



Piezoelectric Accelerometer Type CE 311

FEATURES

- ▶ Industrial vibration monitoring
- ▶ Integrated electronics
- ▶ Certified for use in explosive atmospheres
- ▶ 2-wire signal transmission with current modulation
- ▶ Long-distance signal transmission



CHARACTERISTICS

- ▶ Frequency response
2 Hz to 8000 Hz
- ▶ Sensitivity
50 μ A/g
- ▶ Temperature
-55°C to 125°C



DESCRIPTION

The CE 311 accelerometer is equipped with a symmetrical shear mode polycrystalline measuring element with internal housing insulation. Integral electronics provides charge-to-current conversion and eliminates the need for a charge amplifier. The modulated current output signal allows the use of 2-wire cable for trouble free transmission over long distances.

The CE 311 accelerometer is fitted with an integral cable protected by a stainless steel flexible tube welded to the housing. The system is fully protected against cooling fluids, lubricants, water, steam etc.

SPECIFICATIONS

Input power requirements	: 12...28 V _{DC} , zero signal current 3...8 mA
Signal transmission	: 2-wire system with modulated current output
Signal processing	: Galvanic separation unit or mounting electronics

OPERATING

Sensitivity (at +23°C ±5°C)	: 50 µA/g ±5%
Dynamic measuring range (random)	: 0.004 g to 40 g peak
Overload capacity (spikes)	: Up to 100 g peak
Transverse sensitivity	: ≤ 3% (when measured at 15 Hz and 5 g)
Linearity	: ≤ 1% over dynamic measuring range
Resonant frequency (mounted)	: 20 kHz nominal
Frequency response	: ±5% between 2 Hz and 5 kHz : ±10% between 5 kHz and 8 kHz
Temperature error	: ±5% for temperature range -55°C to +23°C : ±2% for temperature range +23°C to +125°C

ENVIRONMENTAL

Temperature range	: -55°C to +125°C maximum, survival (for maximum of 15 min) to +150°C
Shock acceleration	: 500 g peak (half sine 1 ms)
Explosive atmosphere	: Available in Ex i version for use in hazardous locations according to: • <i>EC type examination certificate</i> : KEMA 04 ATEX 1055 II 1 G (Zones 0, 1, 2) EEx ia IIC T4 to T6

 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.

• <i>cCSAus standard</i>	: Certificate No. 1514310, Class I, Div. 1, Groups A, B, C and D, Ex ia
Corrosion, humidity	: Stainless austenitic steel, hermetically welded
Base strain sensitivity	: 0.0015 g/µε

MOUNTING

4 Allen screws M6 x 35, DIN 912, steel 12.9, 4 spring washers M6, DIN 7980, spring steel. Fastening torque 15 Nm.

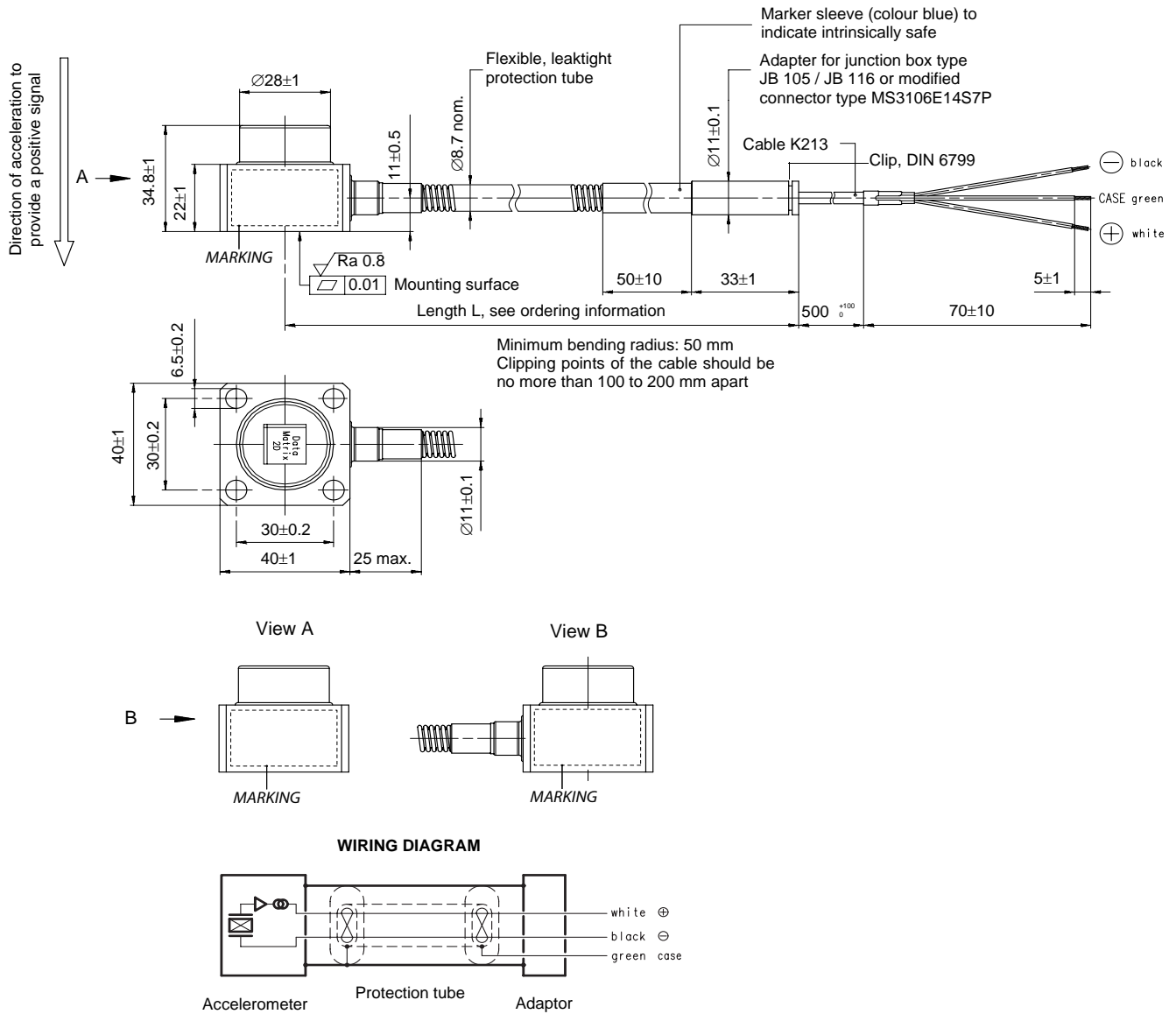
CALIBRATION

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

ACCESSORIES

CG 310	Connector	GSI 122 / GSI 130	Galvanic separation unit
JB 105 / JB 116	Junction box	K 209 / K 213	Transmission cable

MECHANICAL DRAWING



ORDERING INFORMATION

To order please specify :

Type	Designation		Ordering Number
CE 311	Piezoelectric Accelerometer	With integral cable 3 m	444-311-000-01
		With integral cable 6 m	444-311-000-02
		With integral cable 12 m	444-311-000-03
		Ex i with integral cable 3 m	444-311-000-11
		Ex i with integral cable 6 m	444-311-000-12



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