





CESI S.p.A.

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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] Equipment or Protective System intended for use in potentially explosive atmospheres

Directive 2014/34/EU

[3] Supplementary EU-Type Examination Certificate number:

CESI 09 ATEX 045 /03

[4] Product: Vibrations transmitters mod. TR-26 and TR-27

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

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

[7] This supplementary certificate extends EC-Type Examination Certificate CESI 09 ATEX 045 /03 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-B8021354.

[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 2G Ex ia IIC "T6...T4" Gb
I M1 Ex ia I Ma

II 1D Ex ia IIIC "T85 °C...T135 °C" Da II 2D Ex ia IIIC "T85 °C...T135 °C" Db

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

Date 21.11.2018 - Translation issued the 21st 11.2018

Prepared Guido Prazzoli

Ruido Prazzoli

Verified Mirko Balaz Approved Roberto Piccin

CESI s.p.A.

Testing & Certification Division
Business Area Certification

Il Responsabile

(Roberto Piccin)

[13] Schedule

[14] SUPPLEMENTARY EU-TYPE EXAMINATION CERTIFICATE n. CESI 09 ATEX 045 /03

[15] Description of the variation to the product

Variation 3.1: added equipment for Group I and Group III.

Variation 3.2: update electrical characteristics.

Variation 3.3: constructive modifications, the MIL-C-5015 plastic connector is no longer used.

Variation 3.4: standards update.

Description of equipment...

Transmitter TR-26 and TR-27 are integrated equipment for the measure of absolute vibration of the support of rotating machines. The apparatus interfaces directly, by two-wire technique ($4 \div 20$ mA current loop), to a data acquisition system.

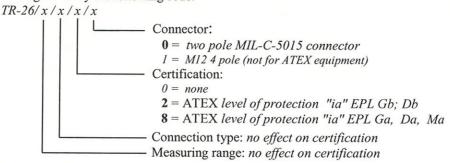
The equipment have a steel enclosure and differs in the electrical connection. TR-26 has a two pole MIL-C-5015 connector. TR-27 has cable permanently connected

The equipment has been, previously, assessed and marked in compliance with the following standards: EN 60079-0:2012, EN 60079-11:2012 and EN 60079-26:2007.

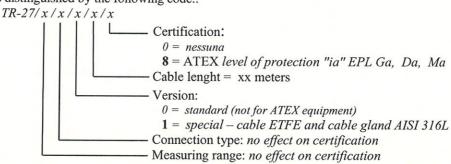
With this Supplement the TR-26 e TR-27 are re-assessed and marked on the basis of the standard: EN 60079-0:2012/A11:2013 and EN 60079-11:2012

Identification of the Transmitters TR-26 / TR-27 (the detail of the code is indicated in the Manufacturer documents)

TR-26 is distinguished by the following code:



TR-27 is distinguished by the following code::



CES

[13]

Schedule

[14] SUPPLEMENTARY EU-TYPE EXAMINATION CERTIFICATE n. CESI 09 ATEX 045 /03

Costruzione e marcatura

ModelConstructionMarkingTR-26Stainless steel body and connectorII 1G Ex ia IIC "T6...T4" Ga

II 2G Ex ia IIIC "T85 °C...T135 °C" Da

I 1M Ex ia I Ma

<u>Model</u> <u>Construction</u> <u>Marking</u>

TR-26 Stainless steel body and aluminum connector II 2G Ex ia IIC "T6...T4" Gb

II 2D Ex ia IIIC "T85 °C...T135 °C" Db

<u>Model</u> <u>Construction</u> <u>Marking</u>

TR-27 Stainless steel body and cable gland, with ETFE cable II 1G Ex ia IIC "T6...T4" Ga

II 1D Ex ia IIIC "T85 °C...T135 °C" Da

I 1M Ex ia I Ma

Electrical characteristics

Intrinsically safe circuits (pins: 1-2 TR-26)

 Ui:
 30.0 V
 Ii:
 100 mA
 Pi:
 0.750 W

 Ui:
 30.5 V
 Ii:
 97 mA
 Pi:
 0.740 W

Ci: negligible Li: negligible

Intrinsically safe circuits (TR-27)

Ui: 30.0 V Ii: 100 mA Pi: 0.750 W Ui: 30.5 V Ii: 97 mA Pi: 0.740 W

Ci: depending on the cable's length = 0.17 nF/mLi: depending on the cable's length = $1.2 \mu\text{H/m}$

The TR-26 and TR-27, shall be supplied by means of certified associated apparatus complying with the limits of the above electrical characteristics.

