

MACHINE HEALTH MANAGEMENT PORTABLE DIAGNOSIS INSTRUMENT

TECOM's "Machine Health Management portable diagnosis instrument" is a new generation vibration measurement instrument for machine equipment. The portable case contains IoT (Internet of Things) gateway, smart vibration sensors, and standard mobile power-pack. Maintenance personnel can carry to site for measurement diagnosis operations.

The gateway connects up to 4 sensors, and its WiFi allows multiple maintenance personnel to connect for simultaneous analysis.



IMPORTANT FEATURES

TIME-FREQUENCY SELECTABLE

Gateway provides both time-domain and frequency-domain vibration signals; and these time-frequency signals are selectable in the app.

PRECISION FREQUENCY-ANALYZER REPLACEMENT

Working together the smart vibration sensors, IoT Gateway and smart phones can replace expensive Precision Frequency Analyzers.

ALL-IN-ONE

The instrument integrates three operations: vibration measurement, analysis, and diagnosis all into one operation. The diagnosis is operated interactively, in real time.

PLUG AND PLAY

All operations are powered by a mobile power pack, the diagnosis are connected via wireless WiFi connections. No power wires or network wires are needed, pure plug and play.

The application of IoT technology to the smart vibration sensors creates a "breakthrough change" in the field of vibration measurements, leading it to the next generation of Industry 4.0.

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PACKAGE CONTENTS



Smart Vibration Sensor (x2)



IoT Gateway (x1)



Mobile Power Pack (x1)



Temperature Sensor (x1)

THE INSTRUMENT DEPLOYS IoT TECHNOLOGY:

The smart vibration sensors are virtually connected to selected smart phones, and vibration measurements and diagnosis can be carried out interactively, in real-time.

CONNECTION DIAGRAM (PLUG-AND-PLAY)



ON-SITE USE OF THE INSTRUMENT

BRING THE PORTABLE DIAGNOSIS INSTRUMENT TO SITE AND MEASURE:

- 3-axis RMS values and compare against the motor vibration specifications, judge for normal or overvalue.
- Examine the FFT data, look into the vibration energy distributions on frequency domain and diagnosis for the five possible defects: *bearing defects, misalignment, unbalance, loose parts and softfoot.*

* These five items represent 90% of a motor's mechanical failures.

- IoT and smart phones work together on the interactive diagnosis.
- Record all measured data and diagnosis results for the motor's future health reference.

The new generation IoT features and strong interactive analysis and diagnosis capabilities of the portable instrument will vastly enhance on-site maintenance efficiency, it would be indispensable for any maintenance personnel.



Vibration



FFT/RMS



All-In-One



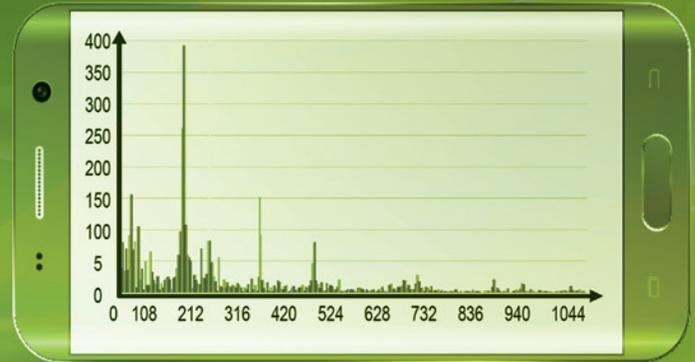
Plug & Play



INSTANT DIAGNOSIS OF MACHINE VIBRATIONS



TECO-WESTINGHOUSE MHM



KEY APPLICATION

OPERATIONAL DATA COLLECTION ON MACHINES 1ST COMMISSIONING

The portable diagnosis instrument has another key application:

1. The portable instrument can help the installer collect all operational data on a machines' 1st commissioning, providing vital information for future maintenance reference, as well as big data analysis.
2. As the use of big data analysis is trending, the operation data collected at commissioning would become a popular practice of main-stream motor manufactures, and the portable vibration diagnosis instruments would be indispensable for all installers or maintenance personnel of dealers, makers, factory, institutes, hotels, hospitals, schools, warehouses, etc.

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