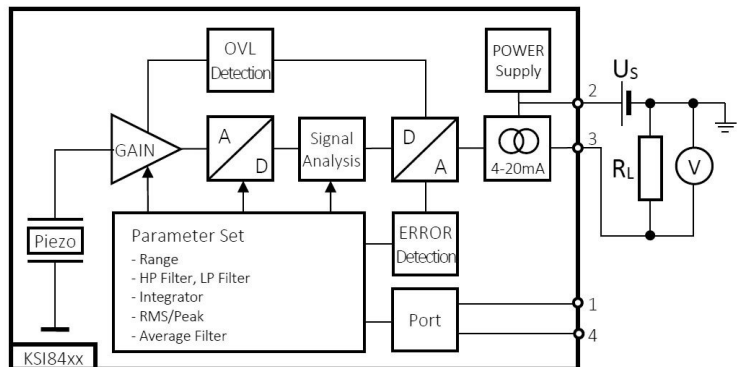
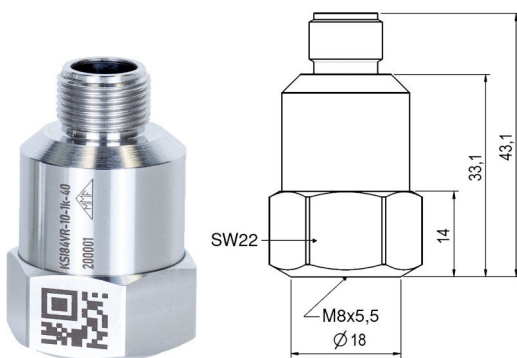


Vibration Acceleration Sensor with RMS Output 4 – 20 mA

KSI84AR-...

Properties

- Suited for direct connection to standard control and measurement equipment, e.g. PLCs or panel meters
- Particularly suited for applications at higher frequencies, e.g. bearing or gearbox monitoring and for shock vibration
- 100 Types with different measurement ranges
- Loop powered
- Ground insulated
- Compact and rugged design
- M12 socket for easy cable connection
- Protected against false polarization and overvoltage
- Double shielded case for best EMC properties
- High protection grade IP68
- With identical design also available as velocity and displacement sensor with RMS or peak output



Piezo design	Shear design	
Output	4 .. 20 mA, RMS of vibration acceleration	
Full scale value (cf. type list)	5 / 10 / 20 / 50 / 100 / 200 / 500	m/s ²
Linear range for <2 % error, referred to full scale output	1 – 112,5	%
Full scale tolerance	2	%
Destruction limit	±5000	g
Transverse sensitivity	<5	%
Lower frequency limit (cf. type list)	1,5 / 3 / 10 / 30 / 100 / 1000	Hz
Upper frequency limit (cf. type list)	100 / 300 / 1000 / 5000 / 10000	Hz
Loop supply voltage	10 – 30	V
Settling time	2 (HP ≥ 30 Hz); 4 (HP < 30 Hz)	s
Operating temperature range	-40 – 100	°C
Temperature coefficient of sensitivity	+0,015	%/K
4 mA offset drift over operating temperature range	±4	µA
4 mA offset drift over time	±1	µA
Weight without cable	60	g
Case material	Stainless steel	
Direction of connector	axial	
Connection	M12, 4 contacts, male. (Binder 713)	
Mounting	tapped hole M8 x 5,5	
Isolation at 250 VDC	>4	GΩ
Protection grade	IP68	



