



### Piezoelectric Accelerometer Type CA 202

#### FEATURES

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- ▶ Industrial vibration monitoring
- ▶ High sensitivity
- ▶ Differential output
- ▶ Hermetically welded
- ▶ Internal case insulation
- ▶ Integral cable



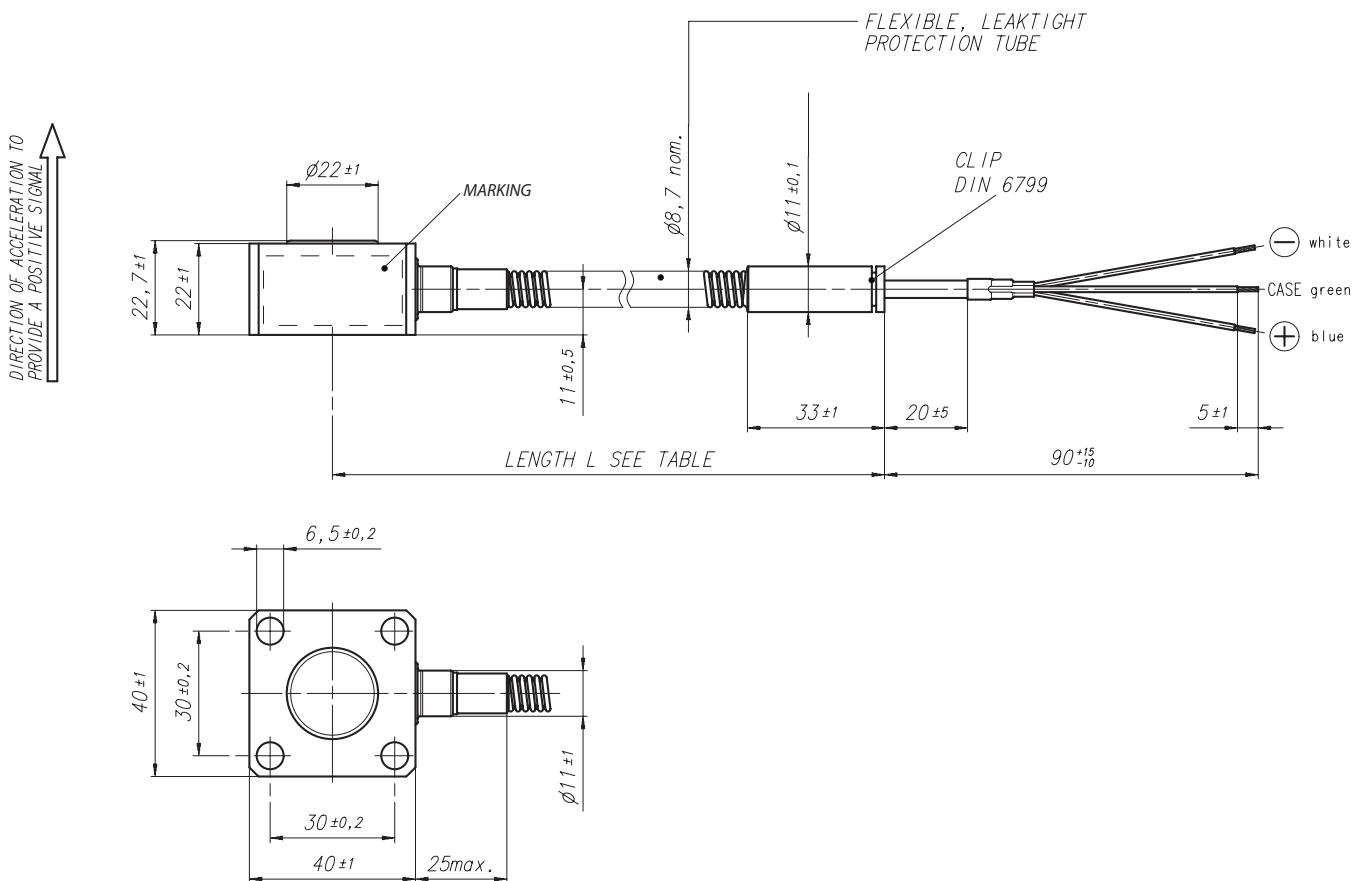
#### DESCRIPTION

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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 stainless steel flexible tube welded to the case.

MECHANICAL DRAWING



SPECIFICATIONS

GENERAL

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

OPERATING (at  $+23^{\circ}\text{C} \pm 5^{\circ}\text{C}$ )

Sensitivity (at 120 Hz)	: 100 pC/g $\pm 5\%$
Dynamic measuring range (random)	: 0.01 g to 400 g peak
Overload capacity (spikes)	: Up to 500 g peak
Linearity	: $\pm 1\%$ between 0.01 g and 20 g peak, $\pm 2\%$ up to 400 g peak
Transverse sensitivity	: $\leq 3\%$
Resonant frequency (mounted)	: 20 kHz nominal
Frequency response	: $\pm 5\%$ between 0.5 Hz and 6000 Hz (lower cut off frequency is determined by conditioner used) +10% between 6 and 8 kHz
Internal insulation resistance	: Min. $10^9 \Omega$

## SPECIFICATIONS (Continued)

### Capacitance (nominal)

- *Pole to pole* : 4500 pF for transducer + 110 pF/m of cable
- *Pole to casing* : 10 pF for transducer + 220 pF/m of cable

### CALIBRATION

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

### 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 atmosphere : Available in Ex version. EC type examination certificate :  
LCIE 02 ATEX 6179 X II 1 G (Zones 0, 1, 2) EEx ia IIC T6 to T1

 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.

#### Corrosion, humidity

: Stainless austenitic steel, hermetically welded

#### Base strain sensitivity

:  $3 \times 10^{-3}$  g/ $\mu\epsilon$  at 250  $\mu\epsilon$  peak-peak

### MECHANICAL

#### 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.

### WEIGHT

- *Accelerometer only* : 250 g nominal
- *Cable* : 135 g/m

### ACCESSORIES

#### JB 105 / JB 106

Junction box

#### IPC 704

Signal conditioner

## ORDERING INFORMATION

To order please specify Ordering Number :

Ordering Number		
Cable length	Standard Version	Exi Version
3 m	144-202-000-203	144-202-000-103
6 m	144-202-000-403	
11 m	144-202-000-803	



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### Your local agent

### Head office

**Vibro-Meter SA**  
Rte de Moncor 4  
P.O. Box  
CH-1701 Fribourg  
Switzerland



Tel: +41 26 407 11 11  
Fax: +41 26 407 13 01

[www.vibro-meter.com](http://www.vibro-meter.com)