

# DSP Remote Monitor

## Vibration Condition System



### Monitoring Remote System

The **DSP Remote Monitor** is a new tool that SEMAPI offers to the industrial market as a result of 30 years of experience in the techniques of control and vibration analysis.

This new equipment, capable of monitoring rotating machinery or structures, has the ability to measure, record and analyze values scalar spectra and waveform. Being able to calculate these measurements in extremely short time and so in all channels simultaneously.



The versatility of its configuration allows the operator to define, each point, all the measurements and the variables that it deems appropriate measured and recorded at different time intervals between points or measurements.

The multiplicity of channels is simply done and optimized by the computer.

Each monitoring module has 6 (six) accelerometer channels plus 4 AC inputs and 2 CC inputs for additional registration process variables, adding to this an independent entry of RPM.

The system can handle in one application up to 192 different channels, able to process between these points more than 1,200 measurement simultaneously, using the same analysis software and a terminal.

#### Overview:

DSP Team Remote Monitor allows monitoring of 12 channels or points for each meter module, these modules have USB and Ethernet connection.

The channels have relay outputs to activate instant alerts if the thresholds set by software are overcome.

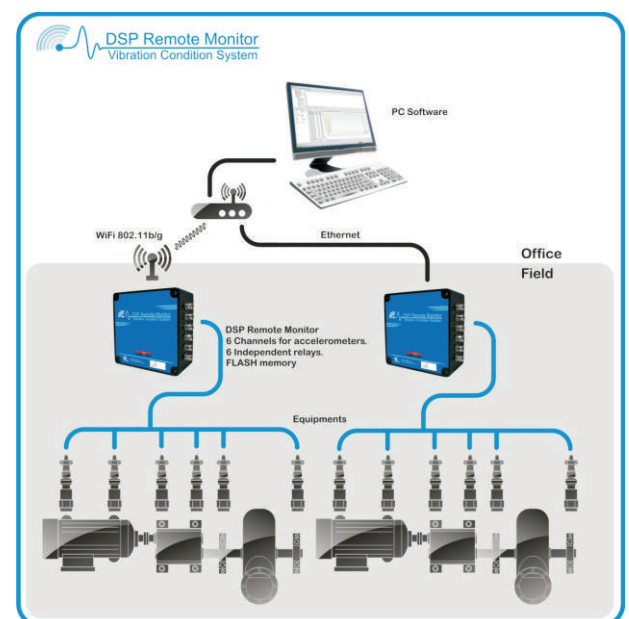
The measurements that are scheduled for points can be scalar or spectral, variables are configurable in each measurement and characteristics of each measurement are extremely flexible.

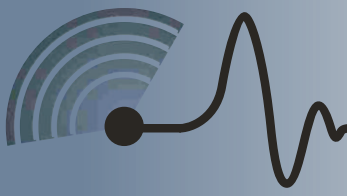
The routines of measuring points of the machine set can be programmed on automatic routines follow-up with periods of different times between measure and record of the measurement.

The monitoring system is carried out under the configuration and Machinery DSP monitoring Control software, which will be responsible for defining the architecture of the system monitoring and tracking of data as On Line.

The software has a configuration diagram plant, sector, equipment and point measurement.

After you set the parameters of the vibration monitoring routines, the system will record the history of the machine, leaving at the user hands all failure analysis tools and tracking anomalies in on line mode.





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The Remote Monitor DSP is a 12 (twelve) channels compact device to be installed in the field of , that can communicate using the 802.11b / g wireless networking standard or existing network wiring. It measures acceleration, velocity, displacement, envelope, temperature and condition of the bearings.

Most important hardware features

12 Channels (10 for dynamic variables, 2 for process variables) Simultaneous vibration measurements in 6 channels and RPM sensor inputs (optical or laser)

IEEE 802.11b / g (WiFi) Support for WEP, WAP, or WAP2/PSK

External, internal and programmable turn-on

Spectrum Data / waveform / RMS / Pk / Pk-Pk simultaneously in any measurement.

Up to 32 kHz bandwidth, Up to 12800 lines of resolution

Powered by battery or power 10 to 30VCC

compact and robust cabinet , IP67

High-quality metal grommets.

Acceleration enveloping programmable filters.

Use of standard industrial sensors, including certificates for hazardous areas

### Ideal for applications in:

Critical or semi-critical/auxiliaries machines both safe and dangerous areas.

Recurring failures monitoring

Measurement routes complement the sensors through a box of measurements.

