

[1]

TYPE EXAMINATION CERTIFICATE



[2]

Category 3 Equipment intended for use
in potentially explosive atmospheres
Directive 94/9/EC

[3] Type Examination Certificate number:

CESI 01 ATEX 070

[4]

Equipment: Luminaires series AVN-... for tubular fluorescent lamps

[5]

Manufacturer: COR.TEM S.p.A.

[6]

Address: Via Aquileia 6, 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 certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design of category 3 equipment intended for use in potentially explosive atmospheres. These Essential Health and Safety Requirements are given in Annex II to European Union Directive 94/9/EC of 23 March 1994.

The examination and test results are recorded in the confidential report n. EX-A1/030232.

[9]

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

EN 50021: 1999

EN 50281-1-1: 1999

[10]

If the sign "X" is placed after the certificate number, it indicates that the equipment is subject to special conditions for safe use specified in the schedule to this certificate.

[11]

This Type Examination Certificate relates only to the design, examination and tests of the specified equipment in accordance to the Directive 94/9/EC. Further requirements of the Directive apply to the manufacturing process and supply of this equipment. These are not covered by this certificate.

[12]

The marking of the equipment shall include the following:



II 3 G D EEx nA II T3,T4,T5 IP 65 T105 ÷ T65 °C



II 3 D IP 65 T105 ÷ T65 °C

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date

October 12th, 2001 - translation issued on October 12th, 2001

prepared

CERT - M. Balaz

approved

CERT - U. Colombo

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Business Unit Certificazione

Il Responsabile

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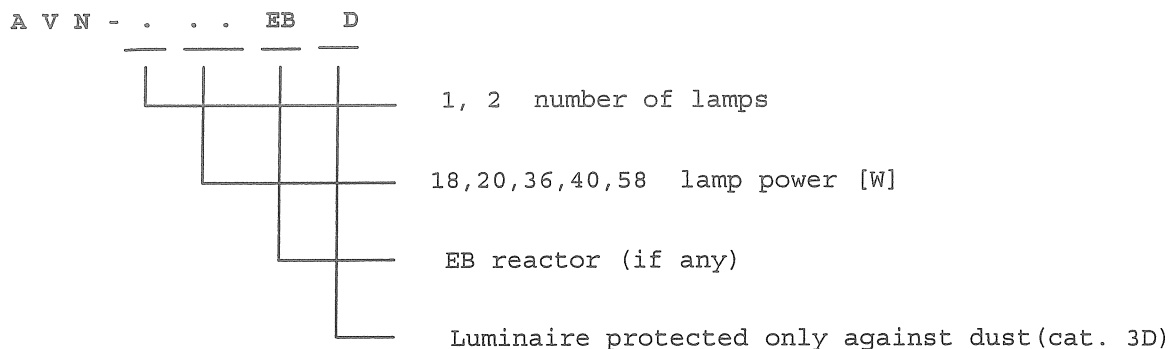
[13]

Schedule

[14] TYPE EXAMINATION CERTIFICATE N. CESI 01 ATEX 070

[15] Description of equipment

The luminaires series AVN... for tubular fluorescent lamps are identified by a code as follows:



The luminaires series AVN...and AVN...EB are of category 3 GD or 3 D.

The luminaires series AVN...EBD are only of category 3 D.

The luminaires series ANV... are equipped with inductive reactors manufactured by MAGNETEK or AROS.

The luminaires series AVN...EB are equipped with electronic reactor COR.TEM type EB.

The luminaires of category 3 G D comply with the requirements of the standards EN 50021 (1999) and EN 50281-1-1 (1999).

The luminaires of category 3 D comply with the requirements of the standard EN 50281-1-1 (1999)

Electrical characteristics

Luminaires series AVN-...

Rated voltage	230 [V]
Rated frequency	50 ÷ 60 Hz
Rated power	1x18, 1x20, 1x36, 1x40, 1x58 2x18, 2x20, 2x36, 2x40, 2x58 [W]
Degree of protection	IP 65
Temperature class for luminaires category 3 GD:	
- for all types	T3 with ambient temperature - 25 ÷ + 45 °C
- for types AVN-118, 218, 136, 236	T4 with ambient temperature - 25 ÷ + 40 °C
Maximum surface temperature of the enclosure for luminaires category 3 GD and 3 D:	
- for all types	T90 °C with ambient temperature - 25 ÷ + 40 °C T105 °C with ambient temperature - 25 ÷ + 55 °C
Degree of protection	IP 65

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Schedule

[14] TYPE EXAMINATION CERTIFICATE N. CESI 01 ATEX 070

Luminaires series AVN-...EB

Rated voltage	100-254 [V.a.c.]	100-270 [V.d.c.]
Rated frequency	50 ÷ 60 Hz	---
Rated power	2x18, 2x36, 2x58 [W]	
Temperature class for category 3 GD luminaires:		
	T5 with ambient temperature - 25 ÷ + 40 °C	
	T4 with ambient temperature - 25 ÷ + 55 °C	
Maximum surface temperature of the enclosure for category 3 GD and 3 D luminaires:		
	T65°C with ambient temperature - 25 ÷ + 40 °C	
	T80°C with ambient temperature - 25 ÷ + 55 °C	
Degree of protection	IP 65	

