

Piezoelectric Accelerometer

FEATURES

- Industrial vibration monitoring
- High sensitivity
- Differential output
- Hermetically welded
- Internal case insulation
- Integral cable
- Certified for use in potentially explosive atmospheres
- Frequency response:
0.5 Hz to 5000 Hz
- Sensitivity:
100 pC/g
- Temperature range (operational):
-55°C to +260°C



DESCRIPTION

The CA 202 accelerometer features a symmetrical shear mode polycrystalline measuring element which has internal case insulation. The transducer is designed for heavy-duty industrial vibration

monitoring and measurement. The accelerometer is fitted with an integral cable protected by a flexible stainless steel tube welded to the case.



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SPECIFICATIONS

GENERAL

Input power requirements	: None
Signal transmission	: 2-pole system insulated from casing, charge output
Signal processor	: Charge amplifier

OPERATING

(at +23°C ± 5°C)

Sensitivity (at 120 Hz)	: 100 ± 5 pC/g
Dynamic measuring range (random)	: 0.01 g to 400 g peak
Overload capacity (spikes)	: Up to 500 g peak
Linearity	: ± 1% between 0.01 g and 20 g peak, ± 2% up to 400 g peak
Transverse sensitivity	: ≤ 3%
Resonant frequency (mounted)	: 20 kHz nominal
Frequency response	: ± 5% between 0.5 Hz and 5000 Hz (lower cut off frequency is determined by conditioner used)
Internal insulation resistance	: Min. 10 ⁹ Ω
Capacitance (nominal)	
• Pole to pole	: 4500 pF for transducer + 105 pF/m of cable
• Pole to casing	: 10 pF for transducer + 210 pF/m of cable

ENVIRONMENTAL

Temperature range	
• Transducer	: -55°C to +260°C operation : -70°C to +280°C survival
• Cable	: -55°C to +200°C operation : -62°C to +250°C survival
Temperature error	
• -55°C to +23°C	: 0.25%/°C
• +23°C to +200°C	: 0.08%/°C
• +200°C to +260°C	: 0.25%/°C
Shock acceleration	: ≤ 1000 g peak (half sine wave, 1 ms duration)
Explosive atmospheres	: Available in Ex version
• EC type examination certificate	: LCIE 02 ATEX 6179 X II 1 G (Zones 0, 1, 2) Ex ia IIC T6 to T1
• Voluntary type examination certificate	: LCIE 09 ATEX 1044 X II 3G (Zone 2) Ex nA II T6 to T2



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

Corrosion, humidity	: Stainless austenitic steel, hermetically welded
Base strain sensitivity	: 0.1 x 10 ⁻³ g/με at 250 με peak-peak

SPECIFICATIONS (Continued)

MECHANICAL

Weight

• Accelerometer (nominal) : 250 g

• Cable : 135 g/m

Cable : 2 pole twisted and shielded

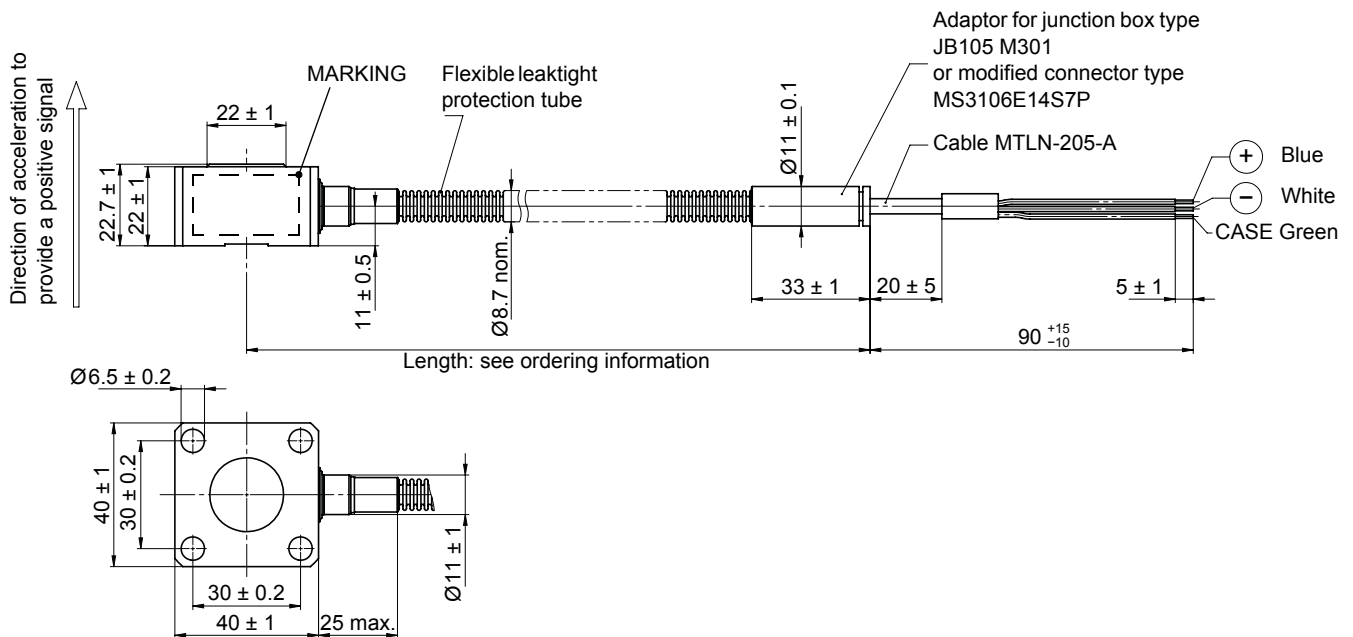
Mounting : 4 Allen screws, size M6x35, with M6 spring-lock washers, screw torque 15 Nm.

No need for electrical insulation of mounting surface.

CALIBRATION

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

MECHANICAL DRAWING



ORDERING INFORMATION

To order please specify:

Type	Designation	Ordering Number
CA202	Standard version, 3 m cable length	144-202-000-205
	Standard version, 6 m cable length	144-202-000-215
	Standard version, 11 m cable length	144-202-000-225
	Standard version, 20 m cable length	144-202-000-235
	Ex version, 3 m cable length	144-202-000-105
	Ex version, 6 m cable length	144-202-000-115
	Ex version, 11 m cable length	144-202-000-125
	Ex version, 20 m cable length	144-202-000-135

MOUNTING ACCESSORIES

MA 133 Thermal insulation kit : See drawing 809-133-000V011



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