Ambient Temperature T_{amb}: from -60 °C up to +75 °C for T6

from -60 °C up to +90 °C for T5 from -60 °C up to +120 °C for T4

Degree of protection: TR-26: IP65; TR-27: IP68 (70m; 24h)

Warning label

None

[16] **Report n.** EX-B8021354

Routine tests

The Manufacturer shall carry out the routine tests provided to clause 27 on the of EN 60079-0 standard. The insulation of each device shall be tested applying for 60 s, a voltage of 500 V between the enclosure and conductors.

[13] Schedule

[14] SUPPLEMENTARY EU-TYPE EXAMINATION CERTIFICATE n. CESI 09 ATEX 045 /03

[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 these variations 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-B8021359)

| - n. I108PRD - Scheda tecnica, rev.04; pg.16 | dated | 05.09.2018 |
|--|-------|------------|
| - n. 107PRD - Istruzioni di Sicurezza, rev.04; pg.13 | dated | 05.09.2018 |
| - n. I27STR - HAZARD (RISK) ANALYSIS, rev. 00; pag.4 | dated | 04.09.2018 |

- FAC-SIMILE EU Declaration of conformity TR-26; pg.2
- FAC-SIMILE EU Declaration of conformity TR-26-1; pg.2
- FAC-SIMILE EU Declaration of conformity TR-27; pg.2

One copy of all documents is kept in CESI files.

Certificate hystory

| Issue N° | Issue Date | Summary description of variation |
|----------|------------|---|
| 03 | 21/11/2018 | Added Group I and Group III, update electrical characteristics, constructive modifications, standard update |
| 02 | 26/06/2015 | New model of transmitter type TR-27, constructive modifications, update electrical parameters, extended Tamb range up to -60 °C, update marking |
| 01 | 06/06/2014 | Constructive modifications, updating to the standards EN60079-0:2012; EN 60079-11:2012, EN 60079-26:2007, update marking with EPL |
| 00 | 30/07/2009 | First Issue of the Certificate |

[1]

[2]







CESI S.p.A.

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CERTIFICATE



TYPE EXAMINATION CERTIFICATE

Category 3 Equipment intended for use in potentially explosive atmospheres Directive 2014/34/EU

[3] Type Examination Certificate number:

CESI 18 ATEX 047 X

Product: [4] Vibrations transmitters mod. TR-26 and TR-27

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

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

[7] This product and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

[8] CESI certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to the design of category 3 equipment intended for use in potentially explosive atmospheres given in Annex II to the European Union Directive 2014/34/EU of the Europea Parliament and Council of 26 February 2014.

The examination and test results are recorded in confidential report n. EX-B8023395.

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

EN 60079-0:2012+A11:2013 EN 60079-7:2015

except in respect of those requirements listed at item 18 of the Schedule.

If the sign "X" is placed after the certificate number, it indicates that the product is subject to special conditions for safe use specified in the schedule to this certificate.

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

The marking of the product shall include the following:

⟨Ex⟩ II 3G Ex ec IIC "T6...T4" Gc

⟨Ex⟩ II 3D Ex te IIIC "T85 °C...T135 °C" De

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

Date 26.11.2018 - Translation issued the 26th 11.2018

Prepared Guido Prazzoli

Verified

Mirko Balaz

Approved Roberto Piccin

Testing & Certification Division **Business** Area Certification

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[13] Schedule

[14] TYPE EXAMINATION CERTIFICATE n. CESI 18 ATEX 047 X

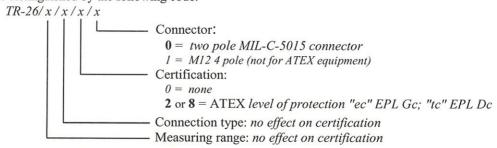
[15] Description of product

Transmitter TR-26 and TR-27 are integrated equipment for the measure of absolute vibration of the support of rotating machines. The apparatus interfaces directly, by two-wire technique $(4 \div 20 \text{ mA current loop})$, to a data acquisition system.

