

CESI



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Schema di certificazione

CESI-ATEX

CERTIFICATE



[1] SUPPLEMENTARY EU-TYPE EXAMINATION CERTIFICATE

[2] **Equipment or Protective System intended for use
 in potentially explosive atmospheres
 Directive 2014/34/EU**

[3] Supplementary EU-Type Examination Certificate number:

CESI 01 ATEX 050 /03

[4] Product: Vibrations transducer, type **T1-40**

[5] Manufacturer: **CEMB S.p.A**

[6] Address: **Via Risorgimento, 9 – 23826 Mandello del Lario (LC – Italy)**

[7] This supplementary certificate extends EC-Type Examination Certificate CESI 01 ATEX 050 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 equipment or protective system 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-B8008939.

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

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

[12] The marking of the equipment or protective system shall include the following:

 II 1G Ex ia IIC "T6...T4" Ga
  II 1D Ex ia IIIC "T85°C...T135°C" Da
 II 2G Ex ia IIC "T6...T4" Gb
  II 2D Ex ia IIIC "T85°C...T135°C" Db

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Date 02.05.2018 - Translation issued the 2nd 05.2018

Prepared
Guido Prazzoli

Verified
Mirko Balaz

Approved
Roberto Piccin

CESI S.p.A.
 Quality & Certification Division
 Business Area Certification
 III Responsabile
 (Roberto Piccin)



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

[13]

Schedule

[14] **SUPPLEMENTARY EU-TYPE EXAMINATION CERTIFICATE n. CESI 01 ATEX 050 /03**

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

Variation 3.1: constructional modifications

Variation 3.2: standard and marking update

Variation 3.3: descriptive documents updated for Directive 2014/34/UE

Description of equipment

The vibrations transducer type **T1-40** is designed for the measurement of the absolute vibration of any type of machines. The transducer generate an electrical signal directly proportional to the vibration speed of the point on which it is installed.

The transducer **T1-40** with stainless steel enclosure has the category 1GD, that in aluminium alloy the category 2GD.

The variations made to the product are: new coil, modification to the electrical diagram, new encapsulating resin and other minor ones, irrelevant to the type of protection.

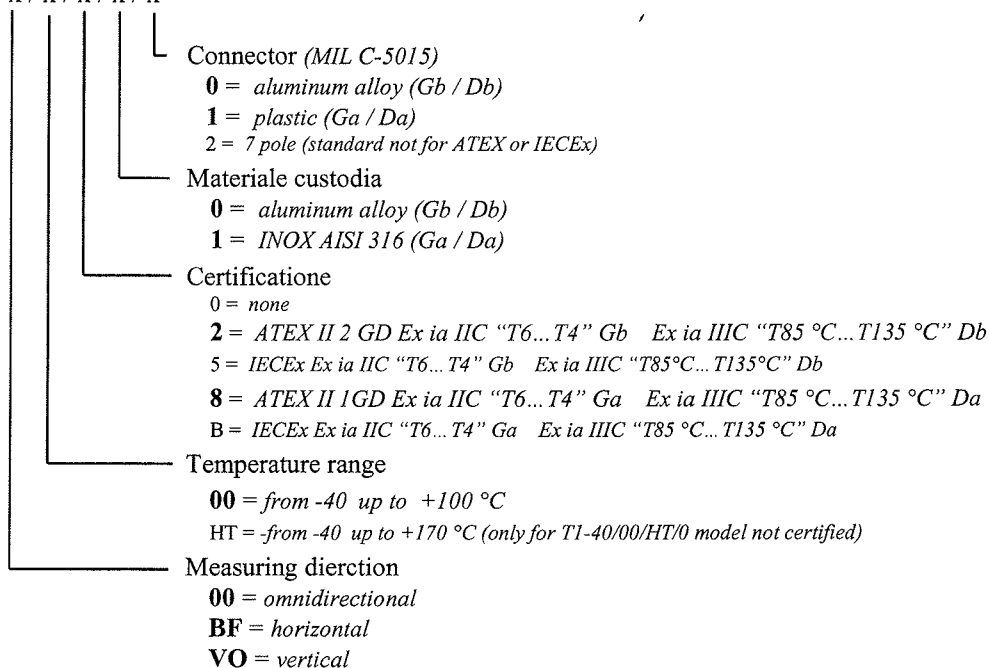
The vibrations transducer type **T1-40** has been, previously, assessed and marked in compliance with the standards: EN 60079-0:2006, EN 60079-11:2007, EN 60079-26:2007, EN 61241-0:2006 e EN 61241-11:2006.

With this Supplement the product has been evaluated according to the standards: EN 60079-0:2012/A11:2013 e EN 60079-11:2012.

