

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 ÷ 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 2G Ex db IIC T6 Gb II 2D 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÷20mA) 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 3/4" NPT female thread.



### TECHNICAL CHARACTERISTICS

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



# CEMB

BALANCING MACHINES

Figure 1 - Maximum load on current loop

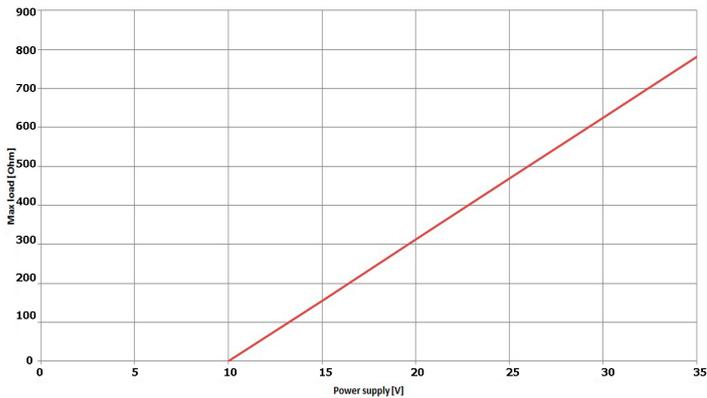
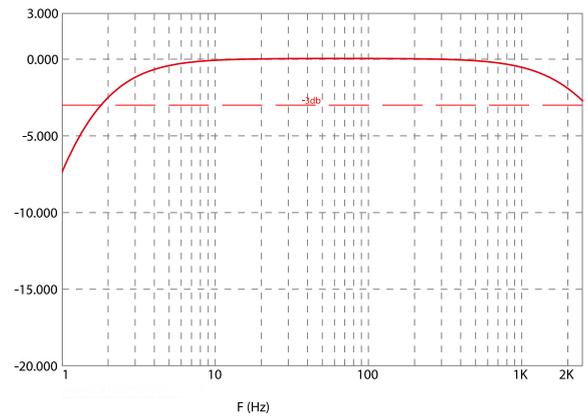


Figure 2 - Frequency response [db]



## 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

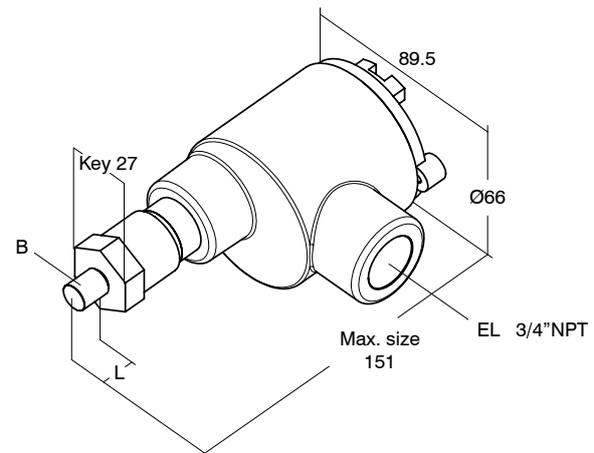
0	Standard 1/4" - 18NPT	L=14 mm
1	M8 x 1,25	L=9 mm
2	1/4" - 28UNF	L=9 mm
3	M8 x 1	L=9 mm
4	M10 x 1,5	L=9 mm
5	M10 x 1	L=9 mm

### C: CERTIFICATION

0	Standard
2	II 2G Ex db IIC T6 Gb II 2D 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 painted



## OPTIONAL ACCESSORIES



### CONDUIT ADAPTERS

**ADAPTER 3/4" NPT - M20 NICKEL PLATED**  
528000058

**ADAPTER 3/4" NPT - M20 INOX**  
528000060

**ADAPTER 3/4" NPT - 1/2" NPT - INOX**  
528000057

B5MAG10 CY002

**PLASTIC TAG**  
040STR000

B5MAG10 CY002

**STAINLESS STEEL TAG**  
980710835