

LSV-1000 MID/-2000 MID

Whenever goods are sold by length in the EU they have to be measured using calibrated machinery. Laser Surface Velocimeters LSV MID are certified according to 2004/22/EC and 2014/32/EU (Measurement Instrument Directive). They optimize the manufacturing and increase the output by providing reliable measurements.

Due to the highly precise, non-contact measurement principle, the LSV eliminates common problems of traditional contact-wheel measurement methods such as damage to delicate surfaces, slippage and thermal expansion on almost any surface.

LSV MID consist of the sensor head LSV-1000/-2000 MID and the controller LSV-A-110 MID with an integrated touchscreen. Use the LSV-2000 MID for determining also the direction of motion as well as standstill conditions.



Highlights

- Easy process integration thanks to flexible interface concept
- Certified length measurement according to MID 2004/22/EC and 2014/32/EU
- Determines direction of motion and standstill (LSV-2000 MID)
- Easy operation by touchscreen
- Robust sensor technology (IP 66, 67)
- Application-specific accessories (optional cooling, air purge, thermo-protective housing etc.)

LSV-1000 MID/-2000 MID

Speed and Length Measurement
for Calibrated Machines

Datasheet



Technical Data



Metrological Specifications

Nominal working distance [mm]						
LSV-1000 MID	200	-	-	-	-	-
LSV-2000 MID	-	300	500	700	1000	1500
Depth-of-field [mm]						
LSV-1000 MID	±15	-	-	-	-	-
LSV-2000 MID	-	±60	±60	±70	±70	±70
Speed range						
LSV-1000 MID	1 ... 800 m/min					
LSV-2000 MID	-3000 ... 0 ... +3000 m/min					
Max. Acceleration [m/s ²]						
LSV-1000 MID	370 ¹					
LSV-2000 MID	300					
Measurement units	mm/s, m/min or m (selectable)					
Accuracy	<0.05 % of reading ²					
Repeatability	<0.02 % of reading ²					
Measurement modes	External Trigger, Cut Mode, Material Detect					
Interfaces	<ul style="list-style-type: none"> ■ Ethernet ■ Encoder ■ 24 V Status-I/O 					
Controller	Siemens Panel-PC with 7"-Touchscreen <ul style="list-style-type: none"> ■ integrated in junction box ■ display of measurement values ■ resolution 800 x 400 					
Data storage period	min. 90 days according to requirement MID 2004/22/EC resp. 2014/32/EU					

¹ Depending on stand-off distance

² Under controlled conditions

Optics Specifications

Wavelength	
LSV-1000 MID	690 nm (visible laser beam)
LSV-2000 MID	658 nm (visible laser beam)
Laser power	max. 25 mW
Laser class	3B
Beam cross section	2 x 4 mm



General Specifications	Sensor Head	Controller
Dimensions (L x W x H)	300 x 120 x 110 mm (see drawing 1)	434 x 300 x 195 mm (see drawing 2)
Weight	4.3 kg	7.4 kg
Power consumption	24 V DC / max. 15 W, Power supply by controller	100 ... 240 VAC, +/- 10 %
Operating temperature	0 ... 40°C acc. to 2014/32/EU (MID)	
Relative humidity	max. 80 %, non-condensing	

Compliance with Standards	Sensor Head	Controller
Protection class	IP66 and IP67 (according to EN 60529)	IP65 (according to DIN EN 60529)
Mechanical shock reliability	10g according to EN 60068-2-29 (IEC 68-2-29)	-
Vibration reliability	according to EN 60068-2-6 (IEC 68-2-6)	-

MID Conformity	
Accuracy class	I, II, III
Tolerance	±0.125 %
Min. length LSV-1000 MID LSV-2000 MID	1 m 0.4 m 0.1 m (at reduced speed range -750 ... 0 ... +750 m/min)
Max. length	100.000 m
Certification	2004/22/EC (LSV-1000 MID) resp. 2014/32/EU (LSV-2000 MID)

Accessories



Air Wipe with quick-exchange window

A front-mounted, aerodynamically optimized air wipe unit keeps the sensor's optical window free of dust and steam. For cleaning or replacement, the quick release window can be easily exchanged.



Mounting Platform

The 3-axis adjustable mounting platform simplifies the precise alignment of the LSV sensor in relation to the measurement object. When mounting the LSV in a cooling housing, a suitable mounting platform is available.

