



DOG2 MEMS-SERIES INCLINOMETER

SPECIFICATIONS

- Dual axis inclinometer
- Measurement ranges $\pm 25^\circ$, $\pm 45^\circ$ and $\pm 90^\circ$
- Voltage output

FEATURES

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

APPLICATIONS

- Mobile and stationary cranes
- Lift platforms
- Building control
- Weighing systems
- Truck chassis leveling
- Vehicle applications
- Road construction machines

The **DOG2 MEMS-Series inclinometer** dual axis is mainly developed with focus on platform leveling, dynamic engine management, tip-over protection and tilt alarm.

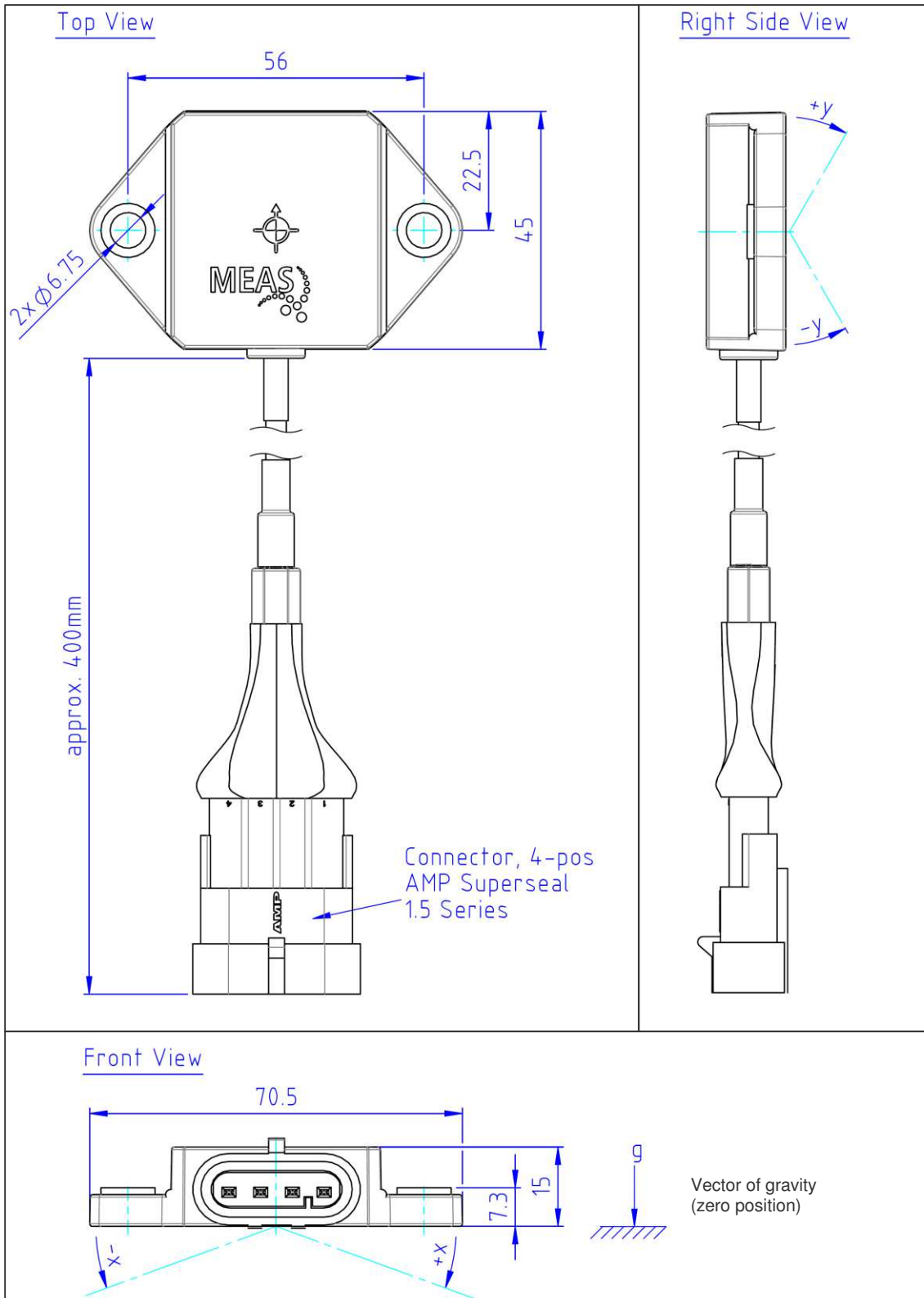
A fast response time and good accuracy makes this device the ideal choice for mobile leveling applications. It features digital signal processing including temperature compensation.

