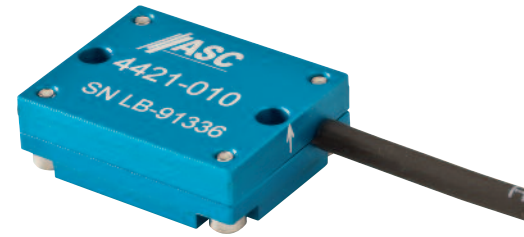


ASC 4421 / ASC 4425

Uniaxial
3 or 4 Wire System
Amplified Output
Aluminium Housing

Uniaxial
3 or 4 wire system
Amplified Output
Stainless Steel Housing



Features

- Range 1g to 200g
- High Shock Resistant
- Gas Damping
- DC Response
- Excellent Bias Stability
- Excellent Scale Factor Stability

Options

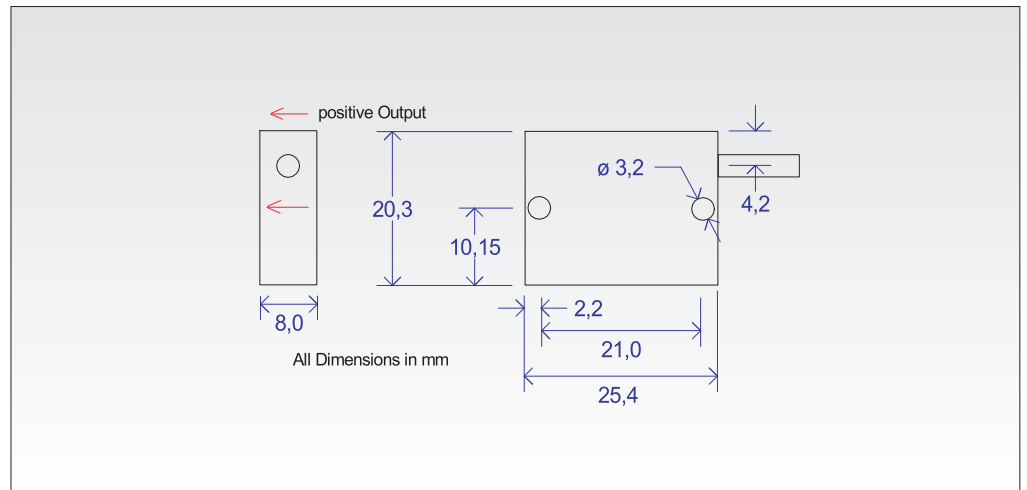
- Customized Cable Length
- Customized Connector
- Dallas ID Module
- ASC-Teds Module

Applications

- Train Control
- Train Engineering
- Wind Energy Engineering
- Automotive
- Aerospace Flight Testing
- Aerospace Flutter Testing
- Mechanical Engineering
- Truck Testing
- Geophysics

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 models **ASC 4421** and **ASC 4425** are uniaxial accelerometers based on capacitive technology. Both **ASC accelerometers** are manufactured with an improved chip technology. The **ASC 4421** and **ASC 4425** therefore benefit from the high stability of the new chip technology with a low noise level and low bias and scale factor temperature coefficient.

The sensor has been developed specifically for measuring relatively small accelerations, as required in the aerospace or automotive sector, for example. The **ASC 4421** and **ASC 4425** are shock resistant up to at least 7,000 g. Both versions require a supply voltage of between 8 to 30 VDC. The +/- 2 VDC is DC coupled at a DC bias of 2.5 V. The amplified output is easy to use with all common data acquisition units.

The stainless steel package of the **ASC 4425** provides a high resistance to strong environmental influences. A very high flexible and rugged cable provides a simple mounting. The **ASC 4421** and **ASC 4425** are equipped with 6 meter cable as standard.

General Technical Data

Supply Voltage	8 VDC - 30 VDC
Operation Current	2 mA max.
Linearity FSO	< 0.8% typ.
Damping Ratio	0.7 typ.
Transvers Sensitivity	2% typ.
Signal Output	+/- 2000 mVDC FSO
Zero Output	2500 mVDC +/-10 mV
Reference Output	2500 mVDC
Output Impedance	10 kOhm
TC Span	all 100 ppm/°C typ.
Shock Resistant	7000g
Operating Temperature	-40 °C to +100 °C
Storage Temperature	-55 °C to +125 °C

Calibration

- Pendulum Calibration
- Sinusoidal Calibration

Calibration Data incl.:

- Sensitivity
- Frequency
- Offset
- Phase

Individual Technical Data

	Sensitivity	Frequency +/- 5%	TC Zero
Range +/-1g	2000 mV/g	100 Hz	0.05 mg/ °C typ.
Range +/-2g	1000 mV/g	100 Hz	0.1 mg/ °C typ.
Range +/-5g	400 mV/g	100 Hz	0.3 mg/ °C typ.
Range +/-10g	200 mV/g	800 Hz	0.5 mg/ °C typ.
Range +/-30g	66 mV/g	1000 Hz	1.5 mg/ °C typ.
Range +/-50g	40 mV/g	1500 Hz	2.5 mg/ °C typ.
Range +/-100g	20 mV/g	1500 Hz	5.0 mg/ °C typ.
Range +/-200g	10 mV/g	1700 Hz	10 mg/ °C typ.

At 10 VDC Supply and 25 °C

Signal response from 0.5 VDC to 4.5 VDC and the Zero-g-Signal is 2.5 VDC.

Order Information ASC 4421-XXX-6A

1 2 3 4

- 1 Model: ASC 4421: Aluminium
ASC 4425: Stainless Steel
- 2 Range: e.g. 050 is 50g
- 3 Cable: Length in Meter
- 4 Connector and Pinout/
„A“ is for No Connector

	Weight	Material	Dimensions
Housing			
ASC 4421	10 gram	Aluminium	25.4 mm x 20.3 mm x 8.0 mm
ASC 4425	22 gram	Stainless Steel	25.4 mm x 20.3 mm x 8.0 mm
Cable			
4 Wire System	12 gram/meter	AWG 30, Polyurethane (PUR)	Diameter 3.0 mm

Cable Code 4 Wire System:

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

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