

# Accelerometer for Vibration Analysis



A range of uniaxial piezoelectric accelerometers is offered for analyzing the vibrations of devices under test. These may range from slight excursions up to strong impacts. The accelerometers can be mounted either with a screw or a magnet depending on the type selected.

## Features

- Uniaxial precision accelerometer with compression ceramic
- Vibration analysis over a wide amplitude & frequency range
- ICP output facilitates long cables under harsh EMI conditions
- Sturdy stainless-steel or aluminum housing
- Flexible mounting via screw or magnet

## ACCELEROMETER A4580

The A4580 uniaxial piezoelectric accelerometer is designed for analyzing the vibrations of massive devices with slight excursions up to strong impacts. With its 45 g weight, the A4580 can be used for many applications. It can be mounted to devices with an M5 screw or by using the included magnet.



## ACCELEROMETER KS901-MF

The KS901-MF uniaxial piezoelectric accelerometer is designed for analyzing the vibrations of devices with slight to medium excursions. With a weight of 24 g, it is mounted to the device under test via the built-in magnet.




## ACCELEROMETER A97100

The A97100 uniaxial piezoelectric accelerometer is dedicated for applications with lightweight devices and small spaces. With a weight of just 3.2 g, it is mounted to the device under test with an M3 screw or by using the included magnet.



## SPECIFICATIONS

Type	A4580	KS901MF	A97100
			
Weight (sensor only)	45 g (1.6 oz)	24 g (0.85 oz)	3.2 g (0.11 oz)
Application	massive devices with slight excursions up to strong impacts	slight to medium excursions	
Piezo design	Compression	Shear	
Sensitivity @ 80 Hz (typ.)	80 mV/g, 8.16 mV/(m/s <sup>2</sup> ) ±20%	100 mV/g, 10.19 mV/(m/s <sup>2</sup> ) ±20%	100 mV/g, 10.19 mV/(m/s <sup>2</sup> ) ±20%
Linear frequency range	3 dB from 3 Hz to 15 kHz 10% from 6 Hz to 10 kHz 5% from 9 Hz to 7 kHz	3 dB from 0.2 Hz to 10 kHz 10% from 0.4 Hz to 6 kHz 5% from 0.6 Hz to 3 kHz	3 dB from 0.15 Hz to 13 kHz 10% from 0.3 Hz to 7.5 kHz 5% from 0.45 Hz to 6 kHz
Measurement range	±75 g (pk)	±60 g (pk)	±60 g (pk)
Residual noise @ 0.5 Hz - 20 kHz	< 300 µg	400 µg	< 400 µg
Power supply	ICP®, 2 to 20 mA		
Mounting	M5 inner thread	built-in magnet head, magnet force 45 N	M3 inner thread
Case	D x L = 19 x 30 mm stainless steel	D x L = 12 x 39 mm stainless steel	L x W x H = 9 x 9 x 9 mm aluminum nickel plated
Magnet	DxH 20 x 5 mm with M5 thread (detachable)	permanently attached	DxH 10 x 5 mm with M3 thread (detachable)
Cable	L = 2 m (detachable) UNF10-32 / BNC	L = 3 m (attached), BNC	L = 2 m (detachable) UNF10-32 / BNC
Temperature range	-10 to +120 °C (14 to 248 °F)	-20 to +100 °C (14 to 212 °F)	-40 to +120 °C (0 to 248 °F)
Order information	Accelerometer A4580 NTi Audio # 600 010 349	Accelerometer KS901MF NTi Audio # 600 010 347	Accelerometer A97100 NTi Audio # 600 010 352
	ICP Adapter ASD for operation with XL2 NTi Audio # 600 010 223		

## Notes

- Mounting the magnet: first attach the magnet to the surface, then mount the sensor to the magnet
- Storage: Please unscrew the detachable mounting magnet from the sensor for storage, and keep the two parts away from each other (by few cm)