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CESI

CERTIFICATE

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

[1] EC-TYPE EXAMINATION CERTIFICATE

[2] **Equipment or Protective System intended for use in potentially explosive atmospheres Directive 94/9/EC**

[3] EC-Type Examination Certificate number:

CESI 03 ATEX 074

[4] Equipment: Luminaires series EXEL.

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

[6] Address: Via Aquileia 10, Villesse (Gorizia – 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] 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-A3/012151.

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

EN 50014: 1997 + A1..A2 **EN 50018: 2000 + A1** **EN 50019:2000**

[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 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.

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

Ex **II 2 G EEx ed IIC T5**

Date April 4th 2003 translation issued on April 4th 2003

Prepared
Mirko Balaz

Approved
Ulisse Colombo

CESI
CENTRO ELETTROTECNICO SPERIMENTALE ITALIANO
Business Unit Certificazione
Il Responsabile

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. 20/7/1993 e D.M. 27/9/2000

[13] # Schedule

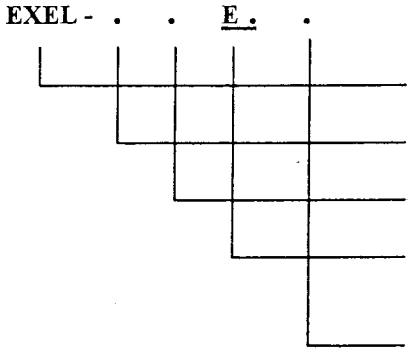
[14] **EC-TYPE EXAMINATION CERTIFICATE n. CESI 03 ATEX 074**

[15] **Description of equipment**

The luminaires series EXEL are made by a body in glass fibre reinforced polyester and by a transparent part in polycarbonate.
They are made in two versions:
- for normal service
- for normal service + emergency service

The luminaires series EXEL are suitable for use of tubolar fluorescent lamps with bi-pin cap G13.

The luminaires series EXEL are identified by a code as follows:



code of the series

1, 2 (number of lamps)

18, 36 (lamp power [W])

EF (luminaires for normal + emergency service)
EE (luminaires for emergency service only)

4, 7 (capacity of the battery in Ah)

In the luminaires series EXEL the following components can be installed:
- bi-pin lampholder type G-0312E, EEx e II, certificate CESI 99 ATEX 095 U;
- electronic reactor series EB., EEx d IIC, certificate CESI 00 ATEX 031 U;
- electronic inverter series EI., EEx d IIC, certificate CESI 00 ATEX 031 U;
- switch BARTEC EEx de IIC or EEx d IIC, certificate PTB 98 ATEX 1032U
- terminals CABUR type CBD-2 or CBD-4, EEx e II, certificate CESI 01 ATEX 090 U;
- battery group series G-0309, EEx e II, certificate CESI 00 ATEX 032 U;
- signalling led type M-0487, EEx d IIC, certificate CESI 00 ATEX 060 U.

Electrical characteristics

Rated voltage	110 / 230 V
Rated power	18 W; 36 W; 2x18 W; 2x36 W
Rated frequency	50/60 Hz
Degree of protection	IP 65 (EN 60529-1991)
Ambient temperature	- 20 ÷ + 50 °C
NiCd battery:	
- rated voltage	6 V
- capacity	4 or 7 Ah

Prot.. A3/012158 P: 3
Keywords 13010R 21420O 48010M 48020T 54250O 66540E

[13] # Schedule

[14] **EC-TYPE EXAMINATION CERTIFICATE n. CESI 03 ATEX 074**

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

Warning label

"Attention to electrostatic charges"
Clean only with wet cloth or antistatic product.

The accessories used for cable entries shall be certified according to the standards EN 50014 and EN 50019 and shall guarantee a degree of protection at least IP 65.

[16] **Report n. EX-A3/012151**

Routine tests

The manufacturer shall carry out the routine tests prescribed at clause 24 of the EN 50014 standard and at clause 7 of EN 50019 standard.
The electric strength test shall be made at the voltage of 1500 V.

Descriptive documents (prot. EX-A3/012152)

- n° A4-4166 Rev. 1 (3 p.)	dated	24.03.2003
- n° A1-4163 Rev. 1	dated	24.03.2003
- n° A3-4164 Rev. 1	dated	24.03.2003
- n° A3-4165 Rev. 1	dated	24.03.2003
- n° A3-4450 Rev. 1	dated	24.03.2003
- n° A3-4451 Rev. 1	dated	24.03.2003
- n° A3-4452 Rev. 1	dated	24.03.2003
- n° A4-4015 Rev. 1	dated	24.03.2003
- Safety instructions F-263 Rev. 0 (8 p.)	dated	04.04.2001
- EC declaration of conformity n. CE/0028	dated	04.04.2001

One copy of all documents is kept in CESI files.

