Long Range LDV System

Overview

The Long Range LDV Probe follows the ILA's approach of building high reliable LDV probes with incorporated lasers and without optical transmission fibers.

The greatest advantage of our approach is that between 80 to 90 % of the laser power is transferred to the measurement volume, furthermore it involves a reduction of costs due to the omission of the additional optical fibers.

A Nd:YAG-Laser is built-in the probe, with a wavelengths of 532 or 561 nm and a maximal power up to 500 mW. The Probe does not require further adjustments after delivery, this fact simplify and optimize the measurement procedure.

The optical setup generates a very small measurement volume for long focal lengths. The generated measurement volume has dimensions equal to 0,4 x 2,1 mm and 0,8 x 8,4 mm at 1 and 2 m focal length respectively.

Main Features

- Long focal length
- Small dispersion effect
- No optical transmission fibers
- High laser power transferred
- Long term stability
- Good visibility
- Automatic traversing (optional)

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Specifications

Long Range LDV Probe

Dimensions	150 x 462 x 90 mm (L x W x H)
Weight	11.6 kg
Laser Power	75, 100, 150, 200, 300, 500 mW
Power Adjustment	30-100 %, optional
Wavelength	532 nm
Coherence Length	≥ 100 m
Focal Length	Up to 2 m
Beam Distance	401 mm

1D LDV Controller

Dimensions	330 x 370 x 150 mm (*)
Weight	7 kg
Signal Detector	Photomultiplier
Communication	Ethernet Connection

(*) LDV Controller also available for 19" rack

Spectral Analysis Module

Sample rates	50 MHz, 250 MHz, 1 GHz
Resolution	8 Bit, 12 bit, 14 bit
Input range	+/- 100 mV, +/- 200 mV, +/- 500 mV, +/- 1 V
Interface	PCI-ex

Accessories

- Traversing units with up to 4 axes and displacement from 200 mm up to 2 m
- Traversing software for different suppliers integrated in LDV software *LDA Control Qt*
- Raytracing Software
- Receiving optical fibers
- Integrated IF Converter with 6 analog input channels (4-20 mA)
- ILA Workstation for LDV-Measurements
- Seeder and particles

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