Identification of the equipment

The **T1-40** is distinguished by the following code:

T1-40 / x / x / x / x / x



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Schedule

[14] SUPPLEMENTARY EU-TYPE EXAMINATION CERTIFICATE n. CESI 01 ATEX 050 /03

Electrical characteristics

- Ui: 11 V or 18 V
- Ii: 400 mA or 125 mA
- Pi: 0.93 W or 0.70 W
- Ci: 0
- Li: 0

The **T1-40** can be interfaced with other apparatus only by certified associated apparatus according to EN 60079-0 and EN 60079-11 [Ex ia] complying with the limits of the above electrical characteristics.

The ambient temperatures in which the equipment may be used are as follows:

- from -40 °C up to: +60 °C, for Class T6, or surface temperature T85 °C;
- +80 °C, for Class T5, or surface temperature T100 °C;
- +100 °C, for Class T4, or surface temperature T135 °C

[16] Report n. EX-B8008939

Routine tests

The Manufacturer shall carry out the routine tests provided to clause 27 on the of EN 60079-0 standard.

[17] Special conditions for safe use

None.

[18] Essential Health and Safety Requirements

Compliance with the Essential Health and Safety Requirements is not affected by this variation and are assured by compliance to the following standards:

- EN 60079-0:2012/A11:2013 – Explosive atmospheres – Part 0: Equipment – General requirements.
- EN 60079-11:2012 – Explosive atmospheres – Part 11: Equipment protection by intrinsic safety "i".

In addition, the following EHSRs (ref. *ANNEX II of the Directive*) are considered relevant for this product:

Clause	Subject	Compliance
1.2.7.	Protection against other hazards	Manufacturer responsibility
1.2.8	Overloading of equipment	User/Installer responsibility
1.4.	Hazards arising from external effects	User/Installer responsibility

[19] Descriptive documents (Prot. EX-B8008946)

- I72PRD – TECHICAL DATA SHEET, Rev.04; pg.13 del 22.02.2018
- I73PRD – SAFETY INSTRUCTIONS, Rev.04; pg.9 del 14.03.2018
- I74PRD – SEMI FINISHED PRODUCTION PLAN, Rev.04; pg.5 del 14.03.2018
- I26STR – HAZARD (RISK) ANALYSIS, Rev.00; pg.4 del 22.02.2018
- Fac-Simile - EU DECLARATION OF CONFORMITY 1GD; pg.2 del 15.03.2018
- Fac-Simile - EU DECLARATION OF CONFORMITY 2GD; pg.2 del 15.03.2018

One copy of all documents is kept in CESI files.

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Schedule

[14] **SUPPLEMENTARY EU-TYPE EXAMINATION CERTIFICATE n. CESI 01 ATEX 050 /03**

Certificate history

Issue N°	Issue Date	Summary description of variation
03	02/05/2018	Constructional modifications; standard and marking update; documentation updated to comply with Directive 2014/34/EU
02	07/10/2010	Constructional modifications: new types of electronic components
01	11/02/2005	Addition of protection against risk of explosion form combustible dust s
00	22/06/2001	First Issue of the Certificate

EXTENSION n. 02/10



to EC-Type Examination Certificate CESI 01 ATEX 050

Equipment: Vibrations transducer, type T1-40/00/00/1

Manufacturer: **CEMB S.p.A**

Address: Via Risorgimento, 9 – 23826 Mandello del Lario (LC) - Italy

Admitted variation

- Conformity to new edition of harmonized European standards;
- New type of protection;
- Constructional modifications;
- New electrical characteristics

Conformity to new edition of the harmonized European standards and type of protection

The equipment subject of the certificate CESI 01 ATEX 050 and annexed extension are conform to the standards:
EN 60079-0: 2006, EN 60079-11: 2007, EN 60079-26: 2007,
EN 61241-0: 2006, EN 61241-11: 2006

the equipment shall be marked as follows:

II 1GD Ex ia IIC T6 Ex iaD 20 T85°C or Ex ia IIC T5 Ex iaD 20 T100°C or Ex ia IIC T4 Ex iaD 20 T135°C

or

II 2GD Ex ia IIC T6 Ex iaD 21 T85°C or Ex ia IIC T5 Ex iaD 21 T100°C or Ex ia IIC T4 Ex iaD 21 T135°C

This extension and annexed descriptive documents must be annexed to the EC-Type Examination Certificate CESI 01 ATEX 050.