[17] **Special conditions for safe use**

None.

[18] Essential Health and Safety Requirements

Covered by standards.

EXTENSION n. 01/06

to EC-Type Examination Certificate CESI 03 ATEX 074

Equipment: Luminaries, series EXEL.

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

Address: Via Aquileia 10, Villesse , Gorizia (Italy)

Admitted variation
- New category II 2 GD (added protection against the risk of explosion from combustible dusts in conformity with the standard EN 50281-1-1)
- New range of ambient temperature from –40°C to +50°C
- New electrical characteristics (supply voltage 277 V AC).

The results of verifications and tests are reported in the confidential report EX-A6028259.

Identification and description of the equipment

The marking of the luminaries, series EXEL..shall include the following:.

II 2 GD EEx ed IIC T5 IP 66 T100°C

This extension and annexed descriptive documents must be annexed to the EC-Type Examination Certificate CESI 03 ATEX 074.

This document may only be reproduced in its entirety and without any change.

date 29th March 2006 translation issued on 29th March 2006

prepared Mirko Balaz

approved Fiorenzo Bregani

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Business Unit GENERAZIONE
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EXTENSION n. 01/06

to EC-Type Examination Certificate CESI 03 ATEX 074

Electrical characteristics

Rated voltage	110 V / 230 V / 277 V
Rated power	18 W; 36 W; 2x18 W; 2x36 W
Rated frequency	50/60 Hz
Degree of protection	IP 66 (IEC 60529-2001)
Ambient temperature	- 40 ÷ + 50 °C
NiCd battery:	
- rated voltage	6 V
- capacity	4 or 7 Ah

Temperature class of the luminaries of category II 2 GD: T5.
Maximum surface temperature T of the luminaries of category II 2 GD: T 100°C.

Cable entries
The accessories used for cable entries and for closing unused apertures shall be certified according to EN 50014, EN 50019 and EN 50281-1-1 standards. A minimum degree of protection IP 66 shall be guaranteed according to EN 60529 standards.

The lighting fixture series EXEL are suitable to be used at the ambient temperature from –40°C to +50°C. When are used as emergency lighting with rechargeable batteries (inside of lighting fixture) the storage temperature can be up to – 40°C but the ambient temperature of installation can be up to –30°C.

Report n. EX-A6028259

Descriptive documents (prot. EX-A6028261)

- n° A4-4675 Rev. 0	dated	24.11.2003
- n° A1-4163 Rev. 2	dated	24.11.2003
- n° A4-4569 Rev. 0	dated	24.11.2003
- n° A4-4674 Rev. 1	dated	24.11.2003
- n° A4-3155 Rev. 0 (2 pg.)	dated	24.11.2003
- Data sheet LATER PBT (4 pg.)	dated	24.11.2003
- Safety instructions F-263 Rev. 2 (8 pg.)	dated	10.09.2003
- EC declaration of conformity n° CE/0028	dated	24.11.2003

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

Essential Health and Safety Requirements

Compliance with the Health and Safety Requirements has been assured by compliance with the following standards:
EN 50014: 1997 + A1..A2 – General requirements
EN 50018: 2000 + A1 - Flameproof enclosures "d"
EN 50019: 2000 – Increased safety "e"
EN50281-1-1: 1998 + A1 – Electrical apparatus for use in the presence of combustible dust. Part 1-1: Electrical apparatus protected by enclosures – Construction and testing.

EXTENSION n. 02/09

to Type Examination Certificate CESI 03 ATEX 074

Equipment: Luminaries series EXEL for tubular fluorescent lamps with or without emergency pack

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

Address: Via Aquileia, 6 – 34070 Villesse (GO) - Italy

Admitted variation
Conformity to new edition of the harmonized European standard, new temperature class, new electrical characteristics and constructional modifications.

Conformity to new edition of the harmonized European standard
The components subject of the certificate CESI 03 ATEX 074 and annexed extension are conform to the standards:

EN 60079-0: 2006 EN 60079-7: 2007 EN 60079-1: 2007

EN 61241-0: 2006 EN 61241-1: 2004

The equipment shall be marked as follows:

II 2GD Ex ed IIC T5, T4 Ex tD A21 IP65 T70 °C, T80 °C

This extension and annexed descriptive documents must be annexed to the Type Examination Certificate CESI 03 ATEX 074.

