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CEMB
BALANCING MACHINES

SAFETY INSTRUCTIONS

VIBRATIONS TRANSMITTER - MOD. TR-I IECEX

Document No. I09STR of 11/11/15 (Rev. 01)

CESI

protocollo

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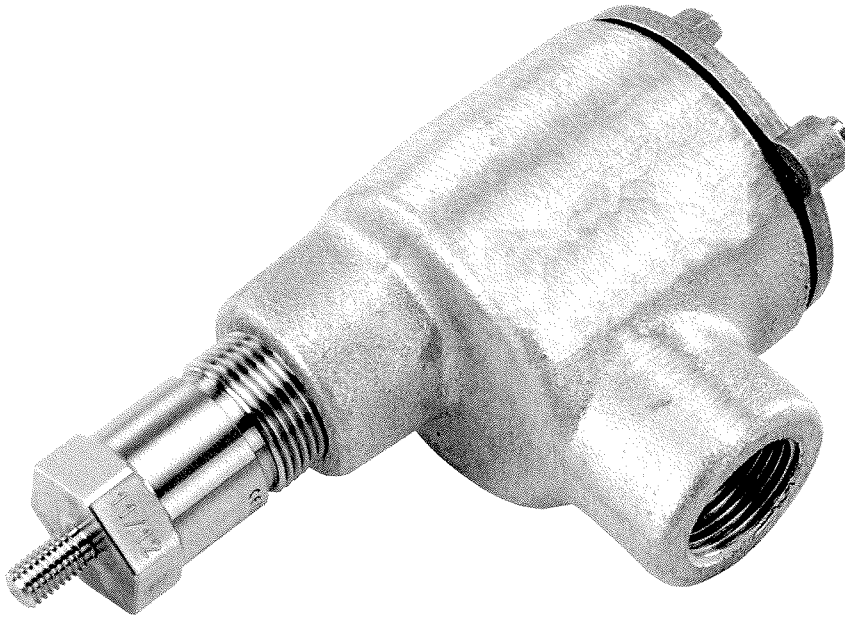
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1. Product specification



This transmitter can provide an electrical signal directly proportional to the vibration of the point to which it is fastened, with direct interface to an acquisition system made in 2-wire technique (4-20 mA current loop).

Typical applications:

Vibrations measurement on machinery parts such as motors, bearings, pumps, etc..

Electrical characteristics

Rated voltage	24 V
Rated current	4-20mA loop

Environmental conditions

Transmitter temperature	-40° to +70° C
Transmitter humidity	Max 100%
Transmitter	IP65 EN 60529/10.91

2. Limits of use - IECEx marking

Foreword

The safety measures and the equipment used on the installation, operation and maintenance site, must follow the specific instructions contained in this manual. They must also comply with the applicable equipment rules (basic standards of the installation site) and the additional ones for the areas with risk of explosion due to gas presence: IEC 60079-14 and IEC 60079-17 for installation and verifications, as well as IEC 60079-19 for maintenance and repairs (unless otherwise specified).

These safety instructions refer to installation, use and maintenance of the TR-I transmitter. The equipment was designed and realised according to IEC 60079-0, IEC 60079-1 and IEC 60079-31 rules.

These instructions have been conceived for installers and users adequately trained, with a basic technical expertise on using and starting up of electrical machinery and plants, in places with danger of explosion.

IECEX marking

The equipment covered by these instructions is characterized by the following protection modality:

IECEX Ex d IIC T6 Gb Ex tb IIIC T85 °C Db

The indications contained in these safety instructions must be observed in addition to what prescribed in the user manual provided to Customer.

The installer and the user are always responsible for the correspondence of the installation sites with the above limits and features.

The nameplate data for the various configurations are shown by Drawing No. 440A001666

Legenda: safety nameplate data

Ex d	Equipment of "d" category for gas
IIC	Equipment of IIC group, suitable for substances (gas) of IIC group
T6	Temperature class
CES _ _ . _ _ _ _	Name of the laboratory issuing the certificate Certificate number
Tamb	Ambient temperature: - 40 / + 70 °C T6
Gb	EPL – Protection level
Ex tb	Equipment of "tb" category for dust
IIIC	Equipment for IIIC group dust
T 85 °C	Surface temperature

Notes:

a) The equipment belonging to IIC group is also suitable for IIB and IIA groups;

3. Equipment suitability to the installation site

For using in areas with danger of explosion, verify that the involved equipment is suitable for area classification and flammable substances which are present in the system.

