



Capacitive Accelerometer



ASC 3411LN

Uniaxial
Low Noise
4 Wire System
Amplified Output

Features

- Range: 2g to 200g
- Frequency Response starting at 0 Hz
- High Shock Resistant
- Gas Damped
- Aluminum Package

Options

- Customized cable length
- Customized connector
- Dallas ID Module
- ASC-Teds Module

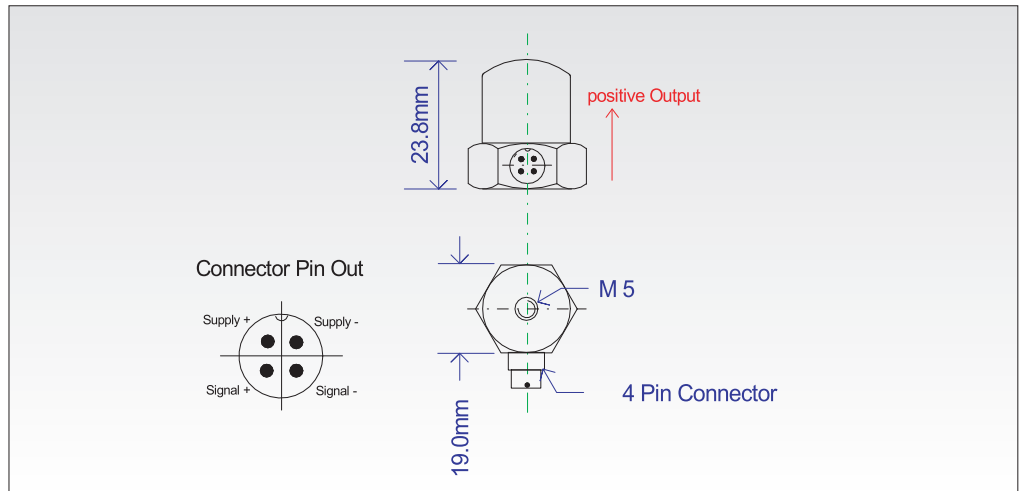
Applications

- Vibration Monitoring
- General Vibrations
- Automotive Comfort Measurements
- Slide Tests
- High Speed Trains



Capacitive MEMS Technology

The accelerometers are based on a capacitive MEMS technology and can be used in a low frequency response up from 0 Hz. Inside the sensor element, the seismic mass is connected with two conductive capacitor plates. If the seismic mass oscillates between the two capacitor plates the capacitance will change. This capacitance change is converted via an ASIC (Application Specific Integrated Circuit) into an analog signal.



Description

The model **ASC 3411LN** is an uniaxial accelerometer based on capacitive technology. It is over a wide temperature range fully compensated and factory calibrated. The sensor has specifically been developed for monitoring and comfort vibration measurements. The four wire output can be connected to all data management systems.

Because capacitive technology is used, extremely small measuring ranges are possible. The amplified output is easy to use with a data acquisition unit.

The signal is independent from the power between +8 VDC to +30 VDC. The package is hard anodized aluminum. A very high flexible and rugged cable provides a simple mounting. The **ASC 3411LN** is equipped as standard with 2 m of this cable and an M5 mounting stud.

The model **ASC 3411LN** is a Low Noise version and has a better frequency response. Owing the lower noise the **ASC 3411LN** provides a higher resolution.

General Technical Data

Supply Voltage	8 VDC - 30 VDC
Operation Current	10 mA
Linearity: typ. FSO	0.5 %
Damping Ratio typ.	0.7
Transvers Sensitivity: typ.	2 %
Zero g Output typ. 2 g and 5 g	+/- 100 mV
Zero g Output typ. 10 g and higher	+/- 50 mV
Output Impedance	90 Ohm
TC Zero (-20° to 85° C), typ. FSO:	1 %
TC Span (-20° to 85° C), typ. FSO:	3 %
Shock Resistant	5000g
Operating Temperature	-20° C to 100° C
Storage Temperature	-40° C to 125° C

Calibration

- Pendulum Calibration
- Sinusoidal Calibration

Calibration Data incl.:

- Sensitivity
- Frequency
- Offset
- Phase

Individual Technical Data

ASC 3411LN	Sensitivity	Frequency +/- 5%	Noise
Range 2g	2000 mV/g	250 Hz	10 µg/root Hz
Range 5g	800 mV/g	400 Hz	10 µg/root Hz
Range 10g	400 mV/g	600 Hz	10 µg/root Hz
Range 25g	160 mV/g	1000 Hz	25 µg/root Hz
Range 50g	80 mV/g	1300 Hz	50 µg/root Hz
Range 100g	40 mV/g	1700 Hz	100 µg/root Hz
Range 200g	20 mV/g	1700 Hz	200 µg/root Hz

At 10 VDC Supply and 25° C

	Weight	Material	Dimensions
Housing	5 gram	Aluminium, hard anodized	19 mm x 23.8 mm
Cable	12 gram/meter	Polyuithan (PU)	diameter 3.0 mm

Cable Code:

Red	Supply +	Green:	Signal +
Black	Supply -	White:	Signal -

Order Information

ASC 3411LN-XXX-2XX

1 2 3 4

- 1 Model: 3411LN
- 2 Range: e.g. 050 is 50 g
- 3 Cable: Length in Meter
- 4 Connector and Pinout /
„A“ is for No Connector at cable end

ASC GmbH
Advanced Sensors Calibration
Schäfflerstraße 15
85276 Pfaffenhofen
Germany

Tel. +49 (0) 8441/786 547-0
Fax +49 (0) 8441/786 547-9
office@asc-sensors.de
www.asc-sensors.de

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www.instrumentation.it

INSTRUMENTATION DEVICES SRL

Via Acquanera 29, 22100 COMO (Italy) tel. +39.031.525391 - fax +39.031.507984 - info@instrumentation.it

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