

vibro-meter
certified by

CE 134

Piezoelectric Accelerometer Type CE 134

CHARACTERISTICS

- Vibration monitoring of turbines, turbocompressors etc.
- Integrally attached electronics
- Long distance signal transmission
- Medium temperature
- CENELEC and CSA approved

FEATURES

- 2-pole system with current modulation output
- Internal case insulation
- Frequency response :
5 Hz to 10,000 Hz
- Sensitivity:
5 μ A/g
- Temperature range :
-70°C to +350°C

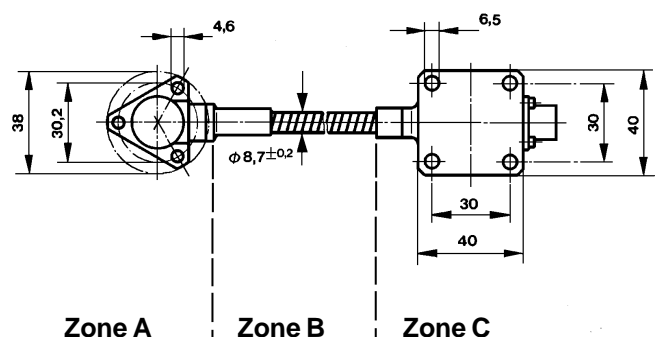
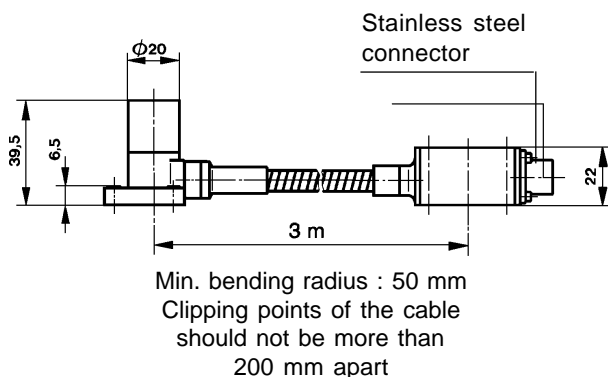
WEIGHT

500 g


DESCRIPTION

The CE 134 accelerometer is equipped with a centre mounted symmetrical compression mode crystal element. The attached electronics eliminates the need for connectors in the high impedance zone B. The hermetic integral cable link is protected by a flexible steel tube brazed to the transducer and to the electronics steel casing.

The electronics in zone C provides a charge-to-current conversion. The modulated current output signal allows the use of a 2-pole cable for trouble-free transmission over long distances. The system is fully protected against cooling fluids, lubricants, water, steam etc.



Input power requirements :

Zero signal current 3...8 mA, 12...18 VDC

Signal transmission :

2-wire system with modulated current output

Signal processing :

Galvanic separation unit

OPERATING (at 23°C ±5°C)

Sensitivity (at 120 Hz) :

5 µA/g ±5%

Dynamic measuring range (random) :

0.001 g to 400 g peak

The transducer resonance effect is corrected by filter.

Overload capacity (spikes) :

Up to 1,000 g peak within random vibration

Transverse sensitivity :

≤5%

Linearity :

≤1% over dynamic measuring range

Resonant frequency (mounted) :

14 kHz nominal

Frequency response :

LF version -10% 1 kHz, -30% 2 kHz

HF version +5% 10 kHz

CALIBRATION :

Dynamic calibration at factory at 5 g peak and 120 Hz (+23°C).

No subsequent calibration necessary.

ENVIRONMENTAL

Temperature range :

Transducer : -70°C to +350°C (zone A)

BOA cable : -54°C to +260°C (zone B)

Converter : -30°C to +100°C (zone C)

Shock acceleration :

≤2,000 g peak (half sine 1 ms)

Explosive atmosphere :

Available in intrinsically safe version for use in hazardous locations according to :

CENELEC standard: PTB No. Ex-82/2125 EEx ib IIC T5

CSA standard : LR 62075, class I, groups A, B, C, D, Div 1

Corrosion, humidity :

Inconel 600, stainless steel, hermetically welded

Base strain sensitivity :

≤10⁻⁴ g/µε

MOUNTING :

- Transducer :

3 Allen screws M4 x 16, with 3 spring lock washers M4. Fastening torque 4.5 Nm.

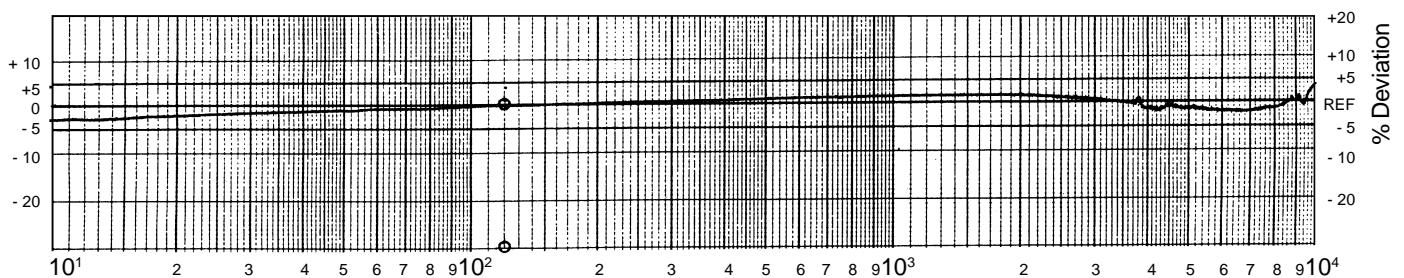
- Electronic box :

4 Allen screws M6 x 35, with 4 spring lock washers M6. Fastening torque 15 Nm.

CONNECTION :

Bayonet connector Type MS 3112 E8-3P (stainless steel) or threaded connector Type MIL-C-83723, series III T, size 0803N (stainless steel).

Frequency curves for HF versions 60 / 70 / 71



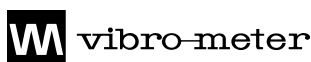
Ordering Information :

To order please specify:

- Type and designation : CE 134 Piezoelectric accelerometer
- Ordering No. : Ex i, LF version, 3 m cable **444-134-000-40**
- Ex i, HF version, 3 m cable **444-134-000-60**
- Ex i, HF version with threaded connector, 3 m cable **444-134-000-70**
- Ex i, HF version with threaded connector, 6 m cable **444-134-000-71**



Due to the continual development of our products we reserve the right to modify the specifications without forewarning.



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Vibro-Meter is a member of the Meggitt Aerospace Systems Division