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date 7th October 2010 - translation issued the 7th October 2010

prepared Damiano Cavanna

verified Mirko Balaz

approved Fiorenzo Bregani

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

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EXTENSION n. 02/10

to EC-Type Examination Certificate CESI 01 ATEX 050

Identification and description of the equipment

The vibrations transducer type T1-40/00/00/1 is designed for the detection of the absolute vibration of any type of machines. The transducer generate an electrical signal directly proportional to the vibration speed of the point on which it is installed. The transducer T1-40 with stainless steel enclosure has the category 1GD, that in aluminium alloy the category 2GD.

Admitted constructional modifications

The vibrations transducer type T1-40/00/00/1 is realized with new types of electronic components. The constructional characteristics are detailed in the descriptive documents annexed to this extension.

Cable entries

The accessories used for cable entries in the enclosure shall be subject of separate certification according to EN 60079-0 (EN 61241-0) standard and guarantee a minimum degree of protection IP 65.

Electrical characteristics

- | | | | |
|------------------------|---|----|--------|
| - Ui: | 11 V | or | 18 V |
| - Ii: | 400 mA | or | 125 mA |
| - Pi: | 0,93 W | or | 0,70 W |
| - Ci: | 0 | | |
| - Li: | 0 | | |
| - Ambient temperature: | -40 ÷ +60 °C for temperature class T6, T85 °C | | |
| - Ambient temperature: | -40 ÷ +80 °C for temperature class T5, T100 °C | | |
| - Ambient temperature: | -40 ÷ +100 °C for temperature class T4, T135 °C | | |

Report n. EX-B0022319.

Routine tests

The manufacturer shall carry out the routine tests prescribed at clause 27 of EN 60079-0: 2006 standard.

Descriptive documents (prot. EX-B0022314)

- | | | |
|-------------------------------------|-------|------------|
| - n. 172PRD01, rev.3 (pg. 17) | dated | 22.07.2008 |
| - n. 173PRD01, rev.3 (pg. 5) | dated | 22.07.2008 |
| - n. 174PRD01, rev.3 (pg. 3) | dated | 22.07.2008 |
| - n. 64956-C, rev. B | dated | 06.07.2004 |
| - n. 64957-C, rev. B | dated | 06.07.2004 |
| - Declaration of Conformity (pg. 2) | dated | 21.04.2010 |

One copy of all documents is kept in CESI files.

Essential Health and Safety Requirements

The Essential Health and Safety Requirements are assured by compliance to the following standards:

- EN 60079-0: 2006 - Electrical apparatus for explosive gas atmosphere - General requirements.
- EN 60079-11: 2007 - Intrinsic safety "i"
- EN 60079-26: 2007 - Electrical apparatus for group II, category 1G.
- EN 61241-0: 2006 - Electrical apparatus for use in the presence of combustible dust - General requirements
- EN 61241-11: 2006 - Intrinsic safety "iD"

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EXTENSION n. 01/05




to EC-Type Examination Certificate CESI 01 ATEX 050

Equipment: **Vibration transducer type T1-40/00/00/1**

Manufacturer: **CEMB S.p.A.**

Address: **Via Risorgimento, 9 – 23826 Mandello del Lario (LC) - Italy**

Admitted variation

New marking :  **II 1 GD EEx ia IIC T6 IP65 T85°C**

for addition of protection against the risk of explosion from combustible dusts in conformity to the standard EN 50281-1-1: 1998 + A1.

This extension and annexed descriptive documents must be annexed to the EC-Type Examination Certificate CESI 01 ATEX 050.

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date February 11, 2005 - translation issued the February 11, 2005

prepared CERT – F. Esposito

verified CERT – M. Balaz

approved CERT – U. Colombo

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Prot. A5/005186

P: 2 + 27

Keywords

13010R 27420G 48030A 54250O 66540E


EXTENSION n. 01/05

to EC-Type Examination Certificate CESI 01 ATEX 050

Description of the equipment

The vibration transducer type T1-40/00/00/1 is used for the detection of the absolute vibration of any type of machines. The transducer generate an electrical signal directly proportional to the vibration speed of the point on which it is installed. The transducer T1-40 with stainless steel enclosure has the category 1GD, that in aluminium alloy the category 2GD. The accessories used for the cable entries shall be certified according to the standards EN 50014 and EN 50281-1-1 and must guarantee a degree of protection IP65 minimum.

According to the temperature class, the following marking shall be adopted:

 II 1GD or II 2GD	EEEx d IIC T6 IP65 T85°C	with Ta = 60°C
	EEEx d IIC T5 IP65 T100°C	with Ta = 80°C
	EEEx d IIC T4 IP65 T135°C	with Ta = 100°C

Minimum ambient temperature : - 40°C

Report n.

EX-A5/005182.

