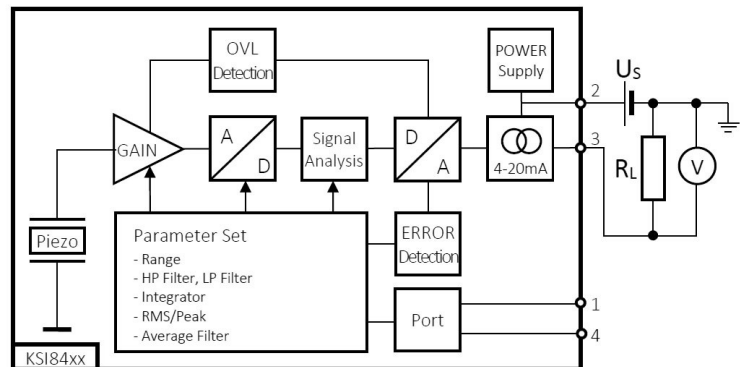
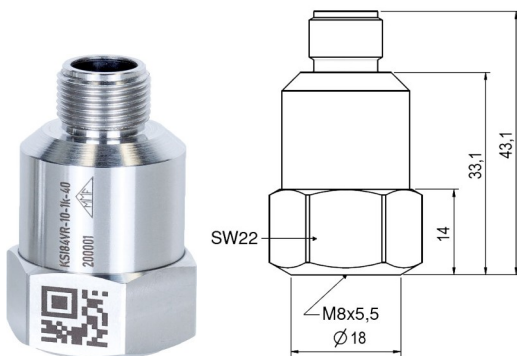


# Vibration Acceleration Sensor with RMS Output 4 – 20 mA

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 <sup>2</sup>
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	

