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Vibro-Meter

CP 216

Piezoelectric Pressure Transducer



FEATURES

- Extreme temperature capability -70°C to +520°C
- High-pressure capability 350 bar
- High reliability
- Internal case insulation
- Certified for use in potentially explosive atmospheres
- Sensitivity
  200 pC/bar (typical)
- Weight
  Transducer: 12 g
  Integral cable: 25 g/m

DESCRIPTION

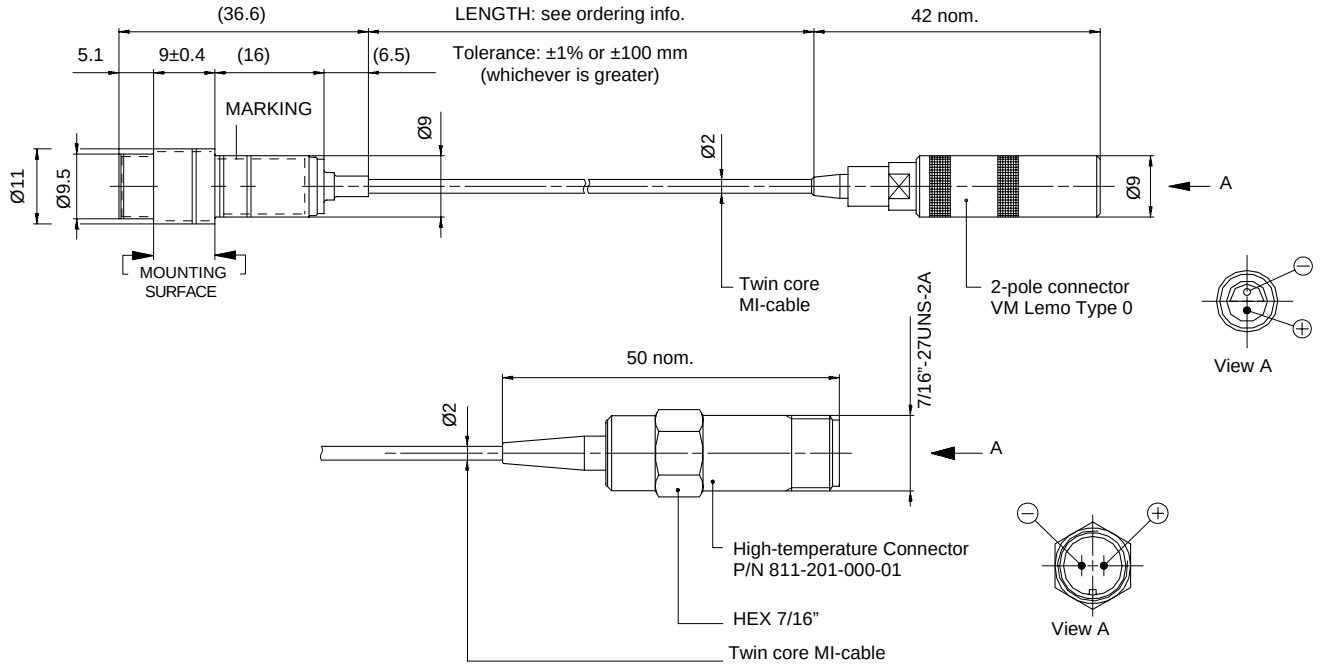
The CP 216 is a compression mode dynamic pressure transducer. It is an extremely stable device thanks to the use of man-made piezoelectric material.

The transducer is designed for long-term monitoring or development testing. It is fitted with an integral mineral insulated cable (twin conductors) which is terminated by either a Lemo connector or a high-temperature connector developed by Vibro-Meter.

