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Schema di certificazione

CESI-ATEX



PRD N. 018B
Membro degli Accordi di Mutuo
Riconoscimento EA, IAF e ILAC
Signatory of EA, IAF and ILAC
Mutual Recognition Agreements

CERTIFICATE



[1] SUPPLEMENTARY EU-TYPE EXAMINATION CERTIFICATE

[2] **Component intended for use on/in equipment or protective system
intended for use in potentially explosive atmospheres
Directive 2014/34/EU**

[3] **Supplementary EU-Type Examination Certificate number:**

CESI 02 ATEX 061 U /02

[4] **Component: Feed-through ground terminal blocks series TEO.. and TE..**

[5] **Manufacturer: Cabur S.r.l.**

[6] **Address: Località Isolagrande 45, I-17041 Altare (SV) – Italy.**

[7] This supplementary certificate extends EC-Type Examination Certificate CESI 02 ATEX 061 U, to apply to products designed and constructed in accordance with the specification set out in the Schedule of the said certificate but having any variations specified in the Schedule attached to this certificate and the documents therein referred to.

[8] CESI, notified body n. 0722 in accordance with Article 17 of the Directive 2014/34/EU of the Parliament and Council of 26 February 2014, certifies that this component 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-B8005740.

[9] In accordance with Article 41 of Directive 2014/34/EU, EC-Type Examination Certificates referring to 94/9/EC that were in existence prior to the date of application of 2014/34/EU (20 April 2016) may be referenced as if they were issued in accordance with Directive 2014/34/EU. Supplementary certificates to such EC-Type Examination Certificates, and new issues of such certificates, may continue to bear the original certificate number issued prior to 20 April 2016

[10] The sign "U" placed after the certificate number indicates that this certificate must not be mistaken for a certificate intended for an equipment or protective system. This partial certification may be used as a basis for certification of an equipment or protective system.

[11] This EU-TYPE EXAMINATION CERTIFICATE relates only to the design, examination and tests of the specified component in accordance to the Directive 2014/34/EU. Further requirements of the Directive apply to the manufacturing process and supply of this component. These are not covered by this certificate.

[12] The marking of the component shall include the following:

I M2 Ex eb I Mb
and
 II 2 G Ex eb IIC Gb

This certificate may only be reproduced in its entirety and without any change, schedule included.

Date 2018.03.14 - Translation issued the 2018.03.14

Prepared
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Approved
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CESI S.p.A.

Testing & Certification Division
Business Area Certification

Il Responsabile

(Roberto Piccin)

[13]

Schedule

[14] SUPPLEMENTARY EU-TYPE EXAMINATION CERTIFICATE n. CESI 02 ATEX 061 U /02

[15] **Description of the variation to the component**

- Updating to standards EN 60079-0: 2012 + A11:2013 and EN60079-7:2015.
- The Increased safety ground terminal blocks TED.4 types were removed from the certificate.
- New maximum service temperature +110°C.

Description of component

Cabur **TEO.*** and **TE.**/*** series "increased safety" ground terminal blocks includes the following sizes: TEO.2, TEO.4, TE.6/O, TE.10/O, TE.16/O, TE.50/O, TE.6/D, TE.10/D, TE.16/D and TE.50/D. They allows the direct and anti-loosening connection of solid, stranded and flexible conductors, by means of wire clamping collars, tightening screws and conducting body. Each clamping unit with rated cross-section from 2,5 mm² up to 50 mm² depending on the size. They can house only one conductor with a maximum size from 4 mm² up to 70 mm².

These **TEO.*** and **TE.**/O** series terminal blocks can be mounted on type TH/35 "Top-hat" symmetric mounting rails, while **TE.**/D** series terminal blocks can be mounted on type "G32" asymmetric rails, both according to EN 50022.

The terminal blocks are contained into insulating bodies, made of Polyamide thermoplastic material and different colours according to Technical Note annexed to this certificate, that are manufactured in two specular half-shells which fit into each other by means of centring pins, provide an **IPXXB** protection degree.

The terminal blocks must be mounted inside "Ex eb" enclosures. The terminal blocks plus enclosure assembly must be subjected to separate certification.

Identification of Terminal blocks TEO...:

- TEO.** = Terminal block series or type;
- 2** = Rated cross-section of Terminal block (2,5 mm²);
- 4** = Rated cross-section of Terminal block (4 mm²).

