

vibro-meter
certified by

CA 303 Series

Piezoelectric Accelerometer Type CA 303 Series

CHARACTERISTICS

- Designed for high temperature gas turbine applications
- High output of 50 pC/g
- 850°F (455°C) continuous operation
- Improved transverse frequency resonance

FEATURES

Frequency response:

5 Hz to 8000 Hz

Sensitivity:

50 pC/g

Construction:

Welded, Inconel 600 stainless steel

DESCRIPTION

The CA 303 series of high temperature accelerometers are designed specifically for gas turbines applications.

They feature a rugged design with hermetically sealed connectors and 1/4" mounting bolts.

An integral mineral insulated cable with stainless steel overbraid ensures signal integrity even in the most hostile environments.



The differential output signal minimizes noise pick-up due to electrical ground potentials.

A version with side connector is available when an integral cable is not required.

Input power requirements :

None

Signal transmission :

2 pole system insulated from casing, charge output

Signal processing :

Charge amplifier

OPERATING CHARACTERISTICS

at 73°F ± 9°F (23°C ± 5°C)

Sensitivity (at 120 Hz) :

50 pC/g ± 5%

Dynamic measuring range (random) :

0.01 g to 40 g peak

Overload capacity (spikes) :

Up to 100 g peak

Linearity :

±1% over dynamic measuring range

Transverse sensitivity :

<5%

Resonant frequency (mounted) :

14 kHz nominal

Frequency response :

± 5% between 5 and 8,000 Hz (lower cut-off frequency is determined by electronics used)

< 10% between 5 and 10,000 Hz

Temperature error :

< 10% between -67°F and 850°F (-55°C and 455°C)

Internal insulation resistance :

Min. 10⁸ ohms

ENVIRONMENTAL

Temperature range :

- Transducer and cable : -65°F to 850°F (-54°C to 455°C)

- Connector : -85°F to 392°F (-65°C to 200°C)

Short term survival temperature :

-94°F to 900°F (-70°C to 482°C)

Shock acceleration :

<2,000 g peak (half sine 1ms) along sensitive axis

Corrosion, humidity :

Inconel 600, hermetically welded

Base strain sensitivity :

<10⁻⁴ g/με

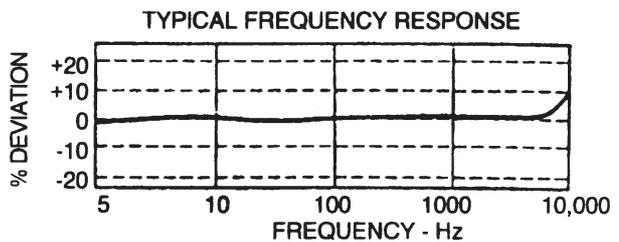
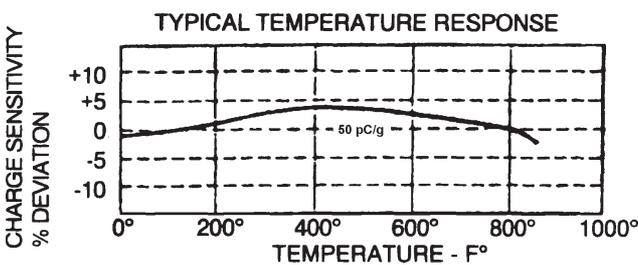
Mounting :

1/4" Allen screws with spring lock washers M4, screw torque 4,5 Nm. No need for electrical insulation of mounting surface

CALIBRATION

Dynamic calibration at factory at 5 g peak and 120 Hz (23°C). No subsequent calibration necessary.

