MotionGo MVS -- *Gen2*

Miniature LDV with Automatic Zoom

Product Introduction

MotionGo MVS is a miniature full - function laser vibrometer.

- Tailored for Harsh Conditions: Custom - designed for medium to long - range harsh environments, equipped with an auto - focus lens.
- Integrated Functional Units: Features built - in data processing and computing units, enabling simultaneous digital and analog output. With a 5M sps sampling rate, it precisely measures vibration signals from DC to 2.5MHz.
- Network - ready and Sensor - compatible: As an intelligent unit, it supports large - scale networking, has sync I/O interfaces for network - synchronized measurements, can receive external triggers, and sync with other sensors.
- Versatile Signal Output: Allows analog output for seamless connection to traditional data - acquisition - card - based measurement systems.
- Superior Performance Metrics: Boasts excellent noise performance with a max vibration velocity of 4.5 m/s (special model at 20 m/s). Leveraging proprietary MODEM algorithms, it features with supreme static characteristic, can be used as a long range laser displacement sensor.
- Ultra - compact and Integrated Design: Despite its robust functionality, MVS is palm - sized. It uses an integrated optical chip which combine optical coherents on a single chip, bypassing the bulkiness of discrete components. This compactness enables easy integration into vibration tables, robot platforms, or drones, facilitating future intelligent sensing via non - contact laser vibrometry.

Product Features

- Dual light source: 1310nm (Measurement) + 655nm (Guidance)
- Automatic Zooming focusing lens,0.2 - 4 Meter
- Support large - scale networking
- Support channel synchronziation
- maximum velocity measurement range:<4.5m/s
- Simultaneous digital output and analog signal output
- Based on highly integrated silicon optical chips
- Premium DC performance as displacement sensor
- Ethernet Inteface
- Smart sensor, customized DSP can be offered
- User SDK available

Application Fields

- Ultrasonic material science and application
- MEMS device vibration test
- Mechanical vibration test
- Electro - acoustic device vibration test
- Home appliance & compressor vibration test
- Industrial online quality inspection
- Material non - destructive testing
- Automotive NVH & noise detection
- Modal test & ODS analysis
- Bridge & dam health monitoring
- Environmental vibration assessment

Specification

Parameter (Unit)	Value	Parameter (Unit)	Value
Measuring Distance (m)	0.2~4	Measuring Frequency Range (Hz)	DC~2.5M
Displacement Noise Density (pm/√Hz)	Minimum 0.1	Velocity Range (m/s)	Maximum 20
Displacement Resolution (nm)	0.01	Displacement Repeatability (nm) (>1kHz)	Minimum 0.01
Laser Wavelength	1310nm measurement light, 655nm indication light	Measuring Laser Output Power (mW)	<5
Measuring Laser Safety Class	CLASS I	Indication Laser Output Power	Adjustable
Ambient Light Interference (Lux)	>60000	Protection Level	IP64
Operating Temperature Range (°C)	0-50	Housing Material	Aluminum Alloy
Supply Voltage (V)	DC12	Power Consumption (W)	<4
Digital Output Signal Interface	Ethernet 100BaseT	Analog Output Signal Interface	SMA
Analog Output Sensitivity Gear	24 gears, digitally auto - adjustable	Analog Output Sensitivity Range (mV/mm)	0.0005-4444
Trigger Signal	Rising Edge	Network Synchronization Signal	Square Wave (1Hz)
Trigger/Synchronization Interface Selection	Input and Output	Synchronization Accuracy (μs)	0.2
Dimensions (mm) (Length*Width*Height)	120x50x60	Weight (g)	570

Product Outline and Dimensions (Unit: mm)