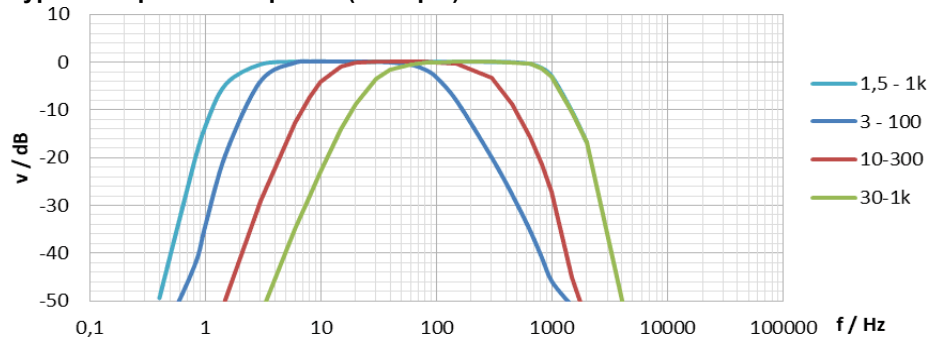


## Type List

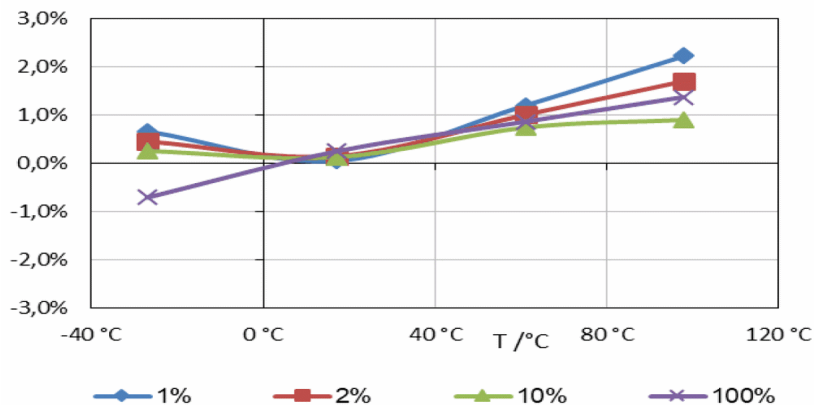
High pass H [Hz]	Low pass L [Hz]	Range* R [m/s <sup>2</sup> ]	Type code KSI84AR-H-L-R	Noise* [m/s <sup>2</sup> ]	High pass H [Hz]	Low pass L [Hz]	Range* R [m/s <sup>2</sup> ]	Type code KSI84AR-H-L-R	Noise* [m/s <sup>2</sup> ]
1,5	100	5	KSI84AR-1-100-5	0,005	10	100	5	KSI84AR-10-100-5	0,005
1,5	300	5	KSI84AR-1-300-5	0,005	10	300	5	KSI84AR-10-300-5	0,005
1,5	1000	5	KSI84AR-1-1000-5	0,005	10	1000	5	KSI84AR-10-1k-5	0,005
1,5	100	10	KSI84AR-1-100-10	0,005	10	100	10	KSI84AR-10-100-10	0,005
1,5	300	10	KSI84AR-1-300-10	0,005	10	300	10	KSI84AR-10-300-10	0,005
1,5	1000	10	KSI84AR-1-1k-10	0,005	10	1000	10	KSI84AR-10-1k-10	0,005
1,5	5000	10	KSI84AR-1-5k-10	0,02	10	100	20	KSI84AR-10-100-20	0,005
1,5	100	20	KSI84AR-1-100-20	0,005	10	300	20	KSI84AR-10-300-20	0,005
1,5	300	20	KSI84AR-1-300-20	0,005	10	1000	20	KSI84AR-10-1k-20	0,005
1,5	1000	20	KSI84AR-1-1k-20	0,005	10	100	50	KSI84AR-10-100-50	0,007
1,5	5000	20	KSI84AR-1-5k-20	0,02	10	300	50	KSI84AR-10-300-50	0,007
1,5	10000	20	KSI84AR-1-10k-20	0,05	10	1000	50	KSI84AR-10-1k-50	0,007
1,5	100	50	KSI84AR-1-100-50	0,007	10	100	100	KSI84AR-10-100-100	0,007
1,5	300	50	KSI84AR-1-300-50	0,007	10	300	100	KSI84AR-10-300-100	0,007
1,5	1000	50	KSI84AR-1-1k-50	0,007	10	1000	100	KSI84AR-10-1k-100	0,007
1,5	5000	50	KSI84AR-1-5k-50	0,03	10	100	200	KSI84AR-10-100-200	0,008
1,5	10000	50	KSI84AR-1-10k-50	0,09	10	300	200	KSI84AR-10-300-200	0,008
1,5	100	100	KSI84AR-1-100-100	0,007	10	1000	200	KSI84AR-10-1k-200	0,008
1,5	300	100	KSI84AR-1-300-100	0,007	10	100	500	KSI84AR-10-100-500	0,016
1,5	1000	100	KSI84AR-1-1k-100	0,007	10	300	500	KSI84AR-10-300-500	0,016
1,5	5000	100	KSI84AR-1-5k-100	0,06	10	1000	500	KSI84AR-10-1k-500	0,016
1,5	10000	100	KSI84AR-1-10k-100	0,18	30	300	5	KSI84AR-30-300-5	0,005
1,5	100	200	KSI84AR-1-100-200	0,008	30	1000	5	KSI84AR-30-1k-5	0,005
1,5	300	200	KSI84AR-1-300-200	0,008	30	300	10	KSI84AR-30-300-10	0,005
1,5	1000	200	KSI84AR-1-1k-200	0,008	30	1000	10	KSI84AR-30-1k-10	0,005
1,5	5000	200	KSI84AR-1-5k-200	0,08	30	300	20	KSI84AR-30-300-20	0,005
1,5	10000	200	KSI84AR-1-10k-200	0,2	30	1000	20	KSI84AR-30-1k-20	0,005
1,5	100	500	KSI84AR-1-100-500	0,016	30	300	50	KSI84AR-30-300-50	0,007
1,5	300	500	KSI84AR-1-300-500	0,016	30	1000	50	KSI84AR-30-1k-50	0,007
1,5	1000	500	KSI84AR-1-1k-500	0,016	30	300	100	KSI84AR-30-300-100	0,007
1,5	5000	500	KSI84AR-1-5k-500	0,16	30	1000	100	KSI84AR-30-1k-100	0,007
1,5	10000	500	KSI84AR-1-10k-500	0,25	30	300	200	KSI84AR-30-300-200	0,008
3	100	5	KSI84AR-3-100-5	0,005	30	1000	200	KSI84AR-30-1k-200	0,008
3	300	5	KSI84AR-3-300-5	0,005	30	300	500	KSI84AR-30-300-500	0,016
3	1000	5	KSI84AR-3-1k-5	0,005	30	1000	500	KSI84AR-30-1k-500	0,016
3	100	10	KSI84AR-3-100-10	0,005	100	1000	5	KSI84AR-100-1k-5	0,005
3	300	10	KSI84AR-3-300-10	0,005	100	1000	10	KSI84AR-100-1k-10	0,005
3	1000	10	KSI84AR-3-1k-10	0,005	100	1000	20	KSI84AR-100-1k-20	0,005
3	100	20	KSI84AR-3-100-20	0,005	100	1000	50	KSI84AR-100-1k-50	0,007
3	300	20	KSI84AR-3-300-20	0,005	100	1000	100	KSI84AR-100-1k-100	0,007
3	1000	20	KSI84AR-3-1k-20	0,005	100	1000	200	KSI84AR-100-1k-200	0,008
3	100	50	KSI84AR-3-100-50	0,007	100	1000	500	KSI84AR-100-1k-500	0,016
3	300	50	KSI84AR-3-300-50	0,007	1000	10000	20	KSI84AR-1k-10k-20	0,05
3	1000	50	KSI84AR-3-1k-50	0,007	1000	10000	50	KSI84AR-1k-10k-50	0,09
3	100	100	KSI84AR-3-100-100	0,007	1000	10000	100	KSI84AR-1k-10k-100	0,18
3	300	100	KSI84AR-3-300-100	0,007	1000	10000	200	KSI84AR-1k-10k-200	0,2
3	1000	100	KSI84AR-3-1k-100	0,007	1000	10000	500	KSI84AR-1k-10k-500	0,25
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-3-300-500	0,016					
3	1000	500	KSI84AR-3-1k-500	0,016					

\* 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; D25; >250  $^{\circ}\text{C}$
- 208: Rare earth magnetic base; M8; D30; 120  $^{\circ}\text{C}$
- 230: Triaxial mounting cube; M8;  $\square 34$

### 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  $^{\circ}\text{C}$ ; D5
- 082-B713W-PIG-5: Cable for KSI84xx; 5 m; Binder 713; angled; female to pig tail; 80  $^{\circ}\text{C}$ ; D5

### Contact Arrangement