This document may only be reproduced in its entirety and without any change.

date 8th May 2009 - translation issued the 8th May 2009

prepared Damiano Cavanna

verified Mirko Balaz

approved Fiorenzo Bregani

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Divisione Energia
"Area Tecnica Certificazione"
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EXTENSION n. 02/09

to Type Examination Certificate CESI 03 ATEX 074

Identification and description of the equipment

The luminaries series EXEL for tubular fluorescent lamps with or without emergency pack, have constructional characteristics conform to those indicated in the certificate CESI 03 ATEX 074 and annexed extensions with new temperature class, electrical characteristics and admitted variation as indicated to follow.

Admitted constructional modifications

New type of luminaries manufactured with battery for emergency pack installed into a separate box external to luminaries enclosure.

The luminaries EXEL series use electronic inverters series EI-58 and news electronic ballasts type EB4118, EB4218, EB4136 and EB4236, subject of certificate CESI 00 ATEX 031U, realized to assure the conformity at annex H of EN 60079-7: 2007 standard regarding End Of Life lamp protection (EOL).

The various types of luminaries series EXEL are identified by a code as follow:

EXEL * * * * *

1, 2: number of tubular fluorescent lamps

18, 36: lamp power in W

Additional code for luminaries for emergency service

EF: luminaries for normal + emergency service

EE: luminaries for emergency service only

4, 7: capacity in Ah of the emergency battery pack

E: battery for emergency pack in separate enclosure

The luminaries EXEL series are suitable for use of tubular fluorescent lamps with G13 bi-pin lampholder.

Cable entries

The accessories used for cable entries shall be certified according to 60079-0 and EN 60079-7 standards and shall guarantee a minimum degree of protection IP66.

Electrical characteristics

- Rated power lamp: 1x18 W; 2x18 W; 1x36 W; 2x36 W
- Rated voltage: 110/230 V ac-dc;
- Working voltage: 100 ÷ 254 V ac; 110 ÷ 254 V dc;
- Rated frequency: 50/60 Hz
- Battery for emergency pack: NiCd 6V 4 A/h or 7 A/h

Degree of protection: IP 66

Temperature class or maximum surface temperature	Temperature class for gas		Maximum surface temperature for dust	
	T5	**T4**	**T70 °C**	**T80 °C**
Ambient temperature [°C]	-40 ÷ +40/+50	-40 ÷ +55 (1)	-40 ÷ +40/+50	-40 ÷ +55 (2)

(1) Maximum ambient temperature admitted only for luminaries without emergency pack.
(2) Maximum ambient temperature admitted only for luminaries with battery for emergency pack in separate enclosure.
Note. The minimum operating ambient temperature for luminaries with battery for emergency pack is –30 °C (storage: -40 °C).

Warning label

"Attention to electrostatic charges! Clean only with wet cloth or antistatic poduct"

EXTENSION n. 02/09

to Type Examination Certificate CESI 03 ATEX 074

Report n. EX-A9014210

Routine tests
The manufacturer shall carried out the routine tests prescribed at paragraph 27 of EN 60079-0 (2006) standard and paragraph 7 of EN 60079-7 (2007) standard.

Descriptive documents (prot. A9014212)

- Technical note A4-4962 + annex (pg. 3 + 9)	dated	22.06.2008
- N. A3-5002	dated	22.06.2008
- N. A4-4569 rev. 1	dated	22.06.2008
- Safety Instruction mod. F-263 rev. 3 (pg. 8)	dated	22.06.2008
- Declaration of Conformity CE N° 0028	dated	22.06.2008

One copy of all documents is kept in CESI files.

Special conditions for safe use (X)

None.

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 atmosphere - General requirements.
- EN 60079-7: 2007 - Equipment protection by increased safety "e"
- EN 60079-1: 2007 - Equipment protection by flameproof enclosure "d"
- EN 61241-0: 2006 - Electrical apparatus for use in the presence of combustible dust - General requirements
- EN 61241-1: 2004 - Protection by enclosures "tD"

EXTENSION n. 03/13

to EC-Type Examination Certificate CESI 03ATEX074

Equipment: Luminaries, series EXEL-...

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

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

Admitted variation

- Upgrade to standards and EPL marking according to EN 60079-0:2012, EN60079-1:2007, EN 60079-7:2007, EN 60079-18:2009, EN 60079-31:2009
- Changed ambient temperature, temperature class and max surface temperature
- New electrical characteristics and constructional modifications (new components)

Marking

The equipment shall be marked as follows:

II 2GD **Ex de mb IIC T4 Gb** **Ex tb IIIC T70°C Db** **IP66**	**II 2GD** **Ex de IIC T4 Gb** **Ex tb IIIC T70°C/T80°C Db** **IP66**

This extension and annexed descriptive documents must be annexed to the EC-Type Examination Certificate CESI 03ATEX074.