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MEGGiTT
smart engineering for extreme environments

MECHANICAL DRAWING



SPECIFICATIONS

ELECTRICAL

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)	: 200 pC/bar typical
Dynamic measuring range (random)	: 0.0005 bar to 250 bar nominal
Overload capacity (spikes)	: Up to 350 bar
Linearity	: ± 1% over dynamic measuring range
Acceleration sensitivity	: ≤ 0.5 pC/g (≤ 0.0025 bar/g)
Resonant frequency	: > 80 kHz
Frequency response	: 2 to 15 000 Hz ±5% (lower cut-off frequency is determi-ned by the electronics used)
Internal insulation resist.	: Min. 10^9 Ω ($5x10^4$ at +450°C)
Capacitance (nominal)	
• *Pole to pole*	: 320 pF for transducer + 200 pF/m of cable
• *Pole to casing*	: 13 pF for transducer + 300 pF/m of cable

ENVIRONMENTAL

Temperature range	
• *Continuous*	: -54°C to +470°C
• *Extreme*	: -70°C to +520°C
Shock acceleration	: < 2000 g peak (half sine 1 ms) along sensitive axis

Use in explosive atmospheres

EC type examination certificate	: LCIE 02 ATEX 6106 X II 2 G (Zones 1, 2) Ex ib IIC T6 to T530

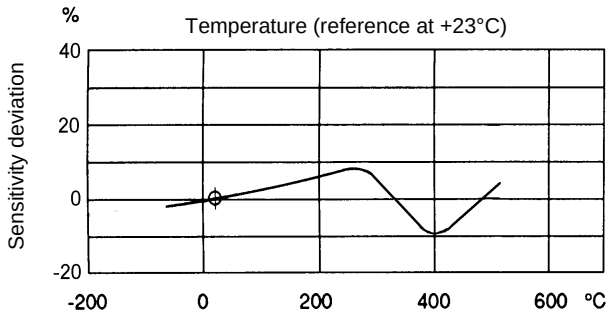
⚠ **For specific parameters of the mode of protection concerned and special conditions for safe use, please refer to the "EC type examination certificate" that is available from Vibro-Meter SA on demand.**

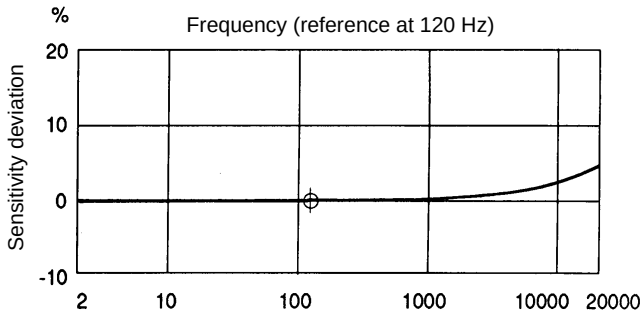
Corrosion, humidity	: Nimonic 90, hermetically welded (Inconel 600 for cable)
Radiations	
• *Gamma flux*	: 10^{10} erg/g no effect
• *Neutron flux*	: 10^{17} n/cm^2 no effect
Mounting	: See manual

CALIBRATION

Dynamic calibration at factory at 1 bar peak and 2 Hz (+23°C). No subsequent calibration necessary.