Luminaires series AVN-...EBD

Rated voltage	100-254 [Va.c.]	100-270 [Vd.c.]
Rated frequency	50 ÷ 60 Hz	---
Rated power	1x18; 1x36; 1x58; 2x18; 2x36, 2x58 [W]	
Maximum surface temperature of the enclosure :		
	T65°C with ambient temperature - 25 ÷ + 40 °C	
	T80°C with ambient temperature - 25 ÷ + 55 °C	
Degree of protection	IP 65	

The accessories used for cable entry shall guarantee a degree of protection at least IP 65 and be certified according to the standard EN 50281-1-1.

The mounting and/or substitution of tubular fluorescent lamps shall be made with de-energized circuits.

Warning label

“ATTENTION TO ELECTROSTATIC CHARGES”
Clean only with wet cloth or antistatic product.

[16] Report n. EX-A1/030232

Routine tests

The routine overvoltage test shall be carried out at 1500 V.

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[13]

Schedule

[14] TYPE EXAMINATION CERTIFICATE N. CESI 01 ATEX 070

Descriptive documents (prot. EX-A1/030250)

- n° A4-4156 Rev. 1 (3 p.)	dated 14.06.2001
- n° A1-4155 Rev. 0	dated 07.03.2001
- n° A1-4171 Rev. 0	dated 14.06.2001
- n° A4-4157 Rev. 0	dated 07.03.2001
- n° A4-3780 Rev. 0	dated 08.07.1997
- n° A4-3781 Rev. 0	dated 08.07.1997
- n° A4-3783 Rev. 0	dated 08.07.1997
- n° A4-3784 Rev. 0	dated 08.07.1997
- n° A4-4129 Rev. 0	dated 26.06.2000
- declaration CORTEM n° 302/99	dated 25.05.1999
- safety instructions n° F-260 Rev. 0 (7 p.)	dated 07.03.2001
- EC declaration of conformity n° CE/0025	dated 07.03.2001

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. 01/03



to Type Examination Certificate CESI 01ATEX070

Equipment: Luminaires series AVN- for tubular fluorescent lamps

Manufacturer: COR.TEM S.p.A.

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

Admitted variation

- New codification of Luminaires series AVN
- New model of Luminaires series AVN-... with new electronic ballast and emergency luminaires series AVN-...E.

Identification and description of equipment

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

AVN -

code of the series

1, 2 (number of lamps)

18, 36, 58 (lamp power [W])

- code omitted (luminaires for normal service with electronic ballast)

EE (luminaires for emergency service only)

EF (luminaires for normal + emergency service)

4, 7 (capacity of the battery in Ah)

This extension and annexed descriptive documents must be annexed to the Type Examination Certificate CESI 01ATEX070.

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date 5 November, 2003 - translation issued the 5th November, 2003

prepared

CERT – M. Balaz

approved

CERT – U. Colombo

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EXTENSION n. 01/03

to Type Examination Certificate CESI 01ATEX070

Identification and description of the equipment (follows)

According to the protection adopted and the model, the luminaires series AVN- can have the following marking :

 II 3 G D EEx nA II T4,T5 IP 65 T80 ÷ T65 °C
 II 3 D IP 65 T80 ÷ T65 °C

Electrical characteristics

Luminaires series AVN-... for normal service

1 - equipped with electronic ballast type BBT-...	
Rated voltage	230 V (207-254 V.a.c.; 190-276 V.d.c.)
Rated power	18 W; 36 W; 58 W; 2x18 W; 2x36 W; 2x58 W
2 - equipped with electronic ballast type BTS-...	
Rated voltage	120/230 V (108-254 V.a.c.; 108-254 V.d.c.)
Rated power	18 W; 36 W; 2x18 W; 2x36 W
Rated frequency	50/60 Hz or d.c.
Degree of protection	IP 65 (EN 60529-1991)
Temperature class for category 3 GD luminaires:	T5 with ambient temperature - 25 ÷ + 40 °C T4 with ambient temperature - 25 ÷ + 50 °C
Maximum surface temperature of the enclosure for category 3 GD and 3 D luminaires:	T65°C with ambient temperature - 25 ÷ + 40 °C T80°C with ambient temperature - 25 ÷ + 50 °C

Luminaires series AVN-...EF. and AVN-...EE. for normal + emergency service or for emergency service only

1 - equipped with electronic ballast type BBT-...	
Rated voltage	230 V (207-254 V.a.c.; 190-276 V.d.c.)
Rated power	18 W; 36 W; 58 W; 2x18 W; 2x36 W; 2x58 W
2 - equipped with electronic ballast type BTS-...	
Rated voltage	120/230 V (108-254 V.a.c.; 108-254 V.d.c.)
Rated power	18 W; 36 W; 2x18 W; 2x36 W
Rated frequency	50/60 Hz or d.c.
Degree of protection	IP 65 (EN 60529-1991)