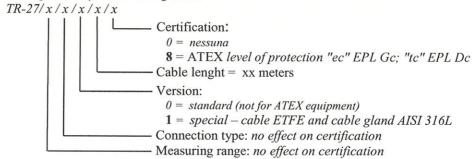
The equipment have a steel enclosure and differs in the electrical connection. TR-26 has a two pole MIL-C-5015 connector. TR-27 has cable permanently connected.

<u>Identification of the Transmitters TR-26 / TR-27 (the detail of the code is indicated in the Manufacturer documents)</u>

TR-26 is distinguished by the following code:



TR-27 is distinguished by the following code::



Electrical characteristics

Rated power supply (pins:1-2 TR-26)

Rated voltage Un:

24 Vdc (Max Voltage: 30.5 Vdc)

Max current:

100 mA

Rated power supply (TR-27)

Rated voltage Un:

24 Vdc (Max Voltage: 30.5 Vdc)

Max current:

100 mA

Ambient Temperature T_{amb}:

from -60 °C up to +75 °C for T6 from -60 °C up to +90 °C for T5 from -60 °C up to +120 °C for T4

Degree of protection:

TR-26: IP65; TR-27: IP68 (70m; 24h)

Warning label

WARNING: Do not connect or disconnect when energized.

[13] Schedule

[14] TYPE EXAMINATION CERTIFICATE n. CESI 18 ATEX 047 X

[16] **Report n.** EX-B8023395

Routine tests

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

The insulation of each device shall be tested applying for 60 s, a voltage of 500 V between the enclosure and conductors.

[17] Schedule of limitations (X)

Do not connect or disconnect when energized.

The TR-26 and TR-27 shall be powered by an SELV / PELV or Class 2 power supply, with 24 Vdc output (max 30.5 Vdc) by means of 100 mA fuse.

[18] Essential Health and Safety Requirements

In addition to the Essential Health and Safety Requirements (EHSRs) covered by the standards listed at item 9, the following have been considered.

| 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-B8023399)

| - n. I28STR - Technical data sheet, rev.00; pg.15 | dated | 04.09.2018 |
|---|-------|------------|
| - n. I124PRD - Semi-finished production plan, rev.02; pg.13 | dated | 13.05.2015 |
| - n. I107PRD - Safety Instructions, rev.04; pg.13 | dated | 05.09.2018 |
| - n. I27STR - HAZARD (RISK) ANALYSIS, rev. 00; pag.4 | dated | 04.09.2018 |

- FAC-SIMILE EU Declaration of conformity TR-26-1; pg.2
- FAC-SIMILE EU Declaration of conformity TR-26-2; pg.2
- FAC-SIMILE EU Declaration of conformity TR-27; pg.2

One copy of all documents is kept in CESI files.











EXTENSION n. 02/15

to EC-Type Examination Certificate CESI 09 ATEX 045

Equipment:

Vibrations transmitter mod. TR-26

Manufacturer:

CEMB S.p.A.

Address:

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

Admitted variation

- New model of transmitter type TR-27
- Constructive modifications
- Update electrical parameters
- Extension T_{amb} range up to -60 °C
- Update marking

Marking

The vibrations Transmitter mod. TR-26 / TR-27 shall be marked as follows:

Ex II 1G Ex ia IIC T6, T5, T4 Ga
II 2G Ex ia IIC T6, T5, T4 Gb

TR-26 and TR-27

TR-26 only

This extension and annexed descriptive documents must be annexed to the EC-Type Examination Certificate CESI 09 ATEX 045.

