

Key Application :  
Operational Data Collection on machines 1st commission.

The portable diagnosis instrument has another key application:

1. The portable instrument can help the installer collect all operational data on machines' **1st commission**, a vital information for future maintenance reference, as well as for Big Data analysis.
2. As the use of Big Data Analysis technology trending up strongly, the operation data collection on **1st commission** 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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## All-Smart Portable Vibration Diagnosis Instrument



TECOM's "All-Smart Portable Vibration 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. Craft person can carry to site for measurement diagnosis operations. The Gateway connects 4 sensors, and its WiFi allows multiple craft persons for simultaneous analysis.

### Important Features

1. **Time-Frequency Selectable**

Gateway provides both time-domain and frequency-domain vibration signals; and these time-frequency signals are selectable at the smart phones.

2. **Precision Frequency-Analyzer Replacement**

Working together, the smart vibration sensors, IoT Gateway and smart phones jointly represent a replacement of expensive and precision Frequency Analyzers, at any place and any time.

3. **All-in-One**

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

4. **Plug-and-Play**

All operations are powered by mobile power-pack, the diagnosis are done via wireless WiFi connections. No power wires, no network wires are needed, pure plug and play, amazingly easy to use.

**The application of IoT technology to the Smart Vibration Sensors creates a "Break-through Change" in the field of Vibration measurements, leads it to the next generation.**

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## All-Smart Portable

### Vibration Diagnosis Instrument

Package Content



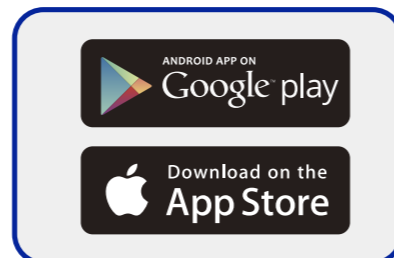
Smart Vibration Sensor x 2



IoT Gateway x1



Mobile Power Pack x 1

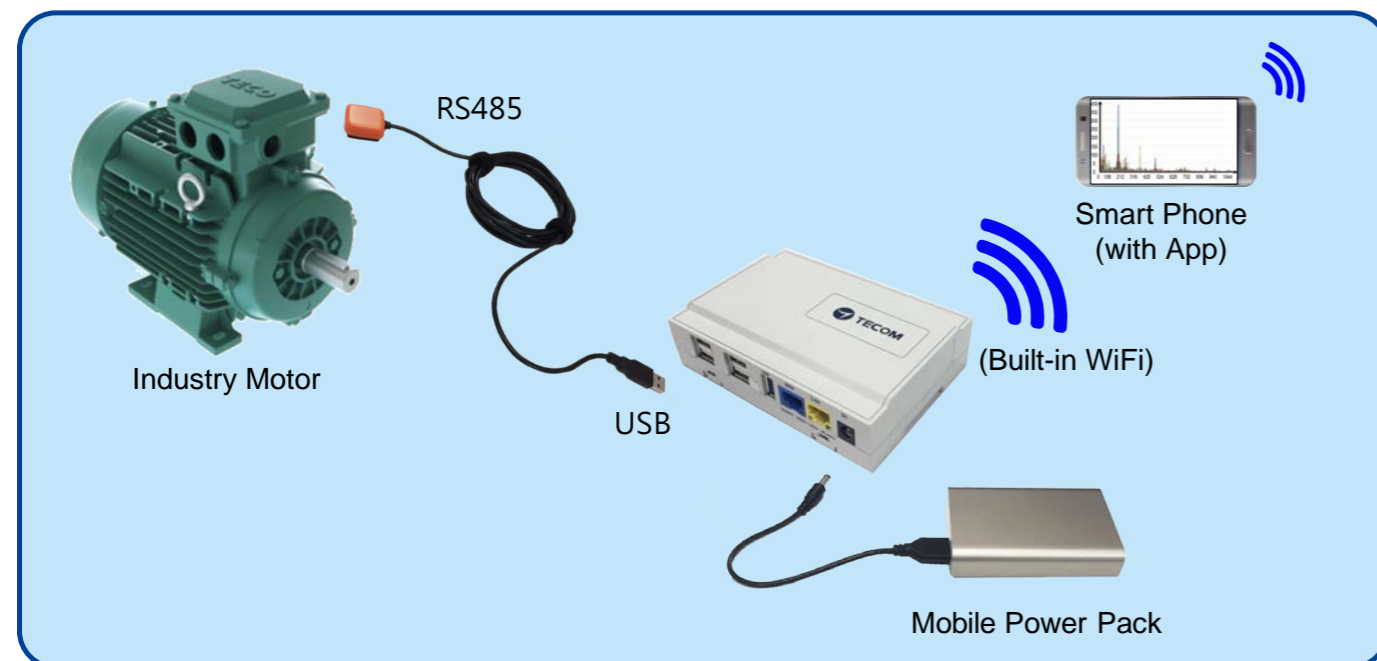


Smart Phone App (iOS, Android)

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 instrument case to the site, measure :

- ◆ 3-axis RMS values and compare against the motor vibration specifications, judge for normal or over-value.
- ◆ Examine the FFT data, look into the vibration energy distributions on frequency domain and diagnosis for the four possible defects :  
Bearing defects, In-alignment, Un-balance and Softfoot.  
\* The four 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

