

# LORD Balance Check™ Portable Instrument

## Description

LORD Balance Check™ portable instrument is a dual-channel balancing instrument used to provide real-time Fast Fourier Transform (FFT) vibration analysis and conformance testing for a broad range of rotating equipment.

LORD Balance Check instrument can operate as a stand-alone instrument or can be interfaced with a variety of printers and IBM-compatible PCs for either uploading/downloading applications or subsequent data analysis.

## Features and Benefits

**Durable** – provides a rugged, lightweight construction for use in indoor or outdoor industrial environments.

**Easy to Use** – provides on-screen help and data transfer functions; allows customization of standard modules.

**Convenient** - provides the ability to print directly from the instrument in the field; increased data storage using MS Excel.

**Accurate** – allows upload of real machinery images and specified sensor positions to ensure valid data collection.

## Product Specifications

### Processing

Processor	400 MHz X-Scale Intel PXA255
Operating System	Windows CE, Net v4.2
Battery	Rechargeable LI-Ion
Communication	ActiveSync – USB, Serial, IrDA
SDRAM	64 Mbyte
Flash Storage	64 Mbyte
PC Card	PCMCIA Type II
CF Card	Compact Flash Type II
MMC/SD Card	MMC/SD Memory Card
Connectors Input Power/Trigger RS232	6-pin Fischer Connector® (two connectors) 7-pin Fischer Connector® 9-pin Plug D-Type

### Data Collection

Input Signal Types	ICP® Accelerometers, Velocity Transducers, Displacement Probes, Photo-Optical Pickups, Acc/Vel Transducers, AC/DC Inputs, Keypad
Signal Inputs	2 x ICP, AC Signals, DC Signals, Tacho from Trigger, Power in Battery Charge, Trigger In
Tachometer	Input: +/- 40 Volts; Supply: +5 Volts
Measurement Parameters	Acceleration, Velocity, Displacement, ESP, Phase, Voltage

*Fischer Connector is a trademark of Fischer Connectors SA.  
ICP is a trademark of PCB Group, Inc.*

## Typical Properties\*

### Physical

Size, in (mm)	7.32x3.66 (186x93) narrowest point; 7.32x5.28 (186x134) widest point
Weight, lb (g)	1.5 (700)
Display	1/4 VGA color TFT screen

### Environmental

Operating Temperature, °F (°C)	14 to 122 (-10 to +50)
Storage Temperature, °F (°C)	-4 to +140 (-20 to +60)
Drop Test, ft (m) Mil 810 Specification	6.5 (2)
Sealing	IP65 (Dust and Water Proof)

\*Data is typical and not to be used for specification purposes.

# LORD TECHNICAL DATA

## Data Collection (cont'd)

Measurement Types	Overall, Spectrum, Time Waveform, Phase
Input Channels Channel 1 Channel 2	2 Simultaneous ICP / AC / DC ICP / AC / DC
Input Signal Range	+/- 40 Volts max
Signal	RMS / Peak / Peak to Peak / True Peak / True Peak to Peak
Transducer Check	ICP Open Circuit Check
Auto Range	Yes
Dynamic Range	> 90 dB
Frequency Range	DC to 40 kHz max
AC / ICP	0.16 Hz min
Integrated	0.22 Hz min
Filters – High Pass	2, 10, 70 Hz
Bearing Condition	ESP (Envelope Signal Processing)
ESP Filters	0.6–1.25 / 1.25–2.5 / 2.5–5 / 5–10 / 10–20 kHz
Real Time Rate	40 kHz (single channel)
FFT Resolution	100-12,800 Lines (single channel)
Time Block Length	256-32,768 Samples (single channel)
Averaging	Conformance Check: RMS (spectral) Vibration Analyzer: Exponential Bump Test: Peak Hold or Exponential

## Optional Accessories

Measurement Modules	Conformance Check (provides Pass/Fail indication) Vibration Analyzer/FFT Recorder/Data Logger
Cables	Accelerometer Extension Tachometer Extension USB/Power/Tachometer Splitter
Case	Transit Case Soft Cover Rubber Bump Guard Hand Strap
Storage	SRAM Storage Card PCMCIA Storage Card
Power Supply	Spare Battery Power Supply Cables (Australia, European Union, South America, United Kingdom, USA)

Values stated in this technical data sheet represent typical values as not all tests are run on each lot of material produced. For formalized product specifications for specific product end uses, contact the Customer Support Center.

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LORD provides valuable expertise in adhesives and coatings, vibration and motion control, and magnetically responsive technologies. Our people work in collaboration with our customers to help them increase the value of their products. Innovative and responsive in an ever-changing marketplace, we are focused on providing solutions for our customers worldwide . . . Ask Us How.

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