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# Multipoint Laser Doppler Vibriometer FNV-R4D-VD1

## Overview

The FNV-R4D-VD1 laser Doppler velocity meter is a 4-point self-synchronizing laser velocity measurement system that can provide measurement data from four points simultaneously. It uses a 633nm laser wavelength and has a safety classification of Class II. In reflective environments, it can measure distances up to 20 meters. Users can choose to measure displacement, velocity, and acceleration as needed. The instrument utilizes a full digital demodulation system and supports both digital and analog outputs, as well as external triggering.




## Parameters

| Parameters | Standard features | Customized for the customer |
|---|---|---|
| Measurement points | 4 | |
| Laser | Helium-Neon laser (632.8 nm wavelength, Class II, Eye-safe) | |
| Measuring distance | 0.2 meters – 5 meters (adjustable focus lens, with reflective film, can reach up to 30 meters) | |
| Laser beam spot size | 20 micrometers - 500 micrometers | |
| Measured physical quantities | Displacement, speed, and acceleration (selected via software) | |
| Frequency measurement range | 0.1Hz - 100kHz 0.1 Hz - 100 kHz | |
| Synchronization between channels | 20ns | |
| Speed measurement range | Adjustable speed: 10mm/s - 2m/s | |
| Resolution | Speed: 0.02 μ m/s / √ Hz<br>Shift: 5 PM | |
| Decoding system | FPGA-based digital demodulation system (real-time output) | |
| Control method | Software control | |
| Measure the length of the coaxial cable connected to the system. | 2m | |
| Measure the threaded hole for the mounting bolt. | M4, M6, 1/4"-20 | |
| Decoding data output | Digital Output (USB 3.0 interface)<br>Simulated Output (BNC interface) | |
| Power | 110V-240V, 50Hz-60Hz | |
| Software | Windows-based software for displaying, storing, and analyzing measurement signals. | Optional laptop with SSD |
| Trigger interface | TTL Signal, BNC interface | |
| Measuring the size of the head | 300mm (L) x 60mm (W) x 120mm (H) | |
| Warranty period | One year warranty | Optional 2-year warranty |

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