

- ▶ Uniaxial
- ▶ Wheatstone Bridge
- ▶ mV Output
- ▶ Aluminium Housing
- ▶ Made in Germany

Features

- ▶ Range 6000g
- ▶ Small Size
- ▶ Light Weight
- ▶ DC Response
- ▶ ±10000g Shock Resistance
- ▶ Gas Damped

Options

- ▶ Customised Cable Length
- ▶ Customised Connector
- ▶ TEDS Module
- ▶ Equipment Exchange (EQX)

Applications

- ▶ Automotive Crash Testing
- ▶ Shock Testing

Piezoresistive MEMS Technology

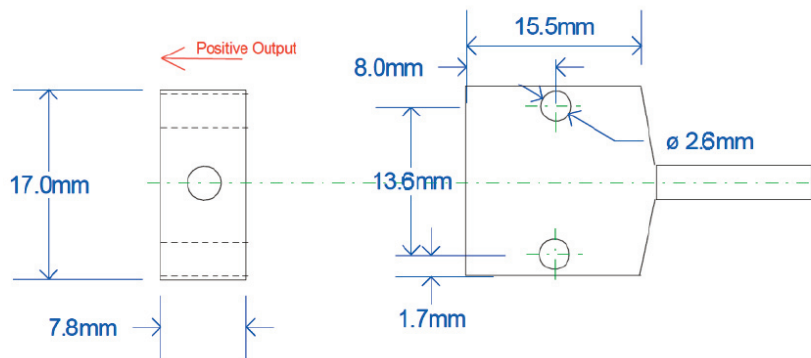
The accelerometer is based on an advanced piezoresistive MEMS technology and can be used in a low frequency response up from 0Hz. The piezoresistive sensor element is made of monolithic resistors. These resistors are attached to carrier-elements and are electrically connected in a Wheatstone bridge. The electrical signal changes proportional to the vibration.

Description

The model ASC 66C2 is a uniaxial accelerometer based on piezoresistive technology. The ASC 66C2 is a small and compact accelerometer. The housing is a flat design made of hard anodised aluminium. Due to low mass, the model is ideal for testing on light-weight structures.

The sensing element has integrated overload stops and therefore the silicon chip is highly shock resistant. The ASC 66C2 has an excellent non-linearity over a wide frequency response and electrically it features a Wheatstone bridge configuration.

The model ASC 66C2 can be obtained with all common sensor ID modules. A very high flexible and rugged cable provides a simple mounting. The model ASC 66C2 is factory calibrated and is equipped with 6 meter cable as a standard.



Typical Specifications

MODEL NUMBER ASC 66C2

Type: MEMS Piezoresistive Accelerometer

DYNAMIC

		Range (\pm g)
		6000
Sensitivity ¹	mV/g	0.10
Frequency response: \pm 5%	Hz	4000
Resonance frequency	kHz	26
Amplitude non-linearity	% FSO	\pm 2
Damping ratio		0.05 - 0.30
Transverse sensitivity	%	<3
Shock limit	\pm g	10000

¹Output is rationmetric to excitation voltage

ELECTRICAL

Excitation voltage	V DC	3 to 10
Zero acceleration output	mV	\pm 25
Insulation resistance	M Ω	>100
Isolation		Case isolated

ENVIRONMENTAL

Temperature coefficient of bias (Thermal zero shift)	g/ $^{\circ}$ C	\pm 1
Temperature coefficient of sensitivity (Thermal sensitivity shift)	%/ $^{\circ}$ C	-0.15
Operating temperature range	$^{\circ}$ C	-40 to +100
Storage temperature range	$^{\circ}$ C	-55 to +125
Humidity / Sealing		IP 65

PHYSICAL

Sensing element	Piezoresistive MEMS
Case material	Aluminium
Mounting	3 mm screws / Adhesive
Weight (without cable)	5 gram
Cable	12 gram/meter; AWG 30, Polyurethane (PUR); Diameter: 3mm

FACTORY CALIBRATION (SUPPLIED WITH THE SENSOR)

Shaker Calibration (Sinusoidal)	
Range	6000g
Sensitivity	at 80Hz and 20g
Frequency Response	40Hz to 4000Hz
Pendulum (Shock) Calibration	
Range	6000g
Sensitivity	5 shocks at 100g

CALIBRATION DIN ISO 17025 (ORDER SEPARATELY)*

Shaker Calibration (Sinusoidal)	
Range	6000g
Sensitivity	at 80Hz and 20g
Frequency Response	25Hz to 4500Hz
Pendulum (Shock) Calibration	
Range	6000g
Linearity	One shock each at 50g, 100g, 150g, 200g

CABLE CODE / PIN CONFIGURATION

<i>Red: Supply +</i>	<i>Green: Signal +</i>
<i>Black: Supply -</i>	<i>White: Signal -</i>

ORDERING INFORMATION

ASC	66C2	6k	6	A
	Model number	Range (Ex. 6k is 6000g)	Cable length (meters)	Connector & Pinout
				A: no connector

Example: ASC 66C2-6k-6A

QUALITY

- 1) ASC is ISO 9001:2015 certified
- 2) The Deutsche Akkreditierungsstelle GmbH (DAkkS) has awarded to our calibration laboratory the DIN EN ISO/IEC 17025:2005 accreditation for calibrations and has confirmed our competence to perform calibrations in the field of mechanical acceleration measurements.

* accredited by the German accreditation body (Deutsche Akkreditierungsstelle, DAkkS) to DIN EN ISO / IEC 17025; the pictured DAkkS-ILAC logo refers exclusively to the accredited service