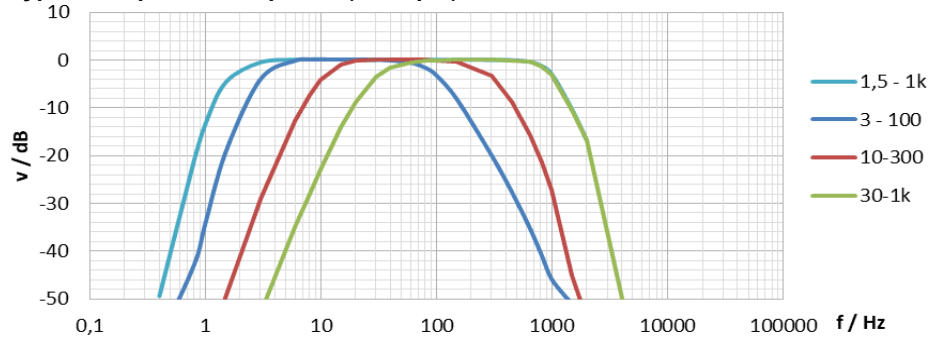
Type List

High pass H [Hz]	Low pass L [Hz]	Range* R [m/s ²]	Type code KSI84AR-H-L-R	Noise* [m/s ²]
1,5	100	5	KSI84AR-1-100-5	0,005
1,5	300	5	KSI84AR-1-300-5	0,005
1,5	1000	5	KSI84AR-1-1000-5	0,005
1,5	100	10	KSI84AR-1-100-10	0,005
1,5	300	10	KSI84AR-1-300-10	0,005
1,5	1000	10	KSI84AR-1-1k-10	0,005
1,5	5000	10	KSI84AR-1-5k-10	0,02
1,5	100	20	KSI84AR-1-100-20	0,005
1,5	300	20	KSI84AR-1-300-20	0,005
1,5	1000	20	KSI84AR-1-1k-20	0,005
1,5	5000	20	KSI84AR-1-5k-20	0,02
1,5	10000	20	KSI84AR-1-10k-20	0,05
1,5	100	50	KSI84AR-1-100-50	0,007
1,5	300	50	KSI84AR-1-300-50	0,007
1,5	1000	50	KSI84AR-1-1k-50	0,007
1,5	5000	50	KSI84AR-1-5k-50	0,03
1,5	10000	50	KSI84AR-1-10k-50	0,09
1,5	100	100	KSI84AR-1-100-100	0,007
1,5	300	100	KSI84AR-1-300-100	0,007
1,5	1000	100	KSI84AR-1-1k-100	0,007
1,5	5000	100	KSI84AR-1-5k-100	0,06
1,5	10000	100	KSI84AR-1-10k-100	0,18
1,5	100	200	KSI84AR-1-100-200	0,008
1,5	300	200	KSI84AR-1-300-200	0,008
1,5	1000	200	KSI84AR-1-1k-200	0,008
1,5	5000	200	KSI84AR-1-5k-200	0,08
1,5	10000	200	KSI84AR-1-10k-200	0,2
1,5	100	500	KSI84AR-1-100-500	0,016
1,5	300	500	KSI84AR-1-300-500	0,016
1,5	1000	500	KSI84AR-1-1k-500	0,016
1,5	5000	500	KSI84AR-1-5k-500	0,16
1,5	10000	500	KSI84AR-1-10k-500	0,25
3	100	5	KSI84AR-3-100-5	0,005
3	300	5	KSI84AR-3-300-5	0,005
3	1000	5	KSI84AR-3-1k-5	0,005
3	100	10	KSI84AR-3-100-10	0,005
3	300	10	KSI84AR-3-300-10	0,005
3	1000	10	KSI84AR-3-1k-10	0,005
3	100	20	KSI84AR-3-100-20	0,005
3	300	20	KSI84AR-3-300-20	0,005
3	1000	20	KSI84AR-3-1k-20	0,005
3	100	50	KSI84AR-3-100-50	0,007
3	300	50	KSI84AR-3-300-50	0,007
3	1000	50	KSI84AR-3-1k-50	0,007
3	100	100	KSI84AR-3-100-100	0,007
3	300	100	KSI84AR-3-300-100	0,007
3	1000	100	KSI84AR-3-1k-100	0,007
3	100	200	KSI84AR-3-100-200	0,008
3	300	200	KSI84AR-3-300-200	0,008
3	1000	200	KSI84AR-3-1k-200	0,008
3	100	500	KSI84AR-3-100-500	0,016
3	300	500	KSI84AR-3-100-500	0,016
3	1000	500	KSI84AR-3-1k-500	0,016

