

# Accelerometer

## Triaxial

Type M0068C...

Type M0068C... is a small, compact triaxial device designed for vehicle impact and road testing.

- Measuring ranges  $\pm 500 \dots 2\,000$  g
- Excitation 2 ... 10 VDC
- Low transverse sensitivity
- Mechanical overload stops
- Replaceable sensors
- Optional cover

### Description

The sensor incorporates three replaceable sensing modules with mechanical overload stops that provide high shock protection in rugged applications. Type M0068C... is compliant with SAE J211 specifications for anthropomorphic dummy instrumentation.

### Application

The sensor is designed for automotive crash testing, impact testing, off-road testing, road testing and dummy instrumentation.

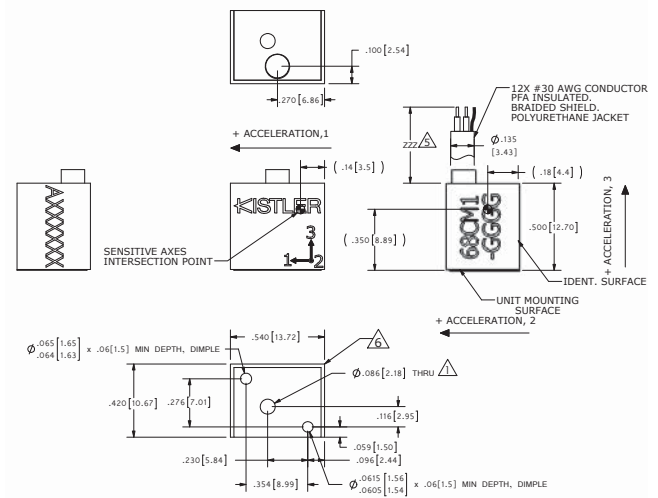


Fig. 1: Dimensions and center of seismic mass

### Technical Data

#### Dynamic

Measuring range	g	$\pm 500$	$\pm 2\,000$
Sensitivity <sup>1)</sup>	mV/g	0,45	0,15
Frequency response			
Axis 1 & 2, $\pm 5$ %	Hz	0 ... 1 400	0 ... 3 000
Axis 3, $\pm 5$ %	Hz	0 ... 2 000	0 ... 4 000
Resonant frequency	Hz	11 000	26 000
Damping ratio, typ.		0,3	0,05
Amplitude non-linearity, of reading	%FSO	$\pm 1$	$\pm 1$
Transverse sensitivity	%	<3	<3
Shock limit	g	5 000	5 000

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**Technical Data (Continuation)**

**Electrical**

Zero acceleration output	mV	<±50
Excitation	VDC	2 ... 10
Input resistance	Ω	2 400 ... 6 000
Output resistance	Ω	2 400 ... 6 000
Insulation resistance, @ 100 VDC	MΩ	>100
Residual noise	μV RMS	<10
Ground isolation		isolated from mounting surface

**Environmental**

Thermal zero shift, from 0 ... 50 °C	%FSO/°C	±0,05
Thermal sensitivity shift, from 0 ... 50 °C	%/°C	-0,20 (±0,05)
Operating temperature range	°C	-20 ... 85
Storage temperature range	°C	-40 ... 90
Humidity, epoxy sealed		IP61

**Physical**

Case material		stainless steel
Cable		12x#30 AWG conductors PFA insulated braided shield PU jacket
Mounting		M2x0,4 16 mm length torque 3 lb-in
Weight (without cable)	grams	9,0

All values are typical at +24 °C, 100 Hz and 10 VDC excitation unless otherwise stated.

<sup>1)</sup> Output is ratiometric to excitation voltage

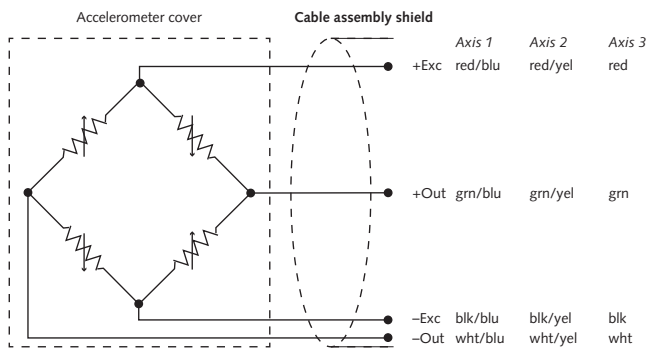


Fig. 2: Schematic diagram

**Included Accessories**

- Screws 1xM2x0,4 (16 mm length)

**Type No.**

on request

**Optional Accessories**

- None

**Ordering Key**

Type M0068C00-----

**Measuring Range**

±500 g	0500
±2 000 g	2000

**Cable Length**

8 ... 360 inches <sup>1)</sup>	###
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**Sensor Detail**

Nothing	A
UPS	B
Dallas	C
DiMod	D
Shunt	N
Shunt & Dallas	P

**Connector**

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

**Calibration Power Supply**

10 VDC	0
5 VDC	1
2,5 VDC	2
2 VDC	3

<sup>1)</sup> 1 inch = 25,4 mm

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