

Piezoelectric Pressure Transducer Type CP 104

FEATURES

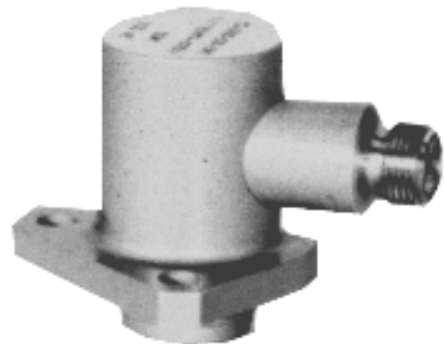
- ▶ High-temperature capability -196°C to +400°C
- ▶ Acceleration compensated
- ▶ Operational in primary circuit of ABWR
- ▶ Proven reliability
- ▶ Will meet IEEE 323-1974

CHARACTERISTICS

- ▶ Internal case insulation
- ▶ VC2 type crystal element
- ▶ Frequency response
2 Hz to 6000 Hz
- ▶ Sensitivity
190 pC/bar

WEIGHT

- ▶ Accelerometer: 150 g



Piezoelectric Pressure Transducer CP 104

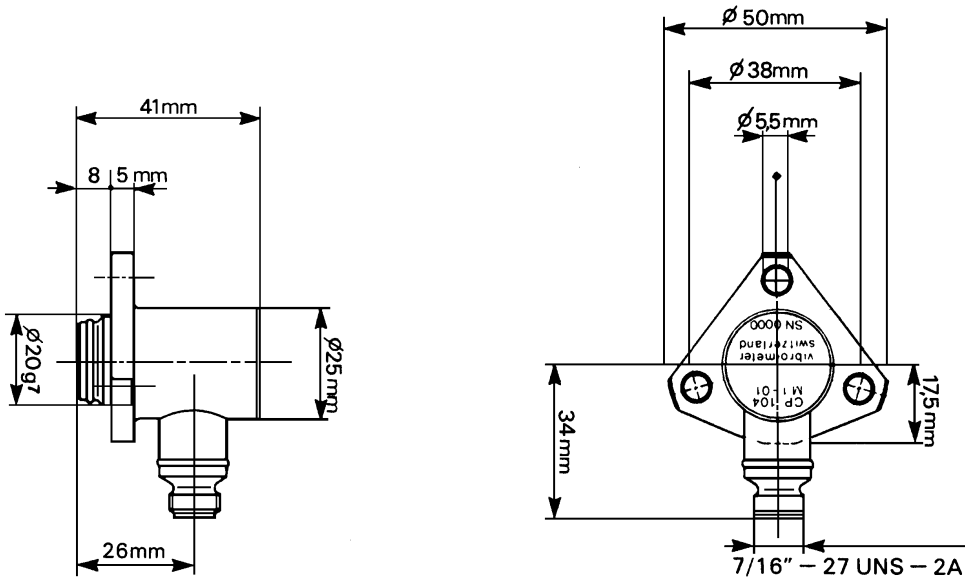
DESCRIPTION

The use of VC2 type single crystal material in the CP 104 compression mode dynamic pressure transducer provides an extremely stable instrument.

The CP 104 pressure transducer may be operated with either softline or hardline cables depending on the required temperature.

The transducer is designed for long-term monitoring or development testing.

MECHANICAL DRAWING



SPECIFICATIONS

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

OPERATING

(at +23°C ±5°C)

Sensitivity (at 2 Hz)	: 190 pC/bar nominal
Dynamic measuring range (random)	: 0.000 05 bar to 20 bar nominal
Overload capacity (spikes)	: Up to 100 bar
Linearity	: ± 1% over dynamic measuring range
Acceleration sensitivity	: ≤ 0.1 pC/g (≤ 0.0005 bar/g)
Resonant frequency	: > 30 kHz
Frequency response	: 2 to 6000 Hz ±5% (lower cut-off frequency is determined by the electronics used)

Internal insulation resist. : Min. $10^9 \Omega$ ($10^7 \Omega$ at $+300^\circ\text{C}$)
 Capacitance : 85 pF nominal pole/pole
 30 pF nominal pole/ground

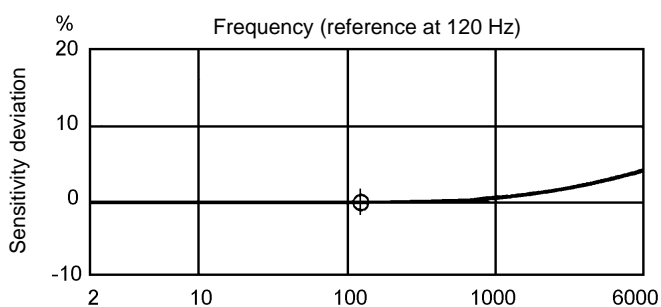
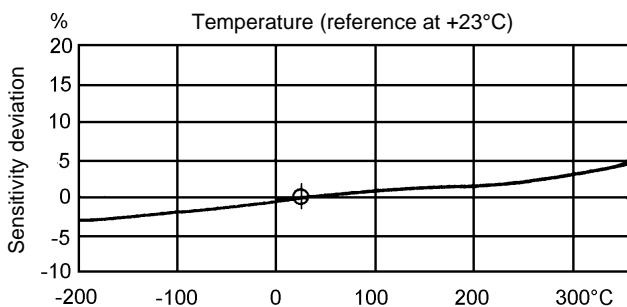
ENVIRONMENTAL

Temperature range : -196°C to $+350^\circ\text{C}$
 Shock acceleration : $< 2000 \text{ g}$ peak (half sine 1 ms) along sensitive axis
 Corrosion, humidity : Inconel 600, hermetically welded
 Radiations :
 • *Gamma flux* : 10^{11} erg/g no effect
 Mounting : 3 Allen screws M5
 Fastening torque 10 Nm

CALIBRATION

Dynamic calibration at factory at 1 bar peak and 2 Hz ($+23^\circ\text{C}$). No subsequent calibration necessary.

TYPICAL RESPONSES



ACCESSORIES

- Connectors
- Cables
- Electronics

Piezoelectric Pressure Transducer CP 104

ORDERING INFORMATION

To order please specify :

Type	Designation	Ordering Number
CP 104	Piezoelectric Pressure Transducer	143-104-000-1



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