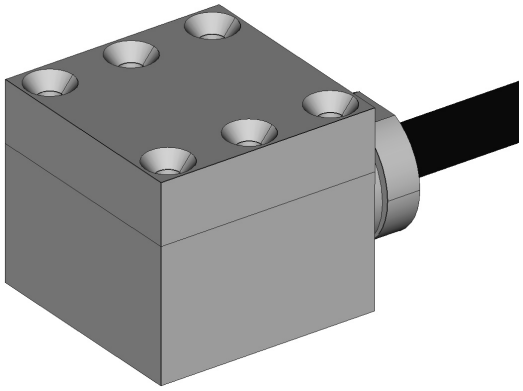
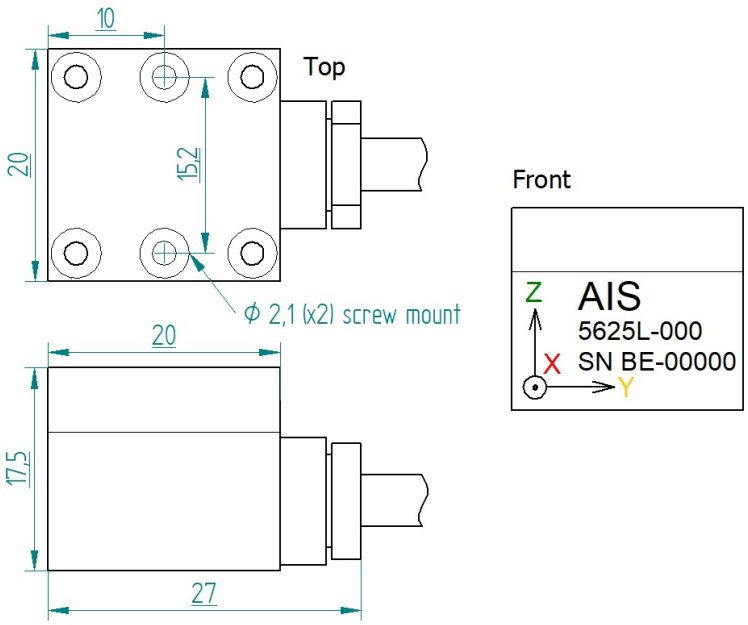


# AIS 5625L

**Capacitive Accelerometer**
**Triaxial, screw mount**
**Protection Class IP68**

## Features

Type AIS 5625L accelerometer with a small housing in cube form 27x20x17,5 mm. The sensor is applicable for rugged applications due to Protection Class IP68 with special integral strain relief. The sensor combines a micro-machined capacitive sense element and a custom integrated circuit that includes a sense amplifier and differential output stage. It is very insensitive to temperature changes and gradients. The flexible and rugged cable provides a simple mounting. The sensor is equipped with standard 6 m cable. We offer an injection molding cable split developed by AIS. Included Accessories screws M2x20 for mounting.




- ❑ Capacitive Technology
- ❑ Ranges ±2g to ±400g
- ❑ Low Noise: 7µ*g*/√Hz typical for 2*g* FSO
- ❑ Linearity typ. 0,15% of span
- ❑ Scale Factor Stability
- ❑ Excellent Long Term Stability
- ❑ Temperature Compensated from -55°C to +125°C
- ❑ Working Temperature -45°C to +95°C
- ❑ Stainless Steel housing

### Applications

- ❑ Vibration Monitoring
- ❑ Automotive Dynamics
- ❑ Industrial Testing
- ❑ Hard Load-condition Tests
- ❑ Endurance Tests
- ❑ Brake Tests
- ❑ Ride Quality & Comfort

### Service

- ❑ Sinusoidal Calibration
- ❑ Connector Options
- ❑ Signal Conditioning
- ❑ ID-Module Options
- ❑ All axes repairable
- ❑ Strucktural Monitoring and Testing

# AIS 5625L Capacitive Accelerometer / Triaxial, screw mount

## Individual Technical Data

$V_{DD}$= $V_R$= 5,0 VDC, $F_{CLK}$ = 250kHz, $T_C$ = 25°C[1], typ.

### AIS 5625L Performance

| Range (*g*) | Sensitivity (mV/*g*) | Frequency Response (nom. 3 dB) (Hz) | Output Noise (µ*g*/root Hz) |
|---|---|---|---|
| 2 | 2000 | 0 - 300 | 7 |
| 5 | 800 | 0 - 400 | 12 |
| 10 | 400 | 0 - 600 | 18 |
| 25 | 160 | 0 - 900 | 25 |
| 50 | 80 | 0 - 1200 | 50 |
| 100 | 40 | 0 - 1400 | 100 |
| 200 | 20 | 0 - 1750 | 200 |
| 400 | 10 | 0 - 2000 | 400 |

### AIS 5625L Performance ±2*g* to ±400*g*

| | | min. | typ. | max. |
|---|---|---|---|---|
| Bias Calibration Error | ±% of span | - | 0.2 | 0.5 |
| Bias Temperature Shift (-55 °C to +125 °C | (ppm of span)/°C | - | 50 | +200 |
| Scale Factor Temperature Shift (-55 °C to +125 °C) | ppm/°C | -200 | 0 | +200 |
| Non-Linearity (-90 to +90% of span) | ±% of span | - | 0.15 | 0.5 |
| Long Term Scale Factor Stability | ± ppm | - | 500 | 100 |

| Cable Code[7] | |
|---|---|
| **12 Wire Code** | |
| **X-, Y-, Z-Axis** | |
| Supply + | red |
| Supply - | black |
| Output + | green |
| Output - | white |

## General Technical Data

### AIS 5625L Performance

| | | min. | typ. | max. |
|---|---|---|---|---|
| Supplay Voltage | (V)[1] | 9 | - | 30 |
| Cross Axis Sensitivity | (%)[2] | - | 2 | 3 |
| Output Impedance | (Ω) | - | 90 | - |
| Operating Current ($I_{DD}$+$I_{VR}$) | (mA)[5, 6] | - | 5 | 6 |
| Max. Mecanical Shock (0,1 ms) | (*g*)[3] | - | - | 5000 |
| Operating Temperature | (°C)[4] | -45 | - | +95 |
| Material Housing | | Stainless Steel[8] | | |
| Weight Sensor | (g) | 37 | | |
| Material Cable | | Polyurethane | | |
| Weight Cable nom. each meter | (g) | 30 | | |

| Order Information | | | |
|---|---|---|---|
| **AIS 5625L-XXX-XXX** | 1 | 2 | 3 |
| 1 Model | | | |
| 2 Range | | | |
| 3 Cable length & Pinout | | | |

1) Permormance chip 5,0VDC, additional circuit for +9..+24VDC, optional +30VDC
2) Max. 3% after assembling in housing
3) Max. mech. shock 0,1ms ±2*g* to ±5*g* = 2000*g*, ±10*g* to ±400*g* = 5000*g*
4) With high temperature cable up to +125°C
5) Operating current chip typ. 5 mA in Modul typ. 20 mA
6) Optional low impedance output driver
7) With customized products please ask for cable code
8) Protection class IP68