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EXTENSION n. 01/03

to Type Examination Certificate CESI 01ATEX070

Electrical characteristics (follows)

NiCd battery:

- rated voltage 6 V
- capacity 4 or 7 Ah

Temperature class for category 3 GD luminaires:

T5 with ambient temperature - 25 ÷ + 40 °C

Maximum surface temperature of the enclosure for category 3 GD and 3 D luminaires:

T65°C with ambient temperature - 25 ÷ + 40 °C

Warning label – refer to emergency lighting

“DO NOT OPEN WHEN AN EXPLOSIVE GAS ATMOSPHERE MAY BE PRESENT”

Report n. EX-A3/042643

Descriptive documents (prot. EX-A3/042645)

- | | | |
|--|-------|------------|
| - n. A1-4545 Rev. 0 | dated | 01.10.2003 |
| - n. A4-4572 Rev. 0 (2 p.) | dated | 01.10.2003 |
| - n. A4-4290 Rev. 2 | dated | 01.10.2003 |
| - Technical description MAGNETEK (5 p.) | dated | 01.10.2003 |
| - Technical description Peters (6 p.) | dated | 01.10.2003 |
| - Technical description TELETRONICS (7 p.) | dated | 01.10.2003 |
| - Technical description VARTA (24 p.) | dated | 01.10.2003 |

One copy of all documents is kept in CESI files.



EXTENSION n. 02/08

to EC-Type Examination Certificate CESI 01ATEX 070

Equipment: Luminaries series AVN- for tubular fluorescent lamps

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

Address: Via Aquileia 10, Villesse (GO)

Admitted variation

- Updating to new standards EN 60079-0 (2006), EN 60079-15 (2005), EN 61241-0 (2006), EN 61241-1 (2004)
- Updating of nameplate
- New ambient temperature range $T_a - 25\text{ }^{\circ}\text{C} \div + 55\text{ }^{\circ}\text{C}$
- New model with battery pack installed in separate junction box

Equipment identification

The equipment shall include the following markings:

 II 3GD Ex nA II T... ; Ex tD A22 IP65 T...°C

or

 II 3D Ex tD A22 IP65 T...°C

Cable entries

The accessories used for cable entries shall guarantee a minimum degree of protection IP65 and be certified at least according to the standards EN 60079-0, EN 60079-15, EN 61241-0 and EN 61241-1.

This extension and annexed descriptive documents must be annexed to the EC-Type Examination Certificate CESI 01ATEX070.

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date 17/06/2008 - translation issued the 17/06/2008

prepared Sergio Mezzetti

verified Mirko Balaz

approved Fiorenzo Bregani

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

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EXTENSION n. 02/08

to EC-Type Examination Certificate CESI 01ATEX 070

Electrical characteristics

The Temperature Class and the max. surface temperature T of the luminaries is a function of the component assembling conditions and of the ambient temperature as specified in the following tables:

For all sizes of luminaries with electronic ballast inside

Temperature Class	Max. Surface Temperature	Ambiente Temperature
T5	T 65 °C	- 25 °C ÷ + 40 °C
T4	T 80 °C	- 25 °C ÷ + 50 °C
T4	T 85 °C	- 25 °C ÷ + 55 °C

For all sizes of luminaries with electronic ballast, inverter and battery pack inside

Temperature Class	Max. Surface Temperature	Ambiente Temperature
T5	T 65 °C	- 25 °C ÷ + 40 °C
T4	T 80 °C	- 25 °C ÷ + 50 °C

For all sizes of luminaries with electronic ballast and inverter inside and battery pack installed on separate junction box

Temperature Class	Max. Surface Temperature	Ambiente Temperature
T4	T 85 °C	- 25 °C ÷ + 55 °C

Report n. EX-A8017673

Routine tests

For the luminaries of Cat. 3GD, the manufacturer shall carry out the routine tests prescribed at par. 27 of the EN 60079-0 and at par. 24 of the EN 61241-0 Standards.

For the luminaries of Cat. 3D, the manufacturer shall carry out the routine tests prescribed at par. at par. 24 of the EN 61241-0 Standard.

Descriptive documents (prot. EX-A8017679)

- Technical Note A4-4969 (2 pg.)	Rev. 0	dated	06.10.2006
- Drawing n. A3-5099	Rev. 0	dated	06.10.2006
- Safety Instruction F-260 (6 pg.)	Rev. 2	dated	06.10.2006
- EC Declaration of Conformity n. CE 0025		dated	06.10.2006

One copy of all documents is kept in CESI files.

Essential Health and Safety Requirements

The Health and Safety Requirements are assured by compliance with the following Standards:

- EN 60079-0 : 2006 Electrical apparatus for explosive gas atmospheres.
General requirements
- EN 60079-15: 2005 Protection mode "n".
- EN 61241-0 : 2006 Electrical apparatus for use in the presence of combustible dust.
General requirements
- EN 61241-1 : 2004 Protection by enclosures "tD"

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