3D Full-field Scanning Vibrometer
TP-LSV-400-3D

3D Full-field Scanning Vibrometer TP-LSV-400-3D is designed based on mature scanning vibrometer technology. All functions of TP-LSV-400.
The motion control system controls the deflection Angle of the scanning mirror to realize the scanning vibration measurement of X, Y and Z.

3D Full-field Scanning Vibrometer TP-LSV-400-3D is the latest product specially developed for system noise and vibration measurement. It can quickly and automatically scan the working deformation and characteristic form of complex structure, with broadband measurement capability.

For large structure, high temperature, soft objects and other contact measurement can not meet the vibration measurement field provides a good solution.

Features

◎3D Full-field Scanning Vibrometer TP-LSV-400-3D is equipped with a high-precision scanning vibration mirror in front of the laser vibration measurement module;

◎The motion control system controls the deflection Angle of the scanning mirror to realize the scanning vibration measurement in X and Y directions;

◎Frequency range up to 3MHz(custom up to 25MHz);

◎Equipped with camera system, can realize man-machine interaction;

◎Equipped with software analysis system, it can realize 2d and 3D animation display and data analysis, etc;

Benefits

◎It equipped with a camera system to achieve human-computer interaction;

◎It equipped with software analysis system to achieve 2d and 3D animation display and data analysis;

◎It provides advanced non-contact measurement technology for visual measurement and analysis of vibration characteristics of object structure;

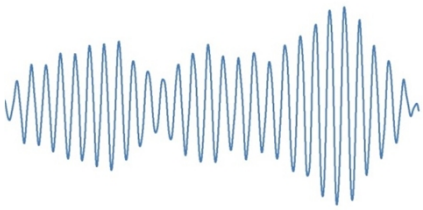
◎It can quickly scan the surface of the object and flexibly define the measuring area and measuring

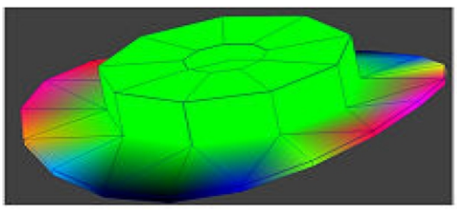
◎ Equipped with a special THREE-DIMENSIONAL vibration measurement and analysis software can intuitively display the scanned object's three-dimensional formation;

◎ Complete solutions including optics, signal processing, software and data acquisition;

◎It can be used to measure three-dimensional vibration characteristics of large equipment;

◎It can be widely used in NVH, structural mechanics analysis, acoustic detection, ultrasonic, automotive, aerospace and other applications;





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TP-LSV-400-3D System Specification

Optical Specifications

laser Safety Level	< 2mW Class II
Working Distance*	0.2m-20m(depending on the surface of the object to be measured)
Laser Wavelength	632.8nm
Scanning Angle(VxH)	40°x50°
Max. Measured Velocity*	±10m/s
Displacement resolution	⩾1pm
Max. Linear Error	<±1%
Max. bandwidth	3MHz (can be expanded to 25M according to customer demand)
Velicity Decoder	VD-16 broadband digital velicity decoder
Displacement Decoder	Dd-21 broadband digital displacement decoder
Filter Setting	High-pass, low-pass filtering, tracking filtering

General Specifications

Supply	100~240AC ±10%, 50/60Hz
Scanning Parameters	Angular Resolution <0.001°; Angular Stability <0.001°/h; Max. 30 points/s;
Vidicon	360 times zoom (30 times optical zoom x 12 times digital zoom)
Mechanical Interface	1pcs: 1/4-20 thread (for connecting tripod); 4pcs: 4 M6 threads;
Analog Output	Two BNC ports output ±10V(speed, displacement)
Digital Output	RJ45 Gigabit Ethernet
Size	LV-SC400-3D Optical Head: 399mm X 223mm X 166mm; LV-SC400-3D Controller: 450mm X 421mm X 149mm;
Weight	LV-SC400 Optical Head: 11.5kg; LV-SC400 Controller: 10.5kg;
Operating temp.	+5°C... +40°C
Storage Temp.	-10°C... +65°C
Relative Humidity	⩽80%

Figure

TP-LSV-400-3D Optical Head

TP-LSV-400-3D Controller

Application

Machine Industry

Ultrasonic Vibration Measurement

Appliance Industry

MEMS

Automobile Industry

Data Storage

Aerospace

Advanced Material

* Customized services can be provided according to customer requirements

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