

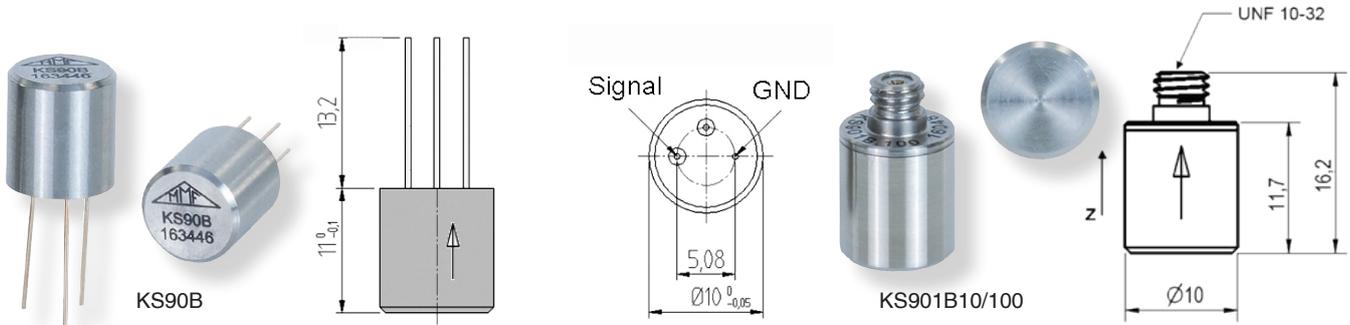
OEM Accelerometers

Properties

- Low-cost accelerometers for integration into machines and instruments
- KS90B with charge output
- KS901B10/100 with IEPE output
- Compact design
- For adhesive, clamp or tube mounting
- KS90B in TO-39 transistor case with solder pins
- KS901B10/100 with UNF 10-32 socket (Microdot)

