

VibroFlex Neo

The Polytec VibroFlex laser Doppler vibrometer is a modular high-performance solution for non-contact vibration measurement. It offers unrivalled measurement performance and versatility for solving pressing vibration issues in both R&D and industrial quality control.

The VibroFlex family comprises the front-end VibroFlex Connect and a selection of non-contact laser sensor heads. Integrated with the VibSoft data acquisition and analysis software, the vibration measurement system is ready to go. Study acoustics, dynamics and vibrations on nano to macro structures without contact and with laser precision.

VibroFlex Neo is the robust and reliable laser Doppler vibrometer for demanding vibration measurement tasks. Gather high-resolution vibration data anytime, and even measure through transparent media like glass for climate chamber tests or water like fluid-coupled ultrasonic analysis.



Highlights

- Outstanding nominal signal-to-noise ratio (SNR)
- Integrated signal level indicator for optimizing data quality
- Fast remote and auto focus for best signal quality
- Measures through transparent media like glass or water
- Full remote control for zero impact on the measurement setup

VibroFlex Neo

For demanding vibration measuring tasks
Preliminary datasheet



Technical data

General specifications



Model	VibroFlex Neo VFX-I-110
Weight	3.3 kg
Protection class	IP40
Dimensions [W x H x L]	125 x 88 x 365 mm
Operating temperature	+5 °C ... +40 °C (41 °F ... 104 °F)
Storage temperature	-10 °C ... +65 °C (14 °F ... 149 °F)
Relative humidity	max. 80%, non-condensing
Controller compatibility	VibroFlex Connect
Maximum velocity	± 12 m/s

Optical specifications

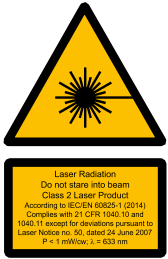
Laser type	Helium Neon (HeNe)
Laser class	Class 2, < 1 mW, eye-safe
Laser wavelength	633 nm, visible red laser beam
Focus	Auto focus, remote focus, manual focus
Maximum stand-off distance	ca. 100 m (with VFX-O-LRS long range front lens, surface dependent)
Visibility maxima ¹	207 mm + n · 204 mm; n = 0, 1, 2, 3, ...

Working distance and laser spot size

Front lenses	VFX-O-SRS short range	VFX-O-LRS long range
Min. stand-off distance [mm] ¹	34	390
Max. stand-off distance [m] ¹	ca. 15	ca. 100
Exit beam diameter (1/e ²) [mm]	3...5	12...14
Typical spot size in µm at		
34 mm	14	–
100 mm	20	–
200 mm	37	–
300 mm	53	–
400 mm	70	23
500 mm	87	30
1,000 mm	171	64
2,000 mm	345	132
3,000 mm	526	201
5,000 mm distance	906	340
Each additional meter add [µm]	+190	+70

Compliance with standards

Laser safety	IEC/EN 60825-1	
Electrical safety	IEC/EN 61010-1	
EMC	IEC/EN 61326-1	
	Emission:	Limit class B IEC/EN 61000-3-2 and 61000-3-3
	Immunity:	IEC/EN 61000-4-2 to 61000-4-6 and IEC/EN 61000-4-11



¹ Measured from the front edge of the front lens.

Please contact your local vibrometer sales engineer or visit our website www.polytec.com/vibroflex for more detailed information.

