

# General Purpose Accelerometers

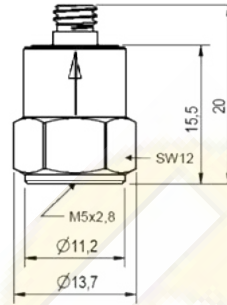
# 1.7.1

## Sensors

# KS78B10 KS78B100

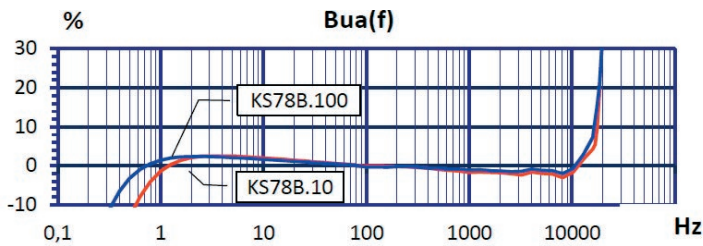
### Properties

- Low-cost accelerometer
- IEPE output
- Includes electronic data sheet (TEDS)
- For light test objects
- Insulated case
- M5 base thread
- UNF 10-32 socket (Microdot)

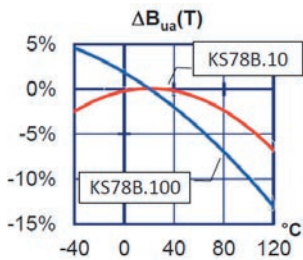


		KS78B10	KS78B100	
• Output		IEPE	IEPE	
• Piezo design		Shear design		
• Voltage sensitivity	$B_{ua}$	$10 \pm 20\%$	$100 \pm 20\%$	mV/g
• Range	$a_x / a_z$	500	60	g
• Destruction limit	$a_{max}$	6000	6000	g
• Linear frequency range	$f_{3dB}$	0,35 .. 23 000	0,2 .. 20 000	Hz
	$f_{10\%}$	0,7 .. 18 000	0,4 .. 16 000	Hz
	$f_{5\%}$	1,4 .. 15 000	0,6 .. 14 000	Hz
• Resonant frequency	$f_r$	> 46 (+25 dB)	> 42 (+25 dB)	kHz
• Transverse sensitivity	$\Gamma_{90MAX}$	< 5	< 5	%
• Residual noise (RMS; 0.5 Hz - 20 kHz)	$a_{n, wide\ band}$	1000	400	$\mu g$ (Hz)
• Noise densities	0,1 Hz	$a_{n1}$	50	$\mu g/\sqrt{Hz}$
	1 Hz	$a_{n2}$	20	$\mu g/\sqrt{Hz}$
	10 Hz	$a_{n3}$	5	$\mu g/\sqrt{Hz}$
	100 Hz	$a_{n4}$	2	$\mu g/\sqrt{Hz}$
• Constant current supply	$I_{CONST}$	2 .. 20	2 .. 20	mA
• Output bias voltage at $I_{CONST} = 4\text{ mA}$	$U_{BIAS}$	12 .. 14,5 V	12 .. 14,5 V	V
• Output impedance at $I_{CONST} = 4\text{ mA}$	$r_{OUT}$	<100	<100	$\Omega$
• Electronic data sheet (TEDS)		IEEE 1451.4 Template 25	IEEE 1451.4 Template 25	
• Environmental characteristics				
• Operating temperature range	$T_{min}/T_{max}$	-40 / 120	-40 / 120	°C
• Temperature coefficient	-40 .. 0 °C	$TK(B_{ua})$	0,05	-0,08 %/K
	0 .. 40 °C		0,00	-0,10 %/K
	40 .. 80 °C		-0,05	-0,12 %/K
	80 .. 120 °C		-0,07	-0,14 %/K
• Temperature transient sensitivity	$b_{aT}$	0,1	0,05	$ms^{-2}/K$
• Magnetic field sensitivity	$b_{ab}$	3,5	1,5	$ms^{-2}/T$
• Mechanical data				
• Weight without cable	m	10,2 / 0,36	11,2 / 0,4	g / oz
• Case material		Stainless steel	Stainless steel	
• Cable connection		axial	axial	
• Connection socket		UNF 10-32	UNF 10-32	
• Mounting		M5 thread in base	M5 thread in base	
• Insulation		yes	yes	

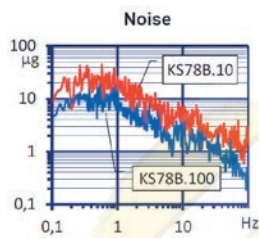
## Typical Amplitude Response



## Temperature Characteristics



## Noise Characteristics



## Suitable Accessories

KS78B10 / KS78B100	
Connection accessories	<ul style="list-style-type: none"> <li>• <b>009-UNF-UNF-1,5</b>: cable UNF 10-32 / UNF 10-32; 1.5 m</li> <li>• <b>009-UNF-BNC-1,5</b>: cable UNF 10-32 / BNC; 1.5 m</li> <li>• <b>010-UNF-BNC-5/10</b>: cable UNF 10-32 / BNC; 5 / 10 m</li> <li>• <b>016</b>: Coupler for 2 UNF 10-32 plugs</li> <li>• <b>017</b>: Adapter UNF 10-32 / BNC (male)</li> <li>• <b>117</b>: Adapter UNF 10-32 / BNC (female)</li> <li>• <b>025</b>: Adapter UNF 10-32 / TNC (male)</li> </ul>
Mounting accessories	<ul style="list-style-type: none"> <li>• <b>002</b>: Adhesive wax</li> <li>• <b>003</b>: Mounting stud M5</li> <li>• <b>045</b>: Thread adapter M5 / UNF 10-32</li> <li>• <b>046</b>: Thread adapter M5 / 1/4"-28</li> <li>• <b>708</b>: Rare-earth magnetic base M5 (Do not use Mod. 008 - risk of damage!)</li> <li>• <b>029</b>: Adhesive pad M5</li> <li>• <b>030</b>: Triaxial mounting cube M5</li> </ul>

## Ordering Information

KS78B10/01; KS78B100/01: Sensor with accessories kit including cable 009-UNF-BNC-1,5, mounting stud 003, adhesive wax 002, probe 001, magnetic base 708, instruction manual, data sheet

KS78B10; KS78B100: Sensor with data sheet

## Notice for Calibration

This accelerometer is supplied with a list protocol showing its individually measured sensitivity.

Note: Our transducers can be supplied with an attractively priced calibration certificate of DKD. Prices on demand.

Specifications subject to change without prior notice.