace it with a new equivalent one with the same functions. In this last case, the user can ask the manufacturer to pick up the subject equipment within and not later than 15 days, natural and consecutive, after the new equipment has been delivered.

Separating waste and recycling is aimed to environmentally compatible waste treatment and disposal, in order to limit negative effects on environment and health and to promote recycling the old equipment construction materials and its remake into new products.

Illegal disposal of the product by the user is subject to fines, as per the current applicable law.

EXECUTION: Ex d [ia] IIC T6 FOR INTERFACE UNITS

Ex d [ia] IIC T6 OR T5 FOR CONTROL AND COMMAND UNITS

PROTECTION DEGREE: IP66

GROUP : II CATEGORY: 2(1)G Ex d [ia] IIC T6 o T5

GROUP : II CATEGORY: 2(1)GD Ex d [ia] IIC T6 o T5; Ex tD [iaD] A21 IP66 T85°C / T100°C

INSTALLATION : ZONE 1, ZONE 2, ZONE 21, ZONE 22

AMBIENT TEMPERATURE: -20°C +40°C o -20°C +55°C

TEMPERATURE CLASS: T6 for amb. temp. -20°C +40°C or T5 for amb. temp. -20°C +55°C

MAX. SUPERFICIAL TEMPERATURE FOR DUST PROTECTION "D" o "GD" :

T85°C for temp. class T6 T100°C for temp. class T5

GENERAL ELECTRICAL CHARACTERISTICS:

NOM. VOLTAGE: 24 -1000 V ac 12 - 250V dc

NOM. FREQUENCY: 50/60 Hz

MAX. CURRENT FOR FUSIBLES AND CONTACTS : 400 A

MAX. POWER FOR LAMPS: 5W per Tamb. -20°C +40°C 3W per Tamb. -20°C +55°C

ELECTRICAL CHARACTERISTICS FOR ASSOCIATED APPARATUS: Um 250 V

MAX OUTPUT DISSIPATED

The maximum power which can be dissipated inside the enclosure and the maximum current on contact and fuses are a function on enclosure size, of the temperature class (or of the maximum surface temperature for category GD units) and of the ambient temperature as specified in details in the following tables:

CORTEM	FONDISONZO	MAXIMUM OUTPUT IN WATT WITH AMBIENT TEMPERATURE			
		40° C		55° C	
		CLASS T6	CLASS T5	CLASS T6	CLASS T5
CCA	GUB	4	6	3	4
CCAS		6	9	5	6
CCA0	GUB 0	10	16	8	12
CCA01	GUB 01	15	24	13	19
CCA02	GUB 02	32	51	26	39
CCA03	GUB 03	51	74	37	55
CCA04		112	197	84	150

CORTEM FONDISONZO	MAXIMUM OUTPUT DISSIPATED IN WATT WITH AMBIENT TEMPERATURE OF 40°C			MAXIMUM OUTPUT DISSIPATED IN WATT WITH AMBIENT TEMPERATURE OF 55°C		
	CLASS T6 WITHOUT SIGNALLING LAMPS, ONLY SIGNALLING LED ARE ALLOWED	CLASS T5 WITH SIGNALLING LAMPS AND/OR SIGNALLING LED	CLASS T5 WITHOUT SIGNALLING LAMPS, ONLY SIGNALLING LED ARE ALLOWED	CLASS T6 WITHOUT SIGNALLING LAMPS, ONLY SIGNALLING LED ARE ALLOWED	CLASS T5 WITH SIGNALLING LAMPS AND/OR SIGNALLING LED	CLASS T5 WITHOUT SIGNALLING LAMPS, ONLY SIGNALLING LED ARE ALLOWED
CCA - 0 C	8	9	13	6	7	9
CCA - 01C	11	12	17	9	10	13
CCA - 02C	23	25	36	20	22	28
CCA - 03C	40	44	58	29	32	43
CCA - 04C	93	100	164	70	77	125