Remote Monitoring via Internet

Machines in motion

Monitoring components end of life (eg bearings)

### Benefits

Reduce the cost of facilities, especially in hazardous areas.

Quick start up

Wide-area monitoring (eg oil tanks)

Measurement routes modification not needed

Online Monitoring of over 192 channels.

Easy to relocate

Taking advantage of a WiFi or cable network already installed.

Completely unattended operation (eg cranes)

### Entries:

6 (six) accelerometers 30-50-70-100-500mv / g IPC type

4 (two) auxiliary AC 0-10V

2 (two) auxiliary 0-10V DC

Optical phase

### Report:

1Gb Flash Hardware type

### Communication:

USB 2.0, Ethernet 10BaseT / 100Base-TX Ethernet port communication, RS232

### Outputs:

Relays 6 (six) with threshold level and cut and programmable channels available, with electrical safety.

### Measurements:

Spectrum: Acceleration, Velocity, displacement, envelope and AC signal

Spectral resolution in lines 400, 800, 1600, 3200, 6400 and 12,800

Windows: Rectangular, Hanning, Flattop and Hanning.

Waveform: Acceleration, velocity, displacement, envelope and AC signal

Resolution hits: 512, 1024, 2048, 4096, 8192 and 16 384

Scalar values: RMS, 0-Pico, Pico-Pico

Br max: 50Hz, 100Hz, 200Hz, 1kHz, 2kHz, 5Hz, 10kHz, 15kHz, 20kHz, 32kHz.

### Environment:

IP65 Rating, Temperature: -10 ° C to 55 ° C

Humidity 95% non-condensing.



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## Software DSP Machinery Control

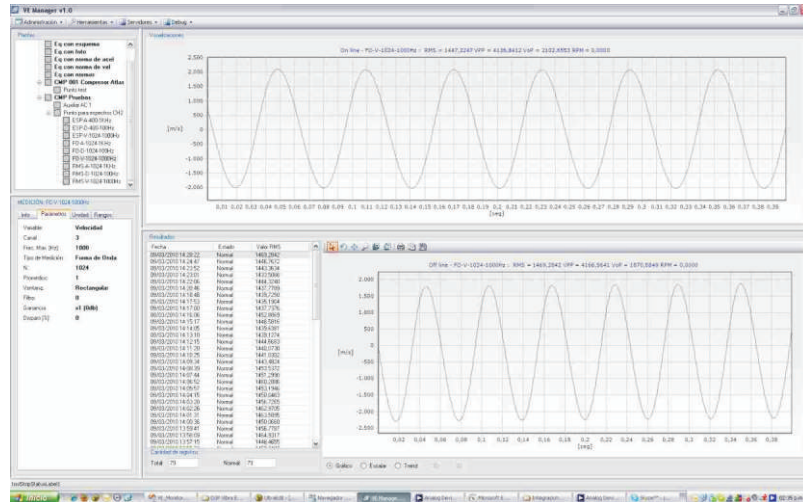
Machinery Control DSP software, is designed to organize, conduct and save the measurements that are done with the DSP module Remote Monitor. The monitoring system of the machine provides a structure derived from the number of sensors, with this new DSP Machinery Control.

### Configuration

Once equipments and the points were transferred from the analyzer, the system allows edit the points information, giving the chance of selecting the data of each point and choose bearings data within the 29,000 that have the system preloaded .

### Record

All measurements that can be made with vibration analyzer can be seen from this option of the system. This application provides the tools for the analysis of the measurements and subsequent results report to define its operating condition. Both values and spectral measurements of all types can be plotted from the history, including waveforms.



In the spectral image can be seen in greater detail all the characteristics of each component of a vibration also have automated tools for analysis, fast and easy to use



- Amplitude and frequency of a component.
- Indicate maximum peaks.
- Indicate harmonics.
- Indicate bands.
- Bearing fault frequencies.
- Harmonics bearing fault frequencies
- Tool and cursors Configuration.
- Copy of spectrums to clipboard .
- Spectrum recording as JPG image.
- Ghost Ship by date.
- Sending e-mail spectra.
- Alarm masks editor.
- Conversion of units of Hz to CPM.
- Analyzer AC motors for power spectra.
- Automatic Frequency fault characteristics Marker.
- Automatic Frequency Gear Marker.
- Automatic Frequency Belts Marker.
- Frequency Finder
- Zoom Max.
- Zoom range axis.
- Zoom on the frequency axis.
- Set logarithmic scale and line.l
- Metric / imperial Standards .