The integrated filter improves performance and allows using the sensor in many noisy environments (e.g. vibrations).

The inclinometer includes a powerful digital signal processing that offers various filter algorithms and allows customer specific OEM solutions. It is possible to adjust the sensor to different environments yielding 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. It is compatible with oil, grease and fuel also. Therefore it is frequently used for engine and vehicle applications.

Dimensions [mm]

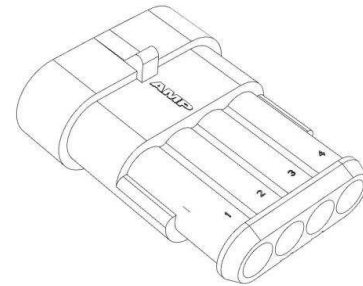


PARAMETERS

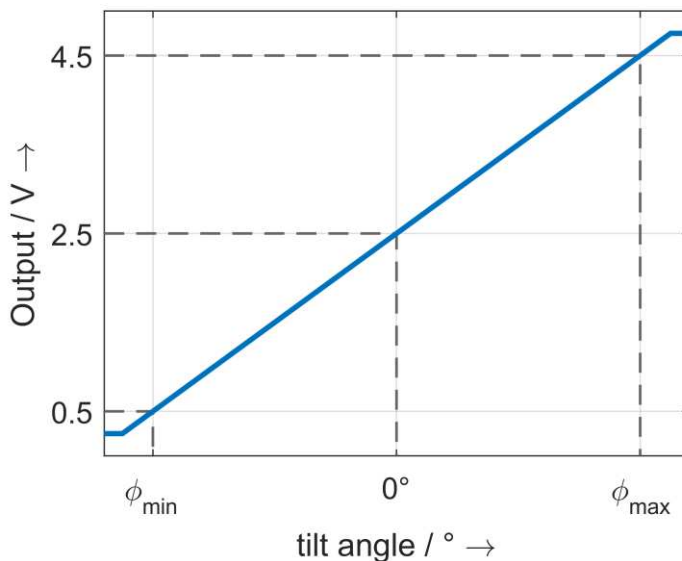
Parameter	Value	Comment
Range	$\pm 25^\circ$, $\pm 45^\circ$ or $\pm 90^\circ$	Dual axis sensor
Accuracy, typ.	0.5°	T= -40 °C to 85 °C
Accuracy, typ.	0.15°	T= 25 °C
Resolution	12 bit	
Refresh rate	100 Hz	Internal processing
Startup time	<1 s	Valid output signal
Supply/excitation voltage	8 to 30 V	Direct current (DC) stabilized
Supply current, typ.	15 mA	No load
Output	0.5 to 4.5 V	-25° to 25°, -45° to 45° or -90° to 90°
Connector	AMP Superseal 1.5-Series, 4-pos. cap housing, TE Connectivity part-no. 282106-1	Requires 4-pos. plug housing, AMP Superseal 1.5-Series at connecting harness, TE Connectivity part-no. 282088-1
Cable	4 wire 0.25 mm ² , outer diameter Ø3.9 mm	PUR, length incl. connector 400 mm, full temperature range, flexible
Operation temperature range	-40 °C to 85 °C	
Storage temperature range	-40 °C to 85 °C	
Weight, typ.	60 g	
Dimensions	70.5 mm x 45 mm x 15 mm	W x D x H

CONNECTOR PINNING

Pin	Function	Description
1	V _{CC}	8 to 30 VDC supply input (+)
2	GND	GND
3	Output X	0.5 to 4.5 V, X axis output
4	Output Y	0.5 to 4.5 V, Y axis output



