



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

Certificate No.: **IECEx CES 15.0023** issue No.: **0** Certificate history:

Status: **Current**

Date of Issue: **2015-12-21** Page 1 of 3

Applicant: **CEMB S.p.A.
Via Risorgimento, 9
I- 23826 Mandello del Lario (LC)
Italy**

Electrical Apparatus: **Vibrations Transmitter, Model TR-I**
Optional accessory:

Type of Protection: **Flameproof enclosures 'd'; Dust ignition protection 't'**

Marking: **Ex d IIC T6 Gb
Ex tb IIIC T85°C Db**

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

Position: **Head of IECEx CB**

Signature: *(for printed version)*

Date:

21-12-2015

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**

CESI

CESI S.p.A.

Testing & Certification Division
Business Area Certification
Il Responsabile

(Roberto Piccin)

PAD B5026924 (2172661) - USO RISERVATO

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Manufacturer: **CEMB S.p.A.**
Via Risorgimento, 9
I- 23826 Mandello del Lario (LC)
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 electrical 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 Edition: 6.0	Explosive atmospheres - Part 0: General requirements
IEC 60079-1 : 2014-06 Edition: 7.0	Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
IEC 60079-31 : 2013 Edition: 2	Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"

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/ExTR15.0020/00

Quality Assessment Report:

IT/CES/QAR14.0003/02



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Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

The TR-I transmitter is an absolute vibrations transducer (seismic) operating with 4 + 20 mA current loop. This transmitter elaborates the electrical signal generated by an accelerometer and transforms it in 4 + 20 mA (2 - wires) current loop, corresponding to the measured vibration level.

The transmitter is composed of a stainless steel body containing the accelerometer and an electronic card for signal conditioning. The connection is made by means of terminal blocks placed inside a IECEx certified aluminium junction box (CORTEM SB-24 - IECEx CES 15.0012U type of protection Ex d IIC Gb; Ex tb IIIC Db).

The electronic card and the accelerometer are placed in an insulation heat shrink sheath (3M HSR sheath 19.0 mm) and in a shielding sheath to guarantee the noise immunity. All the above parts and their sheaths are encapsulated in silicon type resin.

For further information see Annex.

CONDITIONS OF CERTIFICATION: NO



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CESI

Prot: B5026924

Annex to certificate: IECEX CES 15.0023 Issue No.:0 of 2015-12-21

Applicant: CEMB S.p.A.
Via Risorgimento 9; I- 23826 Mandello del Lario (LC), Italy

Electrical Apparatus: Vibrations Transmitter, Model TR-I

Model identification

Identification of the Transmitters TR-I

TR-I / x / x / 5

TR-I	type of certification – 5 IECEX
x	connection type 0 - ¼" – 18 NPT 1 - M8 x1,25
x	measuring range 0 - 0 to 10 mm/s RMS 1 - 0 to 20 mm/s RMS 2 - 0 to 50 mm/s RMS 3 - 0 to 100 mm/s RMS 4 - 0 to 1 g RMS 5 - 0 to 5 g RMS 6 - 0 to 10 g RMS 7 - 0 to 25.4 mm/s (0 – 1 in/s) RMS 8 - 0 to 12.7 mm/s (0 – 0.5 in/s) RMS S - Special
5	

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Electrical characteristics

- Nominal voltage Un: 24 Vdc
- Rated current In: 4 ÷ 20 mA loop
- Ambient temperature: from -40°C up to +70°C

Degree of protection: IP65

Installation conditions

The accessories used for cable entries shall be subject of separate certification. Those accessories shall be certified according to the standards: IEC 60079-0; IEC 60079-1; IEC 60079-31 and shall guarantee a degree of protection IP65 according to IEC 60529 standard.