G-TECH

Fieldpaq III

2-Channel Handheld Dynamic Signal Analyzer





Key Features

- Rugged & Portable 2-Channel Spectrum Analyzer with IP65 industrial protection rating and CE safety certification, designed for measurements in harsh environments.
- Built-in high-capacity rechargeable battery for extended operation.
- 7-inch color touchscreen (1280x800 high resolution) with a high-sensitivity touch panel, providing a user-friendly and intuitive interface.
- 40 kHz measurement bandwidth, 24-bit analog/digital signal converter, and 100 dB+ dynamic range, ensuring high accuracy and precision in signal measurement.
- Supports overall vibration value measurement, vibration/sound spectrum analysis, and in-field rotor balancing.

Rotor Balancing Analysis Features

in-field rotor balancing for rotating machinery, supporting single-plane, dual-plane, cantilevered dual-plane, three-plane, four-plane, and three-point weighting balance methods.
Additional functions include 1X coast-down testing, unequal radius calculation, component calculation, drilling depth calculation, vibration historical data, and balancing historical data.

Spectrum Analysis Features

Vibration and sound measurement analysis functions, including:
Power Spectrum Analysis
Experimental Modal FRF Testing
Envelope Analysis
3D Waterfall Plot
Intensity Chart
Bearing Fault Frequency Analysis

Vibration Meter Features

Supports 1 to 4-channel overall vibration value measurement, with real-time display of vibration displacement, velocity, and acceleration.
Records vibration trend graphs based on time or changes in rotating speed.
Complies with ISO 20816-3 and ISO 17243-1/2/3 standards for rotating machinery vibration measurement, with user-defined vibration filters.

Specifications

Operating System	Windows 10 IoT Enterprise
Input Channels	2 analog input channels, 1 tachometer
Connectors	input channel
	CH1–CH2 Connectors: BNC
	AUX: Lemo 6 pins
Analog Input Coupling	AC, DC, IEPE
Tachometer Input	TTL signal, built-in power supply
CPU	Intel® Pentium® Processor N4200
Internal Storage	128GB eMMC
Battery	7.2V, 32.7W & 7.4V, 11.3W
USB	USB 3.2 Gen 1 Type-C × 1

Display	1280x800 7-inch multi-touch color screen
Operating Temperature	-10°C to + 50°C
Safety Certification	CE
Drop Test Certification	1.2m MIL-STD 810H
Vibration Test Certification	MIL-STD 810 Transportation
Protection Rating	EN60529 IP65
Enclosure Material	ABS + PC
Weight	1,270 g
Dimensions	230 x 150 x 60 mm
Input Channel Voltage Range	±50 V, ±20 V
Analog/Digital Converter	24-bit delta-sigma A/D converter
Measurement Frequency Range	0 Hz~40 kHz

Rotor Balancing Analysis Features

Rotor Types	Single-plane, dual-plane, cantilevered dual-plane, three-point weighting, three-plane, and four-plane balancing
Balancing Speed	60 rpm to 300,000 rpm
Multi-Point Balancing	Single-plane two-point, single-plane three-point, single-plane four-point, and dual-plane four-point balancing
Heavy-End Position Prediction	Continuous measurement of 1X harmonic amplitude and absolute phase angle during deceleration
Signal Resolution	Low, Normal, High, 0.03, 0.015, 0.008, and 0.004 order
Balancing Grade	Balancing grade calculated according to ISO 21940 or user-defined
Additional Functions	Unequal radius calculation, component calculation, drilling depth calculation, vibration historical data, and
	balancing historical data

FFT Spectrum Analysis Features

Maximum real-time bandwidth	40 kHz / 12,800 resolution, with two channels enabled simultaneously
Spectrum resolution	100 to 12,800 lines
Continuous measurement	Continuous spectral measurement displayed in 3D waterfall or intensity chart
Window function	Hanning, Hamming, Flattop, Rectangular, Force, Exponential
Analysis function	Spectrum, Power spectrum, Cross power spectrum, FRF, Time waveform, Envelope spectrum, Orbit,
	Coherence, PSD, Zoom FFT
Averaging method	Off, Linear, Exponential, Time, Peak hold
Trigger	External, input channel, pre/post triggering
Engineering units	Automatic conversion of physical quantities
Cursor	Single, Harmonic, Harmonic + single, Dual, Peak, Mark cursor

Vibration Meter Features

Measurement units	Displacement, Velocity, Acceleration
Detection method	RMS, Peak, Peak to peak, True peak
Filter range	2 Hz–1 kHz, 5 Hz–1 kHz, 10 Hz–1 kHz, 10 Hz HP, 500 Hz HP, 1 kHz HP, 2 kHz HP, ISO 20816-3, ISO 17243-1/2/3
Display method	Trend graph or bar chart
Vibration level threshold	Built-in ISO 20816-3, ISO 17243-1/2/3 vibration levels or user-defined

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