

Accelerometer

Type M328B...

Triaxial, Resistive

The triaxial resistive accelerometer Type M328B... was developed for crash test applications in special defined WorldSID measurement locations.

- Measuring range 1 500 g
- Frequency response 0 ... 2 800 Hz (± 5 %)
- Transverse sensitivity typ. 1,5 %
- Low weight
- High shock resistance

Description

The type series M328B... is based on a specific sensor element, manufactured in silicon technology with an air damping and integrated overload stops and has a resistive full bridge.

The sensor is available with ID modules, either a UPS module (Universal Parameter Memory) or a Dallas module can be chosen for this functionality. These modules are integrated in an external housing in the wiring or in the connector. Transverse sensitivity <1,5 %, small zero measurand output (ZMO) and more customized specifications are possible on request.

Application

The sensor scopes a large measuring range with good linearity characteristics. Furthermore it has a large frequency response and absorbs high shock overloads. These characteristics make it easy to handle the sensor.



Technical Data

Measuring range	g	$\pm 1\ 500$
Sensitivity at 80 Hz ¹⁾		
typ.	mV/g	0,18
min./max.	mV/g	0,16/0,22
Supply voltage	VDC	2 ... 15
Zero measurand output ²⁾	mV	$\pm 10/\pm 20$
typ./max.		
Temperature drift, ZMO	mV	± 3
max.		
Temperature drift, sensitivity ³⁾	%/°C	-0,18
max.		
Source resistance (SIG+ to SIG-)	kΩ	2,7
Frequency response, ± 5 %		
DC up to, min.		
X axis	Hz	2 800
Y axis	Hz	2 500
Z axis	Hz	2 800
Current consumption	mA	4
Amplitude non-linearity	%	$\pm 0,1/\pm 0,3$
0 ... 200 g ⁴⁾ , typ./max.		
Transverse sensitivity ⁵⁾	%	1,5/2
typ./max.		
Bridge resistance	kΩ	2,7
Insulation resistance ⁶⁾	MΩ	90
min.		
Shock (>2 ms pulse)	g	8 000
Max. sine load	g	200
(<2 kHz, peak to peak)		
Warm-up period, max.	s	120
Operating temp. range	°C	-20 ... 80
Storage temp. range	°C	-30 ... 90

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Technical Data (Continuation)

Damping ratio		
typ.		0,35
min./max.		0,3/0,5
Housing material		Alu alloy
Mounting		screwed
Screws, metric M2x16	units	1
Mounting torque	N·m	0,3
Weight (without cable and add. housing)	grams	3
Dimensions	mm	10,8x13,8x12,7

All specifications are typical at 25 °C and rated at 10 V sensor excitation, unless otherwise specified.

- ¹⁾ Sensitivity at 80 Hz, at 50 m/s² sine amplitude
- ²⁾ ZMO values are only valid when accelerometer is mounted
- ³⁾ Range of 0 ... 50 °C
- ⁴⁾ Values calculated with pendulum calibration up to 200 g
- ⁵⁾ Accelerometers with selected transverse sensitivity ≤1 % are extra charged
- ⁶⁾ All wires to screen (GND), measured with 10 V (DC)

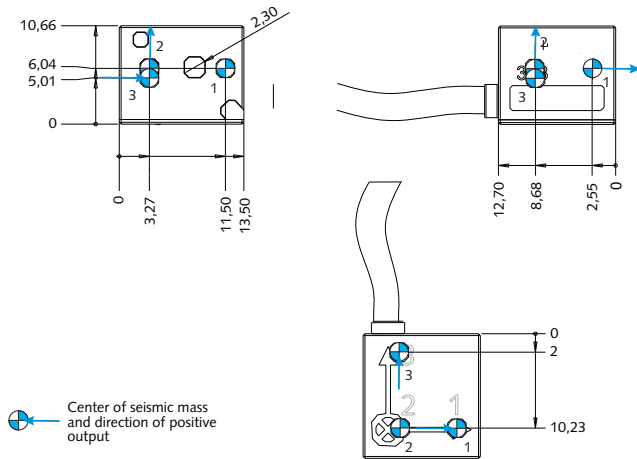
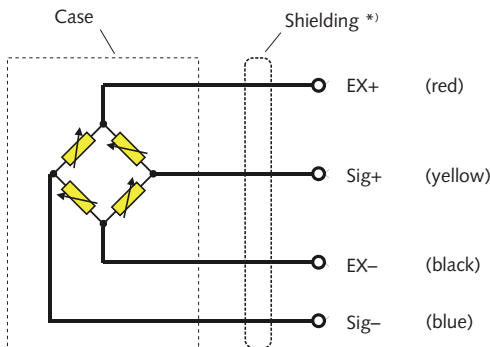


Fig. 1: Dimensions and directions of action



*) Shielding is connected to plug housing

Fig. 2: Schematic diagram of one axis; the sensor has three axes

This information corresponds to the current state of knowledge. Kistler reserves the right to make technical changes. Liability for consequential damage resulting from the use of Kistler products is excluded.

Accessories Included

- Mounting screws

Type No.
on request

Optional Accessories

- Pendulum calibration adapter
- Mounting plate
- Sine calibration adapter
- Add. label with serial number, plug side
- ID module
- Add. label with ID number at sensor
- Add. Shunt

Type No.
on request
on request
on request
M015KABID
on request
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on request

Ordering Key

Type M328B

Design

1 500 g	M1C6
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Cable Length before Electronics

0 cm	00
<10 cm (digit x 1 cm)	C#
10 cm ... 9,9 m (digit x 10 cm)	##
10 m ... 90 m (digit x 10 m)	D#

Additional Electronics

Sensor detail, as per type declaration acceleration TP-650-1	#
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Cable Length after Electronics

0 cm	00
<10 cm (digit x 1 cm)	C#
10 cm ... 9,9 m (digit x 10 cm)	##
10 m ... 90 m (digit x 10 m)	D#

Connector

Conn. type, as per TP-600	#-
Conn. assignment, as per TP-600	-#

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