Identification of Terminal blocks TE...:

- TE.** = Terminal block series or type;
- 6** = Rated cross-section of Terminal block (6 mm²);
- 10** = Rated cross-section of Terminal block (10 mm²);
- 16** = Rated cross-section of Terminal block (16 mm²);
- 50** = Rated cross-section of Terminal block (50 mm²);
- /O** = For TH/35 "Top-hat" symmetric mounting rail;
- /D** = For "G32" asymmetric rails mounting rail.

This certificate may only be reproduced in its entirety and without any change, schedule included.

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Schedule

[14] SUPPLEMENTARY EU-TYPE EXAMINATION CERTIFICATE n. CESI 02 ATEX 061 U /02

Electrical characteristics

TEO.* series Terminal block ratings:

Terminal block type	Rated cross-section [mm ²]	Min. cross-section [mm ²]	Max. cross-section [mm ²]	Rated current [A]	Resistance of terminal block [Ω]
TEO.2	2.5	0.2	4	24	8.25×10^{-4}
TEO.4	4	0.2	6	32	7.75×10^{-4}

The rated currents and rated cross-sections indicated above are for an ambient temperature range between - 40 and + 40 °C and for T6 applications

TE.**/* series Terminal block ratings:

Terminal block type	Rated cross-section [mm ²]	Min. / Max. cross-section for flexible cond. [mm ²]	Min. / Max. cross-section for rigid cond. [mm ²]	Rated current [A]	Resistance of terminal block [Ω]
TE.6/*	6	0.5÷6	0.5÷10	41	4.86×10^{-4}
TE.10/*	10	0.5÷10	0.5÷16	57	5.10×10^{-4}
TE.16/*	16	0.5÷16	0.5÷25	76	4.31×10^{-4}
TE.50/*	50	1.5÷50	1.0÷70	150	1.98×10^{-4}

The rated currents and rated cross-sections indicated above are for an ambient temperature range between - 40 and + 40 °C and for T6 applications.

[16] Report n. EX- B8005740.

Routine tests

None.

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Schedule

[14] **SUPPLEMENTARY EU-TYPE EXAMINATION CERTIFICATE n. CESI 02 ATEX 061 U /02**

[17] **Schedule of limitations**

- The **TEO.*** and **TE.**/*** terminal block series are suited for a service temperature range between - 40 and + 110 °C.
- The terminals shall be mounted inside an enclosure that meets the requirements of an approved type of protection as specified in EN 60079-0 Standard with suitable IP degree of protection.
- When installing the terminals in an enclosure designed to Increased Safety “e” type of protection as specified in EN 60079-7, the clearance and creepage distances shown in Table 2 shall be duly considered.
- If accessories are used, the instructions for installation provided by the manufacturer shall be observed.
- As the back of each terminal block performs the function of insulating wall for the adjoining terminal block, an end section is necessary to close and provide appropriate insulation to the first terminal block forming the assembly.
- The applicable creepage and clearance distances, as stated in EN 60079-7 Table 2, are met in the combination of feed through terminal blocks and earth terminal blocks of the same size and rated values. In combination with other terminal block series and sizes, the required creepage and clearance distances stated in EN 60079-7 Table 2 shall be complied with.

[18] **Essential Health and Safety Requirements**

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

EN 60079-0: 2012 + A11:2013 – Explosive atmospheres – Part 0: Equipment - General requirements;

EN 60079-7: 2015 Explosive atmospheres – Part 7: Equipment protection by increased safety “e”.

[19] **Descriptive documents (prot. EX- B8005751).**

- Technical note No. 20 (11 pg.)	rev.4	dated	2018.01.30
- Technical note No. 14 (9 pg.)	rev.6	dated	2018.02.12
- Technical note No. 6 (9 pg.)	rev.6	dated	2018.02.12
- Ex e Instruction manual No. 20 (2 pg.)	rev.4	dated	2018.02.09
- Ex e Instruction manual No. 14 (2 pg.)	rev.6	dated	2018.02.09
- Ex e Instruction manual No. 6 (2 pg.)	rev.6	dated	2018.02.09
- Datasheet of materials (7 sheets)	rev.0	dated	2018.01.30

One copy of all documents is kept in CESI files.

Certificate history

Issue nr	Issue Date	Summary description of variation
02	2018.03.14	Updating to standards EN 60079-0: 2012 + A11:2013 and EN60079-7:2015. The Increased safety ground terminal blocks TED.4 types were removed from the certificate. New maximum service temperature +110°C.
01	2009.05.27	Updating to new standards EN 60079-0 (2006), EN 60079-7 (2007), EN 61241-0 (2006). Updating of nameplate. Change of address. New terminal block type TED.4.
00	2002.06.12	First Issue of the Certificate.