

CERTIFIED ATEX
 CERTIFIED IECEX
 CERTIFIED SIL2

VIBRATION TRANSMITTER

TR-I



The integrated transmitter TR-I measures the absolute vibrations of any rotating machine support and it is able to interface directly in 2 wires technique (current loop $4 \div 20$ mA) to an acquisition system. It is made in Explosion proof version for application in aggressive environment.

The transmitter is certified for application in classified area as

Ex II 2GD Ex d IIC T6 Gb Ex tb IIIC T85°C Db (ATEX)

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

The transmitter is certificate SIL 2 for functional safety EN/IEC 61508 standard.

The transmitter, secured directly on machinery, generates an electric signal ($4 \div 20$ mA) which is proportional to vibration velocity or acceleration. The transmitter is made of a stainless steel body AISI 316L with machine connection thread and it is supplied with a die-casted aluminium case for the terminal board with $\frac{3}{4}$ " NPT female thread.



TECHNICAL CHARACTERISTICS

Composition	<ul style="list-style-type: none"> AISI 316L stainless steel body Die-casted aluminium explosion proof case
Power supply	<ul style="list-style-type: none"> 24 Vdc ($10 \div 35$ Vdc) current loop $4 \div 20$ mA (2 wires) Maximum load - see figure 1
Environmental use field	<ul style="list-style-type: none"> $-40^{\circ}\text{C} \div +70^{\circ}\text{C}$ IP65
Measure type	<ul style="list-style-type: none"> Omnidirectional seismic (absolute vibration)
Dynamic field	<ul style="list-style-type: none"> ± 18 g
Transverse sensitivity	<ul style="list-style-type: none"> $< 5\%$
Linearity	<ul style="list-style-type: none"> $\pm 2\%$ - 75 Hz
Dynamic performances	<ul style="list-style-type: none"> $\pm 3\%$ / 10Hz-1kHz - see figure 2 -3db / 1Hz - 2kHz
Insulation	<ul style="list-style-type: none"> $\geq 10^8 \Omega$ between signal and container
Application axis	<ul style="list-style-type: none"> Any
Maintenance	<ul style="list-style-type: none"> No maintenance is needed
Mounting torque	<ul style="list-style-type: none"> $5 \div 10$ N-m
Certification	<ul style="list-style-type: none"> Ex II 2GD Ex d IIC T6 Gb Ex tb IIIC T85°C Db (ATEX) Ex d IIC T6 Gb Ex tb IIIC T85°C Db (IECEX)

Figure 1 - Maximum load on current loop

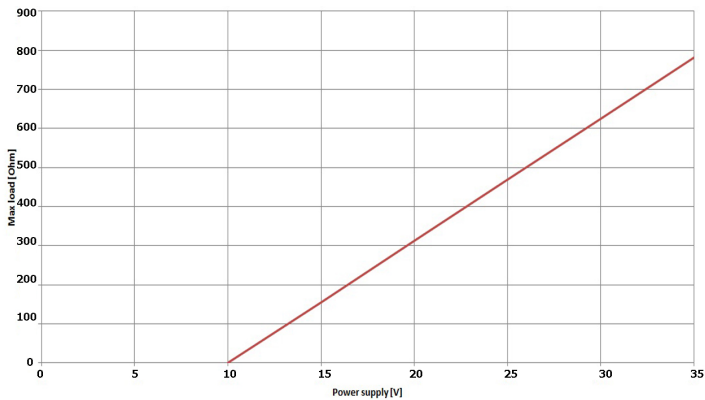
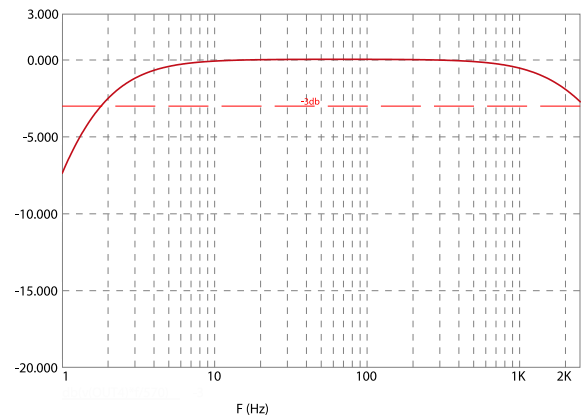


Figure 2 - Frequency response [db]



ORDER INFORMATION

TR - I / / / /

A: MEASURING FIELD

0	0 ÷ 10 mm/s RMS
1	0 ÷ 20 mm/s RMS
2	0 ÷ 50 mm/s RMS
3	0 ÷ 100 mm/s RMS
4	0 ÷ 1 g RMS
5	0 ÷ 5 g RMS
6	0 ÷ 10 g RMS
7	0 ÷ 25,4 mm/s (0 ÷ 1 in/s) RMS
8	0 ÷ 12,7 mm/s (0 ÷ 0,5 in/s) RMS
S	special to be defined

B: MACHINE CONNECTION THREAD

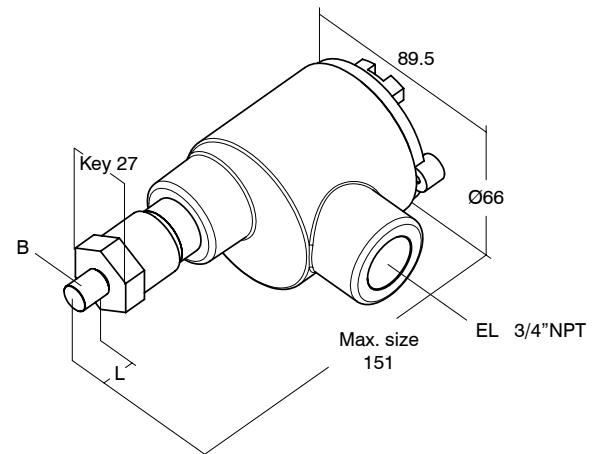
0	Standard 1/4" - 18NPT	L=14 mm
1	M8 x 1,25	L=9 mm
2	1/4" - 28NPT	L=9 mm
3	M8 x 1	L=9 mm

C: CERTIFICATION

0	Standard
2	II 2GD Ex d IIC T6 Gb Ex tb IIIC T85°C Db (ATEX)
5	Ex d IIC T6 Gb Ex tb IIIC T85°C Db (IECEX)

D: CASE SURFACE FINISH

0	Standard not painted
1	Epoxy paint



OPTIONAL ACCESSORIES



CONDUIT ADAPTER 3/4" NPT - 1/2"
528000057

CONDUIT ADAPTER 3/4" NPT - M20
528000058

B5MAG10 CY002

PLASTIC TAG
040STR000

B5MAG10 CY002

STAINLESS STEEL TAG
980710835



CEMB S.p.A.
Via Risorgimento, 9
23826 MANDELLO DEL LARIO (LC) Italy
www.cemb.com

Vibration analysis division:
phone +39 0341 706111
fax +39 0341 706299
e-mail: stm@cemb.com

All the data and features mentioned in this catalogue are purely for information and do not constitute any commitment on the part of our company, which reserves the right to make any and all alterations it may consider suitable without notice.