

# DOG1 MEMS-Series USB Inclinometer

- Range  $\pm 180^\circ$  single axis
- High resolution
- Good accuracy
- Fast response time
- Easy to use software

## The Single Axis Inclinometer

is well suited for test and measurement purposes as well as for vehicle and off road applications.

A fast response time, good accuracy and high resolution are its key features. It uses a digital signal processing including temperature compensation to optimize performance.

The user configurable filter allows to find a good compromise between response time and a stable output in noisy environments, e.g. if vibrations are an issue.

Easy to use software for Microsoft Windows is included. On the other hand, the sensor can be accessed using a virtual COM port for easy integration.

## FEATURES

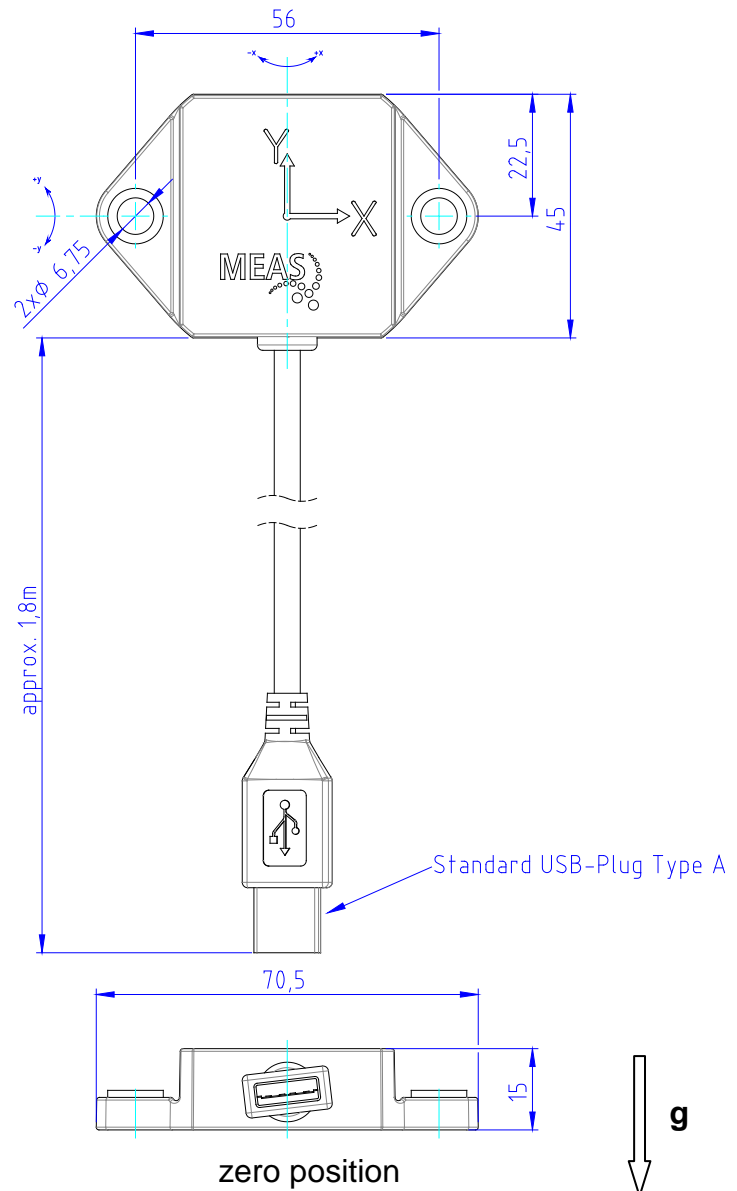
- USB powered
- User defined main and secondary axis
- $\pm 90$  degree tolerance on 2<sup>nd</sup> axis
- Digital signal processing includes
  - filter
  - temperature compensation
- 12 bit resolution
- High refresh rate
- $-40^\circ\text{C}$  to  $+85^\circ\text{C}$  temperature range
- Typical accuracy
  - $0.2^\circ$  at  $+25^\circ\text{C}$
  - $0.6^\circ$  ( $-40^\circ\text{C}$  to  $+85^\circ\text{C}$ )

## APPLICATIONS

- Platform leveling
- Tilt alarm
- Tilt monitoring



## dimensions



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## PARAMETERS

Parameter	Value	Comment
Range	+/-180°	Roll (pitch possible), X-axis /direction
Accuracy, typ.	0.6°	T=-40°C ~ +85°C
Accuracy, typ.	0.2°	T=+25°C
Resolution	12 bit	Actually higher resolution due to oversampling
Refresh rate	>50 Hz	Internal, effective output rate limited by communication and PC performance
Startup time	<1s	For valid output angles
Supply/excitation voltage	5V	Powered via USB
Output	Roll angle, X-axis	Via USB virtual COM port on host PC
Operation temperature range	-40°C ~ +85°C	
Storage temperature range	-40°C ~ +85°C	
Weight	<50g	
Dimensions	70.5 x 45 x 15 mm	W x D x H

## COMMENTS

This DOG1 inclinometer outputs the angles between the two in plane sensor axes and the ground plane (perpendicular to the vector of gravity).

A special feature of the USB version is, that it has a full dual axis output.

The user can define on his own, which of the two sensor axes to use as main and which axis to use as secondary axis.

The main axis gives unique output over +/-180 (0..360) degrees while the other axis has to be kept in a +/-90° range.

## ordering info

### PART NUMBERING

### MODEL

### SHORT DESCRIPTION

G-NSDOG1-022

NS-180/DOG1-BXZ-I-STD

Single axis inclinometer, +/- 180°, USB device incl. Software for MS Windows XP or above

## 联系方式



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