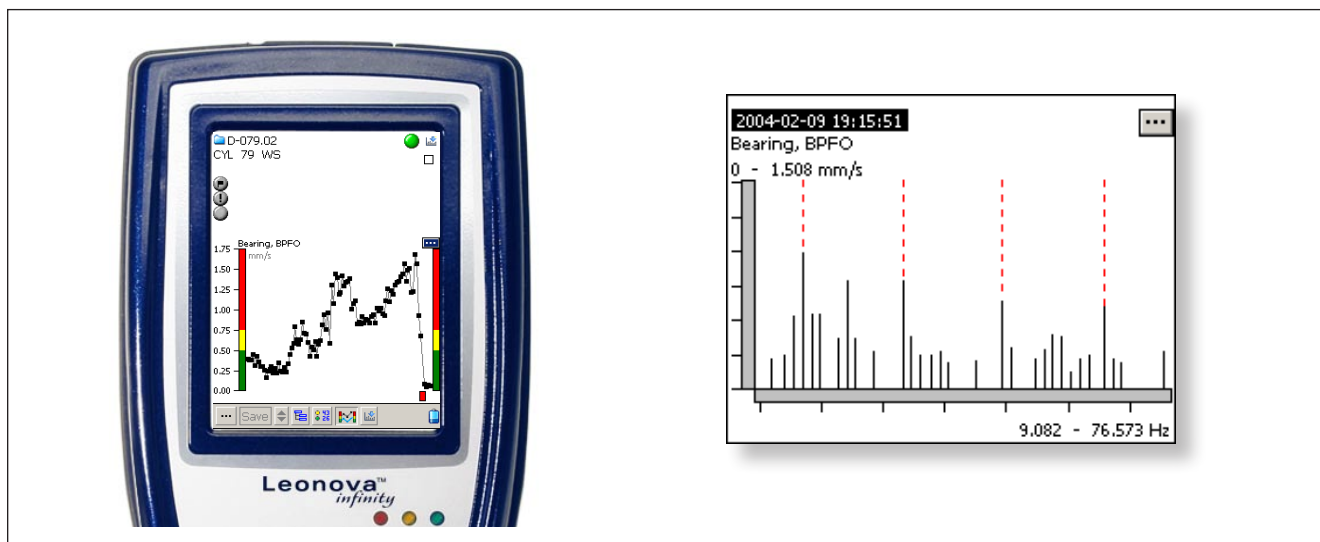


Leonova™ Infinity – FFT spectrum with symptoms



FFT Spectrum with Symptoms is a vibration analysis function offered with Leonova, for either limited or unlimited use. It is a reduced form of EVAM (Evaluated Vibration Analysis Method), lacking the function true zoom, the statistical evaluation by means of criteria and possibility to display and save time signal (option).

This function generates three sets of machine condition data:

- Condition parameters, which are measured and calculated values describing various aspects of machine vibration.
- Vibration spectra where significant line patterns are found, highlighted and evaluated with the help of pre-set fault symptoms.
- Trending of symptom values. Alarm levels are manually set for evaluation in green- yellow - red.

For each measuring point, the user can make an individual selection and define the type of data best suited for the surveillance of an individual machine.

Condition parameters

Condition parameters are measured for a selected frequency range. They can be individually activated and are shown in measuring result tables and as diagrams. Available are:

- VEL RMS value of vibration velocity
- ACC RMS value of vibration acceleration
- DISP RMS value of vibration displacement
- CREST Crest value, difference between peak and RMS
- KURT Kurtosis, the amount of transients in the vibration signal
- SKEW Skewness, the asymmetry of the vibration signal
- NL1 - 4 Noise level in the four quarters of the frequency range.

Peak and peak-to-peak values are shown in the unit selected for the time signal.

Spectrum analysis with 'symptoms'

For easy pattern recognition in spectra, a range of ready made 'fault symptoms' are downloaded from Condmaster. These are instructions to highlight a spectrum line pattern and display the sum of the lines' RMS values as a symptom parameter (which can be trended).

Most symptoms are automatically configured by using the rpm as a variable, for some an input is needed, e. g. the number of vanes on a rotor.

A special symptom group are the bearing symptoms (showing e. g. ball pass frequencies over inner and outer race) for which the Condmaster bearing catalogue contains all need data.

Suitable symptoms and symptom groups are selected from a menu in Condmaster when the measuring point is set up.

Technical data

- Frequency limit, lower: 0.5, 2, 10 or 100 Hz
- Frequency limit, upper: 100, 200, 500, 1000, 2000, 5000, 10000 Hz
- Envelope high pass filters: 100, 200, 500, 1000, 2000, 5000, 10000 Hz
- Measurement windows: Rectangle, Hanning, Hamming, Flat Top
- Averages: time synch, FFT linear, FFT exponential, FFT peak-hold
- Spectrum lines: 400, 800, 1600, 3200, 6400
- Frequency units: Hz, CPM, orders
- Saving options: peaks only, full spectrum
- Spectrum types displayed: linear, power, PSD
- Zoom: visual zoom
- Transducer types: vibration transducer SLD144 or IEPE (ICP®) type transducers with voltage output

As options, the frequency range can be extended to 40000Hz/12800 spectrum lines and possibility to save time signal.

Ordering numbers

- LEO134 FFT with symptoms, unlimited use
- LEO234 FFT with symptoms, limited use
- LEO139 12 800 lines, 40 kHz, option
- LEO164 Time signal, option to FFT with symptoms

