DOG2 MEMS-Series Inclinometer

Range ±25°, ±45° or ±90°
Easy to use voltage output
Supply voltage 8-30V
High resolution



The Dual Axis Inclinometer

is mainly developed with focus on platform leveling, dynamic engine management, tip-over protection and tilt alarm.
A fast response time and good accuracy makes this device the ideal choice for mobile leveling applications. It features digital signal processing including temperature compensation.
The integrated filter improves performance and allows to use the sensor in many noisy environments (e.g. vibrations).

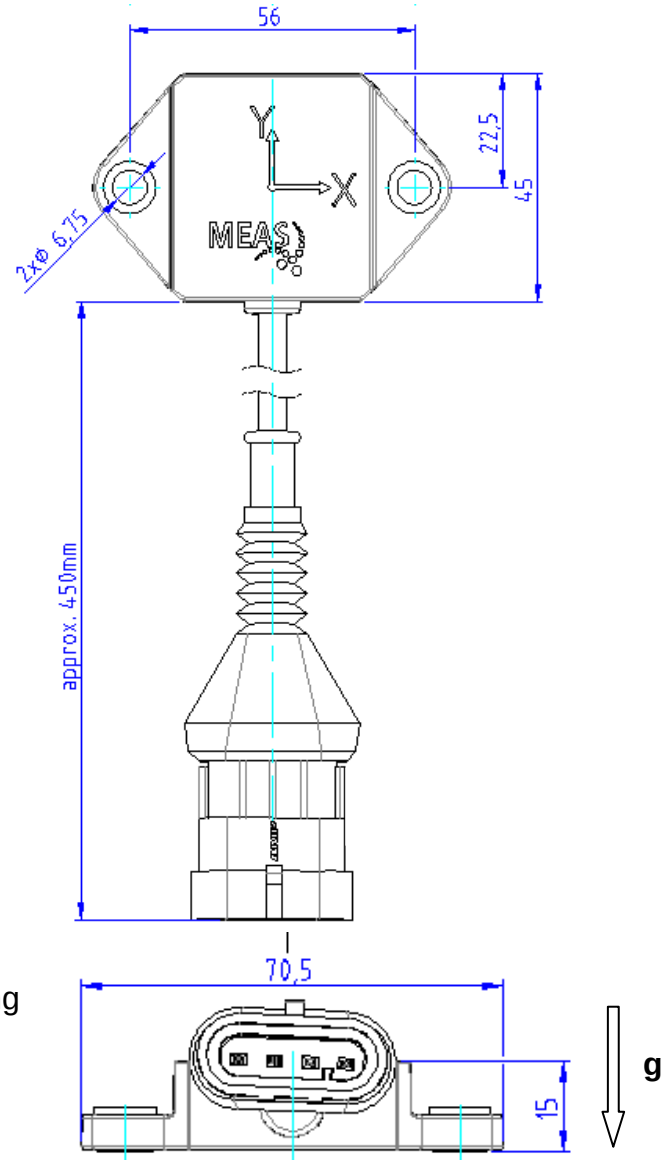
FEATURES

- 8-30V supply voltage (5V on request)
- Digital signal processing includes
  - filter (e.g. vibration damping)
  - temperature compensation
- 12 bit resolution
- up to 100Hz refresh rate
- -40°C to +85°C temperature range
- Accuracy typically
  - 0.5° (-40°C to +85°C)
  - 0.15° at +25°C

APPLICATIONS

- Platform leveling
- Truck and off-road vehicle cabin or tool leveling
- Crane boom leveling
- Tilt alarm, e.g. digger
- Antenna leveling
- Inclination dependent engine control
- Solar panel elevation control

dimensions



zero position

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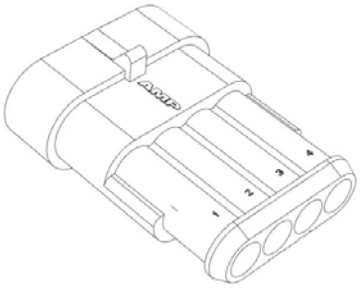
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PARAMETERS

Parameter	Value	Comment
Range	+/- 25°, +/-45° or +/-90°	pitch & roll, other range available on request
Accuracy, typ.	0.5°	T=-40°C ~ +85°C
Accuracy, typ.	0.15°	T=+25°C
Resolution	12 bit	
Refresh rate	50~100 Hz	
Startup time	<1s	valid output angles
Supply/excitation voltage	8 ~ 30V	5V version available as OEM solution on request
Supply current	~15mA	
Output	0.5 ~ 4.5V	-25° ~ +25°, -45° ~ 45° or -90° ~ +90°
Connector	AMP Superseal 1.5-Series, 4-pos cap housing Tyco Art.-Nr. 282106-1	requires 4-pos plug housing from AMP Superseal 1.5-Series at connecting harness, Tyco Art.-Nr. 282088-1
Cable	4 wire 0.25mm^2, outer diameter 6.5mm	length incl. connector 450mm, full temperature range, flexible
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

USER INTERFACE

Pin	Function	Description
1	V_{CC}	+8 ~ 30V supply input
2	GND	GND
3	Output X	0.5 ~ 4.5V, X axis output
4	Output Y	0.5 ~ 4.5V, Y axis output



COMMENTS

The inclinometer includes a powerful digital signal processing that offers various filter algorithms and allows customer specific adaptions. It is possible to adjust the sensor to different environments to yield an optimized performance.Customization can also be made in terms of angular range and connectivity, i.e cable and connector.

The PA6.6 housing is very compact in size and has compression limiter bushings for safe installation of the sensor. In contrast to uncoated (casted) aluminum, PA6.6 is resistant to atmospheric attack. It is compatible with oil, grease and fuel also. Therefore it is frequently used for engine and vehicle applications.

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DOG2 MEMS-Series Inclinometer

ordering info

PART NUMBERING	UNIT	SHORT DESCRIPTION
G-NSDOG2-001	25 DOG2	Dual axis, range +/- 25°, Vcc +8 …30VDC, output voltage +0.5…+4.5V
G-NSDOG2-002	45 DOG2	Dual axis, range +/- 45°, Vcc +8 …30VDC, output voltage +0.5…+4.5V
G-NSDOG2-003	90 DOG2	Dual axis, range +/- 90°, Vcc +8… 30VDC, output voltage +0.5…+4.5V

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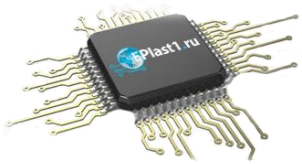
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- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



Как с нами связаться

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