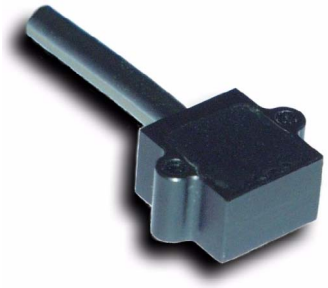
Technical Data Sheet

Uniaxial resistive Mini-Accelerometer

Model 121M/LC

- **Measurement range 1000 g**
- **Non-linearity < 2 %**
- **Transverse sensititvity < 3 %**
- **Frequency response 0 – 1800Hz (5 %)**
- **Low cost**
- **1,8 grams weight**



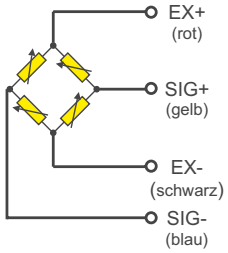
Application

This low-cost accelerometer fulfills the general operation requirements of crash measuring technique. It is universally applicable because of its small dimensions and its light mass. Two screws fix the polyurethane casing at the measurement location[1]. The transducer is mainly used at measurement locations, which are exposed to a possible destruction.

Functional Concept

The transducer is based on a silicon sensor element. The natural oscillation of the sensor is disabled by gas attenuation of the chip. The attenuation and the integrated overload stop units cause the robustness of the transducer. It is also available with an external ID-Module. You may choose between an MSC UPS Module with 16 kByte sampling rate or a Dallas Module.

A modification to a digital sensor in connection with the AIM[2] is also available. For further information about digital measuring technique, please contact our sales department.



Schematic Diagram

Options

Customized cable lengths with or without connectors and connectors with specific customer pin assignment, MSC-Identification Modules (UPS or Dallas version).

Accessories

Mounting screw*)	Article-№: 320283 (2 Stück)
Sine Calibration Adapter	Model-№: 050A/AP-KAL-S-6

For further details please see catalog of accessories

**) included in delivery*

(1) Transducer with glue fixture see model 101M/LC

(2) **A**nalog**I**nput**M**odule

MSC Automotive Messtechnik Service Center GmbH ■ Markgröninger Str. 47/1 ■ D-71701 Schwieberdingen
Telefon +49 (0) 7150 - 3002 - 0 ■ Telefax +49 (0) 7150 - 3002 - 55 ■ E-Mail post@msc-auto.com ■ Internet www.msc-auto.com

Technical Data Sheet

121M/LC

Technical Specifications

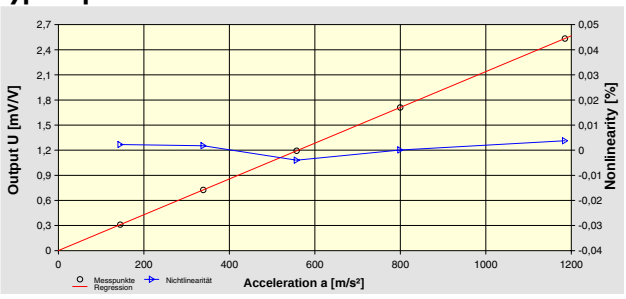
All specifications are typical at 25° C and rated at 10 V transducer supply voltage, unless otherwise specified.

	Units	Value	Rematrk
Measurement range	±g	1000	
Frequency response ±5 % limit, DC up to	Hz (min.)	1800	
Sensitivity at 80 Hz[1]	mV/g (typ.)	0,2	
Supply voltage	V DC	5 – 12	
Transducer current consumption	mA	2,5	
Attenuation[2]		0,7	
Non-linearity up to 200 g[3]	±% FS (max.)	2	
Transverse sensitivity	% (typ.)	1,5	max. 3
Zero Measurand Output	±mV (typ.)	10	max. 30
Temperature drift - ZMO	±mV (max.)	2	
Temperature drift - sinsitivity	±% (max.)	20	
Bridge resistance	kOhm (typ.)	4	
Source resistance (SIG+ to SIG-)	kOhm	4	
Insulation resistance[4]	MOhm (min.)	90	
Max. shock load (pulse width > 2ms) Max. sine load (< 2000Hz)	g (max.)	2000 50	
Warm-up period	s (max.)	120	
Working temperature Storage temperature	° C	-20 – +70 -30 – +70	
Transducer mounting screws	metric	M2x10	DIN912, 2 units
Torque moment	Nm	0,25	
UPS-Module		optional	external housing
Casing material		POM/PU	
Transducer weight	Grams	1,8	

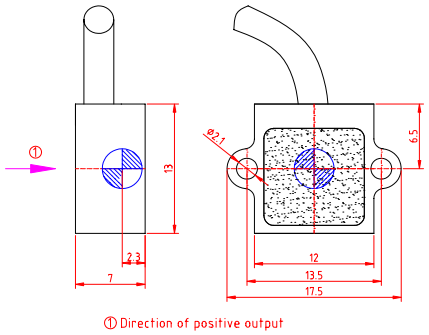
1. Responsivity at 80 Hz, at 50m/s² of sine amplitude
2. The damping factor will vary < 10 % in range of temperature -10° C to +80° C with regard to 25° C
3. Values calculated with pendulum calibration up to 200 g
4. All wires to shield (GND), charged with 10 V (DC)

Model/Option Code: Modell 121M/LC-KT-MGT-(KT)-ST
121M/LC: Basis Article Name/Low Cost
KT: Cable type resp. length in cm
MGT: ID-Module and housing type
ST: Connector type (Interface to cannel-collector or data acquisition panel)

Typical pendulum calibration



Dimensions and directions of action



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