

impactAIMS



FEATURES

- Impact / vibration analysis
- High g sensors (X,Y,Z)
- Compact and robust design
- Light weight / Low cost
- Customized threshold levels
- Logging function
- Event trigger function
- USB 2.0 interface comp.
- Easy-to-use PC software
- Backup Li-Ion battery ¹

The impact sensor module impactAIMS is a small, three degrees of freedom (3 DOF) measurement unit and can be used for impact or vibration analysis for vehicles etc. The impact sensor can be ordered with the battery package option. This enables uninterruptible power supply when external power fails.

TYPICAL APPLICATIONS

- Crash detection/logging
- Vibration monitoring
- Impact monitoring
- Tilt angle measurement
- Event trigger

ORDERING INFORMATION		
Function	Device Name	SN:
No battery backup	impactAIMS	1215100999
Battery backup	impactAIMS / LI-ION	1218100999

¹ Li-ion backup battery package is optional

Technical Data

Housing:	Plastic housing (Polyoxymethylene, POM) IP40 classification
Physical Dimensions:	86.6 x 24.5 x 10.5 mm (L x W x H) no battery option 86.6 x 24.5 x 17 mm (L x W x H) with battery option
Connector:	USB-A male
Power Supply:	5 VDC, 100mA (Supplied from USB host)
Output Interface:	USB 2.0 Full Speed compatible
Operating Temperature Range:	-30°C to +70°C
Storage Temperature Range:	-40°C to +85°C
Weight:	60 gram
Update Rate:	1000 samples/second (Note 1)
Vibration Resistance:	6 g _{rms} (5 - 200 Hz) 3 g _{rms} (200 - 500 Hz)
Shock Resistance:	2000 g, half-sine 0.5 ms
Max battery runtime:	1.5 hours (Fully loaded, 100mAh)
Acceleration Performance	
Range:	±100 g (X and Z axis) ±50 g (Y axis)
Bias Error:	0.2 g (1σ)
Scale Factor Error @ 1 g:	0.02 g (1σ)
Non-linearity:	1 % of FS (max)
Noise:	0.4 g RMS (max)
Bandwidth:	400 Hz
Misalignment:	17 mrad (max)

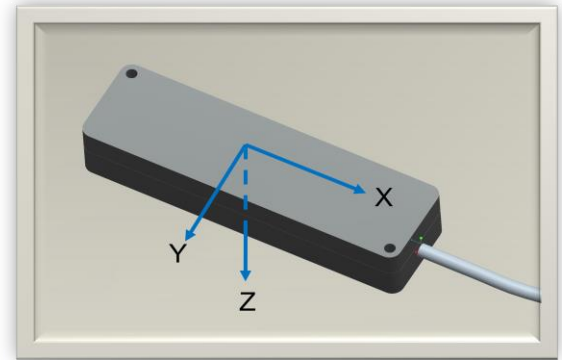
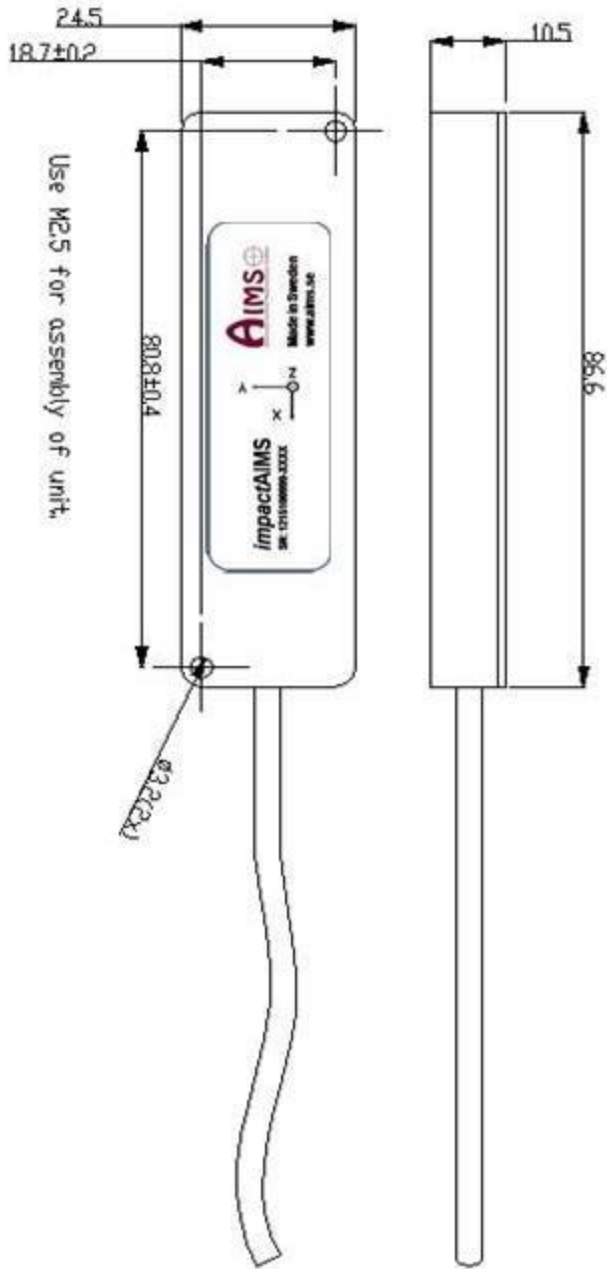
Note 1: Other output rates are available upon customer request.