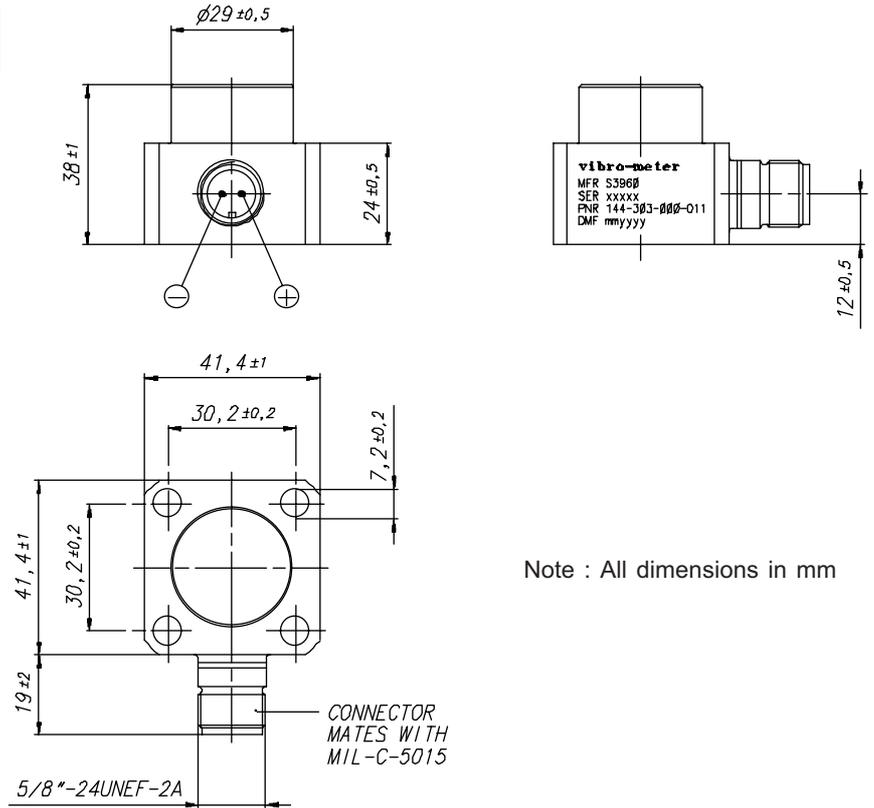
Response Curves :



