



part number :143-104-000-1

CP 104

Piezoelectric Pressure Transducer Type CP 104

FEATURES

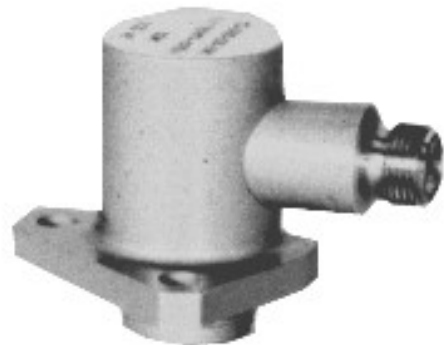
- High-temperature capability -196°C to +400°C
- Acceleration compensated
- Operational in primary circuit of ABWR
- Proven reliability
- Will meet IEEE 323-1974

CHARACTERISTICS

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

WEIGHT

- Accelerometer: 150 g



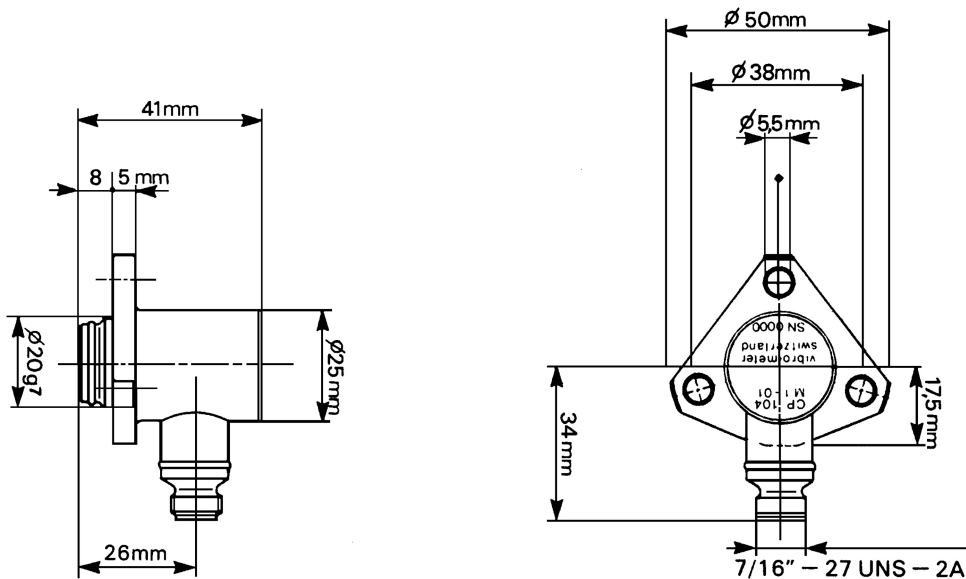
DESCRIPTION

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

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

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

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

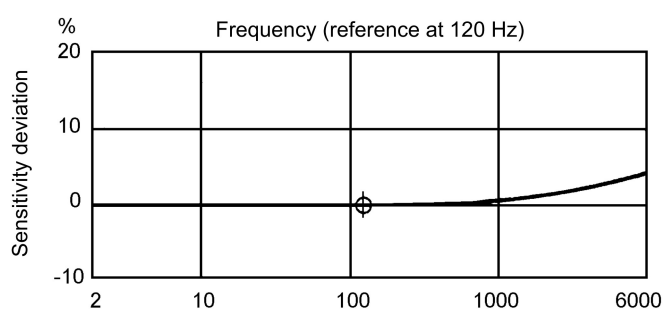
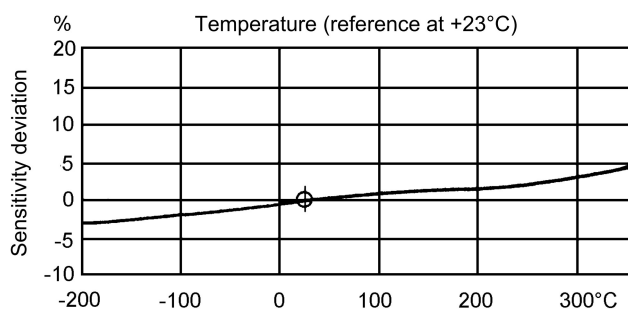
ENVIRONMENTAL

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 : 10^{11} erg/g no effect
 • *Gamma flux*
 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

ORDERING INFORMATION

To order please specify :

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



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