

## Ex e Instruction manual N° 20

TEO Series "increased safety" terminal blocks, are manufactured according to IEC / EN 60079-0, IEC / EN 60079-7 Standards and are in compliance with the ATEX 2014/34/EU Directive and the IEC Ex Certification Scheme prescriptions.

TEO Series terminal blocks are also designed and manufactured in compliance with IEC / EN 60947-1 and IEC / EN 60947-7-2 reference product standards.

TEO Series is covered by IECEx CES 09.0010U and 02 ATEX 061U Certificates.

Terminal blocks (components) must be inserted in Ex e enclosures. The terminal blocks + enclosure assembly must be subjected to separate certification.

TEO Series terminal blocks are suited for a temperature range between - 40 and + 110 °C

Ambient temperature range shall be between - 40 and + 40 °C for T6 applications.

### ATEX Marking:



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

### IECEx Marking:

Ex eb I Mb  
Ex eb IIC Gb

### ATEX Marking description

<b>0722</b>	= number of the ATEX surveillance Notifying Body (CESI)
<b>I M 2</b>	= group <b>I</b> (mines), category <b>M 2</b>
<b>II 2 G</b>	= group <b>II</b> (surface), category <b>2 G</b> (explosive atmosphere with presence of GAS)
<b>Ex eb</b>	= "increased safety" protection mode
<b>I</b>	= gas group <b>I</b> (mines)
<b>IIC</b>	= gas group <b>IIC</b> (Acetylene)
<b>Gb</b>	= E.P.L. (surface)
<b>Mb</b>	= E.P.L. (mines)
<b>TEO</b>	= terminal block series or type
<b>2/4</b>	= rated cross-section of terminal block (2mm <sup>2</sup> or 4mm <sup>2</sup> )

### IEC Ex Marking description

<b>Ex eb</b>	= "increased safety" protection mode
<b>I</b>	= gas group <b>I</b> (mines)
<b>IIC</b>	= gas group <b>IIC</b> (Acetylene)
<b>Gb</b>	= E.P.L. (surface)
<b>Mb</b>	= E.P.L. (mines)

Terminal block	Rated cross section [ mm <sup>2</sup> ]	Gauge according to IEC 60947-1	Minimum / maximum flexible and rigid conductor [ mm <sup>2</sup> ]	Rated current [ A ] (**)	Resistance of the terminal block [ Ω ] (*) (***)	Overall dimensions [ mm ]			
						A	B	C	D
TEO.2	2,5	A3	0,2 / 4	24	8,25 x 10-4	47	55	50	5,5
TEO.4	4	B4	0,2 / 6	32	7,75 x 10-4	52	60	50	6,5

Notes


(\*): According to paragraph 8.4.5 of IEC 60947-7-1 Std.

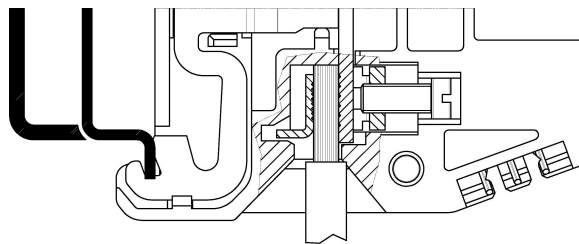
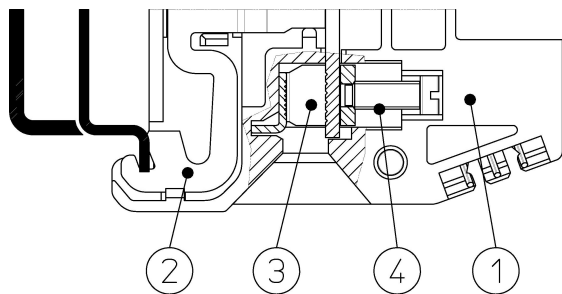
(\*\*): Values calculated from the results of the voltage drop test according to paragraph 8.4.4 of IEC 60947-7-1 Std.

(\*\*\*): Rated voltage values can be subjected to a ± 10 % tolerance as listed in Table 2 of IEC 60079-7 Std.

(\*\*\*\*): Ambient temperature according to paragraph 8.3.3.3.1 of IEC 60947-1 Std.

*J. Cabur*  
Persona Autorizzata ATEX

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		20	1	4	09/02/18	<i>Rapelli</i>	<i>J. Cabur</i> Persona Autorizzata ATEX



POSITION	COMPONENT
1	Insulating body
2	Conducting body and contact element
3	Wire clamping collar
4	Tightening screw

TERMINAL BLOCK	INSULATION STRIPPING LENGTH [mm]	TIGHTENING TORQUE VALUES [ Nm ] (*)
TEO.2	12	0,4
TEO.4	14	0,5

Note(\*): values taken from Table 4 of IEC 60947-1 Std.

Cabur TEO Series terminal blocks allow the direct and anti-loosening connection of solid, stranded and flexible conductors, by means of wire clamping collars, captive screws and conducting body. Each clamping unit shall house only one conductor

The insertion of the cable is eased by:

- Sloping entrance planes provided on the insulating body
- A tab provided in the collar that avoids faulty introduction of the conductors
- Adequate dimensioning of the conductors insertion hole, with respect to the diameter of the maximum connectable conductor (according to the different Gauges prescribed by IEC 60947-1Std.)

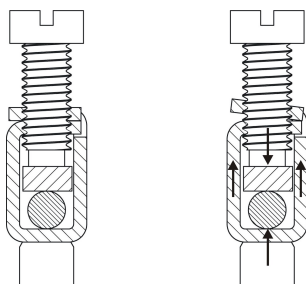
Appropriate grooving, provided in the wire clamping collar and on the conducting body guarantee a perfect electrical contact and an efficient blocking of the conductor.

Both the wire clamping collar and the tightening screw are manufactured in tempered steel with galvanic RoHS conforming zinc plating; thanks to their coupling it is possible to apply the correct contact pressure

By acting on the tightening screw, the collar tightens the conductor against the conducting body, which is manufactured in tin-plated copper. With the clamping yoke tightening system a gasproof, particularly safe connection is guaranteed


Thanks to 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

For the connection of the conductor it is necessary to:



1. Loosen the tightening screw until it frictions, making the collar reach its lower position; once this operation is performed, the conductor's insertion hole results to be completely open and is ready to house the conductor.
2. Prepare the conductor by stripping one end from its insulation and according to the correct insulation stripping length given in the table. introduce it in the terminal block until the limiting wall is reached. By holding firmly the conductor in one hand, tightening operation must be performed (applying the prescribed torque values given in the table). Once this operation is performed the conductor is firmly secured.

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

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		20	2	4	09/02/18	Raffaelli	