PDV
PHOTONIC DOPPLER VELOCIMETRY

NEW PDV SYSTEM - For more reliable measurement on your high speed phenomena

IDIL Fibres Optiques developed the first industrial Photonic Doppler Velocimeter for shocks and detonic applications. This technology allows to measure unique or multiple speeds, in the range of 0 to 20 km/s with an excellent temporal resolution. A dedicated software, based on a Fourier Transform algorithm, allows a rapid visualization of the speed fields. With a 5U height, the compact and modular system allows the user to build its PDV system from 1 to 4 measurement channels.

This new system integrates some improvement such as : low velocity measurement option with a fixed shift frequency, red alignement laser directly integrated on each output, all parameters adjustable on touchscreen...

Additional infos

The processing software allows : the visualisation of raw signals (bin, wfm, csv and most of native file of digitizer); Time-frequency treatment and display; Multi-speed visualisation and Automatic speed extraction.

The system contains : 1 mainframe with high power laser (up to 350mW by channel) and one reference laser; 4 slots for PDV measurement channel; 1 processing software; 1 flight case. (digitizer not provided)

Applications

- Shock physics
- Solid materials
- High explosives
- Gun
- Particle ejection
- Plasma..

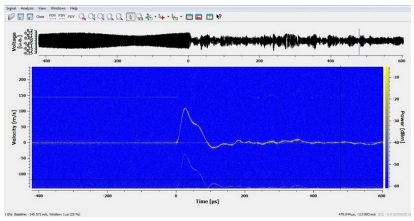
Features

- Non-contact laser measurement
- Compact
- Controlled by 7” touchscreen
- Modular and scalable (1 to 4 channels)
- Attractive initial cost for one channel system
- Easy use and installation
- Frequency up-shifting
- Continue or pulse operation
- Fibered VISAR option

Specifications

Photonic Doppler Velocimeter	
Displacement interferometer	High dynamics (>27 dB)
Eye safety (1.55 µm), all fibered design	Minimum reflectance required -60 dB
Speed measurement : 0 to 20 km/s	High sensitivity (>50 dB)
Speed uncertainty : t v = 150 ns.m/s	Up to 4 measurement channels
(function of the width of the Fourier window analysis)	Ethernet interface
Speed uncertainty : +/- 3 m/s for 50 ns	Continuous or triggered mode
Speed uncertainty : +/- 0.5 m/s for 300 ns	Low heat deposition on sample
Time uncertainty : 200 ps on the raw signal,	-
5 ns on velocity after porcessing	Manufactured under CEA license

soft PDV



Related products

- Photonic Doppler Velocimeter 32 channels

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