CORTEM FONDISONZO	MAXIMUM OUTPUT DISSIPATED IN WATT WITH AMBIENT TEMPERATURE OF 40-C			MAXIMUM OUTPUT DISSIPATED IN WATT WITH AMBIENT TEMPERATURE OF 55-C		
	CLASS T6 WITHOUT SIGNALLING LAMPS, ONLY SIGNALLING LED ARE ALLOWED	CLASS T5 WITH SIGNALLING LAMPS AND/OR SIGNALLING LED	CLASS T5 WITHOUT SIGNALLING LAMPS, ONLY SIGNALLING LED ARE ALLOWED	CLASS T6 WITHOUT SIGNALLING LAMPS, ONLY SIGNALLING LED ARE ALLOWED	CLASS T5 WITH SIGNALLING LAMPS AND/OR SIGNALLING LED	CLASS T5 WITHOUT SIGNALLING LAMPS, ONLY SIGNALLING LED ARE ALLOWED
CCA - 0E	8	9	13	6	7	9
CCA - 01E	11	12	17	9	10	13
CCA - 02E	23	25	36	20	22	28
CCA - 03E	40	44	58	29	32	43
CCA - 04E	93	100	164	70	77	125

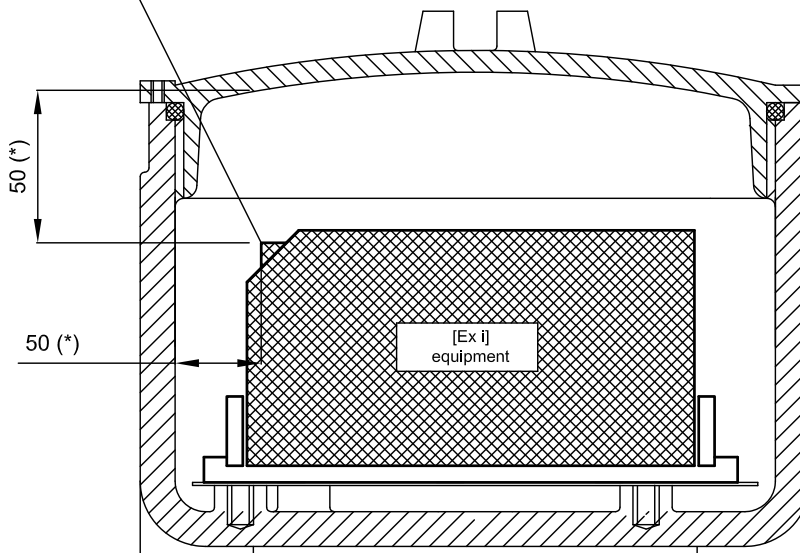
CORTEM FONDISONZO	MAXIMUM OUTPUT DISSIPATED IN WATT WITH AMBIENT TEMPERATURE OF 40-C			MAXIMUM OUTPUT DISSIPATED IN WATT WITH AMBIENT TEMPERATURE OF 55-C		
	CLASS T6 WITHOUT SIGNALLING LAMPS, ONLY SIGNALLING LED ARE ALLOWED	CLASS T5 WITH SIGNALLING LAMPS AND/OR SIGNALLING LED	CLASS T5 WITHOUT SIGNALLING LAMPS, ONLY SIGNALLING LED ARE ALLOWED	CLASS T6 WITHOUT SIGNALLING LAMPS, ONLY SIGNALLING LED ARE ALLOWED	CLASS T5 WITH SIGNALLING LAMPS AND/OR SIGNALLING LED	CLASS T5 WITHOUT SIGNALLING LAMPS, ONLY SIGNALLING LED ARE ALLOWED
CCAI - 2020	30	35	42	25	27	34
CCAI - 3020	50	54	68	39	42	53
CCAI - 3030	80	85	120	60	65	100
CCAI - 4030	105	112	170	90	100	140

The max permitted heat dissipation and characteristics for the CCA series enclosure depending must not exceed the above mentioned values when intrinsically safe devices having a maximum heat dissipation of 1.1Watts and non-intrinsically safe devices are mounted together.

The maximum value of heat dissipation into the box includes also the maximum power dissipated of cables, terminals, and contacts. The values of the density current permitted into the boxes are foreseen by the Standard EN 60439-1. The prescriptions of this Standard must be respected during Design and Manufacturing of CCA.. boxes.

### 1) EXAMPLE FOR INTERFACE UNIT

EEx-i CONNECTION TERMINALS



Types Of ACTIVE & PASSIVE Barriers Permissible for Installation inside the Enclosure

The active and passive (Zener) barriers utilised for installation inside the CCA series enclosures must possess their own individual ATEX generation certificate according to Cenelec Norms EN60079-0, EN60079-11 for Ex type of protection [Ex-ia] suitable for gas groups IIC and thus be marked as follows [Ex ia] IIC. The characteristics and data of Ex-i circuits ( $U_o$ ,  $I_o$ ,  $P_o$ ,  $C_o$  and  $L_o$ ) are described on the device (certificate label), associated drawings for certification and the overall certificate for the Ex-i device. The maximum input voltage ( $U_m$ ) of the barrier on the non Ex-i circuit must be  $< 250$  volts.