The criteria for classification of areas with potentially explosive atmosphere are listed by IEC 60079-10 standard.

The technical requirements of electrical installations in hazardous areas are listed by IEC 60079-14 standard.

The transmitter can be installed in zone 1 or 2.

On the nameplate, in addition to functional data, are also indicated the references to the notified bodies responsible for certification.

4. Installation

Mechanical assembly

The TR-26 transmitter must be fixed to the point where the vibrations have to be detected, usually on the bearing support of pumps, motors, fans, etc..

To ensure a good mechanical coupling between transmitter and support, it is necessary:

- in case of cylindrical thread, M8:

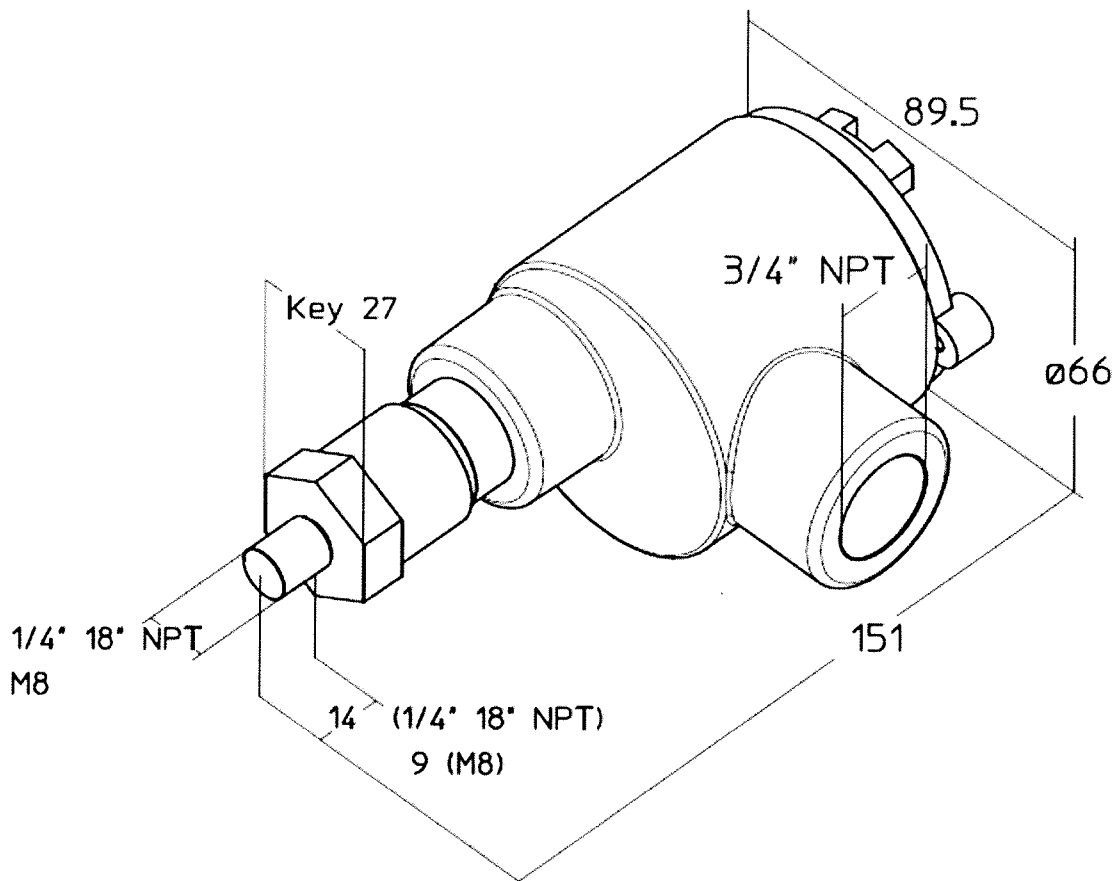
- >> A flattening of the fixing surface

- >> A threaded hole, orthogonal to the surface, having depth of 12 mm

- >> A thin layer of grease

- in case of tapered thread:

- >> A threaded hole, 1/4" 18 NPT



Electrical connection

The electrical connection must be carried out by suitably trained personnel.