This document may only be reproduced in its entirety and without any change.

Date

26th 06.2015 - Translation issued the 26th 06.2015

Prepared

Guido Prazzoli

Verified

Mirko Balaz

Approved

Roberto Piccin

Testing & Certification Division Business Area Certification

V Responsabile

berto Piccin)

Page 1/3

CESI S.p.A. Via Rubattino 54 I-20134 Milano - Italy Tel: +39 02 21251 Fax: +39 02 21255440 e-mail: info@cesi.it

www.cesi.it

Capitale sociale € 8.550.000 interamente versato C.F. e numero iscrizione Reg. Imprese di Milano 00793580150 P.I. IT00793580150 N. R.E.A. 429222

EXTENSION n. 02/15

to EC-Type Examination Certificate CESI 09 ATEX 045

Description of equipment

The transmitter TR-26 is integrated apparatus for the measure of absolute vibration of the support of rotating machines. The TR-26 interfaces directly, by 2 wire technical ($4 \div 20 \text{ mA current loop}$), to a data acquisition system.

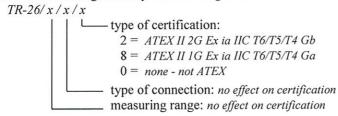
The only constructive modifications introduced by the Manufacturer, regarding the lengthening of the transmitter's body, to improve the encapsulation of the electronic circuits, and updating the electrical parameters.

The new model of transmitter type TR-27 has the same characteristics of the TR-26, but is distinguished by having the cable permanently connected with cable gland locking in place of bipolar connector; this configuration provides protection degree IP68.

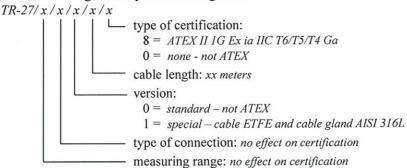
The ambient temperature range T_{amb}, for both transmitters, has been extended from -50 °C up to -60 °C

Identification of the Transmitters TR-26 / TR-27 (the detail of the code is indicated in the Manufacturer documents)

The TR-26 is distinguished by the following code:



The TR-27 is distinguished by the following code:



Electrical characteristics

Intrinsically safe circuits (terminals:1-2 TR-26)

Ui: 28 V Ii:

100 mA

Li: negligible

Intrinsically safe circuits (TR-27)

Ui: 28 V

Ci: negligible

Ii: 100 mA Pi: 0.650 W

Pi: 0.650 W

Ci: depending on the cable's length = 0.17 nF/m

Li: depending on the cable's length = $1.2 \mu H/m$

The TR-26 / TR-27, shall be supplied by certified associated apparatus complying with the limits of the above electrical characteristics.

Ambient temperature T_{amb}:

from -60 °C up to +75 °C for T6

from -60 °C up to +90 °C for T5

from -60 °C up to +120 °C for T4

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EXTENSION n. 02/15

to EC-Type Examination Certificate CESI 09 ATEX 045

Report n. EX-B5013435

Descriptive documents (prot. EX-B5013438)

| - n.I108PRD02 - Technical Note; rev.03 | pg.12 | dated | 13.05.2015 |
|---|-------|--------|------------|
| 15 - 15 - 15 - 15 - 15 - 15 - 15 - 15 - | | 20.000 | |
| - n.I107PRD03 – Safety Instructions; rev.3 | pg.10 | dated | 13.05.2015 |
| - n.I124PRD - Semi-finished production plan; rev.02 | pg.13 | dated | 13.05.2015 |
| - n.48ATB2389 - Marking drawing TR-26; rev.B | pg.1 | dated | 13.05.2015 |
| - n.48ATB9093 - Marking drawing TR-27; rev.A | pg.1 | dated | 14.04.2015 |
| - n.M126PRG02 - Fac-simile EC Declaration of conformity | pg.1 | dated | 20.03.2015 |
| - n.M127PRG02 - Fac-simile EC Declaration of conformity | pg.1 | dated | 20.03.2015 |
| - n.M128PRG01 - Fac-simile EC Declaration of conformity | pg.1 | dated | 20.03.2015 |

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: 2012 – Explosive atmospheres – Part 0: Equipment – General requirements.

