

## 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

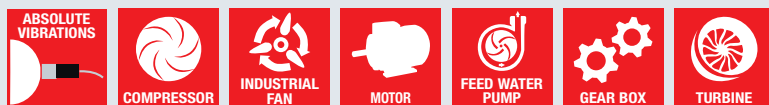
The transmitter is available for applications in hazadus areas:

### 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



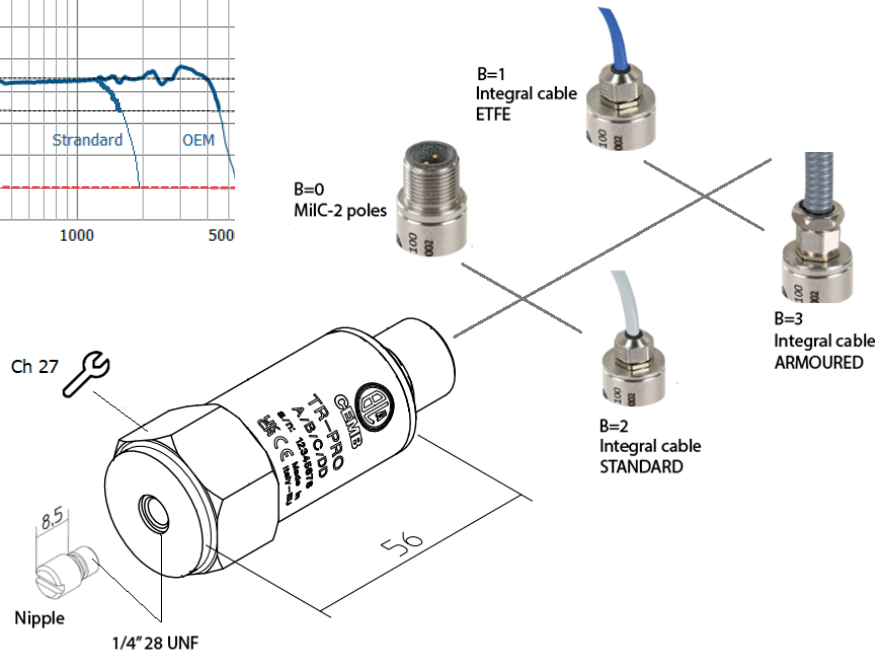
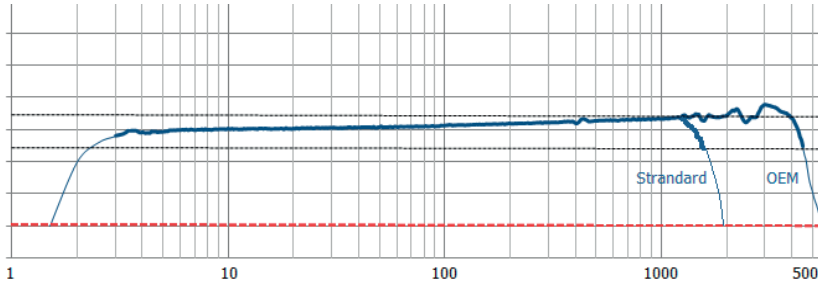
### TECHNICAL SPECIFICATION

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 ■ Integral cable
Operating conditions	■ - 60°C ÷ + 120°C ■ 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 ■ OEM version: -3db: 1.5 Hz – 5 KHz
Insulation	■ ≥10 <sup>8</sup> Ω between signal and case
Shock resistance	■ 1000 g
Periodic Maintenance	■ Not required
Storage conditions	■ - 60°C ÷ +120°C
Tightening torque	■ 5÷10 N-m



# TR-PRO

FREQUENCY RESPONSE TR-LPRO [db]



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

## ORDER INFORMATIONS

TR - PRO /  /  /  /

### 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
2	ATEX Gas and Dust -Zone1: Ex-ia (with Barrier) -Zone2: Ex-ec & Ex-tc (No Barrier)

### 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	1/4" - 28 UNF*			<b>SHIELDED CABLE 2X1 STANDARD</b>	80419-P		
440315760	M8 x 1.25*			(length in meters)			
440315750	M6 x 1					<b>SHIELDED CABLE ARMOURED ETFE</b>	87SEA7952
440814330	M10 x 1.5					(length in meters)	
440A008780	M10 x 1						
440A042669	M8 x 1			(length in meters)			
B5MAG10 CY002		<b>PLASTIC TAG</b>	040STR000				
B5MAG10 CY002		<b>STAINLESS STEEL TAG</b>	980710835		<b>2 PINS STRAIGHT (STANDARD)</b>	597023104	



**CEMB**  
BALANCING MACHINES

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