

Precise Compact Inclinometer

DIGITAL ADVANCED SENSORS **DAS**

M1-MEMS

High precise and compact inclinometer M1-MEMS performs angular measurement as a part of controlling and tracking systems such as solar-panels, machineries, closing and opening systems and other various applications.

- High performance MEMS based compact inclinometer (tilt sensor)
- Micro-Processor mounted for stable sensing and data processing
- High strength PC and ABS housing / compact size and high cost-effectiveness



General Specifications

Item	Specification
Measuring Range	Uniaxial +/-30 deg
Resolution	0.005 deg
Temp. Drift	+/-0.014 deg per celsius
Response	<0.5 sec
Output ¹⁾	10 ... 90% of power source
Power Source	4.5 ... 5.5VDC
Current Consumption	<10mA
Operating Temp.	-20 ... +80 celsius
Dimensions	W28 x H37 X D12mm
Weight	13g
Cables	MOLEX 3P, 30cm

¹⁾ Ratio-type : 0.5 ... 4.5Vdc output at 5VDC.

Sensing Directions



Data Descriptions

$$= \left(\frac{\text{Measuring Range}}{\text{Output V Range}} \right) \times (\text{Output V} - \text{Zero Offset})$$

Measuring Range : max range – min range

Output V Range : 4.5V – 0.5V = 4V

Zero Offset : 2.5V

e.g. Measuring range +/-30 deg, Output 3.5V,

$$\left(\frac{+30 - (-30)}{4} \right) \times (3.5 - 2.5) = +15^\circ$$

NOTES

- 1) M1-MEMS has not been applied any stabilizing circuit or protection circuit.
- 2) To stable using, stabilizing and protection circuit on the systems are necessary.
- 3) MEMS based inclinometer (tilt sensor) measures tilt (degree) by gravity. Check sensing directions before use.
- 4) 12 months warranty is provided after released. Warranty provided only in case of using for designed purpose correctly.
- 5) Specifications, design and components can be changed without prior notice to improve its performances.

Wiring Connections

M1-MEMS wired by MOLEX 3P plug.

	Color	Description
M1-MEMS	RED	V+
	BLACK	GND (COM)
	WHITE	Output

DAS Co., Ltd.

128 Bibong-ro, Bibong-myeon,
Hwaseong-si, Gyeonggi-do, 18284
Republic of Korea

TEL : +82 31) 356-3541

email : das@das-co.com

Web : <http://das-co.com>