EN 60079-11: 2012 - Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"

EN 60079-26: 2007 – Explosive atmospheres – Part 26: Equipment with equipment protection level (EPL) Ga.









EXTENSION n. 01/14

to EC-Type Examination Certificate CESI 09 ATEX 045

Equipment:

Vibrations transmitter mod. TR-26

Manufacturer:

CEMB S.p.A.

Address:

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

Admitted variation

- Constructive modifications

- Updating to the standards EN60079-0:2012; EN 60079-11:2012, EN 60079-26:2007

- Update marking with EPL

Marking

The vibrations Transmitter mod. TR-26 shall be marked as follows:



Ex II 1G Ex ia IIC T6, T5, T4 Ga
II 2G Ex ia IIC T6, T5, T4 Gb

This extension and annexed descriptive documents must be annexed to the EC-Type Examination Certificate CESI 09ATEX045.

This document may only be reproduced in its entirety and without any change.

Date

06th 06.2014 - Translation issued the 06th 06.2014

Prepared

Guido Prazzoli

Verified Mirko Balaz **Approved**

Fiorenzo Bregani

Testing & Certification Division Business Area Certification

N Responsabile

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www.cesi.it

EXTENSION n. 01/14

to EC-Type Examination Certificate CESI 09 ATEX 045

The transmitter **TR-26** is integrated apparatus for the measure of absolute vibration of the support of rotating machines. The **TR-26** interfaces directly, by 2 wire technical $(4 \div 20 \text{ mA current loop})$, to a data acquisition system.

The transmitter has stainless steel body with thread for the assembly to the machines and steel or aluminum bipolar connector, for the connection with the users; the degree of protection is IP65.

The transmitter TR-26 is intrinsically safe apparatus suitable for installation in Zone 0 or in Zone 1 depending of the type of connector used.

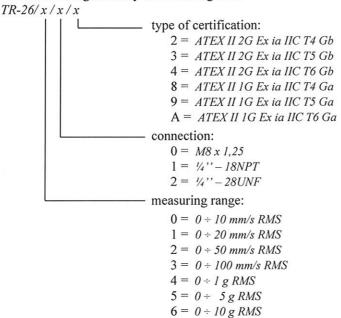
The constructive modifications introduced by the Manufacturer are:

- the electronic circuit has been revised according to the new components on the market and have been implemented solutions able to improve the noise immunity and stability of the measurement as a function of temperature. These changes did not affect the circuit solutions related to the type of protection Ex ia, which were kept unchanged;
- the marking of the Transmitter TR-26, is updated with EPL

With this extension the transmitter, has been re-assessed and marked on the basis of the standard: EN 60079-0:2012, EN 60079-11:2012, EN 60079-26:2007.

Identification of the Transmitter TR-26

The TR-26 is distinguished by the following code:



The detail of the code is indicated in the Manufacturer documents

Electrical characteristics (unchanged)

Intrinsically safe circuits (terminals: 1/2)

Ui: 30 V

Ii: 100 mA

Pi: 750 mW

Ci: negligible

Li: negligible

The TR-26, shall be supplied by associated apparatus complying with the limits of the above electrical characteristics.

Ambient temperature:

from -50°C up to +75°C per T6 from -50°C up to +90°C per T5 from -50°C up to +120°C per T4

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EXTENSION n. 01/14

to EC-Type Examination Certificate CESI 09 ATEX 045

Report n. EX-B4013888

Descriptive documents (prot. EX-B4013893)

| - n.I108PRD - Technical Note; rev.02 | pg.8 | dated | 20.03.2014 |
|---|-------|-------|------------|
| - n.I124PRD - Production plan emifinished; rev.01 | pg.13 | dated | 24.03.2014 |
| - n.I107PRD02 - Safety Instructions; rev.02 | pg.8 | dated | 20.03.2014 |
| - n.M126PRG02 - Fac-simile EC Declaration of conformity | pg.1 | dated | 20.03.2014 |
| - n.M127PRG02 - Fac-simile EC Declaration of conformity | pg.1 | dated | 20.03.2014 |

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: 2012 - Explosive atmospheres - Part 0: Equipment - General requirements.

