

Vibro Meter Vibro Meter Series Service Manual

144-901-000-282

1. Description

144-901-000-282

3. Product Information

144-901-000-282

Vibro Meter Piezoelectric Accelerometer

Extreme temperature capability

□ Operational as loose part monitoring accelerometer

□ Proven reliability

□ Meets NRC guide 1.133, IEEE 323-1974.

Qualified to DIN 25.475.1

□ Integral case insulation

□ Certified for use in potentially explosive atmospheres

□ Frequency response:

3 Hz to 2 800 Hz

□ Sensitivity:

10 pC/g

□ Temperature range (operational):

-196°C to +700°C

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)

Sensitivity (at 120 Hz) : 10 pC/g ±5%

Dynamic measuring range (random) : 0.001 g to 200 g peak

Overload capacity (spikes) : Up to 500 g peak

Linearity : ±1% over dynamic measuring range

Transverse sensitivity : < 5%

Resonance frequency (mounted) : > 17 kHz nominal

Frequency response

3 to 2800 Hz nominal : ±5% (lower cutoff frequency is determined by the electronics used)

2800 to 3700 Hz : < 10%

Internal insulation resistance : Min. 109 Ω

Capacitance (nominal)

Pole to pole : 80 pF for transducer + 200 pF/m of cable

Pole to casing : 18 pF for transducer + 300 pF/m of cable

ENVIRONMENTAL

Temperature range

Continuous : -54°C to +650°C

Extreme : -196°C to +700°C

Shock acceleration : < 500 g peak (half sine 1 ms) along sensitive axis

Pressure : 140 bar 23°C, 80 bar 300°C

Corrosion, humidity : Inconel 600, hermetically welded

Radiations

Gamma flux : 1011 erg/g no effect

Neutron flux : 1018 n/cm² no effect

Mounting inside tube : 4 Allen screws M6, fastening torque 15 Nm

Use in explosive atmospheres:

EC type examination certificate : LCIE 08 ATEX 6017 X II 1 G (Zones 0, 1, 2)

Ex ia IIC T6 to T710

Type CA 901

Version Standard

Ordering Number

144-901-000-2 XX VM Lemo connector

XX=82 : cable length 3.5 m

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