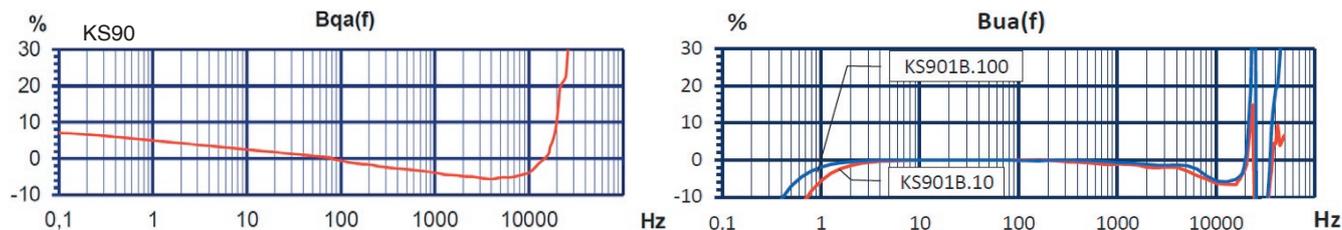
1.7.2 Sensors

KS90B KS901B10 KS901B100

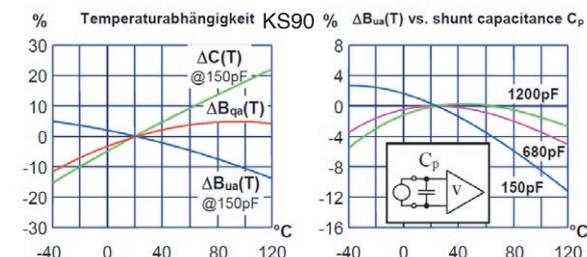


		KS90B	KS901B10	KS901B100		
Ausgang • Output		Ladung • Charge	IEPE	IEPE		
Piezosystem • Piezo design		Scherprinzip • Shear design				
Ladungsübertragungsfaktor • Charge sensitivity	B_{qa}	10 ± 20%	-	-	pC/g	
Spannungsübertragungsfaktor • Voltage sensitivity	B_{ua}	20 ± 20%	10 ± 20%	100 ± 20%	mV/g	
Messbereich • Range	a_x / a_y	5000	500	60	g	
Bruchbeschleunigung • Destruction limit	a_{max}	10 000	8000	8000	g	
Linearer Frequenzbereich • Linear frequency range	f_{3dB}	27 000	0,35 .. 28 000	0,2 .. 23 000	Hz	
	$f_{10\%}$	20 000	0,7 .. 21 000	0,4 .. 20 000	Hz	
	$f_{5\%}$	17 000	1,0 .. 10 000	0,6 .. 10 000	Hz	
	f_r	> 44 (+25 dB)	> 60 (+25 dB)	> 45 (+25 dB)	kHz	
Resonanzfrequenz • Resonant frequency						
Querrichtungsfaktor • Transverse sensitivity	Γ_{90MAX}	< 5	< 5	< 5	%	
Eigenrauschen (Effektivwert; 0,5 Hz - 20 kHz) • Residual noise (RMS; 0,5 Hz - 20 kHz)		$a_{n wide band}$	-	1000	400	μg (Hz)
Rauschdichten • Noise densities	0,1 Hz	a_{n1}	-	50	20	$\mu g/\sqrt{Hz}$
	1 Hz	a_{n2}	-	20	8	$\mu g/\sqrt{Hz}$
	10 Hz	a_{n3}	-	5	2	$\mu g/\sqrt{Hz}$
	100 Hz	a_{n4}	-	2	0,8	$\mu g/\sqrt{Hz}$
Konstantstromversorgung • Constant current supply	I_{CONST}	-	2 .. 20	2 .. 20	mA	
Arbeitspunktspannung bei $I_{CONST} = 4$ mA • Output bias voltage at $I_{CONST} = 4$ mA	U_{BIAS}	-	12 .. 14 V	12 .. 14 V	V	
Ausgangsimpedanz bei $I_{CONST} = 4$ mA • Output impedance at $I_{CONST} = 4$ mA	r_{OUT}	-	<100	<100	Ω	
Kapazität ohne Kabel • Capacitance without cable	C_1	0,48	-	-	nF	
Verhalten gegenüber Umgebungsbedingungen • Environmental characteristics						
Arbeitstemperaturbereich • Operating temperature range	T_{min}/T_{max}	-30 / 150	-30 / 120	-30 / 120	°C	
Temperaturkoeffizient des Spannungsübertragungsfaktors • Temperature coefficient of voltage sensitivity	$TK(B_{ua})$	-0,14 .. 0,05	-0,06 .. 0,03	-0,14 .. -0,08	%/K	
	$TK(B_{qa})$	0,04 .. 0,12	-	-	%/K	
Temperaturkoeffizient des Ladungsübertragungsfaktors • Temperature coefficient of charge sensitivity						
Temp.-koeffizient der Kapazität • Temp. coefficient of capacitance	$TK(C_1)$	0,25	-	-	%/K	
Temperatursprungempfindlichkeit • Temperature transient sensitivity	b_{aT}	0,1	0,2	0,1	ms^{-2}/K	
Magnetfeldempfindlichkeit • Magnetic field sensitivity	b_{aB}	10	3,5	1,5	ms^{-2}/T	
Mechanische Daten • Mechanical data						
Masse ohne Kabel • Weight without cable	m	5,1 / 0,18	5,2 / 0,18	5,6 / 0,2	g / oz	
Gehäusematerial • Case material		Edelstahl Stainless steel	Edelstahl Stainless steel	Edelstahl Stainless steel		
Kabelanschluss • Cable connection		TO-39 axial	axial	axial		
Anschlussbuchse • Connection socket		-	UNF 10-32	UNF 10-32		
Befestigung • Mounting		Kleben, Klemmen • Adhesive, clamping				

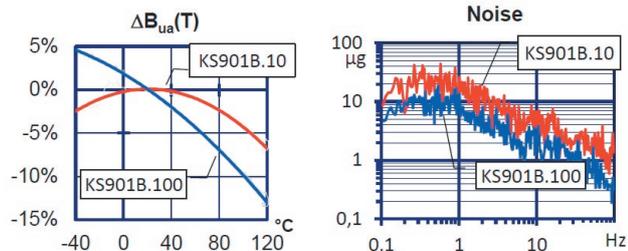
Typical Amplitude Response



Temperature Characteristics



Noise Characteristics



Suitable Accessories

KS901B10/100	
Anschluss-zubehör	<ul style="list-style-type: none"> • 009-UNF-UNF-1,5: Kabel 2 x UNF 10-32; 1,5 m • 009-UNF-BNC-1,5: Kabel UNF 10-32 / BNC; 1,5 m • 010-UNF-BNC-5/10: Kabel UNF 10-32 / BNC; 5 / 10 m • 016: Kupplung für 2 UNF 10-32-Stecker • 017: Adapter UNF 10-32 / BNC (männlich) • 117: Adapter UNF 10-32 / BNC (weiblich) • 025: Adapter UNF 10-32 / TNC (männlich)
Connection accessories	<ul style="list-style-type: none"> • 009-UNF-UNF-1,5: cable UNF 10-32 / UNF 10-32; 1.5 m • 009-UNF-BNC-1,5: cable UNF 10-32 / BNC; 1.5 m • 010-UNF-BNC-5/10: cable UNF 10-32 / BNC; 5 / 10 m • 016: Coupler for 2 UNF 10-32 plugs • 017: Adapter UNF 10-32 / BNC (male) • 117: Adapter UNF 10-32 / BNC (female) • 025: Adapter UNF 10-32 / TNC (male)
Befestigungs-zubehör	<ul style="list-style-type: none"> • 002: Klebewachs
Mounting accessories	<ul style="list-style-type: none"> • 002: Adhesive wax

Notice for Calibration

These accelerometers are supplied with a list protocol showing its individually measured sensitivity.

Note: Our transducers can be supplied with optional calibration certificate of DKD.

Specifications subject to change without prior notice.