TYPICAL RESPONSE CURVES





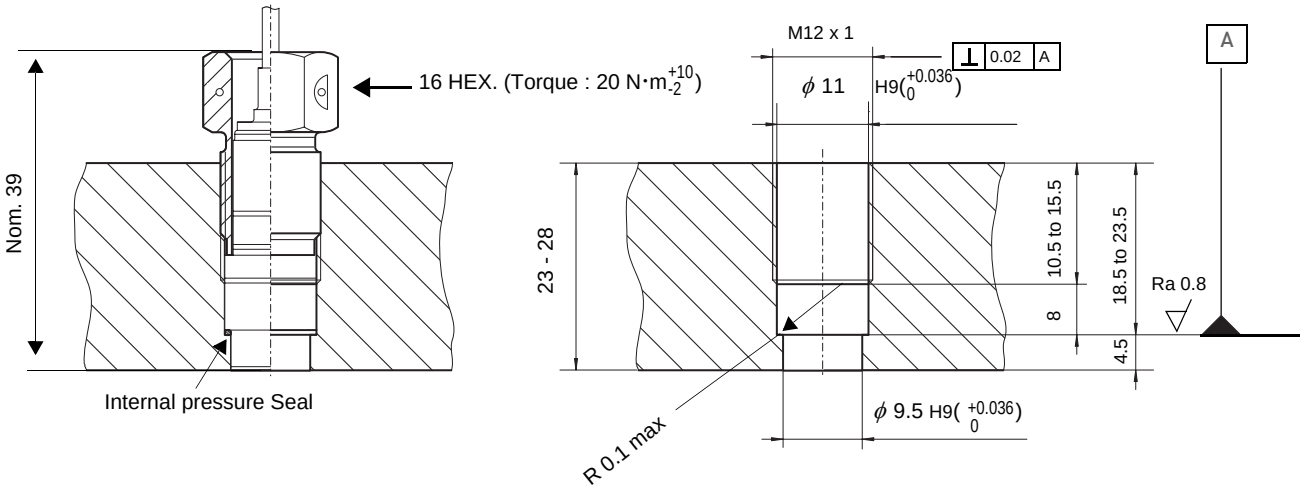
ORDERING INFORMATION

To order please specify :

Type	Designation	Ordering Number	
CP 216	Piezoelectric Pressure Transducer with VM Lemo connector	143-216-000-0 XX	
		1X	: cable length defined on order
		2X	: cable length 0.5 m
		3X	: cable length 1 m
		4X	: cable length 2 m
		5X	: cable length 3 m
CP 216	Piezoelectric Pressure Transducer with VM high-temperature connector	143-216-000-1 XX	
		1X	: cable length defined on order
		2X	: cable length 0.5 m
		3X	: cable length 1 m
		4X	: cable length 2 m
		5X	: cable length 3 m

MOUNTING ACCESSORIES

MA 104 Mounting Adapter for CP 216 Version 0XX (for VM Lemo Connector)

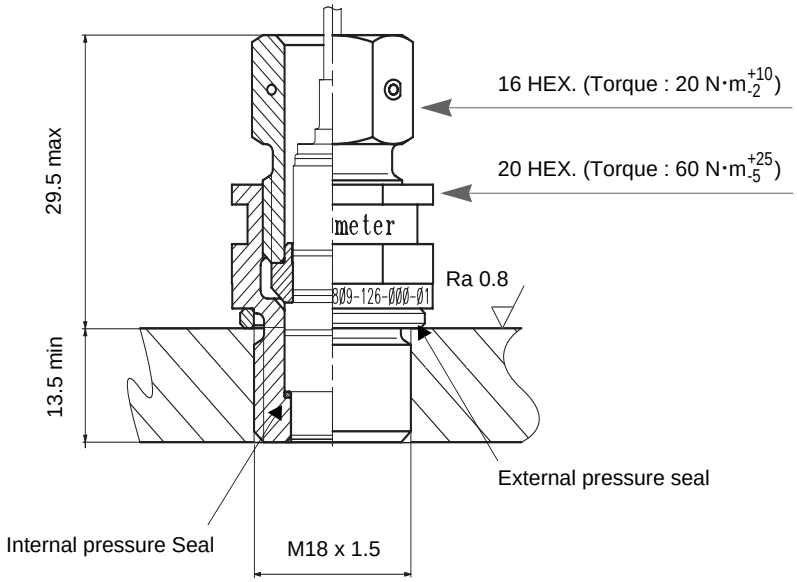


Note: All dimensions in mm

Designation	Ordering Number
MA 104 Mounting adapter	: 809-104-000-011
MA Internal pressure seal	: 143-215-902-011

MOUNTING ACCESSORIES *(Continued)*

MA 126 Mounting Adapter for CP 216 Version 1XX (for VM High-temperature Connector)



Note: All dimensions in mm

Designation	Ordering Number
MA 126 Mounting adapter	: 809-126-000-011
MA Internal pressure seal	: 143-215-902-011
MA External pressure seal	: 143-215-903-011

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In this publication, a dot (.) is used as the decimal separator and thousands are separated by spaces. Example : 12 345.678 90.

Sales offices

Vibro-Meter has offices in more than 30 countries. For a complete list, please visit our website.

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ISO 9001

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