Mounting details of Barriers inside Ex-d enclosures

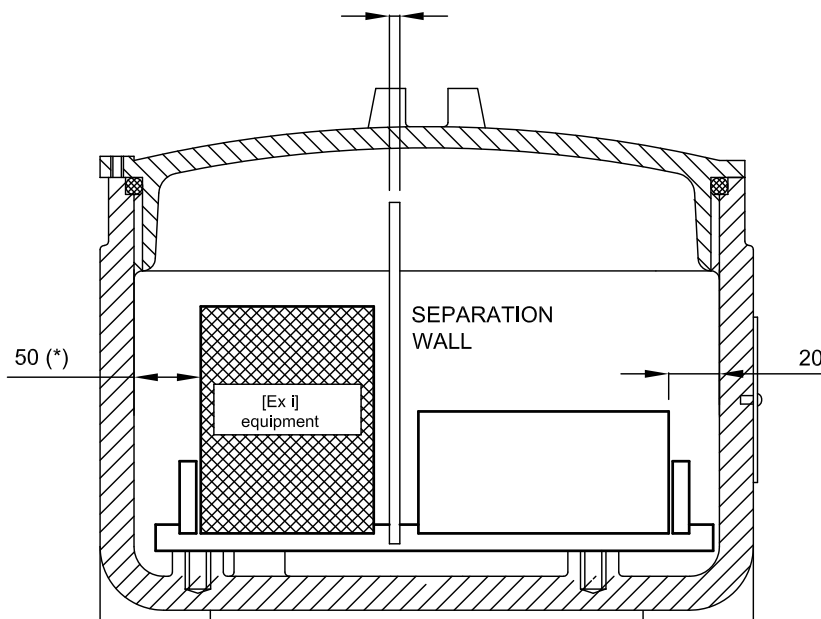
The "OMEGA" guide as stated in EN50022 makes reference to the fixing of the active and passive (Zener) barriers inside an Ex-d enclosure.

The barriers are mounted as per the barrier manufactures standard din rail having a maximum distance of 7.5mm between the device and depth of enclosure.

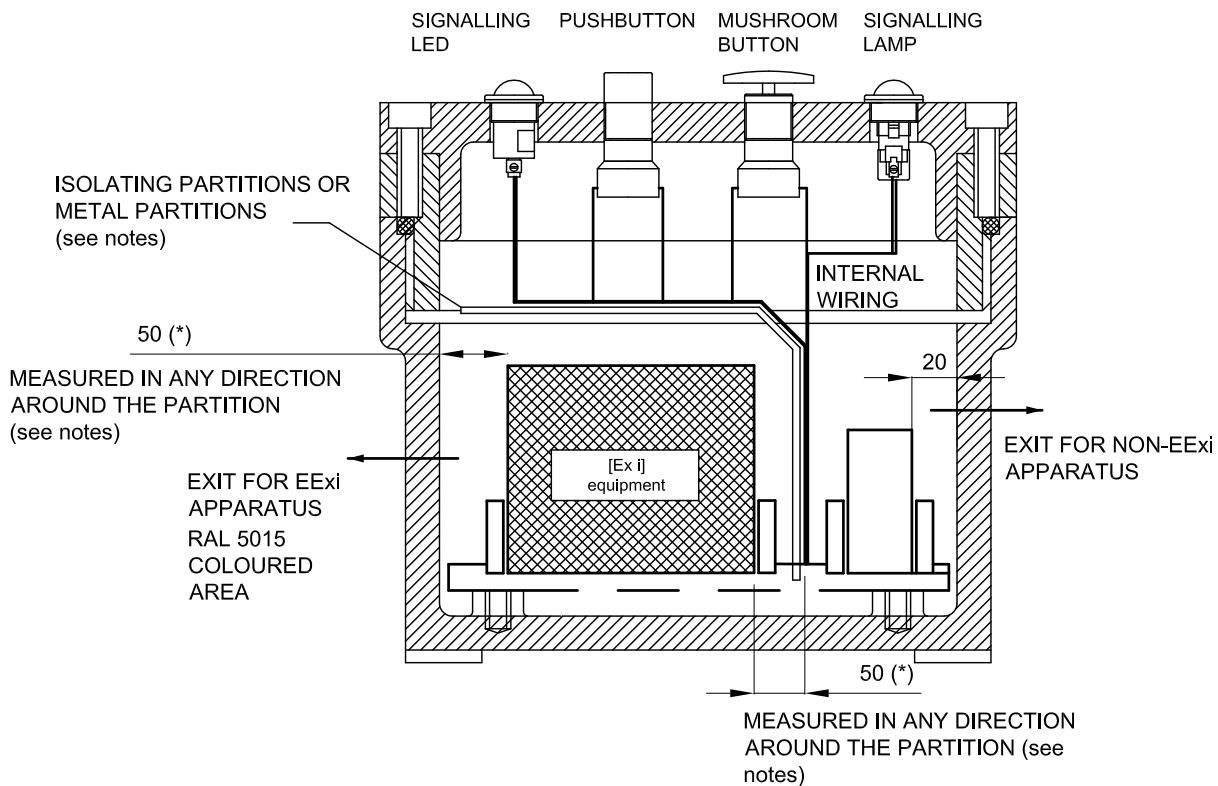
The barrier must be locked on the DIN rail via two earth terminals having a nominal cross section of 6 /10mm or two end stops providing a mechanical protection as stated in the OMEGA guide EN50022.

