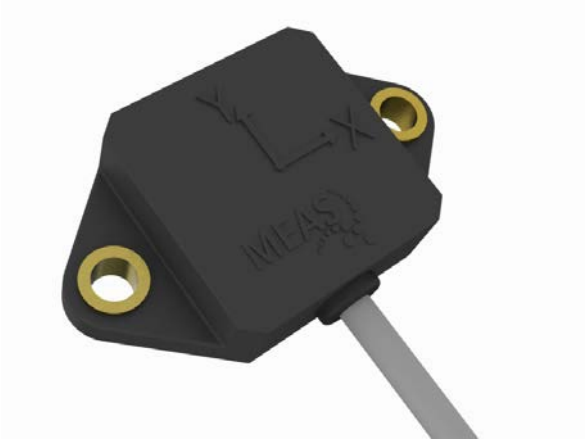
DOG1 MEMS-Series USB Inclinometer

Range ±180° 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.

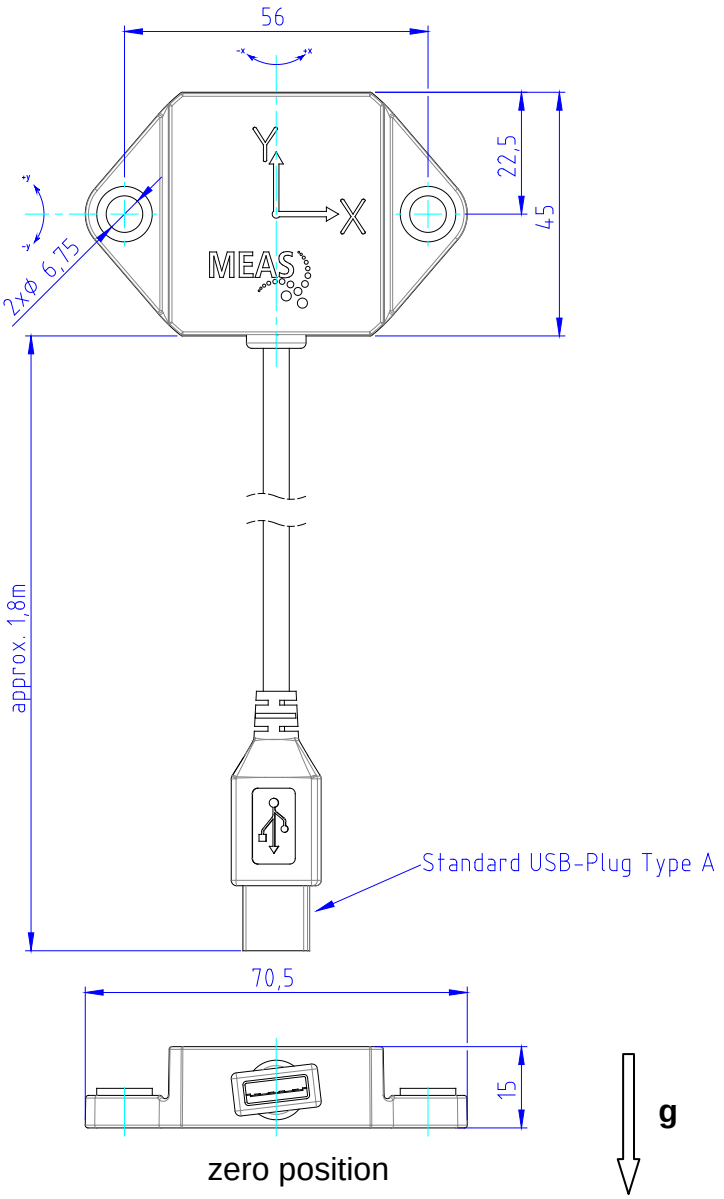
FEATURES

- USB powered
- User defined main and secondary axis
- +/-90 degree tolerance on 2nd axis
- Digital signal processing includes
  - filter
  - temperature compensation
- 12 bit resolution
- High refresh rate
- -40°C to +85°C temperature range
- Typical accuracy
  - 0.2° at +25°C
  - 0.6° (-40°C to +85°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 keept in a +/-90° range.

A software for an easy use of the sensor is available and included. It has a setup wizard that helps to make a first configuration quick and simple. Updates can be found on www.meas-spec.com.

The DOG1 is available with other interfaces also.

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

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