CA 303 Version 0XX : _____

VM-SA P/N	VM-CORP P/N
144-303-000-011	303-031

Cable assembly : EC 318, EC 319

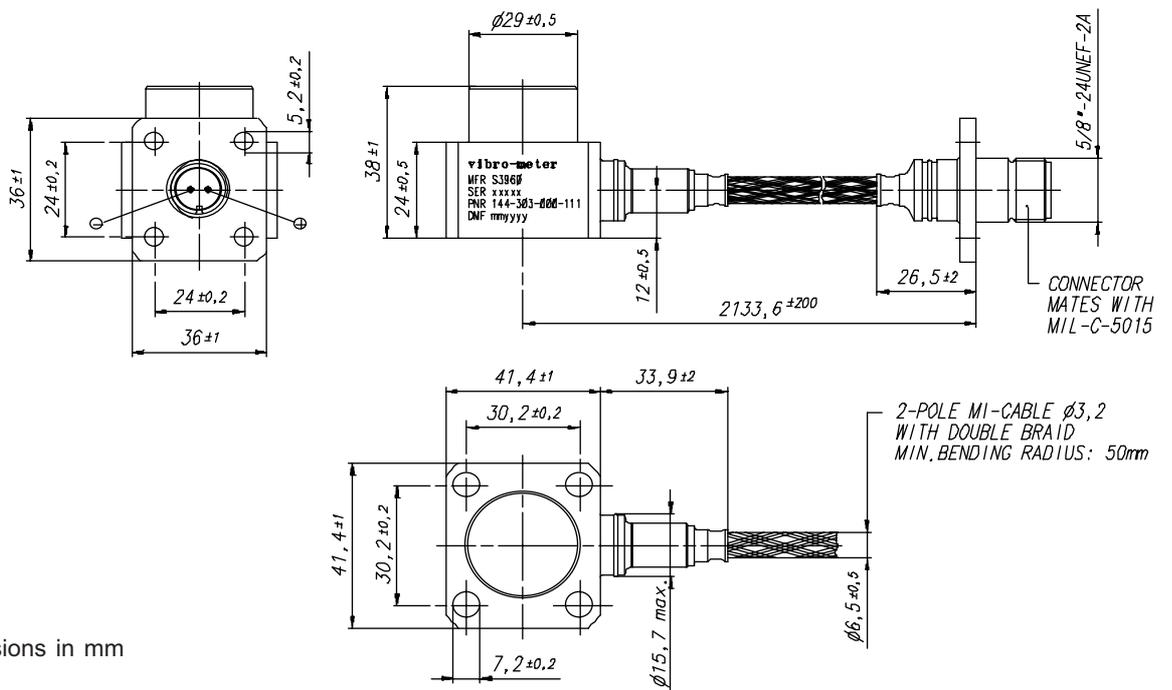


Note : All dimensions in mm

CA 303 Version 1XX : _____

VM-SA P/N	VM-CORP P/N
144-303-000-111	303-02

Cable assembly : EC 318, EC 319

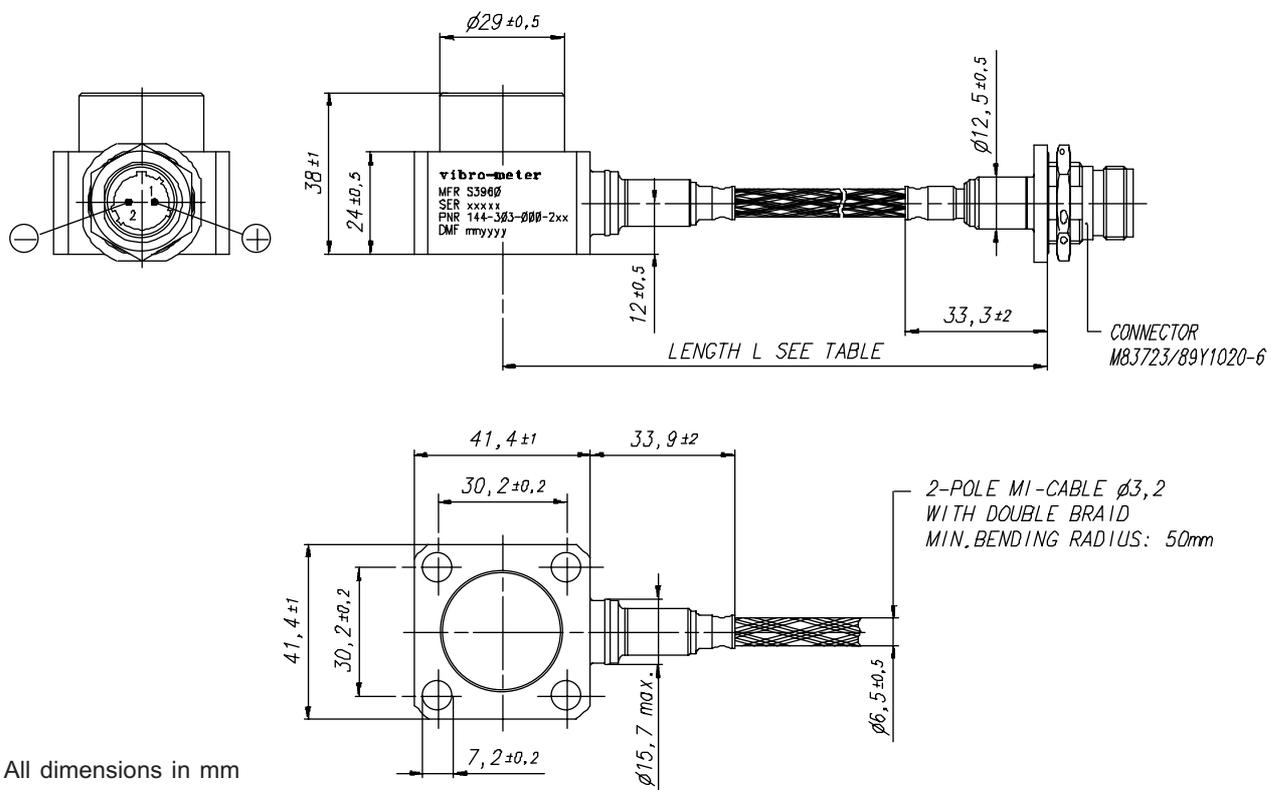


Note : All dimensions in mm

CA 303 Version 2XX :

VM-SA P/N	VM-CORP P/N	Length L in inches	Length L in mm
144-303-000-211	Not appl.	48 ± 4	1219 ± 100
144-303-000-221	303-033	81 ± 8	2057 ± 200
144-303-000-231	Not appl.	45 ± 4	1143 ± 100
144-303-000-241	303-035	53 ± 4	1346 ± 100
144-303-000-251	303-039	50 ± 4	1270 ± 100
144-303-000-261	303-041	78 ± 4	1981 ± 100

