

SCA220 Series

Stand Alone Accelerometer



FEATURES

- Stand alone accelerometer in plastic housing
- Available range: $\pm 2g$
- Accurate over a wide temperature range $-40^{\circ}C \dots +85^{\circ}C$ without any compensation
- Electrical connection with integrated connector
- Standard analogue output (ratiometric)
- Standard bracket and mating connector upon request

BENEFITS

- Excellent overload durability (1.5 m drop proof)
- Plastic housing makes the accelerometer IP6K9K
- Meet typical automotive EMC requirements
- Easy to use

APPLICATIONS

- Acceleration measurement
- Inclination measurement
- Motion measurement

For customised product please contact VTI Technologies

ELECTRICAL CHARACTERISTICS

Parameter	Condition	Min.	Typ	Max.	Units
Supply voltage (1)		4,5		5,5	V
Current consumption			2,0	4,0	mA
Analogue output load		10			mOhm
				20	nF
Output	Analogue Voltage				

PERFORMANCE CHARACTERISTICS

Parameter	Condition	SCA220-C24H1G	Units
Measuring range (1)		± 2	g
Offset (2, 3, 4)	Output at 0g @ 23 °C	2,5	V
Offset temperature error	$-40, 85^{\circ}C$	± 60	mg
Sensitivity (3)	@ 0g (offset position)	1	V/g
Sensitivity temperature error (3)	$-40, 85^{\circ}C$	± 3	%
Non-linearity	$\pm 2g$	± 40	mg
Frequency response -3dB (5)		45	Hz
Output noise		5	mVrms
Cross-axis sensitivity (6)		± 4	%

Typical values unless otherwise specified.

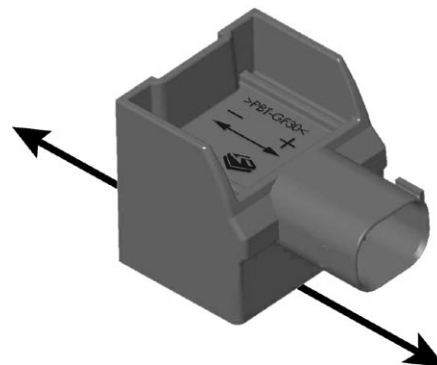
- Note 1. The measuring range is limited by the sensitivity and offset.
 Note 2. Offset specified as Output @ 0g.
 Note 3. Mounting position should be calibrated. See measuring positions.
 Note 4. Vdd 5V, unless otherwise specified.

- Note 5. The frequency response is determined by the sensing element's internal gas damping. The output has true DC (0Hz) response.
 Note 6. The cross-axis sensitivity determines how much acceleration or inclination, perpendicular to the measuring axis, couples to the output. The total cross-axis sensitivity is the geometric sum of the sensitivities of the two axes which are perpendicular to the measuring axis.

ABSOLUTE MAXIMUM RATINGS

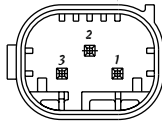
Parameter	Value	Units
Over voltage protection (1)	16	V
Reverse voltage protection	16	V
Acceleration (powered or non-powered)	>20000	g

MEASURING DIRECTIONS



ELECTRICAL CONNECTION

Pin	Function
1	Accsig (signal output)
2	GND
3	Vdd



Mating connector:

AMP 2-967642-1 MQS, Socket housing, SWS, 3 pos.assy
 AMP 965907-1, Sn Plated socket terminal for 0.75mm² wire
 AMP 967067-1, wire seal, green silicone for $\phi 1.4...1.9$ mm wire

MECHANICAL SPECIFICATION

Sensor weight: 23 grams
 Total weight: 100 grams (with bracket)
 Protection class: IP6K9K (DIN 400050)
 Metal part: Housing: PBT + 30% glass fiber
 Bracket: Yellow passivated steel

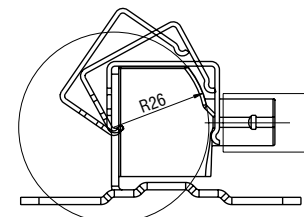
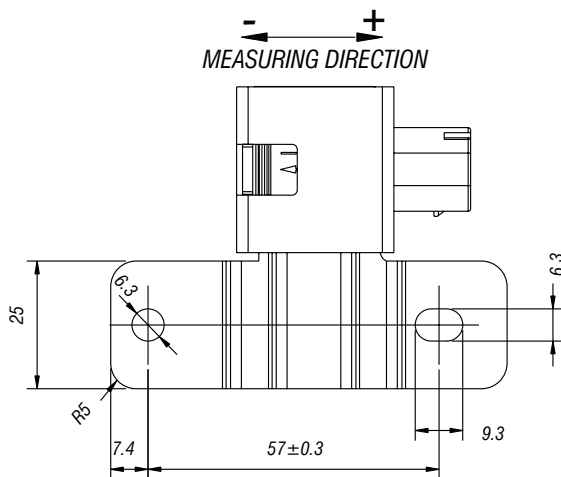
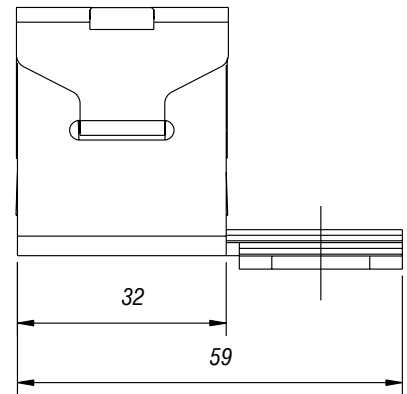
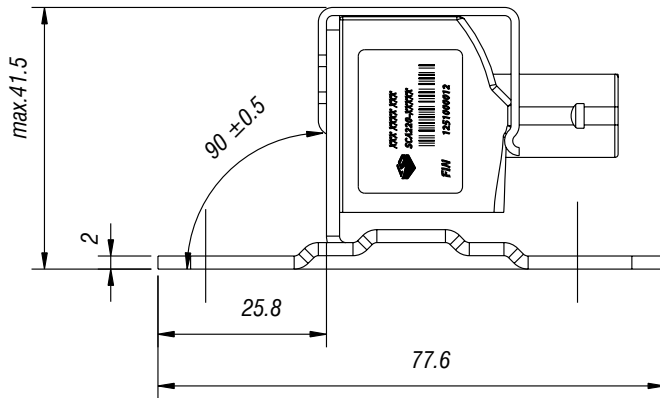
MOUNTING

Sensor mounting
 Bracket: 37052
 Clip: 37053

Bracket mounting
 Screws: M6
 Torque: 10 ± 2 Nm

SENSOR DIMENSIONS

Dimensions in mm.



CLIP ASSEMBLY-ONLY FOR INFORMATION

Acceleration in the direction of the arrow will increase the output voltage