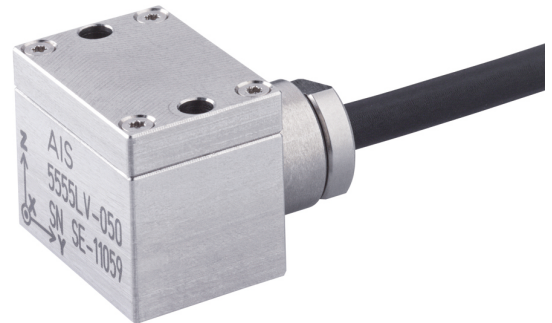


AIS 5555LV

Capacitive Accelerometer Triaxial, screw mount



Features

The model AIS 5555LV is a new extra high end Product dedicated to applications in the domains of **vibration sensing**.

The model AIS 5555LV is manufactured with an improved chip technology with high stability and low noise level as well as a improved bias and scale factor coefficient. This sensor has been specifically designed to provide a wide bandwidth. For the $\pm 200g$ version the bandwidth is ≥ 3 kHz (-3 dB)

Optional we can offer additional **temperature compensation** up to 150°C in different housings.

The Sensor is applicable for rugged applications due to Protection Class IP67/68 with integrla strain relief.

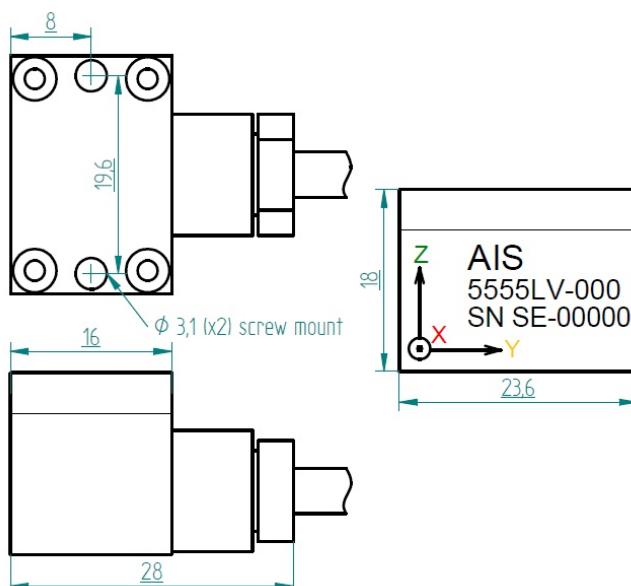
- ☐ NEW Generation
- ☐ Ultra Low Noise - Vibration
- ☐ Temperature Compensated
- ☐ Stainless Steel Package
- ☐ Amplified Output
- ☐ Highly Shock Resistant 6000g
- ☐ Ranges $\pm 2g$ to $\pm 200g$

Applications

- ☐ Vibration Sensing
- ☐ HUMS
- ☐ Automotive Testing
- ☐ Industrial Testing
- ☐ Railway Technology
- ☐ Aerospace Flight & Flutter Testing

Service

- ☐ Sinusoidal Calibration
- ☐ Connector Options
- ☐ Repair Options
- ☐ ID-Module Options



AIS 5555LV Capacitive Accelerometer / Triaxial, screw mount

Individual Technical Data

AIS 5555LV Ultra Low Noise								
Range	g	2	5	10	30	50	100	200
Resonant frequency	kHz	1,3	1,1	2	4	5,1	7,2	11
Sensitivity	mV/g	1000±8	400±4	200±2	66,6±1	40±1	20±1	10±
Output Noise typ.	µV/√Hz	25	25	25	25	25	25	25
Output Noise 0; 4000Hz max.		27	27	27	27	27	27	27
Non Linearity max. ¹⁰	% of FS	< 0,8	< 1	< 1	< 1	< 1	< 1	< 1 ¹⁰
One Year Scale Factor Stability typ. (max) ⁷	ppm.	300(<1000)	300(<1000)	300(<1000)	300(<1000)	300(<1000)	300(<1000)	300(<1000)
Scale factor temp. Coefficient ⁸	ppm/°C	100	100	100	100	100	100	100
Bias Temp. Coefficient typ.	mg/°C	< 0,1	< 0,25	< 0,5	< 1,5	< 2,5	< 5	< 10
Bandwidth (-3dB) ⁹	Hz	0 to ≥ 800	0 to ≥ 1700	0 to ≥ 2400	0 to ≥ 3000	0 to ≥ 3000	0 to ≥ 3000	0 to ≥ 3000

General Technical Data

AIS 5555LV Performance				
		min.	typ.	max.
Supply Voltage	(V) ¹	9	12	30
Input axis misalignment (Kp, Ko)	mrad			<10
Output Impedance	(Ω)			
Operating Current (I _{DD} +I _{VR})	(mA) ^{5, 6}		<400	
Max. Mechanical Shock (0,15 ms)	(g) ³			6000
Operating Temperature	(°C) ⁴	-45		+95
Material Housing		Stainless Steel		
Weight Sensor	(g)	39		
Material Cable		Polyurethane		
Weight Cable nom. each meter	(g)	30		

Cable Code¹¹

12 Wire Code

X-, Y-, Z-Axis

Supply +	red
Supply -	black
Output +	green
Output -	white

Order Information

AIS 5555LV-XXX-XXX

1 2 3

1 Model

2 Range

3 Cable length & Pinout

1) Performance chip 5,0VDC, additional circuit for +9...+24VDC, optional +30VDC

2) Max. 3% after assembling in housing

3) Max. mech. shock 6000g (0,15ms half sine, single shock, not repetitive, in one direction o, p or i)

4) With high temperature cable up to +150°C

5) Operating current chip typ 400µA in Modul typ. 18mA

6) Optional low impedance output driver

7) One year stability according to IEE 528-2001: turn on/on, storage at -55°C to +125°C Tcycling, -55°C to +85°C unpowered harass, vibration shock (6000g single shock)

8) Temperature coefficients are specified for a range of -40°C to +20°C, where temperature behaviour is typically linear

9) The bandwidth is defined as a frequency band for which the sensitivity has decreased by less than 5%

10) The non-linearity specification for 200g version is validated at maximum 100 range

11) With customized products please ask for cable code