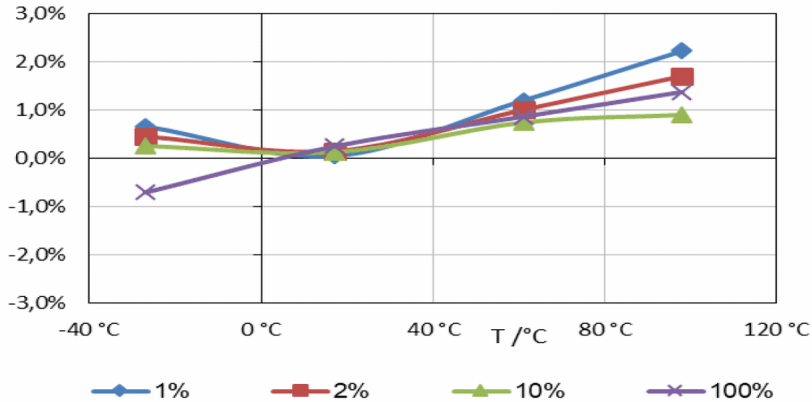
High pass H [Hz]	Low pass L [Hz]	Range* R [m/s ²]	Type code KSI84AR-H-L-R	Noise* [m/s ²]
10	100	5	KSI84AR-10-100-5	0,005
10	300	5	KSI84AR-10-300-5	0,005
10	1000	5	KSI84AR-10-1k-5	0,005
10	100	10	KSI84AR-10-100-10	0,005
10	300	10	KSI84AR-10-300-10	0,005
10	1000	10	KSI84AR-10-1k-10	0,005
10	100	20	KSI84AR-10-100-20	0,005
10	300	20	KSI84AR-10-300-20	0,005
10	1000	20	KSI84AR-10-1k-20	0,005
10	100	50	KSI84AR-10-100-50	0,007
10	300	50	KSI84AR-10-300-50	0,007
10	1000	50	KSI84AR-10-1k-50	0,007
10	100	100	KSI84AR-10-100-100	0,007
10	300	100	KSI84AR-10-300-100	0,007
10	1000	100	KSI84AR-10-1k-100	0,007
10	100	200	KSI84AR-10-100-200	0,008
10	300	200	KSI84AR-10-300-200	0,008
10	1000	200	KSI84AR-10-1k-200	0,008
10	100	500	KSI84AR-10-100-500	0,016
10	300	500	KSI84AR-10-300-500	0,016
10	1000	500	KSI84AR-10-1k-500	0,016
30	300	5	KSI84AR-30-300-5	0,005
30	1000	5	KSI84AR-30-1k-5	0,005
30	300	10	KSI84AR-30-300-10	0,005
30	1000	10	KSI84AR-30-1k-10	0,005
30	300	20	KSI84AR-30-300-20	0,005
30	1000	20	KSI84AR-30-1k-20	0,005
30	300	50	KSI84AR-30-300-50	0,007
30	1000	50	KSI84AR-30-1k-50	0,007
30	300	100	KSI84AR-30-300-100	0,007
30	1000	100	KSI84AR-30-1k-100	0,007
30	300	200	KSI84AR-30-300-200	0,008
30	1000	200	KSI84AR-30-1k-200	0,008
30	300	500	KSI84AR-30-300-500	0,016
30	1000	500	KSI84AR-30-1k-500	0,016
100	1000	5	KSI84AR-100-1k-5	0,005
100	1000	10	KSI84AR-100-1k-10	0,005
100	1000	20	KSI84AR-100-1k-20	0,005
100	1000	50	KSI84AR-100-1k-50	0,007
100	1000	100	KSI84AR-100-1k-100	0,007
100	1000	200	KSI84AR-100-1k-200	0,008
100	1000	500	KSI84AR-100-1k-500	0,016
1000	10000	20	KSI84AR-1k-10k-20	0,05
1000	10000	50	KSI84AR-1k-10k-50	0,09
1000	10000	100	KSI84AR-1k-10k-100	0,18
1000	10000	200	KSI84AR-1k-10k-200	0,2
1000	10000	500	KSI84AR-1k-10k-500	0,25

* RMS values

Typical Amplitude Response (example)



Linearity vs. Temperature and Vibration Amplitude



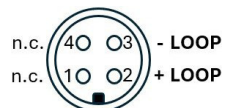
Mounting Accessories

- 043: Mounting stud; M8 x 10
- 229: Adhesive flange; conductive; M8; Ø25; >250 °C
- 208: Rare earth magnetic base; M8; Ø30; 120 °C
- 230: Triaxial mounting cube; M8; □34

Connection Accessories

- 080G: Plug Binder 713 (female) with screw terminals, IP67; straight
- 080W: Plug Binder 713 (female) with screw terminals, IP67; angled
- 082-B713G-PIG-5: Cable for KSI84xx; 5 m; Binder 713; straight; female to pig tail; 80 °C; Ø5
- 082-B713W-PIG-5: Cable for KSI84xx; 5 m; Binder 713; angled; female to pig tail; 80 °C; Ø5

Contact Arrangement



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