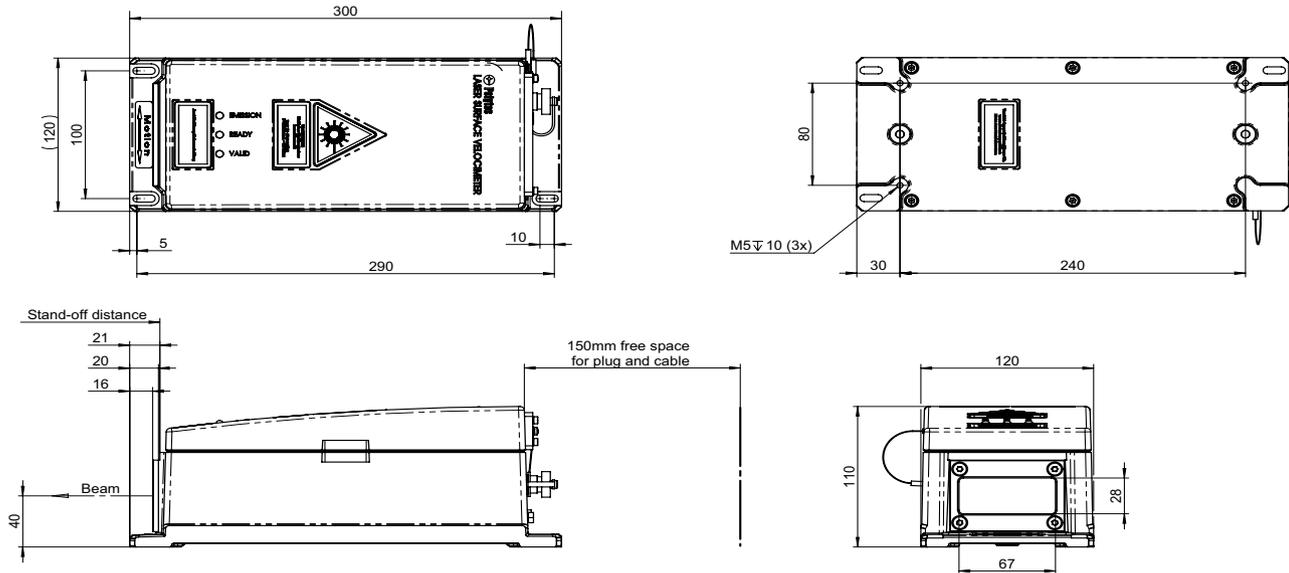


Cooling Plate

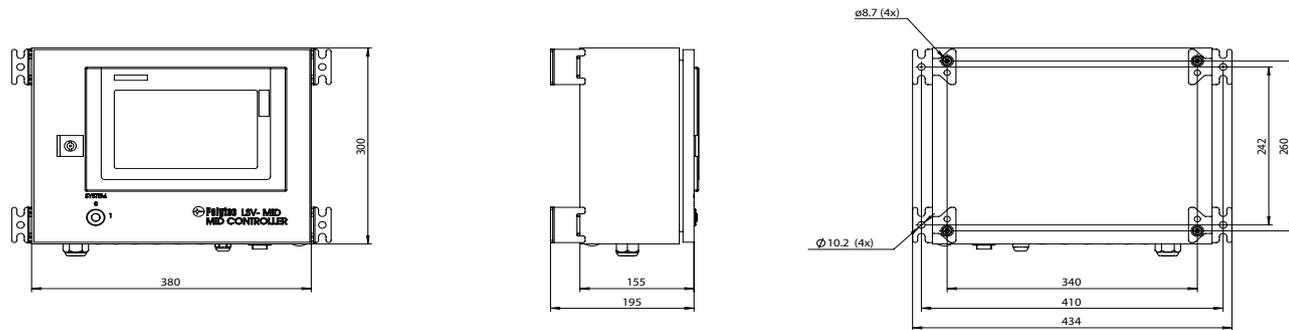
The cooling plate keeps the sensor in its operational temperature range, even under hot ambient conditions.

Further accessories

Thermo-protective housing housing, air-amplifier, measurement frame installation kit, beam protective sleeve, cable protection, air preparation unit



Drawing 1



Drawing 2

More Information

For more information please contact your Polytec application/sales engineer or visit the LSV homepage www.velocimeter.us and www.velocimeter.co.uk.

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