

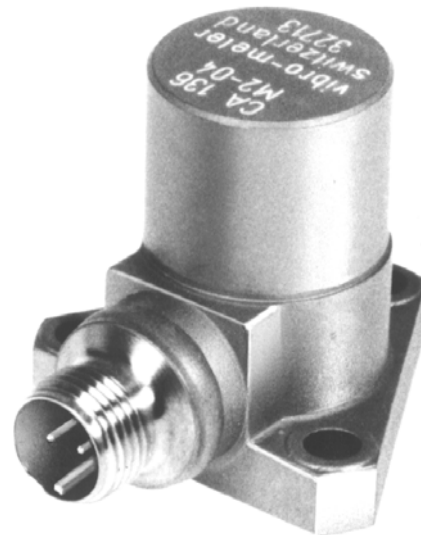


### Piezoelectric Accelerometer Type CA 136

#### CHARACTERISTICS

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- Vibration monitoring e.g. low amplitude and analytical applications
- High sensitivity
- ARINC No 554 fixation
- Differential output
- Hermetically welded
- ATEX and cCSAus certified



#### FEATURES

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- Internal case insulation
- Frequency response  
0.5 Hz to 6000 Hz
- Sensitivity  
100pC/g
- Accelerometer weight  
100 g

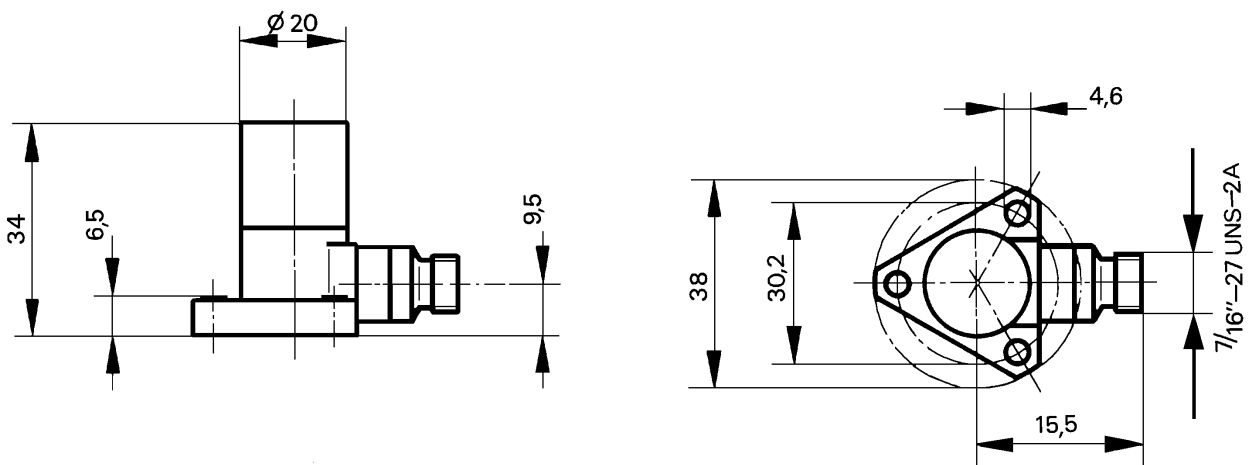
## DESCRIPTION

The CA 136 accelerometer is equipped with a centre mounted compression mode polycrystalline measuring element, which has internal case isolation.

The transducer is designed for monitoring and measurement of vibration, when high instrument sensitivity is required.

The accelerometer is hermetically welded and shows low base strain sensitivity.

## MECHANICAL DIAGRAM



## SPECIFICATIONS

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

### OPERATING

(at +23°C ±5°C)

Sensitivity (at 120 Hz)	: 100 pC/g ± 5%
Dynamic measuring range (random)	: 0.0001 g to 1000 g peak
Overload capacity (spikes)	: Up to 2000 g peak
Linearity	: < 1% between 0.0001 g and 100 g peak, max. 2% between 100 g and 1000 g peak
Transverse sensitivity	: < 5%
Resonant frequency (mounted)	: 35 kHz nominal
Frequency response	: ±5% between 0.5 Hz and 6000 Hz (lower cut-off frequency is determined by the electronics used) < 10% between 6 kHz and 10 kHz

## SPECIFICATIONS (Continued)

Temperature error	: < -4% between -54°C and +23°C : < ±5% between +23°C and +200°C : < +12% between +200°C and +260°C
Internal insulation resistance	: Min. 10 <sup>9</sup> Ω
Capacitance	: 6000 pF nominal, pole to pole, 32 pF nominal, pole to casing

## ENVIRONMENTAL

Temperature range	: -54°C to +260°C
Short term survival temperature	: -70°C to +280°C
Shock acceleration	: < 2000 g peak (half sine 1 ms) along sensitive axis

Use in explosive atmospheres

- *EC type examination certificate* : LCIE 02 ATEX 6110 X II 1 G (Zones 0, 1, 2) EEx ia IIC T6 to T2 (see copy)



Refer to the attached "EC type examination certificate" for specific parameters of the mode of protection concerned and special conditions for safe use.

• <i>cCSAus standard</i>	: Certificate No. 1545317, Class I, Div. 1, Groups A, B, C, D (see copy)
Corrosion, humidity	: Inconel 600, hermetically welded
Base strain sensitivity	: 0.001 g/με
Mounting	: 3 Allen screws M4 x 16 with spring lock washers M4, screw torque 4.5 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.

## ORDERING INFORMATION

To order please specify :

Type	Designation	Ordering Number
CA 136	Piezoelectric Accelerometer	144-136-000-2



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### 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)

