



# IECEx Certificate of Conformity

## INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification Scheme for Explosive Atmospheres

for rules and details of the IECEx Scheme visit [www.iecex.com](http://www.iecex.com)

Certificate No.: IECEx CES 09.0010U

Issue No: 1

Certificate history:

[Issue No. 1 \(2018-04-04\)](#)

[Issue No. 0 \(2009-12-30\)](#)

Status: **Current**

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Date of Issue: **2018-04-04**

Applicant: **Cabur S.r.l.**  
Località Isolagrande 45,  
I-17041 Altare (SV)  
**Italy**

Equipment: **Feed-through ground terminal blocks, TEO.\*, TE.\*\*/D, TE.\*\*/O series**

*Optional accessory:*

Type of Protection: **Increased safety 'e'**

Marking:

**Ex eb I Mb**

**Ex eb IIC Gb**

*Approved for issue on behalf of the IECEx  
Certification Body:*

Mirko Balaz

*Position:*

Head of IECEx CB

*Signature:  
(for printed version)*

*Date:*

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting the [Official IECEx Website](#).

Certificate issued by:

**CESI**  
**Centro Elettrotecnico**  
**Sperimentale Italiano S.p.A.**  
**Via Rubattino 54**  
**20134 Milano**  
**Italy**



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Manufacturer: **Cabur S.r.l.**  
Località Isolagrande 45,  
I-17041 Altare (SV)  
**Italy**

Additional Manufacturing location(s):

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended.

## STANDARDS:

The apparatus and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards:

**IEC 60079-0 : 2011** Explosive atmospheres - Part 0: General requirements  
Edition:6.0

**IEC 60079-7 : 2015** Explosive atmospheres – Part 7: Equipment protection by increased safety "e"  
Edition:5.0

*This Certificate **does not** indicate compliance with electrical safety and performance requirements other than those expressly included in the Standards listed above.*

## TEST & ASSESSMENT REPORTS:

*A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in*

Test Report:

[IT/CES/ExTR09.0008/00](#)

[IT/CES/ExTR09.0008/01](#)

Quality Assessment Report:

[IT/CES/QAR07.0004/10](#)



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## Schedule

### EQUIPMENT:

*Equipment and systems covered by this certificate are as follows:*

Cabur TEO.<sup>X</sup> and TE.<sup>XX/X</sup> 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.

The ground terminal blocks rated characteristics are further described in the Annexe of this certificate.

**SPECIFIC CONDITIONS OF USE: NO**



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## DETAILS OF CERTIFICATE CHANGES (for issues 1 and above):

### Variation 1.1

The Increased safety terminal blocks TEO.<sup>x</sup> and TE.<sup>xx</sup>/<sub>x</sub> series originally assessed in compliance to IEC 60079-0:2004 and IEC 60079-7:2006 have been re-assessed on the basis of IEC 60079-0:2011 and IEC 60079-7:2015 Standards.

### Variation 1.2

The Increased safety ground terminal blocks TED.4 types were removed from the certificate.

### Variation 1.3

The Increased safety terminal blocks TEO.<sup>x</sup> and TE.<sup>xx</sup>/<sub>x</sub> series were extended to the new service temperature range of -40°C up to +110°C.

## Annex:

[IECEx CES 09.0010U Issue 1 ANNEX TEO\\_TE\\_Terminal blocks.pdf](#)



## IECEx Certificate of Conformity



Prot: B8009749

**Annex to certificate:**

**IECEx CES 09.0010U Issue No.:1 of 2018-04-04**

**Applicant:**

**Cabur S.r.l.**

**Località Isolagrande 45, I-17041 Altare (SV) – Italy**

**Electrical Apparatus:** Feed-through ground terminal blocks TEO.\*, TE.\*\*/D, TE.\*\*/O series

### Description of the 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 mm<sup>2</sup> up to 50 mm<sup>2</sup> depending on the size. They can house only one conductor with a maximum size from 4 mm<sup>2</sup> up to 70 mm<sup>2</sup>.

Appropriate grooving, provided in the wire clamping collars and on the tin-plated copper conducting body, guarantee a perfect electrical contact and an efficient blocking of the conductor. The wire clamping collars and the tightening screws are made of Zinc-plated steel that with their coupling it is possible to apply the correct contact pressure.

The force applied during the tightening process, the overlapped threaded parts system act, by means of elastic deformation on the head of the screw, blocking it and avoiding subsequent loosening.

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 IEC 60715.

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 mm<sup>2</sup>);

**4** = Rated cross-section of Terminal block (4 mm<sup>2</sup>).

### Identification of Terminal blocks TE..:

**TE.** = Terminal block series or type;

**6** = Rated cross-section of Terminal block (6 mm<sup>2</sup>);

**10** = Rated cross-section of Terminal block (10 mm<sup>2</sup>);

**16** = Rated cross-section of Terminal block (16 mm<sup>2</sup>);

**50** = Rated cross-section of Terminal block (50 mm<sup>2</sup>);

**/O** = For TH/35 “Top-hat” symmetric mounting rail;

**/D** = For “G32” asymmetric rails mounting rail.

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**Annex to certificate:**

**IECEx CES 09.0010U Issue No.:1 of 2018-04-04**

**Applicant:**

**Cabur S.r.l.**

**Località Isolagrande 45, I-17041 Altare (SV) – Italy**

**Electrical Apparatus:** Feed-through ground terminal blocks TEO.\*, TE.\*\*/D, TE.\*\*/O series

## Electrical characteristics:

**TEO.\* series Terminal block ratings:**

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

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

**TE.\*\*/\* series Terminal block ratings:**

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

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

## **“Schedule of Limitations”:**

- The **TEO.\*** and **TE.\*\*/\*** terminal block series are suited for a service temperature range between – 40°C and + 110 °C.
- The terminals shall be mounted inside an enclosure that meets the requirements of an approved type of protection as specified in IEC 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 IEC 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 IEC 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 IEC 60079-7 Table 2 shall be complied with.