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# HIGH PERFORMANCE VIBRATION TRANSMITTER

# TR-PRO




**TR-PRO is a high performance 4-20mA loop power seismic vibration transmitter with SIL2 certification for Functional safety.**
**TR-PRO is designed for machines characterized by extended thermal cycles, high rotation speed or high dynamic vibrations like crushers, alternative motors, screw compressors, gearboxes, pump and ventilators with turbulent fluids.**
**TR-PRO is perfect for heavy duty applications, with its AISI 316L stainless steel body and rugged electrical connections for severe environmental applications.**

**It is available in 4 different configurations:**

- With Connection for 2-pin MIL-C
- With Standard Integrated Cable
- With Built-in Armoured Cable
- With Built-in ETFE cable

**The transmitter is available for applications in hazadus areas:**

**ATEX**

- II 1G Ex ia IIC T6/T5/T4 Ga
- II 1D Ex ia IIIC T85°C/T100°C/135°C Da
- I M1 Ex ia I Ma
- II 3G Ex ec IIC T6/T5/T4 Gc
- II 3D Ex tc IIIC T85°C/T100°C/135°C Dc

**IECEX**

Ex ia IIC T6/T5/T4 Ga
Ex ia IIIC T85°C/T100°C/135°C Da
Ex ia I Ma
Ex ec IIC T6/T5/T4 Gc
Ex tc IIIC T85°C/T100°C/135°C Dc