2) EXAMPLE FOR COMAND AND CONTROL UNITS (ASSOCIATED APPARATUS)

MIN. THICKNESS 0,9mm FOR ISOLATING MATERIAL, OR  
0,45mm FOR METALLIC MATERIAL FIXING AT THE  
INTERNAL FRAME OR AT WALLS BY MEANS OF SCREWS  
OR RIVETS  
according to 6.3 of EN EN60079-11 2007  
(see notes)



TYPICAL OPERATORS ON COVER OR ON WALLS  
CERTIFIED CESI 01 ATEX 025U



#### Cable Terminations

The internal cable connections of the barrier refer to EN50022, which enables the barrier to possess a side of the device having an intrinsically safe circuit and the opposite side to have a non-intrinsically safe circuit as detailed below.

The internal cable connections to the intrinsically safe side of the device must be solely made with insulated conductors. The conductors must be fixed in such a way that they cannot be grouped, waved or placed directly next to conductors of non-intrinsically safe circuits  
I.e Cables of non-IS circuits and IS circuits must be segregated.

The minimum distance between intrinsically safe and non-intrinsically safe conductors must be 8mm. The minimum grade of insulation for non-intrinsically safe conductors is >1.5KV and >0.5KV for intrinsically safe conductors.

#### Input & Output cables of the Ex-d Enclosure.

The input and output threaded cable entries of the Ex-d enclosure must be as per drawings attached to certificate CESI 00 ATEX 034U.

The accessories (cable glands) used to terminate the cables to and from the enclosure shall be certified according to Norms EN 60079-0 and EN 60079-1.

Accessories tested in accordance with ATEX certificate may also be utilised.

To assure the Protection Degree the possible cable entries mounted on boxes must have, at least, the same protection degree of boxes.

The intrinsically safe cable(s) entering and exiting the enclosure must be clearly identified with a label, which is affixed to the enclosure wall with threaded rivets.

#### Installation of IS Devices and Non IS Devices inside and Ex-d enclosure

The Command, Control Units complete with accessories execution Ex d IIC can containing also Associated Apparatus [Ex ia] IIC In this case the execution shall be Ex d [ia] IIC.

For dust with associated apparatus [Ex ia D] the execution shall be Ex tD [ia D] A21 IP66 T...°C

The following rules for installation of IS equipment inside the CCA type enclosures must be adhered to.

When intrinsically safe devices are installed inside an enclosure together with non-intrinsically safe devices and components, a minimum of 50mm segregation must be maintained.

The intrinsically safe earth must be always be a clean earth and be totally insulated from the supply ground.

#### Mounting

All the Associated Apparatus are mounted on DIN rail. They can be mounted also on internal frame respecting the min. distances foreseen. The Apparatus mounted on DIN rail or mounted on internal frame must respect the same prescriptions.

#### Partitions used to separation

When separation is accomplished by partitions, they are accurately dimensioned, thickness of partition and fixing into box must be estimated, the partitions must be guaranteed the air circulation into boxes.

