The World Smallest Laser Vibrometer

MotionGo

Product description

MotionGo is a miniature-size full-featured laser vibrometer with built-in data processing unit. MotionGo support both digital output and analog output at the same time. The data sampling rate is 5M sps, which can accurately test vibration signals from DC to 2.5MHz. MotionGo is equipped with a complete sets of lens system, which supports the target distance from 4cm to 40 meter. The foci of these lenses can be manually adjusted.

As an intelligent measurement unit, MotionGo can be integrated with multiple units of its kind to measure large objects from various points simultaneously. This capability allows for comprehensive and precise measurements across extensive areas of an object. MotionGo is equipped with synchronous input and output port. MotionGo can also accept external trigger signals, supporting synchronous measurement together with other types of sensors. MotionGo also supports analog signal output, which can be easily connected with data acquisition cards, and enable the system upgrade of a traditional vibro testing system with non-contact measurement capability.

MotionGo has excellent noise performance, supports testing up to 40 meters away,. Based on patented algorithms and excellent quality control, MotionGo also has excellent DC performance and can be used as a accurate displacement sensor with meter scale displacement range.

To sum up, MotionGo can be widely used in many areas, such as aerospace material testing, structural mechanics testing, semiconductor micro-electromechanical testing, ultrasonic material testing, new energy processing, etc.

Product Features

- Highly Integrated, based on PIC.
- Supreme DC performance, 0~2.5Mhz bandwidth.
- Velocity Range 20m/s .
- Sync-ed with Trig IN&OUT.
- Support both digital and analog output .
- Ethernet Inteface.
- Smart sensor, customized DSP can be offered.
- User SDK available.

Performance parameters

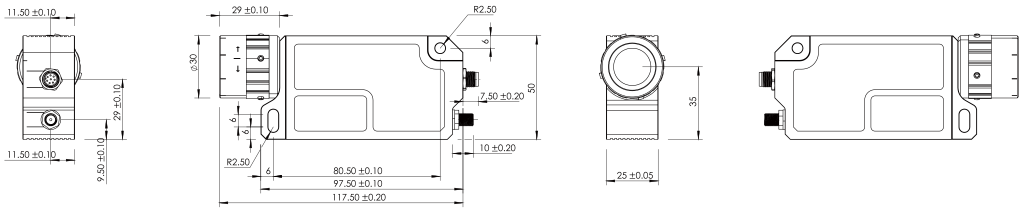
MotionGo			
Parameters (Units):	Value	Parameters (Units):	Value
Measurement Distance (m)	0.025~100	Measurement Frequency Range(MHz)	DC~2.5
Noise Density (pm/√Hz)	<0.3	Speed Range (m/s)	>20
Displacement Resolution (nm)	0.01	Displacement Repeatability (nm) (>1 kHz)	<0.1
Laser Specification	1310nm Measurement, 655mm indicator	Measurement Laser Output Power (mW)	<5
Laser Safety Class	CLASS Ⅰ	Indicator Laser Output Power	Class I or Adjustable
Stray Light Interference (Lux)	>60000	Protection Class	IP64
Operating Temperature Range (°C)	0~50	Casing Material	Alluminum
Supply Voltage (V)	DC12	Power Consumption (W)	< 4
Digital Interface	Ethermet 100BaseT	Analog Output Signal Interface	SMA
Analog Sensitivity Range	24 level，automatic	Analog Output Sensitivity Range (mV/碌m)	0.0005~4444
Trigger Signal	rising edge	Network Synchronization Signal	方波(1Hz)
Trigger I/O	Input & Output	Synchronization Accuracy	0.2 ms
Dimensions (mm) (L*W*H)	110x50x25	Weight (g)	300

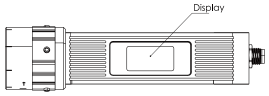
Performance parameters

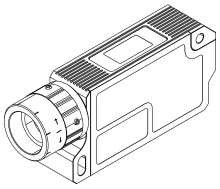
Selection list					
PN	Depth of field	Max speed (meter/second)	Spectral floor noise @10cm	Laser Source	Max distance
MV-GW-TR-L	10%	1.5	10pm/√Hz	low power	~10 meter
MV-HW-TR-L	10%	4.5	1pm/√Hz	high power	~40 meter
MV-HW-TR-S	20%	4.5	1pm/√Hz	high power	~40 meter
MV-HW-TR-LC	10%	4.5	0.3pm/√Hz	low noise	~100 meter
MV-HW-TR-SC	20%	4.5	0.3pm/√Hz	low noise	~100 meter
MV-GW-TR-U	20%	20	0.1pm/√Hz	low noise	~4 meter

Product outline and dimensions

UNIT： mm







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