Single-point laser Doppler velocimeter, PNV-RD-AVD1

Overview

The PNV-RD-AVD1 is a high-performance, portable single-point laser vibrometer. It utilizes a 633nm laser wavelength and has a safety classification of Class II. It can measure distances up to 20 meters in reflective environments. Users can choose between models with automatic focusing, allowing them to selectively measure displacement, velocity, and acceleration as needed. The instrument features a fully digital demodulation system, supporting both digital and analog outputs, and external triggering. It can also be used with a power bank.



Parameters

Parameters	Standard features	Customized for the customer
Measurement points	1	
Laser	Helium-Neon laser (632.8 nanometer wavelength, Class 2, safe for direct eye exposure)	
Measuring distance	0.2 meters – 20 meters (with variable focus, up to 30 meters with a reflective film)	
Laser beam spot size	20 micrometers - 500 micrometers	Less than 10 micrometers
Measured physical quantities	Displacement, speed, and acceleration (selected by the customer via software)	
Frequency measurement range	0.1Hz - 250kHz	Up to 5 MHz
Speed measurement range	10mm/s - 2m/s, with adjustable speed settings	Customized for the customer
Acceleration range	10-2-106m / s² 10-2-106 m/s²	
Resolution	Speed: 0.02 μ m/s / √ Hz Start time: 1:00 PM	
Decoding system	FPGA-based digital demodulation system (real-time output)	
Control Interface	Software control	
Decoding data output	Digital Output (USB 3.0 interface) Simulated Output (SMA connector, supports vibrations up to 250 kHz)	
Standardized thread specifications for the system	M4, M6, 1/4"-20	Customized for the client
Software	Software based on the Windows operating system, with the ability to display, analyze, and store measurement data.	High-performance laptops are available with solid-state drives (SSDs)
Power	Type C port, compatible with power banks	
System size	300mm (length) x 62mm (width) x 120mm (height)	
Measuring the trigger interface	TTL signal, SMA connector	
Warranty	One year	Two years is an option

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