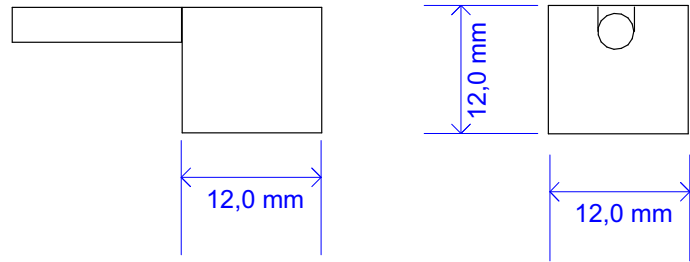


Capacitive Accelerometer - Uniaxial

AIS 4220LC

- Ultra LOW NOISE
- Temperature Compensated
- Aluminium Package
- Amplified Output
- Highly Shock Resistant
- Ranges 2 g to 200 g



APPLICATIONS

- **Inertial Sensing**
- Avionics
- Land & Sea inertial Navigation
- Train control
- Tilt & Inclination

Service

Pendulum Calibration
Sinusoidal Calibration

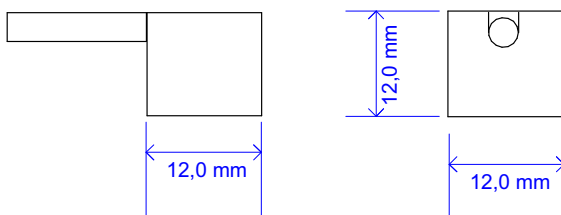
Features

The model **AIS 4220LC** is an uniaxial, capacitive accelerometer for INERTIAL SENSING.

Small measuring ranges are possible due to capacitive technology. The signal is independent from the power supply between 9VDC to 30VDC. The sensor has an excellent Bias stability.

The model AIS **4220LC** has an aluminium package.

The model **AIS 4220LC** has an ULTRA LOW NOISE performance.



| AIS 4220LC Ultra Low Noise | | | | | | | | | |
|-------------------------------------|--|---------|---------|---------|---------|---------|--|--|--------------------|
| Range | 2 | 10 | 30 | 50 | 100 | 200 | | | g |
| Resonant frequency | 1.4 | 3.7 | 6.3 | 11 | 15 | 26 | | | kHz |
| Sensitivity | 1000±8 | 200±2 | 66,6±1 | 40±1 | 20± | 10± | | | mV/g |
| Output Noise typ. | 18 | 18 | 18 | 18 | 18 | 18 | | | µV/√Hz |
| Output Noise max. | 24 | 24 | 24 | 24 | 24 | 24 | | | |
| Non Linearity % of FS max. | <0.8 | <0.9 | <0.9 | <0.9 | <1 | <1 | | | % of FS max |
| One year scale factor stability [1] | 150 | 150 | 150 | 150 | 150 | 150 | | | ppm typ. |
| Scale factor temp. coefficient [2] | 100 | 100 | 100 | 100 | 100 | 100 | | | ppm/°C |
| | -50/250 | -50/250 | -50/250 | -50/250 | -50/250 | -50/250 | | | min/max |
| Bandwidth [3] | 0 to >100 over the whole measuring range | | | | | | | | Hz |
| Bias temp. coefficient typ. | <0.1 | <0.5 | <1.5 | <2.5 | <5 | <10 | | | typ. mg/°C |
| | ±0.4 | ±2 | ±6 | ±10 | ±20 | ±40 | | | max mg/°C |
| Input axis misalignment | 1 | 1 | 1 | 1 | 1 | 1 | | | % max. |
| | | | | | | | | | |

| | |
|-------------------------------|---|
| Supply Voltage | 9 to 30 Volts |
| ESD sensitivity | Class 2 |
| Output Impedance / load | Min. 50kOhm at Vout / Max. 50pF at Vout |
| Operating Current | < 400µA at 5 VDC |
| Max. Mechanical Shock (0.1)ms | 6000 g (0.15ms half-sine period 1ms) |
| Operating Temperature | -20°C to 100°C |
| Material Housing | Aluminium |
| Weight Sensor | 4 grams |
| Material Cable | Polyurethane |
| Weight Cable nom. each meter | 14 grams |

[1] One year stability according to IEEE 528-2001: turn on /on, storage at -55°C to 125°C T cycling, -55°C to 85°C unpowered harass, vibration, shock.

[2] Temperature coefficients are specified for a range of -40°C to 20°C, where temperature behaviour is typically linear.

[3] The bandwidth is defined as a frequency band for which the sensitivity has decreased by less than 3dB

Cable Code
Supply + = Red
Supply - = Black
Output + = White
Output - = Green

Ordering information

AIS 4220LC-XXX-XXX
 └── Cable Length and Pinout
 └── Range
 └── Model Ultra Low Noise

