Vibro-Meter

CA 901

Piezoelectric Accelerometer

FEATURES

- Extreme temperature capability
- Operational as loose part monitoring accelerometer
- Proven reliability
- Meets NRC guide 1.133, IEEE 323-1974. Qualified to DIN 25.475.1
- Integral case insulation
- Certified for use in potentially explosive atmospheres
- Frequency response:
  3 Hz to 2 800 Hz
- Sensitivity:
  10 pC/g
- Temperature range (operational):
  -196°C to +700°C

DESCRIPTION

The use of VC2 type single crystal material in the CA 901 compression mode accelerometer provides an extremely stable instrument.

The transducer is designed for long-term monitoring or development testing. It is fitted with an integral mineral insulated cable (twin conductors) which is terminated with a Lemo or a high-temperature connector from Vibro-Meter.

MEGGiTT
smart engineering for extreme environments

SPECIFICATIONS

GENERAL

Input power requirements	: None
Signal transmission	: 2 pole system insulated from casing, charge output
Signal processing	: Charge converter

OPERATING

(at +23°C ±5°C)

Sensitivity (at 120 Hz)	: 10 pC/g ±5%
Dynamic measuring range (random)	: 0.001 g to 200 g peak
Overload capacity (spikes)	: Up to 500 g peak
Linearity	: ±1% over dynamic measuring range
Transverse sensitivity	: < 5%
Resonance frequency (mounted)	: > 17 kHz nominal
Frequency response	
• *3 to 2800 Hz nominal*	: ±5% (lower cutoff frequency is determined by the electronics used)
• *2800 to 3700 Hz*	: < 10%
Internal insulation resistance	: Min. 10^9 Ω
Capacitance (nominal)	
• *Pole to pole*	: 80 pF for transducer + 200 pF/m of cable
• *Pole to casing*	: 18 pF for transducer + 300 pF/m of cable

ENVIRONMENTAL

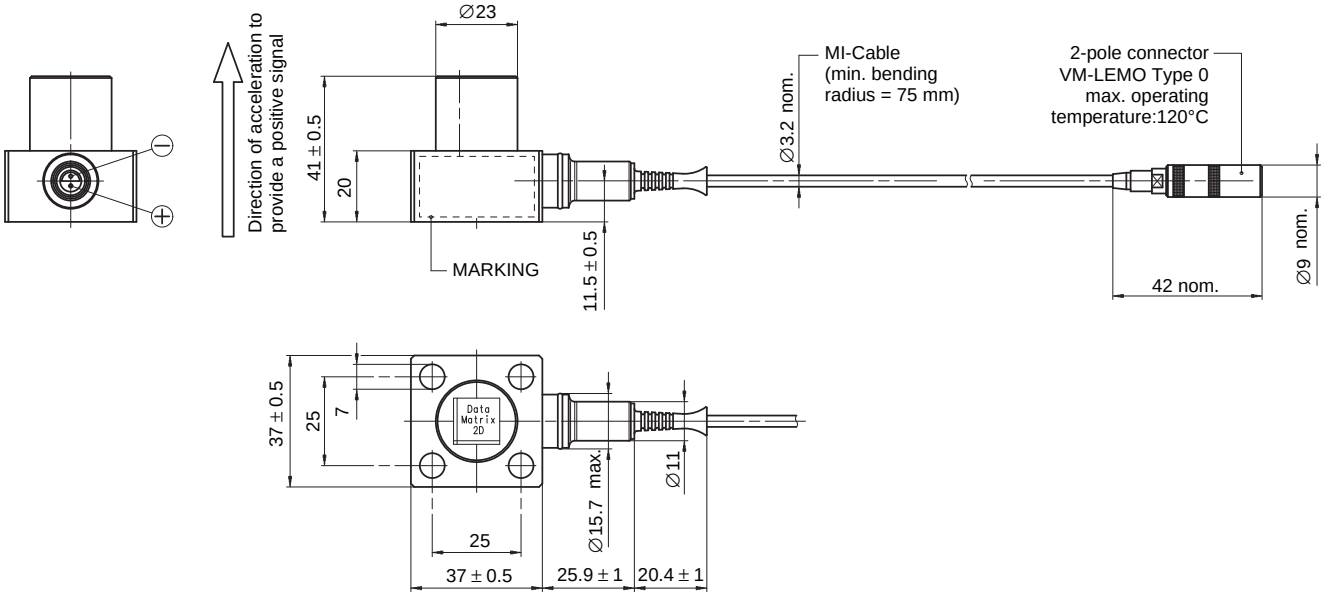
Temperature range	
• *Continuous*	: -54°C to +650°C
• *Extreme*	: -196°C to +700°C
Shock acceleration	: < 500 g peak (half sine 1 ms) along sensitive axis
Pressure	: 140 bar 23°C, 80 bar 300°C
Corrosion, humidity	: Inconel 600, hermetically welded
Radiations	
• *Gamma flux*	: 10^{11} erg/g no effect
• *Neutron flux*	: 10^{18} n/cm^2 no effect
Mounting inside tube	: 4 Allen screws M6, fastening torque 15 Nm
Use in explosive atmospheres:	
• *EC type examination certificate*	: LCIE 08 ATEX 6017 X II 1 G (Zones 0, 1, 2) Ex ia IIC T6 to T710

⚠ **For specific parameters of the mode of protection concerned and special conditions for safe use, please refer to the "EC type examination certificate" that is available from Vibro-Meter SA on demand.**

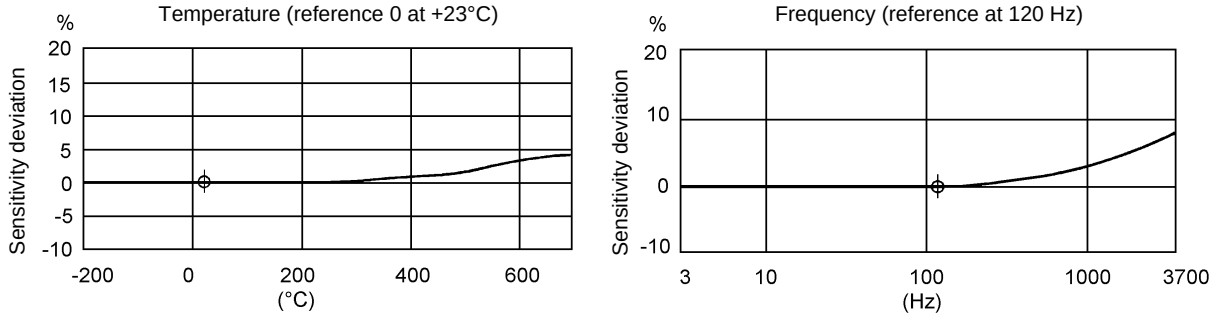
CALIBRATION

Dynamic calibration at factory at 5 g peak and 120 Hz (+23°C). No subsequent calibration necessary.

MECHANICAL DIAGRAM



TYPICAL RESPONSES



ORDERING INFORMATION

To order please specify :

Type	Version	Ordering Number	
CA 901	Standard	144-901-000-2XX	VM Lemo connector
		82	: cable length 3.5 m
		12	: cable length 5 m
		52	: cable length 8 m
		22	: cable length 12.5 m
	Ex	144-901-000-601	: cable length 5 m

In this publication, a dot (.) is used as the decimal separator and thousands are separated by spaces. Example : 12 345.678 90.

Sales offices

Vibro-Meter has offices in more than 30 countries. For a complete list, please visit our website.

Your local agent

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