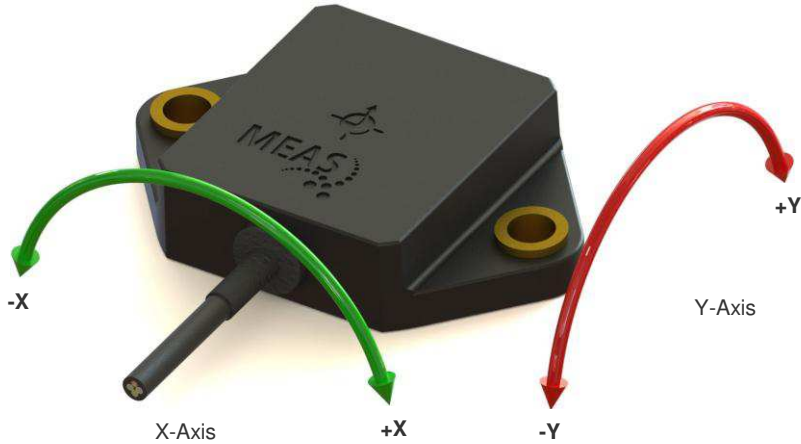
TRANSFER CHARACTERISTIC



Part-No.	ϕ_{\min}	ϕ_{\max}
G-NSDOG2-001	-25°	25°
G-NSDOG2-002	-45°	45°
G-NSDOG2-003	-90°	90°

Linear transfer characteristic between ϕ_{\min} and ϕ_{\max}

FUNCTION VIEW



The DOG2-series is designed for floor mount application.

ORDERING INFORMATION

PART NUMBER	DESCRIPTION
G-NSDOG2-001	Dual axis inclinometer, floor mount, range $\pm 25^\circ$, supply 8 to 30 VDC, output voltage 0.5 to 4.5 V
G-NSDOG2-002	Dual axis inclinometer, floor mount, range $\pm 45^\circ$, supply 8 to 30 VDC, output voltage 0.5 to 4.5 V
G-NSDOG2-003	Dual axis inclinometer, floor mount, range $\pm 90^\circ$, supply 8 to 30 VDC, output voltage 0.5 to 4.5 V

For other orientations, measurement ranges or supply voltages please contact TE Connectivity sales representatives.

NORTH AMERICA

Measurement Specialties, Inc.,
a TE Connectivity Company
1000 Lucas Way
Hampton, VA 23666
United States
Phone: +1-800-745-8008
Fax: +1-757-766-4297
Email: sales@meas-spec.com
Web: www.meas-spec.com

EUROPE

Measurement Specialties (Europe), Ltd.,
a TE Connectivity Company
Deutschland GmbH
Hauert 13
D-44227 Dortmund
Germany
Phone: +49-(0)231-9740-0
Fax: +49-(0)231-9740-20
Email: info.de@meas-spec.com
Web: www.meas-spec.com

ASIA

Measurement Specialties (China), Ltd.,
a TE Connectivity Company
No. 26 Langshan Road
Shenzhen High-Tech Park (North)
Nanshan District, Shenzhen 518057
China
Phone: +86-755-33305088
Fax: +86-755-33305099
Email: info.cn@meas-spec.com
Web: www.meas-spec.com

TE.com/sensorsolutions

Measurement Specialties, Inc., a TE Connectivity company.

Measurement Specialties, TE Connectivity, TE Connectivity (logo) and EVERY CONNECTION COUNTS are trademarks. All other logos, products and/or company names referred to herein might be trademarks of their respective owners.

The information given herein, including drawings, illustrations and schematics which are intended for illustration purposes only, is believed to be reliable. However, TE Connectivity makes no warranties as to its accuracy or completeness and disclaims any liability in connection with its use. TE Connectivity's obligations shall only be as set forth in TE Connectivity's Standard Terms and Conditions of Sale for this product and in no case will TE Connectivity be liable for any incidental, indirect or consequential damages arising out of the sale, resale, use or misuse of the product. Users of TE Connectivity products should make their own evaluation to determine the suitability of each such product for the specific application.

© 2016 TE Connectivity Ltd. family of companies All Rights Reserved.