

Linearized Velocity Sensor

LVS-100 (Horizontal)
LVS-200 (Vertical)

FEATURES

- Frequency response down to 10Hz
- Models for horizontal and vertical mounting position
- Stainless steel body
- Passive sensor, no supply voltage needed

Monitoring solution



Shaft & bearing vibration - absolute

Typical applications



Hydrogenerators



Pumps, fan, cooling towers...



Gas & steam turbines



LVS-101 M3 model

DESCRIPTION

The LVS-100 and LVS-200 velocity sensors have been designed for low frequency vibration monitoring applications of rotating machines. More specifically, the sensors fulfil the special low frequency requirements of low speed hydroelectric machines.

The LVS sensors operate in accordance with the electrodynamic principle and are used for measuring the bearing absolute vibration of the machines.

The sensing element of the sensor is a coil supported by high precision springs moving around a permanent magnet which produces a voltage directly proportional to the vibration velocity. By design, the sensor has an excellent sensitivity and linearity down to very low vibration levels. Horizontal and vertical model of sensors are available.

The sensor is a passive element and doesn't need any external power supply

GLOBAL SPECIFICATIONS

OPERATION

Measuring principle and parameter	Electrodynamic vibration velocity
Sensitivity	100mV/mm/s $\pm 10\%$; calibrated at 80Hz
Transverse sensitivity	< 7% max. of nominal
Maximum displacement	1.8mm peak-peak
Natural frequency	8Hz ± 0.75 Hz of measuring element
Output	
Impedance	4k Ω
Maximum output voltage	5V peak
Typical frequency response	10Hz to 2kHz (< -3dB)
Pin out	Brown : signal(+); White : signal(-); Clear : shield

ENVIRONMENTAL

Temperature range	
Operation	-20° to +80°C
Non-destructive (short time)	-40° to +100°C
Humidity	resistant to 100% RH
Acceleration limit	
Shock	50g
Continuous vibration	5g
EMC	acc. to EN 61326-2-3:2006
Fluid compatibility	withstands contact with water, oil, solvents
Ingress Protection	IP68 as per DIN 40 050

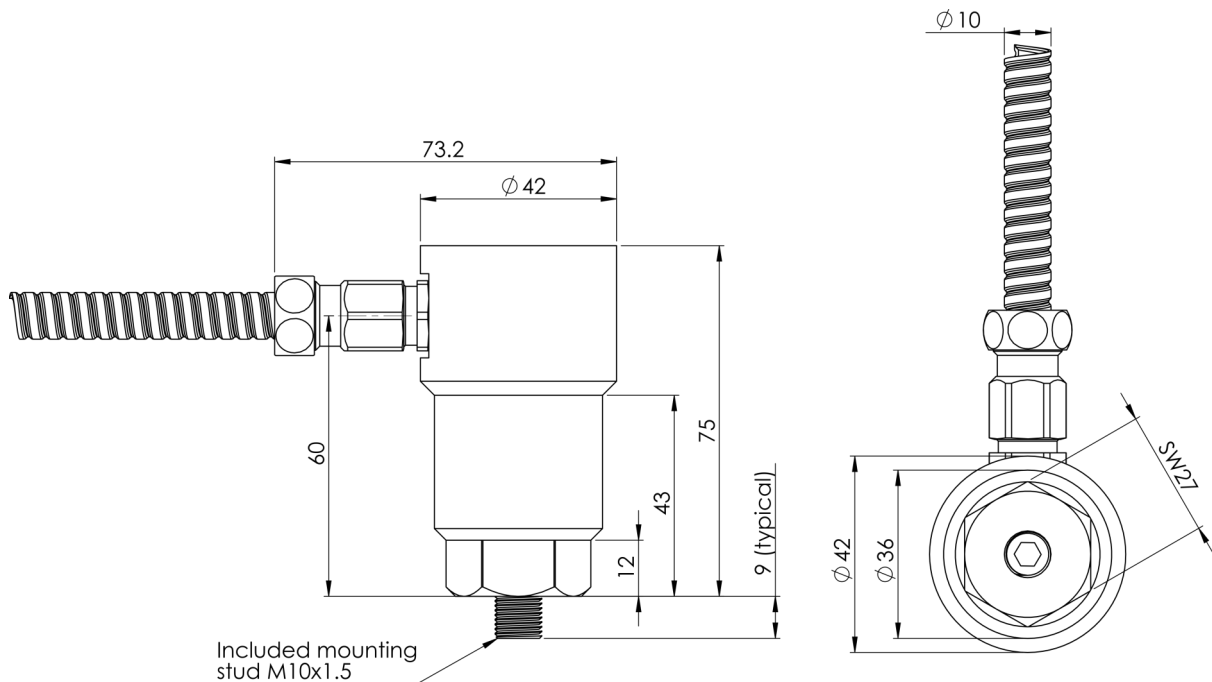
PHYSICAL

Sensor dimensions [mm]	$\varnothing 42 \times 75$
Body material	Stainless steel 1.4301
Weight (without cable)	400g
Integral cable	$\varnothing 5$ cable protected by $\varnothing 10$ flexible metal conduit covered by PVC IP68
Mounting stud (included)	M10x1.5, length 20mm, stainless steel

ORDERING INFORMATION

Part type	Stainless steel velocity sensor with integral cable	
Ordering code	05.X00.000 L	
	X - mounting position	L - integral cable length
	1 Horizontal (LVS-100)	5m
	2 Vertical (LVS-200)	10m

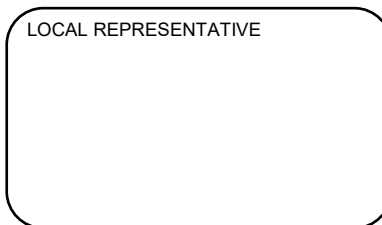
MECHANICAL DRAWING



MC-monitoring Quality certifications



LOCAL REPRESENTATIVE



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