ACEPOM321 Vibration Analysis and Dynamic Balancer

Origin： China

Brand： ACEPOM

Model： ACEPOM321

This model of vibration analyzer designed by Anbo Technology is an integrated system of collector and computer to collect data with USB interfaces and it is a trouble diagnosis system with brand new concept. It will become a helpful assistant in your equipment diagnosis and maintenance. This system is composed of high-performance touch panel, reliable and durable acceleration sensor, current sensor and photoelectric sensor. Every component has passed elaborate design, selection and strict measurement. All performance indexes are internationally advanced and especially applicable to be used on site.

Major features:

Supporting touch panel, full-screen tough operation;

Simple process, optimized process design;

User-friendly consideration, and operators able to grasp the usage of the instruments in tens of minutes;

Small, light, compact and convenient;

Huge memory capability: 2G memory can satisfy the demands for large-capacity data collection;

Optimal functions:

Able to collection vibration speed, acceleration, shifting and other parameters;

Able to measure the spectrum and time domain waveform from channel 1 to channel 4;

Wide analysis band, strong computing capacity, and permitting the analysis range from DC to 2400000 CPM(0 ~ 40KHz); the instrument can directly calculate FFT of dual-channel 3200 line and can satisfy the vibration demands for accurate analysis of complicated machines;

Flexible collection parameter setting: high pass filter, low pass filter, sampling length, sampling frequency and other parameters can set freely to satisfy the requirement for status data collection of various mechanical equipment.

Basic parameter:

Operating system: embedded WIN7

Memory: 2G

LCD: 3.5-inch True Color LCD touch panel

Touch panel: full-screen touch operation

Communication: USB

Battery: Lithium battery, operating time>8 hours

Operating temperature range: (-10~50)℃

Humidity: 95%RH non-condensing

Working temperature range: (-10 ~ 50) ℃

Data collection

1/2 vibration channel + 1 speed channel

Collection parameter: hardware integrating processing (no integration, one integration, and two integration), able to collection acceleration speed, speed and shifting;

Independent signal processing: completely independent signal processing of various channels, ensuring the independence of the signal of various channels and avoiding interference among the channels;

Hardware process control gain amplifier: with amplification of 1,2,4,8, 16, 32,64,128 and 256 regulated automatically, effectively enhancing the signal-noise ratio of the signal;

Simultaneous collection protection: conducting simultaneous multi-channel collection for the hardware, guaranteeing the absolute same phase of the vibration signals of multiple channels;

Anti-aliasing filter: automatic adjustment of the hardware;

High-speed precision AD: 14 bit, 350K

Dynamic range: 96dB parameter setting;

Sampling frequency, high pass filter, low pass filter and sampling length can be set freely;

Spectral analysis:

Types of spectrum: amplitude spectrum, power spectrum, phase spectrum, cepstrum, etc.

Time domain sampling:

Window function: Hanning, rectangle, etc.

Machinery fault analysis:

Status monitoring and fault diagnosis of the rotor system

Various dimensional parameters and time domain waveforms display real-time memory, time windowing, logarithmic spectrum, amplitude spectrum, phase spectrum, self-correlation, mutual correlation, power spectrum, speed 3-D spectrum, time 3-D spectrum and axis orbit. It has good diagnosis effect for various rotor system faults (including rotor imbalance, rotor bending, misalignment, oil whirl, oil whipping, rotation stall, surging, friction between the rotor and stationary parts, lack of interference in the interference component of the rotor, loose connection of the rotor supporting system, dynamic instability of sealing and clearance and transverse cracks in rotation shaft). There’s single and double face onsite dynamic balance software package completely in Chinese in Windows interface, which is convenient and practical.

Status detection and fault diagnosis for the rolling bearing

With functions of non-dimensional parameter display (including waveform index, peak index, margin index and kurtosis value), dimensional parameter display (including

acceleration peak value and average amplitude), time domain waveform analysis, amplitude probability density analysis, envelope demodulation and spectral analysis. Able to conduct analysis and diagnosis for damage, friction, lack of oil and other faults of the inner and outer rings, roller and cage of the rolling bearing.

Status detection and fault diagnosis of the gear box

With functions of dimensional parameter (vibration acceleration, speed, shifting peak, average amplitude and effective value), non-dimensional vibration parameter display, time domain average, frequency domain average, envelope demodulation, power spectrum analysis and cepstrum analysis. Able to diagnose misalignment, eccentricity, local abnormity, abrasion, pitch error, unbalance and other faults of the gear box.

AC induction motor diagnosis expert system

The collection and analysis of the current signal of the motor can diagnose the rotor and eccentricity fault of the AC asynchronous induction motor, eccentricity fault of AC synchronous motor and other faults. Herein, rotor faults include: rotor breaking, ring cracking at the end of the rotor, high-impedance connection in the rotor, casting clearance and bubble in cast-aluminium rotor and poor brazed joint in wound rotor. Eccentricity faults include: uneven air space, magnetic attraction force imbalance, mechanical imbalance, rotor axis bending (thermal mechanical bending) and bearing abrasion. Specific to the aforesaid faults, this system is able to offer dimensional diagnosis conclusion concerning the fault degree as well as corresponding reference suggestions.

Single and double face onsite dynamic balance module

Guidance type operation, able to finish onsite dynamic balance within only 3 to 5 steps

Able to continue the dynamic balance from the uncompleted dynamic balance process stored

Using existing installation conditions on site, starting up and closing dow for 2 to 3 times;

Providing test weight balance method and influence coefficient method;

Decomposition and composition of vector are convenient for balance weight installation

One balance can reduce the amount of unbalance by 90%;

Production and output of the balance report

Part No.	Standard configuration of single channel	Qt
ACEPOM321A	Host	1
ACEPOM321-ZDT	Vibration acceleration sensor (USA, PCB)	1
ACEPOM321-ZDX	Sensor calbe to the acceleration sensor	1
ACEPOM321-CZ	Magnetic base	1
ACEPOM321-CD	Charger	1
ACEPOM321-BOX	Instrument box	1

Part No.	Standard configuration of double channel	Qty
ACEPOM321B	Host	1
ACEPOM321-ZDT	Vibration acceleration sensor USA,PCB)	2
ACEPOM321-ZDX	Sensor calbe to the acceleration sensor	2
ACEPOM321-CZ	Magnetic base	2
ACEPOM321-CD	Charger	1
ACEPOM30-BOX	Instrument box	1

Part No.	Optional configuration	
ACEPOM321-BAL	Dynamic balance software	
ACEPOM321-BCS	Bearing fault diagnosis software	
ACEPOM321-JGC	Rotation speed sensor	
ACEPOM321-JGC-X	Rotation speed sensor wire	
ACEPOM321-DZC1	weigher/500g/0.1g	
ACEPOM321-DZC2	weigher/200g/0.01g	