USB INTERFACE

The universal serial bus interface emulates a virtual com-port to host-PC. The settings for the communication are 1 start bit, 8 data bits, no parity and 1 stop bit. Baud rates up to 115200 bps are possible.

The bandwidth, output rate and protocol type can be configured upon customer specifications.

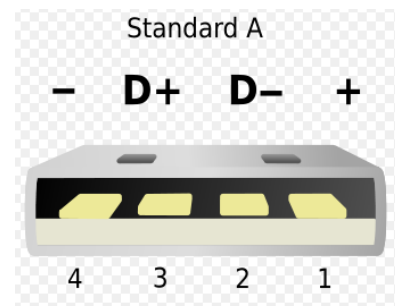
MECHANICAL DRAWING (1215100999)



AXIS DEFINITIONS

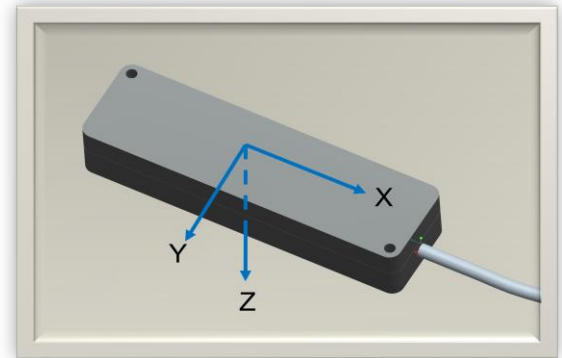
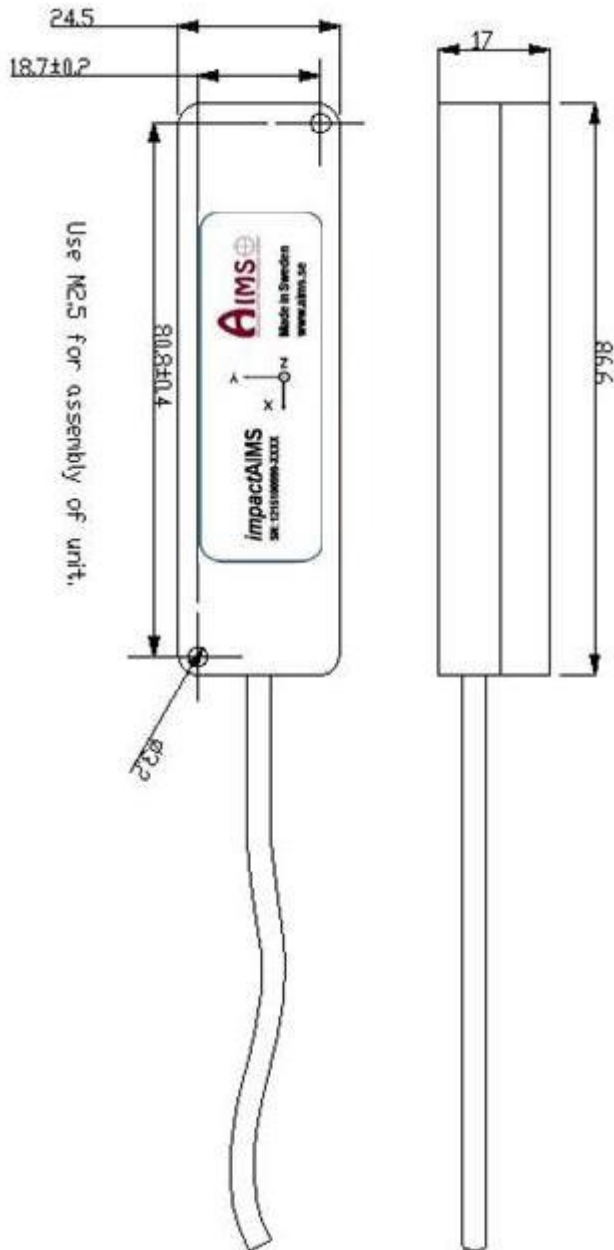
Pinning (USB A)

Pin	Signal
1	POWER
2	-D
3	+D
4	GROUND



MECHANICAL DRAWING (1218100999)

- Li-Ion battery package option



AXIS DEFINITIONS

Pinning (USB A)

Pin	Signal
1	+5VDC
2	-D
3	+D
4	GROUND