Options and accessories



Optical accessories

VFX-O-SRS SR Front Lens	Short Range front lens for measuring at short working distances (highest depth of focus)
VFX-O-LRS LR Front Lens	Long Range front lens for measuring at long working distances



Tripods

VIB-A-T02 Standard Tripod	Easy targeting on the object under test
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VIB-A-T05 Tripod with Geared Pan/Tilt Head	For precise pointing of the sensor head. The geared pan/tilt head allows quick coarse adjustment and fine adjustment in 3 axes
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Transportation cases

VIB-A-CAS11 Transportation Case for VibroFlex Neo (VFX-I-110)	Robust transportation case for the sensor head (included with sensor head)
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Positioning stages

VIB-A-P01 Tripod Mountable Tilt Stage	The tilt travel is $\pm 9^\circ$. Quick release plates to interface with VIB-A-T02 and VIB-A-T05 tripods are included.
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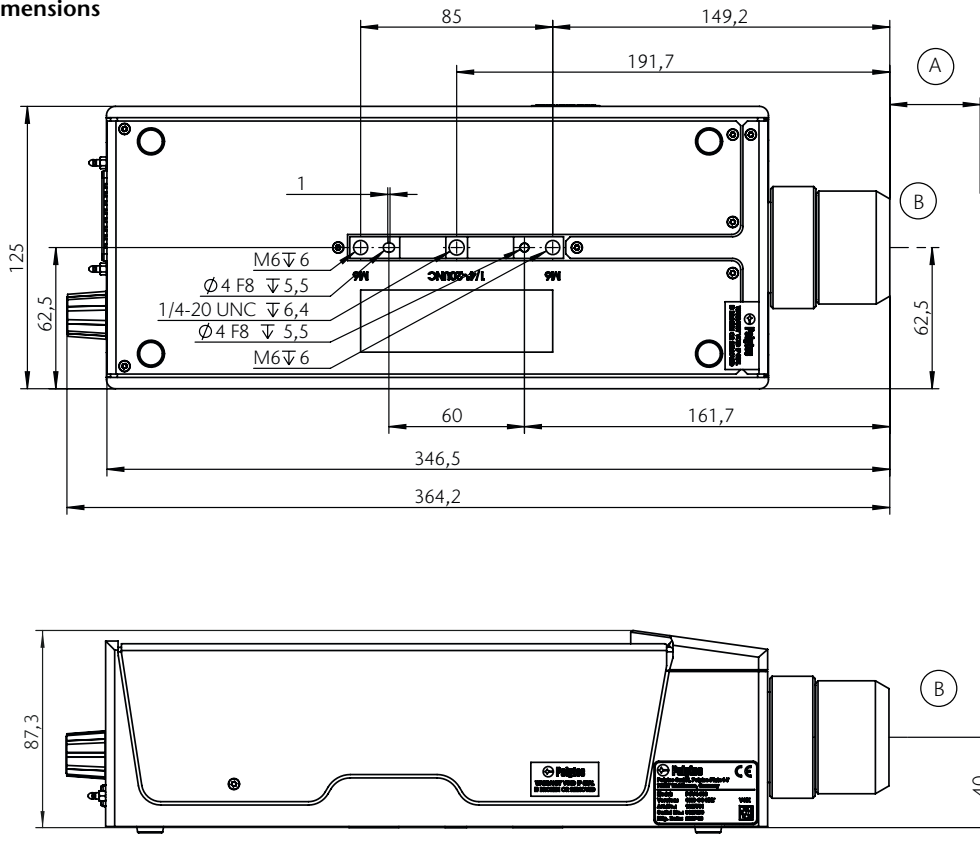
VIB-A-P02 Tripod Mountable Traverse/Tilt Stage	The travel of the traverse stage is 105 mm and the tilt travel is $\pm 9^\circ$. Quick release plates to interface with VIB-A-T02 and VIB-A-T05 tripods are included.
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VIB-A-P06 Tripod Mountable X/Y/Tilt	The travel of the x & y traverse is 100 mm along and across laser beam and the tilt stage is $\pm 9^\circ$. Quick release plates to interface with VIB-A-T02 and VIB-A-T05 tripods are included.
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Please contact Polytec's application and sales engineers who will help to choose the appropriate accessories like VibSoft data acquisition and analysis software.

Dimensions


All dimensions in mm if not marked otherwise

- (A) Stand-off distance
- (B) Beam

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