

Piezoelectric pressure transducer

CP 103

SPECIFICATIONS

General

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

Operating

At +23°C ±5°C (+73°F ±41°F)

Sensitivity (at 2 Hz)	: 232 pC/bar (16 pC/psi) ±5% typical
Dynamic measuring range (random)	: 0.00004 to 20 bar nominal
Overload capacity (spikes)	: Up to 250 bar
Linearity	: ±1% over dynamic measuring range
Acceleration sensitivity	: ≤0.05 pC/g (≤0.000 21 bar/g)
Resonant frequency	: >50 kHz
Frequency response	: 2 to 10 000 Hz ±5% (the lower cut-off frequency is determined by the electronics used)
Internal insulation resistance	: Min. 10 ⁹ Ω. 10 ⁷ Ω at 300°C (+572°F)
Capacitance (nominal)	
• Pole to pole	: 135 pF for transducer + 200 pF/m of cable
• Pole to casing	: 18 pF for transducer + 300 pF/m of cable

Environmental

Temperature range	
• Continuous operation	: -54 to +650°C (-65 to +1202°F)
• Extreme operation	: -196 to +700°C (-321 to +1292°F)
Shock acceleration	: <2000 g peak (half sine 1 ms) along sensitive axis
Corrosion, humidity	: INCONEL® alloy 600, hermetically welded
Radiation	
• Gamma flux	: 10 ¹¹ erg/g no effect
• Neutron flux	: 10 ¹⁸ n/cm ² no effect