Cable assembly : EC 334 M011

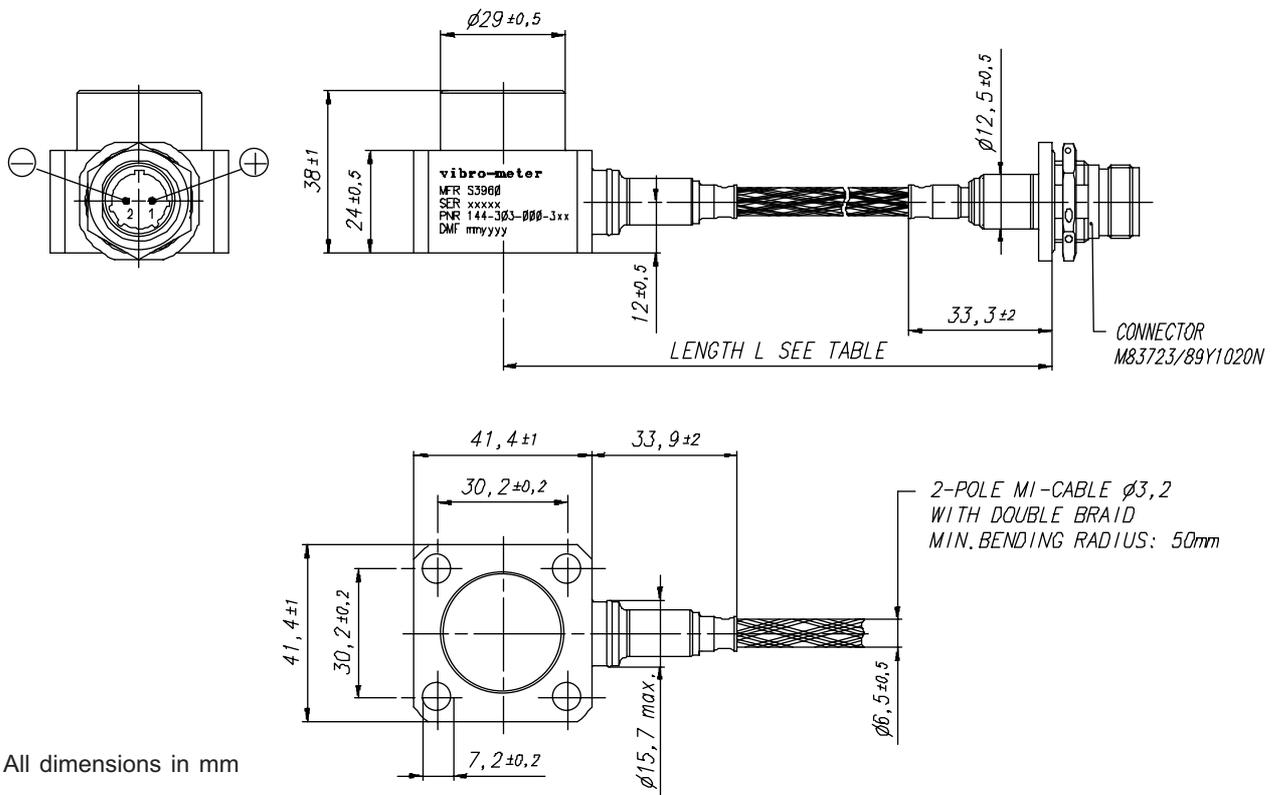


Note : All dimensions in mm

CA 303 Version 3XX :

VM-SA P/N	VM-CORP P/N	Length L in inches	Length L in mm
144-303-000-311	303-032	48 ± 4	1219 ± 100
144-303-000-321	Not appl.	81 ± 8	2057 ± 200
144-303-000-331	303-034	45 ± 4	1143 ± 100
144-303-000-341	Not appl.	53 ± 4	1346 ± 100
144-303-000-351	Not appl.	50 ± 4	1270 ± 100
144-303-000-361	Not appl.	78 ± 4	1981 ± 100

Cable assembly : EC 334 M111



Note : All dimensions in mm



Due to the continual development of our products we reserve the right to modify the specifications without forewarning.



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Vibro-Meter is a member of the
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