

Order No.: E/Y/4100/20144601

Dated: 20.12.2014

(4)

GRI	PORTABLE /HANDHELD VIBRATION METER	GRI NO. : GRI/27/03/14-15 DATE : 11.12.2014 PAGE : 1 OF 3
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1.0 APPLICATION :

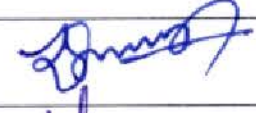
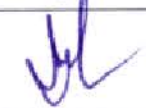
The portable /handheld Vibration meter shall be used in the laboratory as well as at sites, for following features:

- Analogue or digital type
- Vibration measurement, analysis of rotating electrical / mechanical machines.
- Structural testing: Impact testing(NFT).
- Analysis of any electrical signal as carried out by standard oscilloscope.
- Measurement of the vibration: Acceleration, Velocity and Displacement modes
- The vibration meter shall be in-built features like- data /readings storage and retrieval of data/ inbuilt printer etc.
- Computer-interface for post-processing

2.0 TECHNICAL SPECIFICATION :

2.1 INPUT SECTION :

- a. Number of channels : Single or more channels
- b. Input Configuration : Isolated/ Single ended
- c. Input Connector : 10-32 UNF miniature /BNC
- d. Input impedance : $\geq 1 \text{ M } \Omega$
- e. Input coupling : AC, DC, ICP and Charge-input
- f. Input Voltage : 10.00 mVrms To $\geq 30 \text{ Vrms}$
- g. Input level monitor : Over load/ Appropriate level indicator / LED
- h. Auto range : The amplitude voltage range changes automatically if input range-over occurs.
- i. A/D converter : 16 bits or more
- j. Dynamic range : 90 db or better
- k. Freq. Range : 1-10kHz
- l. Amplitude linearity : $\pm 0.015\%$ at full scale
- m. Trigger : Free / Repeat/Single/One-shot
- n. Filter : Low pass and High pass

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2.2 DISPLAY SECTION :

- a. Display Mode : Single/Dual/Triple/Quad Screen display mode
- b. Horizontal scale : Zooming with default/delta cursor
- c. Screen Size : ≥ 3 inch
- d. Type : TFT color
- e. Lighting (back light) : 2-level brightness adjustment

2.3 ANALYSIS SECTION :

- a. Function : Differential and integration operation , FRF,COH, Instantaneous/Auto/Average Fourier Spectrum , Envelope Time, Phase, etc.
- b. Window functions : Rectangle / Hanning / Flat-top/ Force/ Exponential/ User-defined
- c. Averaging mode : Time domain / Frequency domain- (linear / Exponential Peak hold etc.)
- d. Amplitude : Displacement, Velocity, Acceleration
- e. Cursor : Pk, Pk-Pk, RMS etc.

2.4 MEMORY FUNCTION :

Provision for internal memory as well as extendable memory data recording .



2.5 PC INTERFACE :

- Provision for LAN interface with PC
- Suitable data transfer software
- Report generation software

2.6 In-built printing provision (preferable)

2.7 Power Requirement :

- Single phase AC : 100-260Volt., 47-55Hz
- The instrument shall be operated on rechargeable battery for minimum 3 hours continuously after fully charging

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2.8 Overall Weight : < 2 Kg. (lower weight and compact size is preferable)

2.9 Environment :

Operating Temp. : 0 - 50°C or better
Relative Humidity : 25-90%

3.0 PRE-QUALIFICATION REQUIREMENTS (PQR):


Only those vendors (OEMs / authorized dealers), who have supplied and commissioned vibration monitoring system as per required specifications or any other similar instrument shall be considered.

In such case, following informations should be furnished by vendors/party.

1. The party must have experience of manufacturing, commissioning of such or similar instruments at least for five years.
2. Name of the reputed agency to whom such instrument has been supplied
3. P.O. No. and Date of commissioning and its report.
4. Performance certificate of the supplied instrument from the reputed agency to whom such instrument has been supplied.

4. General Conditions:

- a) Preferably the party should quote all the items, even if it is not making all the specified items.
- b) The party shall carry out commissioning at our works free of cost.
- c) The party shall provide one hard copy operation and service manuals.
- d) The party shall provide detailed calibration certificate of the instrument traceable to national/international standard.
- e) Essential spare parts should be quoted separately.

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