Descriptive documents (prot. EX-A5/005183)

- n. I72PRD01 rev. 2	dated	26/11/2004
- n. 18480-C	dated	26/11/2004
- n. 17951-C	dated	26/11/2004
- n. 17833-C	dated	26/11/2004
- n. Safety Instructions rev. 2	dated	26/11/2004
- n. 18479-C	dated	26/11/2004
- n. tab18479-C	dated	26/11/2004
- n. 15653-C1	dated	26/11/2004
- n. 15653-C2	dated	26/11/2004
- n. 15653-C3	dated	26/11/2004
- n. 15653-C4	dated	26/11/2004
- n. 9170-C	dated	26/11/2004
- n. 9000-C	dated	26/11/2004
- n. I74PRD01 rev. 2	dated	22/11/2004
- n. 18481-C	dated	26/11/2004
- n. 64957-C	dated	26/11/2004
- n. 64956-C	dated	26/11/2004
- n. EC Declaration (facsimile)	dated	26/11/2004

Essential Health and Safety Requirements

Compliance with the Health and Safety Requirements as been assured by compliance with the following standards: EN 50014: 1997 + A1..A2, EN 50020: 2002 and EN 50281-1-1: 1998 + A1.

[1] **EC-TYPE EXAMINATION CERTIFICATE**



[2] **Equipment or Protective System intended for use
in potentially explosive atmospheres
Directive 94/9/EC**

[3] EC-Type Examination Certificate number:

CESI 01 ATEX 050

[4] Equipment: Vibrations transducer type T1-40/00/00/1

[5] Manufacturer: **CEMB s.p.a**

[6] Address: Via Risorgimento, 9 – 23826 Mandello del Lario (LC) - 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, notified body n. 0722 in accordance with Article 9 of the Council Directive 94/9/EC of 23 March 1994, certifies that this equipment or protective system 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-A1/019900.

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

EN 50014: 1997 + A1..A2 EN 50020: 1994 EN 50284: 1999

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

[11] This EC-TYPE EXAMINATION CERTIFICATE relates only to the design, examination and tests of the specified equipment or protective system in accordance to the Directive 94/9/EC. Further requirements of the Directive apply to the manufacturing process and supply of this equipment or protective system. These are not covered by this certificate.

[12] The marking of the equipment or protective system shall include the following:

II 1 G EEx ia IIC T6

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

date June 22nd, 2001 - translation issued on June 22nd, 2001

prepared CERT – P. Canavesi

verified CERT – D. Cavanna

approved CERT – U. Colombo

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Schedule

EC-TYPE EXAMINATION CERTIFICATE n. CESI 01 ATEX 050

[15] Description of equipment

The vibrations transducer type T1-40/00/00/1 is used for the detection of the absolute vibration of any type of machines.

The transducer produce an electric signal directly proportional to the vibration speed of the point on which it is installed.

Electrical characteristics

- Maximum input power U_i :	16.6 V	11.4 V
- Maximum input current I_i :	180 mA	400 mA
- Maximum input power P_i :		0.93 W
- Maximum internal capacity C_i :		0
- Maximum internal inductance L_i :		0
- Ambient temperature:		-20 ÷ +60 °C

Report n. EX-A1/019900

Individual tests

The manufacturer shall carry out the routine tests prescribed at clause 24 of EN 50014 Standard.

Verification of the degree of protection

The vibrations transducer type T1-40/00/00/1 complete of the sealing rings indicated in the documents annexed to this certificate, has been tested in accordance with the specifications of EN 60529 Standard for the degree of protection IP65.

The transducer above mentioned comply with EN 60529 Standard for the degree of protection IP 65.

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[13]

Schedule

[14] **EC-TYPE EXAMINATION CERTIFICATE n. CESI 01 ATEX 050**

Report n. EX-A1/019900 (follow)

Descriptive documents (prot. EX-A1/019901)

- Technical Note	no. 0164 (pg. 5)	dated	05.06.2001
- Safety instruction	no. 0165 (pg. 5)	dated	05.06.2001
- Drawing	no. 18479-P Rev. C	dated	22.06.2001
- Component table	no. 18479-P	dated	22.06.2001
- Drawing	no. 15.653.G Rev. F	dated	05.09.1995
- Drawing	no. 17833 P Rev. A	dated	06.09.1995
- Drawing	no. 9170	dated	31.10.1995
- Drawing	no. 9000	dated	31.10.1995
- Drawing	no. 17951-P	dated	26.06.1996
- Drawing	no. 18480-P Rev. C	dated	22.06.2001
- Drawing	no. 670184810	dated	22.06.2001
- Drawing	no. 52091-P Rev. A	dated	22.06.2001
- Declaration of CE conformity		dated	20.06.2001

One copy of all documents is kept in CESI files.

Special conditions for safe use

None.

Essential Health and Safety Requirements

Assured by compliance to the Standards indicated at pag. 1.

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