www.cemb.com

VELOCITY TRANSDUCER

T1-40

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, TRAL-V, TM1, TDSP).
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 aluminium or stainless steel complete with MIL standard connector for electrical connection.

The transducer is available for the following classified area:

Ex II 2GD Ex ia IIC T6/T5/T4	Ex iaD 21 T85/100/135°C	(ATEX - ZONE 1)
Ex II 1GD Ex ia IIC T6/T5/T4	Ex iaD 20 T85/100/135°C	(ATEX - ZONE 0)
Ex ia IIC T6/T5/T4 Gb	Ex ia IIIC T85°C/100°C/135°C Db	(IECEx - ZONE 1)
Ex ia IIC T6/T5/T4 Ga	Ex ia IIIC T85°C/100°C/135°C Da	(IECEx - ZONE 0)

The transducer is certified SIL2 for functional safety.

TECHNICAL CHARACTERISTICS

Sensitivity	■ 21.2 mV/mm/s
Composition	■ body in anodised aluminium or AISI 316L stainless steel
External connections	■ 5 or 7 pin MIL standard connector
Operating temperature range	■ -40° C ÷ 100°C ■ -40° C ÷ 170°C HT ■ IP65
Type of measurement	■ seismic (absolute vibration)
Measurement direction	■ omnidirectional
Measurement range	■ ± 1 mm
Dynamic range	■ 10÷1000 Hz fig. 1
Resonance frequency	■ 12 Hz
Transverse sensitivity	■ < 7%
Output impedance	■ 1K Ω a 25°C
Retaining screw	■ M8 X 1,25
Weight	■ ~ 450 gr

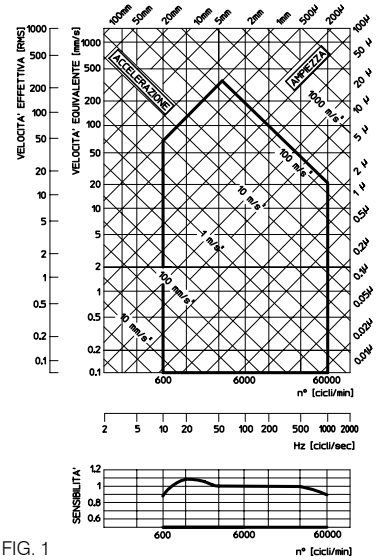


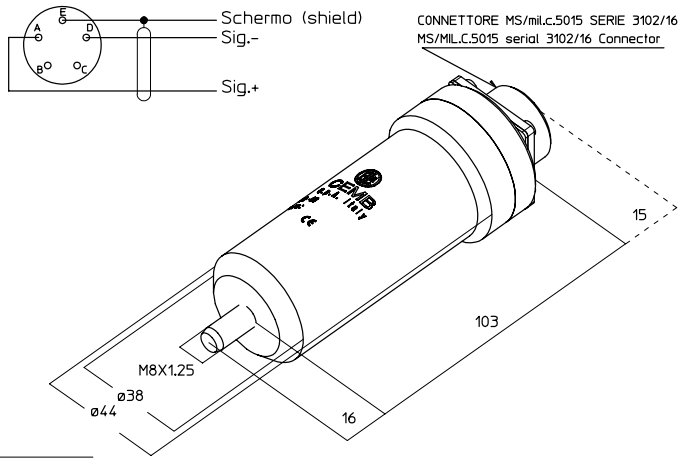
FIG. 1

CEMB
BALANCING MACHINES

T1-40

A B C D E

T1-40/ 00 / 00 / ☐ / ☐ / ☐



A: MEASUREMENT DIRECTION

00	omnidirectional

B: TEMPERATURE RANGE

00	-40°C ÷ +100°C
HT	-40°C ÷ +170°C (no ATEX/IECEx)

C: CERTIFICATION

0	NONE		
2	Ex II 2GD Ex ia IIC T6/T5/T4	Ex ia D21 T85/100/135°C	(ATEX - ZONE 1)
5	Ex ia IIC T6/T5/T4 Gb	Ex ia IIIC T85°C/100°C/135°C Db	(IECEx - ZONE 1)
8	Ex II 1GD Ex ia IIC T6/T5/T4	Ex ia D20 T85/100/135°C	(ATEX ZONE 0)
B	Ex ia IIC T6/T5/T4 Ga	Ex ia IIIC T85°C/100°C/135°C Da	(IECEx - ZONE 0)

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

CABLES AND OPTIONAL ACCESSORIES

CABLES:

SHIELDED CABLE 2X1 STANDARD 80419-P
CBL-T1-40 / S / 0 / XX (lenght in meters)

SHIELDED CABLE ARMOURED IN ETFE 87SEA7952
CBL-T1-40 / E / 0 / XX (lenght in meters)

SHIELDED CABLE 2X1
WITH METAL JACKET COVERED BY PVC 95743-P
CBL-T1-40 / A / 0 / XX (lenght in meters)

CONNECTORS:

5 PINS STRAIGHT (standard)	597053126
5 PINS 90°	597053128
5 PINS PLASTIC CASE (mandatory for zone 0)	597053127
7 PINS STRAIGHT	597073116
7 PINS 90°	597073118

OTHER:

ZENER BARRIER Z787 (for hazardous area)	800208787
PLASTIC TAG	040STR000
STAINLESS STEEL TAG	980710835

CEMB BALANCING MACHINES

HOFMANN

Hofmann Maschinen- u. Anlagenbau GmbH
Altrheinstraße 11
D-67550 Worms - Rheindürkheim
www.hofmannmaschinen.com

Tel.: +49 (0) 6242 904-113
Fax: +49 (0) 6242 904-286
e-mail: info@hofmannmaschinen.com

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