

Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from, Europe, America and south Asia, supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts, Customers Priority, Honest Operation, and Considerate Service", our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip, ALPS, ROHM, Xilinx, Pulse, ON, Everlight and Freescale. Main products comprise IC, Modules, Potentiometer, IC Socket, Relay, Connector. Our parts cover such applications as commercial, industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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#### **FEATURES**

- High accuracy
- Robust metal housing, IP Class 67/68
- · High resolution
- EMC protected
- CE approved
- Rugged M12 male connector
- Programmable digital filtering to minimized influences from shock and vibration
- Programmable zero point, baud rate, output rate

### **APPLICATIONS**

- Building control
- Road construction machines
- Wind power
- Mobile and stationary cranes
- Hydraulic leveling
- Platform leveling
- Drilling machines

## **D-SERIES INCLINOMETER**

#### **SPECIFICATIONS**

- Dual axis inclinometer
- Measurement range +/-5°+/-15° or +/-30°
- High accuracy
- Digital and analogue output signal
- CANopen
- CE approved

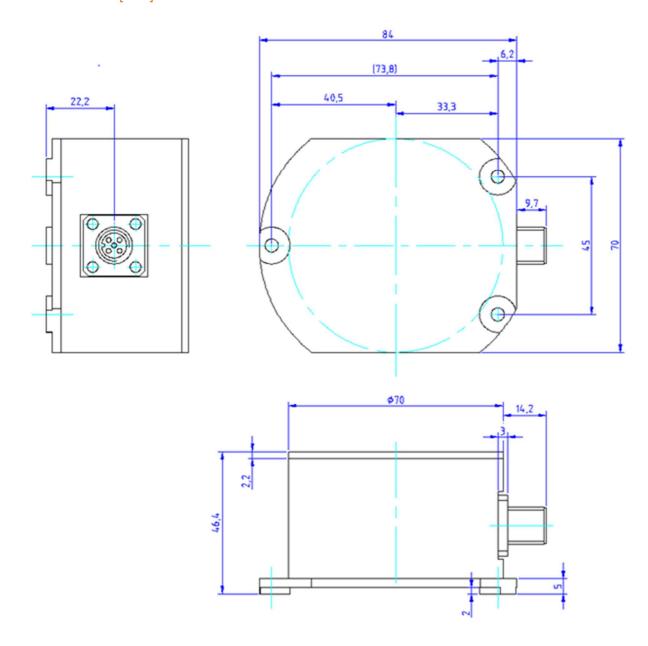
The D-series of conductive inclinometers offers modern SMD-technology in an environmentally protected and a robust aluminum housing. The dual axis inclinometer achieves high accuracy over a wide temperature range.

The fast microcontroller works with a linearization and temperature compensation routines. This full calibrated inclinometer is available with digital output RS 232 and analogue voltage output 0.5 up to 4.5 V or current output 4...20mA or PWM output or switch output signals. Furthermore is inclinometer is available with a CANopen interface.

## PERFORMANCE SPECIFICATIONS

	Conditions	Min	Type	Max	Unit
Measurement range		-5 (-15,-30)		+5(+15,+30)	0
Resolution		0.001		0.005	0
Accuracy, digital, analogue (absolute)	Ta = +25℃		0.04		0
Accuracy, digital, analogue (absolute)	Ta = - 40℃ to 85℃		0.15	(0.3,0.8)	0
Offset temperature drift error	Ta = - 40℃ to 85℃		0.06		0
Noise RMS			0.001		0
Frequence responce			2	3	Hz
Power supply		10		30	VDC
Operation temperature range		-40		+85	$\mathcal{C}$
Storage temperature range		-40		+85	$\mathcal{C}$
Weight			290		g
Dimensions	WxDxH	3	34 x 70 x 4	ŀ6	mm
Unit with RS 232 interface and ana	logue output signal				
Transmission rate, programmable		0.1	10	16	Hz
Baud rate, programmable		2.4	9.6	57.6	kB
Current output		20		4	mA
Voltage output		0.5		4.5	٧
PWM output	1 KHz	20		80	%
Switch output,programmable	Step		0.1		0
Current consumption			30	40	mA
Unit with CANopen interface	L				
Baud rate, programmable		0.02	0.25	1	MBaud
Code	Binary				-
Interface	CAN according to CAL				-
Current consumption	- J		50	90	mA

