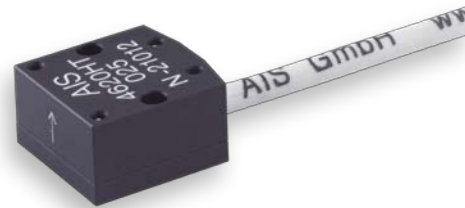


AIS 4620L

Capacitive Accelerometer Uniaxial



Features

The Model **AIS 4620L** is an uniaxial capacitive accelerometer. The sensor is over a wide range from -55°C to +125°C temperature compensated and optional minimal exposure at +175°C recommended for maximum lifespan. The LowNoise performance is a drop in next generation with excellent 0G Bias, scale factor stability and temperature behavior. The housing with its mounting holes allows more possibilities. The AIS 4620L is adaptive for automotive and industrial applications. The signal is independent from the power supply between 9Vdc to 24Vdc optional up to 30Vdc. The flexible and rugged cable provides a simple mounting.

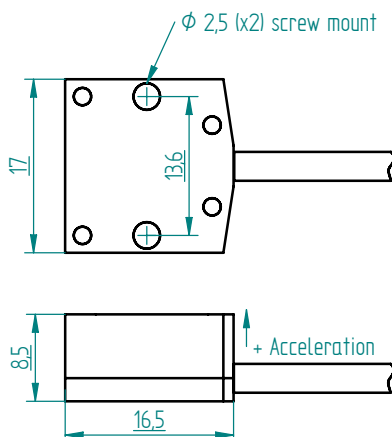
- Range $\pm 2g$ to $\pm 400g$
- Temperature Compensated from -55°C to +125°C
- Responds to DC and AC Acceleration
- Amplified Output
- Scale Factor Stability
- Low Noise: $7\mu g/\sqrt{Hz}$ typical for 2g FSO
- Excellent 0G Stability
- High Temperature Cable up to +150°C
- Aluminium Housing

Applications

- Vibration Monitoring
- Automotive
- Seismic Monitoring
- Industrial Application
- Machine Control

Service

- Sinusoidal Calibration
- Different cable length
- Repairable
- Signal Conditioning
- Protective Circuit



AIS 4620L Capacitive Accelerometer / Uniaxial

Individual Technical Data $V_{DD}=V_{R}=5.0$ VDC, $T_C=25^\circ\text{C}$, Differential. Span = $\pm g$ range = 8000mV

AIS 4620L Performance			
Range (g)	Sensitivity (mV/g)	Frequency Response (Minimum 3 dB) (Hz)	Output Noise ($\mu\text{g}/\text{root Hz}$)
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

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

New „Wide Band“ sensor by next year 2017

AIS 4620L Performance				
		min.	typ.	max.
Bias Calibration Error	(% of Span)			
	$\pm 2 g - \pm 400 g$	-	0.2	0.5
Bias Temperature Shift (-55 °C – +125 °C) (ppm of Span/°C)				
	$\pm 2 g - \pm 400 g$	-	50	+200
Scale Factor Temperature Shift (-55 °C – +125 °C) (ppm/°C)				
	$\pm 2 g - \pm 400 g$	-200	0	+200
Non-Linearity (-90 to +90% of span) ($\pm\%$ of span)				
	$\pm 2 g - \pm 400 g$	-	0.15	0.5
Long Term Scale Factor Stability ($\pm\text{ppm}$)				
	$\pm 2 g - \pm 400 g$	-	500	1000

Order Information		
AIS 4620L-XXX-XXX		
1	2	3
1 Model		
2 Range		
3 Cable Length and Pinout		

Export Classification: EAR99 for $\pm 2g$ to $\pm 100g$

General Technical Data

AIS 4620L Performance				
		min.	typ.	max.
Supply Voltage	(V) ¹	9	-	30
Cross Axis Sensitivity	(%) ²	-	2	3
Output Impedance	(Ω) ⁷	-	90	-
Operating Current ($I_{DD}+I_{VR}$)	(mA) ⁶	-	5	6
Max. Mechanical Shock (0.1 ms)	(g) ³	-	-	5000
Operating Temperature	(°C) ⁴	-45	-	+95
Material Housing		Aluminium Housing ⁵		
Weight Sensor	(g)	6		
Material Cable		Polyurethane ^{7,8}		
Weight Cable nom. each meter	(g)	14		

1) Performance chip 5.0VDC, additional circuit for 9 to 24VDC, optional 30VDC

2) Max. 3% after assembling in housing

3) Max. Mechanical Shock (0.1 ms)
 $\pm 002 g$ to $\pm 005 g = 2000 g$
 $\pm 010 g$ to $\pm 400 g = 5000 g$

4) With high temperature cable up to 150 °C

5) Protection class IP67 due to asymmetric housing and integral strain relief

6) Operating current chip typ. 5 mA, in modul typ 20 mA

7) Optional low impedance output driver

8) Optional with High Temperature Cable up to +150°C