MVA1

The MVA1 Motor Vibration Analyzer detects noisy, imbalanced, or otherwise faulted DC electric motors from the motor's vibration and supply current characteristics.   Simultaneously performs no-load speed and current testing.

Sophisticated DSP algorithms analyze the input vibration and supply current characteristics of the motor under test. Dozens of frequency, amplitude, and time characteristics of the waveforms are used to indicate the presence of one of many possible fault types.

The MVA1 unit supports implementation of different test criteria for every individual motor type manufactured on the assembly line. Each motor can be simultaneously tested for up to ten independent fault types (ie. Balance, clicking, transients, high-frequency noise, commutation noise, brush noise, speed, and current abnormalities.)

Designed to interface to any common PLC or PC. Highly reliable and repeatable results.

Proven to provide the highest and most consistent quality control in the factory setting – **far superior than the human ear**.


DSP Analysis

The MVA1 tester is based on DSP technology that allows high-speed analysis of dozens of characteristics of the incoming current and vibration waveforms. These include the spectral information used by traditional noise testers, as well as a variety of temporal characteristics of the waveforms.

The motor's characteristics are analyzed for nearly the entire test cycle time.

A motor that meets automotive requirements for spectral characteristics may still emit perceptible clicking or ticking sounds. The temporal analyses performed by the DSP processor targets (and catches) these types of motor faults.
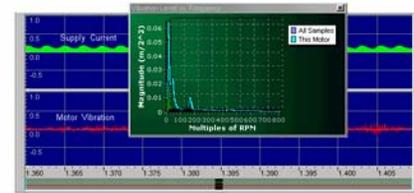
FEATURES

➢ Tests for noisy motors – spectral and temporal characteristics

➢ Catches clicks, ticks, and chirps on motors that pass spectral characteristic testing

➢ Performs no-load speed and current tests

➢ Reliable, consistent results

➢ Simultaneously learn and test multiple part types

➢ Minimal setup. Once basic motor information and tests are defined, the tester automatically learns the motor and begins testing

➢ Versatile interface to any automated assembly line

➢ Fast, (programmable) cycle time

➢ Versatile fault detection programming