

**CERTIFIED ACCORDING TO ATEX 94/9/CE DIRECTIVE**  
**CERTIFIED SIL2 ACCORDING TO EN/IEC 61508**

### FUNCTION

The T1-40 transducer measures absolute vibration of any rotating machine support. It supplies a voltage proportional to the vibration speed directly interfaceable with a device that can process the signal (TR-V, TM1, TDSP).

### GENERAL DESCRIPTION

The T1-40 electrodynamic transducer consists of a suspended plate coil immersed in the magnetic field of a permanent magnet. It is fastened at the point to be tested and generates a signal proportional to the vibration speed. It is used to monitor pumps, fans, motors and compressors and is available in various versions in aluminium or stainless steel complete with MIL standard connector for electrical connection.

The transducer is available for the following classified area:

-  II 2GD Exia IIC T6/T5/T4 Ex iaD 21 T85/100/135°C ZONE 1
-  II 1GD Ex ia IIC T6/T5/T4 Ex iaD 20 T85/100/135°C ZONE 0

The transducer is certified SIL2 for functional safety



## TECHNICAL CHARACTERISTICS

Composition	<ul style="list-style-type: none"> <li>• Body in anodised aluminium or AISI 316L stainless steel</li> <li>• Connector</li> </ul>
External connections	<ul style="list-style-type: none"> <li>• 5- or 7-pin MIL standard connector</li> </ul>
Operating temperature range	<ul style="list-style-type: none"> <li>• -40°C to +100°C (standard)</li> <li>• -40°C to +170°C (HT version)</li> <li>• IP65</li> </ul>
Type of measurement	<ul style="list-style-type: none"> <li>• Seismic (absolute vibration)</li> </ul>
Measurement direction	<ul style="list-style-type: none"> <li>• T1-40/00 omnidirectional</li> <li>• T1-40/BF horizontal</li> <li>• T1-40/VO vertical</li> </ul>
Measurement range	<ul style="list-style-type: none"> <li>• ± 1 mm</li> </ul>
Dynamic range	<ul style="list-style-type: none"> <li>• T1-40/00 10-1000 Hz (Fig. 1)</li> <li>• T1-40/BF 3-2000 Hz (Fig. 2)</li> <li>• T1-40/VO 10-2000 Hz (Fig. 3)</li> </ul>
Resonance frequency	<ul style="list-style-type: none"> <li>• T1-40/00 12 Hz</li> <li>• T1-40/BF 4,5 Hz</li> <li>• T1-40/VO 10 Hz</li> </ul>
Transverse sensitivity	<ul style="list-style-type: none"> <li>• T1-40/00 &lt; 7%</li> <li>• T1-40/BF &lt; 3%</li> <li>• T1-40/VO &lt; 3%</li> </ul>
Output impedance	<ul style="list-style-type: none"> <li>• 1K Ω at 25°C</li> </ul>
Retaining screw	<ul style="list-style-type: none"> <li>• M8 X 1,25</li> </ul>
Weight	<ul style="list-style-type: none"> <li>• ~ 300 gr</li> </ul>
Certifications available	<p>ATEX ZONE 1 II 2GD Exia IIC T6/T5/T4 Ex iaD 21 T85/100/135°C (for T1-40/00)</p> <p>ATEX ZONE 0 II 1GD Ex ia IIC T6/T5/T4 Ex iaD 20 T85/100/135°C (for T1-40/00)</p>

### INFORMATION FOR THE ORDER:

A B C D E  
T1-40/□□/□□/□□/□

#### A: MEASUREMENT DIRECTION

- 00 omnidirectional
- BF horizontal
- VO vertical

#### B: TEMPERATURE RANGE

- 00 -40°C ÷ +100°C
- HT -40°C ÷ +170°C (only for T1-40/00 and T1-40/VO)

