Vibro-Meter

CA 134

Piezoelectric Accelerometer Type CA 134

CHARACTERISTICS

- Vibration monitoring e.g. cryogenic applications
- Low temperature
- ARINC No 554 fixation
- Differential output
- Hermetically welded
- ATEX and cCSAus certified

FEATURES

- Internal case insulation
- VC2 type crystal element
- Frequency response
  5 Hz to 6000 Hz
- Sensitivity
  10 pC/g
- Temperature range
  -196°C to +500°C
- Accelerometer weight
  120 g

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smart engineering for extreme environments

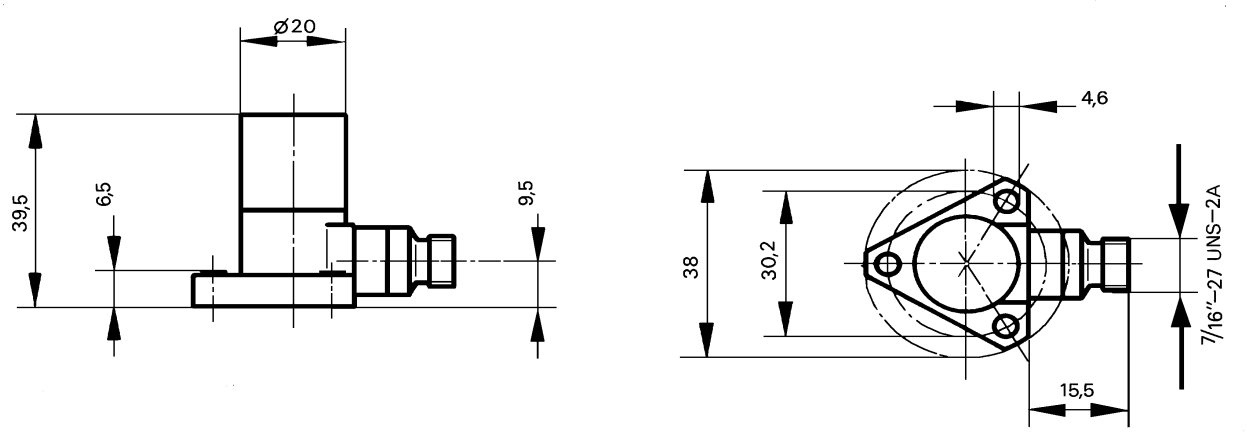
DESCRIPTION

The use of VC2 type single crystal material in the CA 134 compression mode element accelerometer provides an extremely stable instrument.

The transducer is designed for long-term monitoring and measurement of vibration in severe temperature environments such as cryogenic installation, etc.

The CA 134 accelerometer may be operated with either soft line or hard line cables depending on the required temperature.

MECHANICAL DIAGRAM



SPECIFICIATIONS

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)	: 10 pC/g ± 5%
Dynamic measuring range (random)	: 0.001 g to 500 g peak
Overload capacity (spikes)	: Up to 1000 g peak
Linearity	: ±1% over dynamic measuring range
Transverse sensitivity	: < 5%
Resonant frequency (mounted)	: 14 kHz nominal
Frequency response	: ±5% between 0.5 Hz and 3500 Hz (lower cut-off frequency is determined by the electronics used) < 10% between 3500 Hz and 6000 Hz
Temperature error	: < 0.01% per °C between -70°C and +500°C (cryogenic version -196°C)

SPECIFICIATIONS *(Continued)*

Internal insulation resistance	: Min. 10^8 Ω
Capacitance	: 150 pF nominal pole to pole, 30 pF nominal pole to ground (asymmetry 1 pF max.)

ENVIRONMENTAL

Temperature range	: -54°C (-196°C) to +450°C
Short term suvival temperature	: -70°C (-196°C) to +500°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 T1 (see copy)

⚠ **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.**

• *cCSAus standard*	: Certificate No. 1636188, Class I, Div. 1, Groups A, B, C, D (see copy)
Corrosion, humidity	: Inconel 600, hermetically welded
Base strain sensitivity	: < 10^{-4} 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 134	Piezoelectric Accelerometer	144-134-000-2

⚠ In this publication, a dot (.) is used as the decimal separator and thousands are separated by spaces. Example : 12 345.678 90. Although care has been taken to assure the accuracy of the data presented in this publication, we do not assume liability for errors or omissions. We reserve the right to alter any part of this publication without prior notice.

Sales offices

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

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

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