

Acceleration

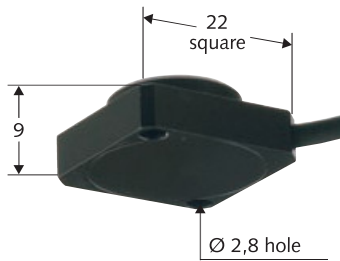
Single axis static/low frequency accelerometer options include integral cable, environmentally sealed and hermetic configurations. Case or base isolation is provided by a durable, hard anodized aluminium construction. Some types operate symmetrically about a 2,5 volt DC voltage and others provide an output symmetric about a zero volt baseline. Integral cable types provide the necessary measurement performance characteristics in an economical package while the four pin connector types provide an improved seal, replaceable cable and some advanced signal conditioning. The 8310's offer an internal temperature sensor thereby providing a means of subsequent temperature compensation.



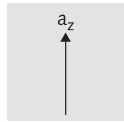
Acceleration

Variable Capacitance Accelerometer

K-Beam Capacitive Accelerometer Type 8305A...



Measuring direction Connection



Std.: pigtail
M2: pigtail

Specifications		Type 8305A2	Type 8305A10
Range	g	±2	±10
Sensitivity, ±5%	mV/g	500	100
Output at Zero g, ±5%	V	2,5	2,5
Frequency Response, +5%	Hz	0 ... 200	0 ... 180
Non-Linearity	%FSO	±0,4	±0,4
Resolution/Threshold	µg	280	1410
Transverse Sensitivity typ.	%	1	1
Shock (0,5 ms half sine)	g	6 000	6 000
Temp. Coeff.: Bias typ.	mg/°C	0,2	1
Sensitivity typ.	%/°C	0,02	0,02
Phase Shift max. @ 100 Hz	deg.	20	20
Operating Temperature	°C	-40 ... 85	-40 ... 85
Power Supply	mA	0,7	0,7
	VDC	7 ... 16	7 ... 16
Housing/Base	type	Al., hard anodized	
Sealing	type	Epoxy	Epoxy
Mass	gram	6,5	6,5

M2 versions, operate from a single polarity supply and provides a differential output.

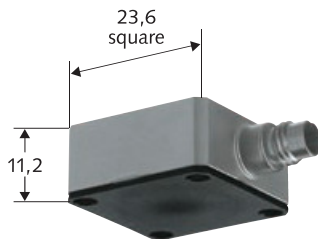
Characteristics
Small, lightweight variable capacitance sensing element, can be operated from a 9 volt battery, CE compliant

Applications
Low frequency vibration measurements

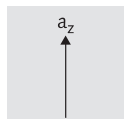
Accessories
Power supply: Type 5210
Mounting cube: Type 8516

Datasheet 8305A_000-217

K-Beam Capacitive Accelerometer Type 8310A...



Measuring direction Connection



4-pin pos.

Specifications		Type 8310A2	Type 8310A10
Range	g	±2	±10
Sensitivity, ±5%	mV/g	1000	200
Output at Zero g	V	±30	±30
Frequency Response, ±5%	Hz	0 ... 250	0 ... 180
Non-Linearity	%FSO	±0,8	±0,8
Resolution/Threshold	µg	540	2 830
Transverse Sensitivity typ.	%	1	1
Shock (0,7 ms half sine)	g	6 000	6 000
Temp. Coeff.: Bias typ.	mg/°C	0,2	1
Sensitivity typ.	%/°C	0,02	0,02
Phase Shift max. @ 100 Hz	deg.	20	20
Operating Temperature	°C	-40 ... 85	-40 ... 85
Power Supply	mA	1,3	1,3
	VDC	3,8 ... 16	3,8 ... 16
Housing/Insulator Base	type	Titanium/Al., hard anodized	
Sealing	type	Hermetic	Hermetic
Ground Isolation	MΩ	10	10
Mass	gram	17	17

Characteristics
Low Power, 1,3 mA, bipolar output, 2 V FS, zero volt output at zero g, CE compliant, temperature output provided
M11: includes integral cable

Applications
Vehicle ride quality studies, structural analysis, building & bridge vibration

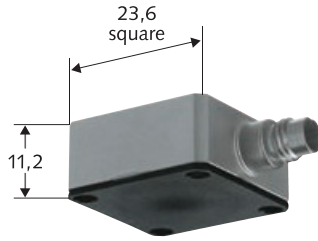
Accessories
Cable: Type 1592A..., 1592M1..., 1786C...
Power supply: Type 5210
Mounting cube: Type 8518A

Datasheet 8310A_000-218

Acceleration

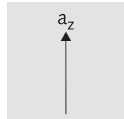
Variable Capacitance Accelerometer

K-Beam Capacitive Accelerometer Type 8310A...



