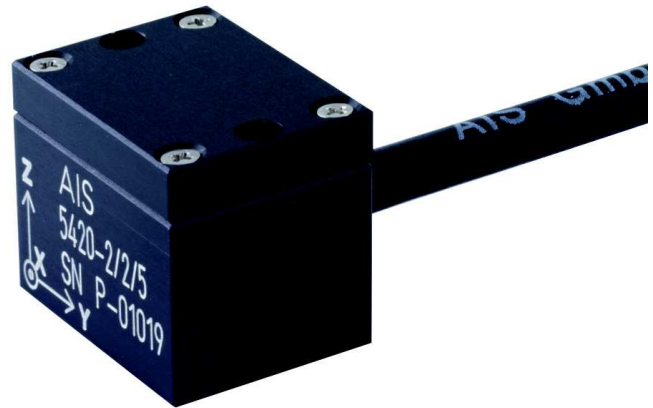


Capacitive Accelerometer - Triaxial

AIS 5420

- Ranges ± 2 g to $\pm 1,000$ g
- Temperature Compensated
- Aluminium Housing
- Amplified Output
- Highly Shock Resistant



APPLICATIONS

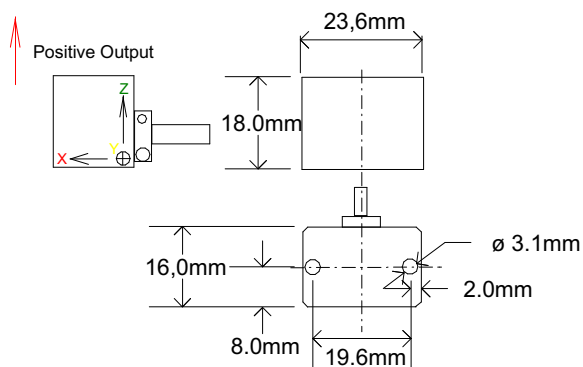
- Vibration Monitoring
- Automotive Dynamics
- Instrumentation
- Machine Control

Service

Pendulum Calibration
Sinusoidal Calibration

Features

The AIS 5420 model is an triaxial, capacitive accelerometer. The sensor is over a wide range temperature compensated. Small measuring ranges are possible due to capacitive technology. The signal is independent from the power supply between 9VDC to 24VDC. The flexible and rugged cable provides a simple mounting. The sensor is equipped with standard 6m cable. Different cable lengths and cable splits are available. The model **AIS 5420LN** is the Low Noise version with better and improved frequency response.



AIS 5420 Low Noise									
Range	2	5	10	25	50	100	200	400	g
Frequency Response (nom.3dB)	0-400	0-600	0-1000	0-1500	0-2000	0-2500	0-3500	0-4000	Hz
Sensitivity	2000	800	400	160	80	40	20	10	mV/g
Output Noise	5	7	10	25	50	100	200	400	$\mu\text{g}/\sqrt{\text{Hz}}$

AIS 5420 Standard									
Frequency Response (nom.3dB)	n.a.	0-400	0-600	0-1000	0-1500	0-2000	0-2500	0-3500	Hz
Output Noise	n.a.	32	63	158	316	632	1265	2350	$\mu\text{g}/\sqrt{\text{Hz}}$

PARAMETER LOW NOISE		MIN	TYP	MAX	UNITS
Bias Error	2g		2	4	% of Span
	5g to 200g		1	2	
Bias Temperature Shift (-20°C to 100°C)	2g		100	200	(ppm of span)/°C
	5g to 200g		50	200	
Scale Factor Temperature Shift (-20°C to 100°C)		-250		250	ppm/°C
Non- Linearity	2g to 50g		0.3	0.5	% of span
	100g to 200g		0.5	1.0	
	400g		1.0	2.0	

PARAMETER STANDARD		MIN	TYP	MAX	UNITS
Bias Error	5g		2	4	% of Span
	10g to 400g		1	2	
Bias Temperature Shift (-20°C to 100°C)	5g		100	300	(ppm of span)/°C
	10g to 400g		50	200	
Scale Factor Temperature Shift (-20°C to 100°C)	5g to 400g	-250		250	ppm/°C
Non- Linearity			0.5	1.0	% of span

Supply Voltage	9	24	Volts
Cross Axis Sensitivity	2	3	%
Output Impedance	90	Ohms	
Operating Current	8	10	mA
Max. Mechanical Shock (0.1ms)	2000	g	
Operating Temperature	-40	+100	°C
Material Housing		Aluminium	
Weight Sensor	22	grams	
Material Cable		Polyurethane	
Weight Cable nom. each meter	33	grams	

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

Ordering information

AIS 5420XX-XXX-XXX
 ———— Model LN with Low Noise
 ———— Range
 ———— Cable Length and Pinout

subject to change October 2012



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