EN 60079-11: 2012 - Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"

EN 60079-26: 2007 - Explosive atmospheres - Part 26: Equipment with equipment protection level (EPL) Ga.

[1]

7.1

CESI Centro Elettrotecnico Sperimentale Italiano Giacinto Motta SpA

Via R. Rubattino 54 20134 Milano - Italia Telefono +39 022125.1 Fax +39 0221255440 www.cesi.it

Capitale sociale 8 550 000 € interamente versato Codice fiscale e numero iscrizione CCIAA 00793580150

Registro Imprese di Milano Sezione Ordinaria N. R.E.A. 429222 P.I. IT00793580150



Il CESI è stato autorizzato dal governo italiano ad operare quale organismo di certificazione di apparecchi e sistemi destinati a essere utilizzati in atmosfera potenzialmente esplosiva con D.M. 1/3/1983, D.M. 19/6/1990, D.M. 20/7/1998, D.M. 27/9/2000 e D.M. 02/02/2006

CERTIFICATE



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 09 ATEX 045

[4] Equipment: Vibrations transmitter type TR-26

[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- A9022410.

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

EN 60079-0:2006 EN60079-11:2007 EN60079-26:2007

[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:

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

Date 30.07.2009 - Translation issued the 30th,07,2009

Prepared Guido Prazzoli Verified Mirko Balaz Approved Fiorenzo Bregani

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CES S.p.A.
Divisione Energia
'Area Tecnica Certificazione"
Ij Responsabile

Page 1/2

Schedule [13]

[14] EC-TYPE EXAMINATION CERTIFICATE n. CESI 09 ATEX 045

[15] Description of equipment

The transmitter TR-26 is an integrated apparatus for the measure of absolute vibrations of rotating machines support. The TR-26 interfaces directly, by 2 wire technical (4 ÷ 20 mA current loop), to a data acquisition system. The transmitter has stainless steel body with a threaded part for the assembly on the machines; moreover the TR-26 is provided with a steel or aluminium multipolar connector, for the connection with the acquisition system. The degree of protection is IP65. The vibrations transmitter TR-26 is intrinsically safe apparatus suitable for installation in Zone 0 or in Zone 1 in function of the type of connector used.

- Steel connector:

II 1G Ex ia IIC T6 or T5 or T4

- Aluminium connector:

Il 2G Ex ia IlC T6 or T5 or T4

Electrical characteristics

Rated voltage Un

: 30 Vdc

Current absorbed

: 100 mA : $-50 \div +75^{\circ}$ C for T6

-50 ÷ +90°C for T5

-50 ÷ +120°C for T4

Intrinsically safe circuits (terminals:1/2)

Ui li

Tamb.

: 30 V

Ci

: negligible

Pi

: 100 mA : 750mW Li negligible

The vibrations transmitter, shall be supplied by associated apparatus complying with the limits of the above electrical characteristics.

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Routine tests

The Manufacturer shall carry out the routine tests prescribed at clause 27 of EN 60079-0.

Descriptive documents (prot. EX- A9022417)

| - n. 1108PRD - Technical Note rev.01 | pg.9 | dated | 23.06.2009 |
|---|------|-------|------------|
| - n. 1107PRD - Safety Instructions rev.01 | pg.5 | dated | 23.06.2009 |
| - n. 1109PRD - Production plan 88284 rev.01 | pg.8 | dated | 24.06.2009 |
| - n. 88357-C – Labels | pg.1 | dated | 23.06.2009 |
| - n. M126PRG01 - EC Declaration of conformity | pg.1 | dated | 23.06.2009 |
| - n. M127PRG01 - EC Declaration of conformity | pg.1 | dated | 23.06.2009 |

One copy of all documents is kept in CESI files.

[17] Special conditions for safe use

None.

Essential Health and Safety Requirements

Assured by the conformity to the Standards.