Specifications		Type	Type
		8310A25A1	8310A50
Range	g	±25	±50
Sensitivity, ±5%	mV/g	80	40
Output at Zero g	V	±40	±40
Frequency Response, ±5%	Hz	0 ... 300	0 ... 500
Non-Linearity	%FSO	±1	±1
Resolution/Threshold	µg	2 940	5 700
Transverse Sensitivity typ.	%	2	2
Shock (0,7 ms half sine)	g	3 000	3 000
Temp. Coeff.: Bias typ.	mg/°C	3	5
	Sensitivity typ.	%/°C	0,02
Phase Shift max. @ 100 Hz	deg.	20	20
Operating Temperature	°C	-40 ... 85	-40 ... 85
Power Supply	mA	13	13
	VDC	6 ... 16	6 ... 16
Housing/Insulator Base	type	Titanium/Al., hard anodized	
Sealing	type	Hermetic	Hermetic
Ground Isolation	MΩ	10	10
Mass	gram	17	17

Measuring direction Connection
4-pin pos.



Characteristics

Low Power, 1,3 mA, bipolar output, 2 V FS, zero volt output at zero g, CE compliant, temperature output provided
M11: includes integral cable

Applications

Vehicle ride quality studies, structural analysis, building & bridge vibration

Accessories

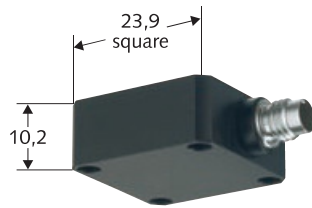
Cable: Type 1592A..., 1592M1..., 1786C...
Power supply: Type 5210
Mounting cube: Type 8518A

Datasheet 8310A_000-218

Acceleration

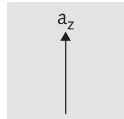
Variable Capacitance Accelerometer

K-Beam Capacitive Accelerometer Type 8312A...



Specifications		Type 8312A2	Type 8312A10
Range	g	±2	±10
Sensitivity, ±5%	mV/g	1000	200
Output at Zero g	V	0	0
Frequency Response, ±5%	Hz	0 ... 250	0 ... 180
Non-Linearity	%FSO	±0,8	±0,8
Resolution/Threshold	µg	540	2830
Transverse Sensitivity typ.	%	1	1
Shock (500 µs half sine)	g	6000	6000
Temp. Coeff.: Bias typ.	mg/°C	0,2	1
Sensitivity typ.	%/°C	0,02	0,02
Phase Shift max. @ 100 Hz	deg.	20	20
Operating Temperature	°C	-40 ... 85	-40 ... 85
Power Supply	mA	1,3	1,3
	VDC	3,8 ... 16	3,8 ... 16
Housing/Base	type	Al., hard anodized	
Sealing	type	Epoxy	Epoxy
Ground Isolation	MΩ	10	10
Mass	gram	12	12

Measuring direction Connection
4-pin pos.



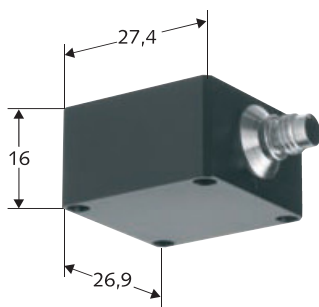
Characteristics
Low power, zero volt output at zero g, bipolar output: ±2 V FS, CE compliant

Applications
Vehicle ride quality studies, structural analysis, building & bridge vibration

Accessories
Cable: Type 1592A..., 1592M1..., 1786C...
Power supply: Type 5210
Mounting cube: Type 8518

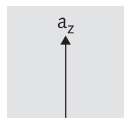
Datasheet 8312A_000-219

ServoK-Beam Capacitive Accelerometer Type 8330A...



Specifications		Type 8330A2,5
Range	g	±2,5
Sensitivity, ±5%	mV/g	1500
Frequency Response, ±5%	Hz	0 ... 200
Non-Linearity	%FSO	±0,2
Resolution/Threshold	µg	<2,5
Transverse Sensitivity typ.	%	0,4
Shock (500 µs half sine)	g	1500
Temp. Coeff.: Bias typ.	mg/°C	0,2
Sensitivity typ.	%/°C	0,0055
Phase Shift max. @ 100 Hz	deg.	-1
Operating Temperature	°C	-40 ... 85
Power Supply	mA	8,5
	VDC	±6 ... ±15
Housing/Base	type	Aluminium, hard anodized
Sealing	type	Epoxy
Ground Isolation	MΩ	10
Mass	gram	28,5

Measuring direction Connection
4-pin pos.



Characteristics
Variable capacitance analogue force feedback operation, zero volt output at zero g, ultra low noise, CE compliant

Applications
Low frequency, low amplitude vibration measurements typical to critical machine process control

Accessories
Cable: Type 1592M1..., 1788A...
Mounting cube: Type 8530

Datasheet 8330A_000-242