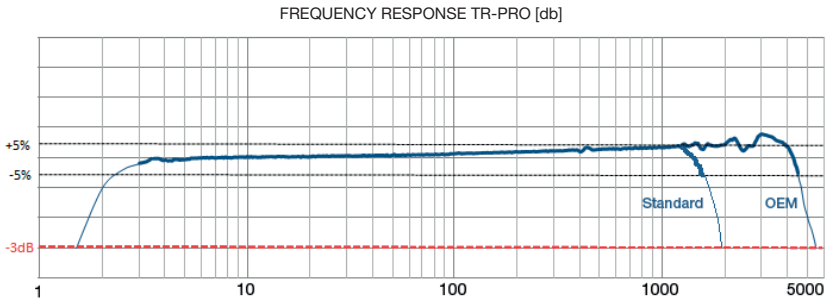


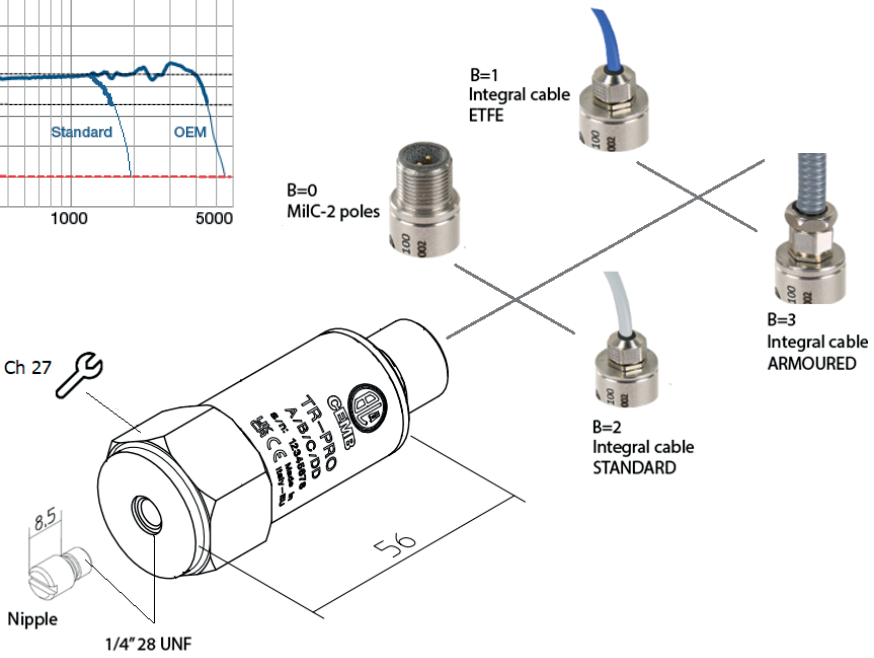

## TECHNICAL SPECIFICATION

| | |
|---|---|
| **Material** | ■ Body in Stainless steel AISI 316L |
| Power supply | ■ 24Vdc nominal (10-35Vdc) current loop 4÷20mA - 2 wires |
| Electrical connection | ■ Mil-C 2 poles integrated connector<br>■ Integral cable |
| Operating conditions | ■ - 60°C ÷ + 120°C<br>■ IP 68 - EN 60529/10.91 |
| Type of measure | ■ Sismic vibrations along axis (any mounting direction) |
| Application axis | ■ any |
| Dynamic range | ■ ± 50 g |
| Sensitivity | ■ < 5 % |
| Linearity | ■ ± 5% - 75 Hz |
| Dynamic performance | ■ Standard version: -3db: 1.5 Hz – 2 KHz<br>■ OEM version: -3db: 1.5 Hz – 5 KHz |
| Insulation | ■ $\geq 10^8$ Ω between signal and case |
| Shock resistence | ■ 1000 g |
| Periodic Maintenance | ■ Not required |
| Storage conditions | ■ - 60°C ÷ +120°C |
| Tightening torque | ■ 5÷10 N-m |

CEMB
VIBRATION EQUIPMENT

# TR-PRO




* Nipples included in the scope of delivery:
- 1/4" 28 UNF
- M8x1,25

## ORDER INFORMATIONS

TR - PRO / A / B / C / D

### A: MEASURING FIELD [RMS]

| | |
|---|---|
| 0 | 0 ÷ 10 mm/s |
| 1 | 0 ÷ 20 mm/s |
| 2 | 0 ÷ 50 mm/s |
| 3 | 0 ÷ 100 mm/s |
| 4 | 0 ÷ 1 g |
| 5 | 0 ÷ 5 g |
| 6 | 0 ÷ 10 g |
| 7 | 0 ÷ 25,4 mm/s (0 ÷ 1 in/s) |
| 8 | 0 ÷ 12,7 mm/s (0 ÷ 0,5 in/s) |

### B: CONNECTIONS

| | |
|---|---|
| 0 | CONNECTOR: MILC-2 poles |
| 1 | Integrated cable ETFE 2x1 shielded+armouring (internal) |
| 2 | Integrated cable STANDARD 2x1 |
| 3 | Integrated cable ARMOURING 2x1 shielded+armouring (external) |

### C: CERTIFICATION

| | |
|---|---|
| 0 | Safe area |
| 8 | ATEX |
| B | IECEx |

### D: INTEGRATED CABLE LENGHT (M)

| | |
|---|---|
| 0 | No cable (per B=0) |
| XX | 1 a 29 m (default = 5 m) |

## OPTIONAL ACCESSORIES

| Nipple codes | Thread | Reference Image |
|---|---|---|
| 440315770 | ¼" - 28 UNF* | |
| 440315760 | M8 x 1.25* | |
| 440315750 | M6 x 1 | |
| 440814330 | M10 x 1.5 | |
| 440A008780 | M10 x 1 | |
| 440A042669 | M8 x 1 | |






**PLASTIC TAG** 040STR000




**STAINLESS STEEL TAG** 980710835



**SHIELDED CABLE 2X1 STANDARD**
CBL / TR-PRO / S / 0 / XX
(lenght in meters) 80419-P



**SHIELDED CABLE ARMOURED ETFE**
CBL / TR-PRO / E / 0 / XX
(lenght in meters) 87SEA7952



**SHIELDED CABLE 2X1 WITH METAL JACKET PVC COVERED**
CBL / TR-PRO / A / 0 / XX
(lenght in meters) 95743-P



**2 PINS STRAIGHT (STANDARD)** 597023104

CEMB BALANCING MACHINES

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