#### Incoming Cables

The incoming cables for Ex-i connections are marked with a label, or the area is painted with blue colour RAL 5015. To assure the execution and the protection degree of construction, the cable entries mounted on boxes must have, at least, the same protection degree of boxes.

#### Internal wiring

The cable passages of Ex i cables are manufactured and identified with one of the following methods:

- Cables with isolating colour light blue (if into housing are not other cables with this colour).
- Separation of cables Ex i and cables non-Ex i with cable tray painting in light blue
- Grouping the Ex i cables with electric tape (or similar) and identify the area of a label (colour light blue) with the writing "Warning Ex i circuits"

The section of cables for power circuits is min. 1.5 Sq.mm.

The distance between Ex i circuits and non-Ex i circuits is 50mm in all the directions.

The earth connection must be in accordance with EN 60079-14.

#### typical Disposition of internal Equipment

The number of equipment mounted inside the box are variable but according to some notes:

- The free area measured in any transversal section of box is min. 30%.
- The distance between equipment is adequate for the cable wiring

#### command control and signalling equipment

All the accessories series M-0.. mounting on boxes are certified CESI 01 ATEX 025U. IP66 with gasket between cover and body of box.

(\* ) 50 mm IS THE SAFETY DISTANCE FROM Ex-i COMPONENTS AND NOT Ex-i COMPONENTS/CONDUCTIVE PARTS FOR ALL THE APPLICATIONS.  
LOWER DISTANCES CAN BE VALUED IN ACCORDANCE TO EN 60079-11 AND EN60079-14 STANDARDS A/O INDICATIONS BY THE NOTIFIED BODY.



**cor.tem**

CorTEM S.p.A.  
Cap.Soc. € 1.578.000 int.vers.  
R.E.A./C.C.I.A.A. GORIZIA U.32755  
M.G.O. 000139  
Reg. Imp. n. 1228 Tribunale di Gorizia  
Cod. Fisc. e Partita Iva IT00052120318  
Sede e Stabilimento/Works:  
34070 Villesse (GO)  
Via Aquileia 10  
Telefono: +39 0481 964911  
Telefax: +39 0481 964999  
E-mail: info@corTEMgroup.com



Direzione commerciale/Sales:  
20129 Milano (MI)  
Piazza Daleo, 2

Telefono: +39 02 76110329  
Telefax: +39 02 7383402  
E-mail: info@corTEMgroupmi.com



To be sure to be safe.

**DICHIARAZIONE DI CONFORMITA' - Declaration of conformity**



**N° 0036**

**IL COSTRUTTORE**

we:

**CORTEM S.p.A.**  
**Via Aquileia, 10**  
**34070 VILLESSE (GO) - ITALY**

**DICHIARA QUI DI SEGUITO CHE IL PRODOTTO:**  
hereby declare that the product:

**UNITA' DI COMANDO E CONTROLLO, UNITA' DI INTERFACCIA**  
Command and control, interface units: **CCA... GUB...**

**MODO DI PROTEZIONE:**

Protection mode:

**II 2(1)GD Ex d[ia] IIC T5/T6 Ex tD [ia D] A21**  
**IP66 T100°C/T85°C**  
**II 2(1)G Ex d[ia] IIC T5/T6**

**CERTIFICATO:**

certificate:

**CESI 03 ATEX 174**

**ORGANISMO NOTIFICATO:**

Notify Body:

**n.0722 CESI via RUBATTINO,54 (MI) ITALY**

**RISULTA IN CONFORMITA' CON LE SEGUENTI DIRETTIVE COMUNITARIE:**  
is in conformity with the following comunitary directives:

**89/336/EEC**  
**92/31**  
**93/68**

**94/9/EC**

**E CHE SONO STATE APPLICATE LE SEGUENTI NORME ARMONIZZATE:**  
and that the following harmonized standards have been applied:

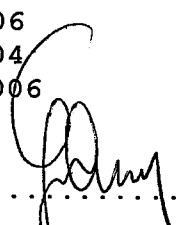
**EN 60439-1**  
**EN 60529**

**EN 60079-0 2006**  
**EN 60079-1 2004**  
**EN 60079-11 2007**  
**EN 60079-26 2004**  
**EN 61241-0 2006**  
**EN 61241-1 2004**  
**EN 61241-11 2006**

Villesse, 2007-03-23

Firma

Signature .....

  
**Riccardo Gratton**  
**Vice-president**