The transmitter has an earth terminal block inside the junction box; it must be connected to the plant earth.

The only electrical connection concerns the power supply cable / signal, shielded bipolar type and earth.

The evaluation of the system composed by the associated equipment, the transmitter TR-I and the connection cables, must be performed by qualified personnel and must be in accordance with IEC 60079-14.

5. Verifications and Maintenance

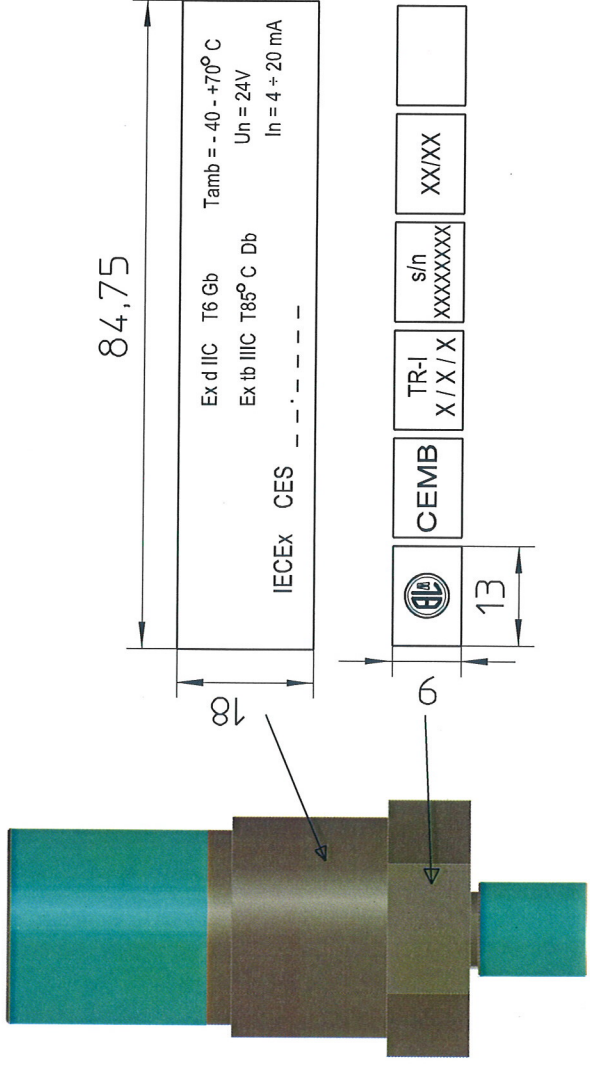
The equipment verification and maintenance operations, must be carried out according to IEC 60079-17 criteria.

6. Repair

In case of malfunction or damages, it is recommended to send back the equipment to CEMB Spa for repair.

If not carried out by the manufacturer, all repairs shall be made according to IEC 60079-19, at workshops suitably equipped for repairs and inspections, by operators having adequate technical expertise about protection modalities.

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					Rev.	Creazione		Descrizione Modifica	Disegnatore



Cod. 440992940
Cod. 440992950

DO NOT MODIFY WITHOUT THE AUTHORIZATION
OF THE CERTIFICATION AUTHORITY

LASER MARKING DIRECTLY ON THE TRANSMITTER BODY

ISO 9001	NOTE	TOLLERANZE ISO 2768-H					
	RAGGI NON QUOTATI: 1 MAX	DA	0.5	7	31	121	401
	SMUSI NON QUOTATI: 0.5x45°	A	6	30	120	400	2000
Ra 3.2/	TOLLERANZE ANGOLARI: ± 30'	TOLL.	+0.05	+0.1	+0.15	+0.2	+0.5

Data: 01/12/2015
Disegnatore: SIFICO M.
Cliente:
Ordine :



SCALE 1:1
FOGLIO 1 of 1
FORMATO A4

Tipo di macchina:
Disegno:
Descrizione:

Marcatore IECEX TR-I

Cod: 440A001666

Rev. A