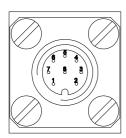
## **DIMENSIONS [MM]**



#### PINNING - UNIT WITH RS 232 INTERFACE AND ANALOGUE OUTPUT

Pin	Name	Description	Туре	Color schema (1)
1	+Ub	positive power supply +10+30VDC	supply	white
2	RxD	Rx serial signal RS 232	input	brown
3	TxD	Tx serial signal RS232	output	green
4	GND	negative power supply, ground	supply	yellow
5	XOut	X-axis output	output	grey
6	SGND	signal ground	supply	pink
7	YOut	Y- axis output	output	blue
8	NC	NC	nc	nc

<sup>(1)</sup> By using a Measurement Specialties cable



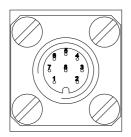
Front view of housing connector inclinometer

For more details please use the product specification / application note / instruction manual.

## PINNING - UNIT WITH CANOPEN INTERFACE

Pin	Name	Description	Туре	Color schema (1)
1	+Ub	positive power supply +10+30VDC	supply	white
2	NC	nc	nc	brown
3	NC	nc	nc	green
4	GND	negative power supply, ground	supply	yellow
5	CANout	CAN Low	output	grey
6	CANgnd	CAN Ground	supply	pink
7	CANout	CAN High	output	blue
8	NC	nc	nc	nc

<sup>(1)</sup> By using a Measurement Specialties cable



Front view of housing connector inclinometer

For more details please use the product specification / application note / instruction manual.

#### **ORDERING INFORMATION**

PART NUMBERING	UNIT	SHORT DESCRIPTION
G-NSDMG-015 G-NSDMG-017 G-NSDMG-014 G-NSDMG-016 G-NSDMG-030	NS-5/DMG2-U NS-5/DMG2-I NS-5/DMG2-PWM NS-5/DMG2-S NS-5/DMG2-CXD	Range +/-5°,Vcc 10 to 30 VDC,output RS232,voltage Range +/-5°,Vcc 10 to 30 VDC,output RS232,current Range +/-5°,Vcc 10 to 3 0VDC,output RS232,PWM Range +/-5°,Vcc 10 to 30 VDC,output RS232,switch Range +/-5°,Vcc 10 to 3 0VDC,output CANopen
G-NSDMG-019 G-NSDMG-021 G-NSDMG-018 G-NSDMG-020 G-NSDMG-031	NS-15/DMG2-U NS-15/DMG2-I NS-15/DMG2-PWM NS-15/DMG2-S NS-15/DMG2-CXG	Range +/-15°,Vcc 10 to 30VDC,output RS232,voltage Range +/-15°,Vcc 10 to 30VDC,output RS232,current Range +/-15°,Vcc 10 to 30VDC,output RS232,PWM Range +/-15°,Vcc 10 to 30VDC,output RS232,switch Range +/-15°,Vcc 10 to 30VDC,output CANopen
G-NSDMG-023 G-NSDMG-025 G-NSDMG-022 G-NSDMG-024 G-NSDMG-032	NS-30/DMG2-U NS-30/DMG2-I NS-30/DMG2-PWM NS-30/DMG2-S NS-30/DMG2-CXN	Range +/-30°,Vcc 10 to 30VDC,output RS232,voltage Range +/-30°,Vcc 10 to 30VDC,output RS232,current Range +/-30°,Vcc 10 to 30VDC,output RS232,PWM Range +/-30°,Vcc 10 to 30VDC,output RS232,switch Range +/-30°,Vcc 10 to 30VDC,output CANopen
Accessories		
G-NSMIS-036 G-NSMIS-013	Connector Connector	Connector, straight, 713-series Connector, angle 90°, 713- series
G-NSMIS-008 G-NSMIS-009	Connection Connection	2 m cable, straight connector 763-series 2 m cable, angle 90° connector 763-series

Other cable length on request.

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