#### C: CERTIFICATION

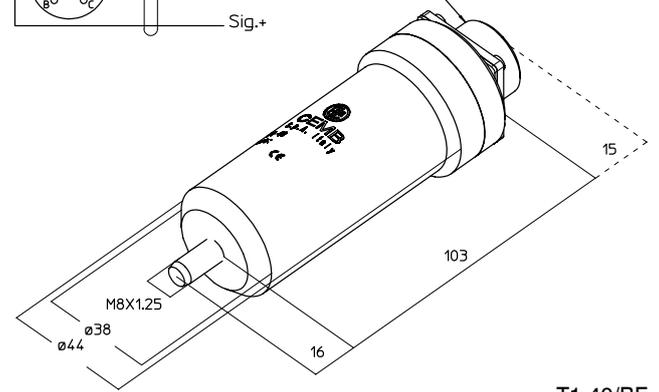
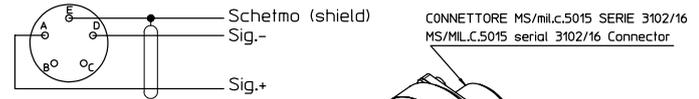
- 0 NONE
- 2 ATEX ZONE 1 II 2GD Ex ia IIC T6/T5/T4 Ex ia D21 T85/100/135°C
- 8 ATEX ZONE 0 II 1GD Ex ia ICT T6/T5/T4 Ex ia D20 T85/100/135°C

#### D: CASING

- 0 ALUMINIUM
- 1 STAINLESS STEEL (mandatory for zone 0)

#### E: FIXED CONNECTOR

- 0 ALUMINIUM
- 1 PLASTIC (mandatory for zone 0)
- 2 7 CONTACTS



T1-40/BF  
T1-40/VO

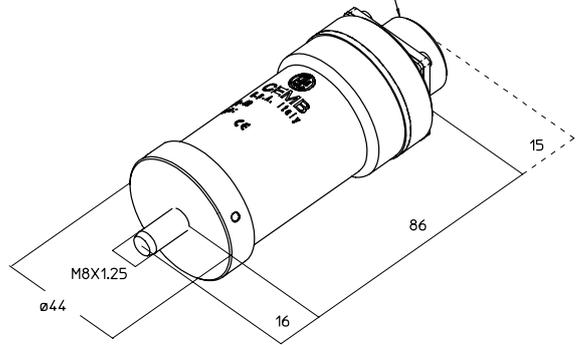
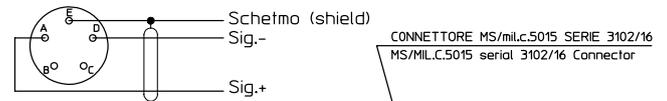


FIG. 1 - T1-40/00

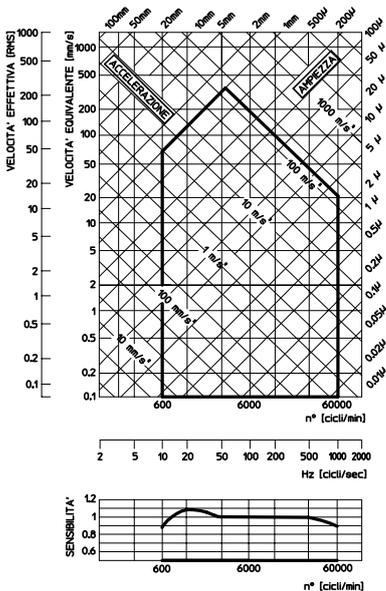


FIG. 2 - T1-40/BF

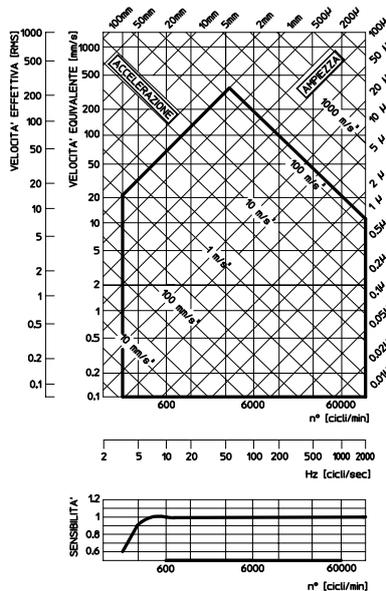
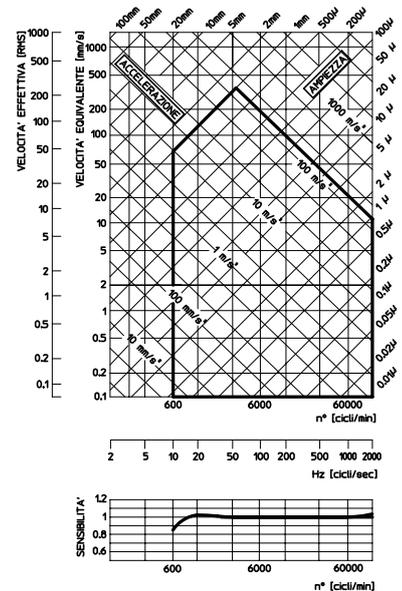


FIG. 3 - T1-40/VO



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