Date 10th September 2013 - translation issued the 10th September 2013

prepared	verified	approved
M. T.	Mirko Balaz	Fiorenzo Bregani

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EXTENSION n. 03/13

to EC-Type Examination Certificate CESI 03ATEX074

Description of equipment
The lighting fixtures series EXEL have constructional characteristics conform to those indicated in the certificate CESI 03 ATEX 074 and annexed extensions.

The new components, with separated ATEX certification, are:
- new safety switch type M-0530 – Cortem
- new type of internal terminals
- add electronic ballast, type EBV-1 – Cortem

Electrical characteristics

Nominal wattage:	1x18W, 1x36W, 2x18W or 2x36W
Frequency:	50/60Hz
Number of lamps:	1 or 2 fluorescent tubes T8 with G13 socket

Lighting fixture with electronic ballast type EB:

Nominal voltage:	110/230/240Vac	110/230/240 Vdc
Voltage range:	100÷264Vac	100÷264Vdc

Lighting fixture with electronic ballast type EBV-1:

Nominal voltage:	110/230/240Vac	110/230/240 Vdc
Voltage range:	99÷264Vac	99÷264Vdc

Ingress protection:	IP 66 (IEC 60529)
NiCd battery voltage:	6V
NiCd battery capacity:	4Ah or 7Ah

Temperature class and maximum surface temperature:
Following table show the temperature classes and the maximum surface temperatures of lighting fixtures according to the maximum ambient temperature admitted.

For lighting fixture with electronic ballast type EB:

Lighting fixture type	Ambient temperature	Temperature class	Max. surface temperature	Notes
EXEL-118 EXEL-218 EXEL-136 EXEL-236	-40°C ÷ +55°C	T4	T80°C	None
EXEL-118EF4 EXEL-118EF7 EXEL-218EF4 EXEL-218EF7 EXEL-118EE4 EXEL-118EE7 EXEL-136EF4 EXEL-136EF7 EXEL-236EF4 EXEL-236EF7 EXEL-136EE4 EXEL-136EE7	-20°C ÷ +50°C	T4	T70°C	Battery pack installed inside of lighting fixtures
EXEL-118EF4E EXEL-118EF7E EXEL-218EF4E EXEL-218EF7E EXEL-118EE4E EXEL-18EE7E	-20°C ÷ +55°C	T4	T80°C	Battery pack installed on separate enclosure

The minimum operating ambient temperature for lighting fixtures with battery pack for emergency is -20°C.

Lighting fixtures emergency working installed in ambient temperature up to +55°C shall be supplied with battery pack installed on separated housing.

EXTENSION n. 03/13

to EC-Type Examination Certificate CESI 03ATEX074

Temperature class and maximum surface temperature *(follow):*

For lighting fixture with electronic ballast type EBV-1:

Lighting fixture type	Ambient temperature	Temperature class	Max. surface temperature	Notes
EXEL-118 EXEL-218 EXEL-136 EXEL-236	-40°C ÷ +50°C	T4	T70°C	None
EXEL-118EF4 EXEL-118EF7 EXEL-218EF4 EXEL-218EF7 EXEL-118EE4 EXEL-118EE7 EXEL-136EF4 EXEL-136EF7 EXEL-236EF4 EXEL-236EF7 EXEL-136EE4 EXEL-136EE7	-20°C ÷ +50°C	T4	T70°C	Battery pack installed inside of lighting fixtures

The minimum operating ambient temperature for lighting fixtures with battery pack for emergency is -20°C

Model Identification:

Normal operating lighting fixtures:

EXEL - ☐ ☐

Code of the series

Number of lamps:
1 for one fluorescent tube
2 for two fluorescent tubes mounting

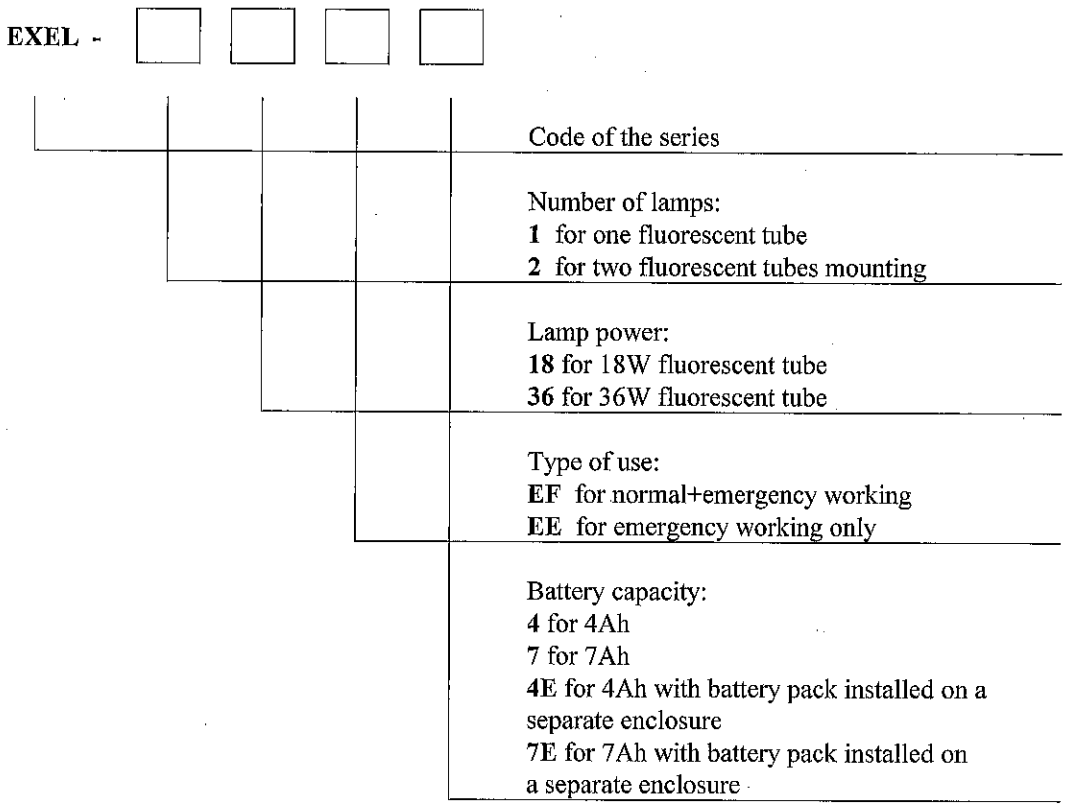
Lamp power:
18 for 18W fluorescent tube
36 for 36W fluorescent tube

EXTENSION n. 03/13

to EC-Type Examination Certificate CESI 03ATEX074

Model Identification *(follow)*:

Emergency operating lighting fixtures:



Warning label:

"Caution electrostatic charges – clean only by wet cloth or antistatic products."

For lighting for normal working only:
"Do not open when energized"

For lighting with emergency unit only:
"Do not open when an explosive gas atmosphere may be present"

Installation conditions

The accessories used for cable entries and for closing unused openings shall be certified according to EN 60079-0, EN 60079-7 and EN 60079-31 standards. A minimum degree of protection IP66 shall be guaranteed according to EN 60529 standard.

EXTENSION n. 03/13

to EC-Type Examination Certificate CESI 03ATEX074

Report n. EX-B3020409

Routine test

On Lighting fixtures type EXEL-... the dielectric test with applied voltage shall be performed (according to clause 7.1 of the EN 60079-7) at 1,5 KV between the terminals and earth.

Descriptive documents (prot. EX-B3020413)

- A4-5667	Technical note	rev. 1	(page 4)	date 19.04.2013
- A4-5938	Technical note	rev. 0	(page 4)	date 19.04.2013
- F-263	Safety instructions	rev. 4	(page 9)	date 19.04.2013
- F-383	Safety instructions	rev. 0	(page 9)	date 19.04.2013
- 0028	Fac-simile declaration of conformity	rev.0	(page. 1)	date 19.04.2013
- 0151	Fac-simile declaration of conformity	rev.0	(page 1)	date 19.04.2013
- A1-4163	Drawing lighting fixtures with EB	rev.3	(page 1)	date 08.05.2012
- A1-5939	Drawing lighting fixtures with EBV-1	rev.0	(page 1)	date 19.04.2013
- A3-4165	Drawing detail of switch and safety block	rev.2	(page 1)	date 08.05.2012
- C-134	Data sheet of materials	rev.0	(page 44)	date 19.04.2013

One copy of all documents is kept in CESI files.

Special conditions for safe use

None.

Essential Health and Safety Requirements

The Essential Health and Safety Requirements are assured by compliance to the following standards:

- EN 60079-0: 2012 - Electrical apparatus for explosive atmospheres - Part 0: general requirements.
- EN 60079-1: 2007 - Explosive atmosphere - Part 1: equipment protection by explosion proof "d".
- EN 60079-7:2007 Explosive atmospheres - Part 7: Equipment protection by increased safety "e"
- EN 60079-18:2009 Explosive atmospheres - Part 18: Equipment protection by encapsulation "m"
- EN 60079-31:2009 Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"