

vibro-meter
certified by


PE 255

Piezoelectric Pressure Transducer Type PE 255

CHARACTERISTICS

- Qualified for flight on Ariane 5 launcher (ESA-CNES-SEP-Arianespace Program)
- Built-in electronics, 5 V output
- Flat membrane
- Compatible to high-pressure liquid oxygen and hydrogen
- Dynamic pressure range ± 100 bar overload static and dynamic 350 bar
- Inconel X 750 case

FEATURES

- 2 wire technique
- Hermetically sealed
- Frequency response:
0.3 Hz to 20,000 Hz
- Sensitivity
17 mV/bar (1.17 mV/psi)
- Temperature range:
-253°C to +125°C

WEIGHT : 6 g (US $\frac{5}{16}$ "")
18 g (Metric M10x1)

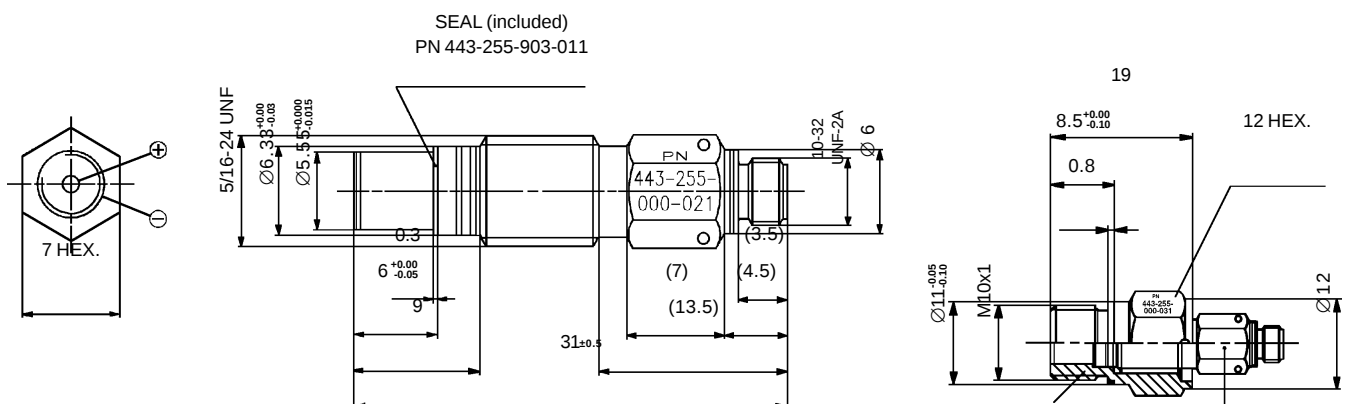


DESCRIPTION

The dynamic pressure transducer PE 255 is a low mass transducer with extended low and high frequency performances.

The integral electronics eliminates the need for a charge converter and allows the use of up to several hundred meters of low-cost cable.

Noise floor is an exceptional 20 μ V broadband.



Input power requirements : Constant current 0.5 to 12 mA,
min. 22 V

Signal transmission : 2 wire system with modulation
voltage output

Signal processing : Power supply (constant current
source)

OPERATING (at +23°C ±5°C)

Sensitivity * : 17 mV/bar ±3mV/bar
(1.17 mV/psi)

Dynamic measuring range : ±100 bar pk

Resonant frequency
(mounted) : >80 kHz

Overload capacity (spikes) : Static + dynamic not to exceed
350 bar

Linearity : <1% over dynamic measuring
range

Acceleration sensitivity : <0.0025 bar/g

Frequency response

- 1 to 15,000 Hz : ±5%
- 20 kHz : ±3 dB max.

Output impedance *

- With 12 mA : 200 Ω
- With 6 mA : 500 Ω

Bias voltage * (over temperature range)

- 8 to 14 VDC : 12 mA
- 5 to 10 VDC : 6 mA

Noise floor * : <35 µV typical (12 mA)

ENVIRONMENTAL

Temperature range : -253°C to +125°C

Shock acceleration : <2000 g peak (half sine, 1 ms)

Acoustic sensitivity
(on connector side membrane isolated)

Corrosion, humidity : Inconel X 750, hermetically
welded

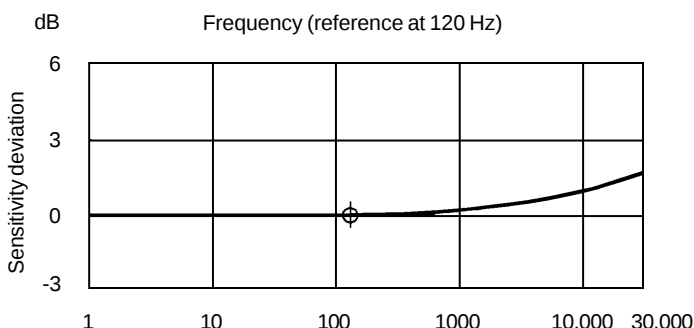
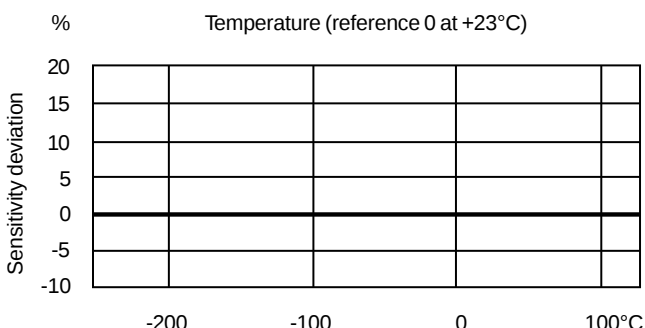
Mounting : 5/16" - 24 UNF thread,
M10 x 1 adapter available

CALIBRATION

Dynamic calibration at factory at 20, 40, 60, 80 and 100 bar
(+23°C). No subsequent calibration necessary.

* A lower constant current reduces the noise floor and the bias voltage, increases the sensitivity and the impedance.

Typical responses



Ordering information:

- Description / Ordering No	: PE 255 443-255-000-02	5 / 16"
	Seal 443-255-903-01	Ø6.3 / 5.55 x 0.3
	: PE 255 443-255-000-03 / -05	M10 x 1
	Seal 443-255-902-01	Ø10.95 / 10 x 0.8



Due to the continual development of products, Vibro-Meter reserves the right to modify these specifications without forewarning.



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