

E2-Series Inclinometer



- **Dual axis inclinometer**
- **Measurement range**
+/-5° +/-10° +/-15° and
+/-45°
- **analogue voltage output**
signal
- **OEM module**

DESCRIPTION

The **E2-series** is a biaxial inclination sensor as a pcb module for OEM use with measurement range +/-5°, +/-10°, +/-15° and +/-45°. It consist of two basic inclination sensor cells based on a conductance measurement principle and their complete electronic biasing and readout, which is carefully designed in order to minimize drift and temperature effects.

FEATURES

- High resolution
- Analogue voltage output signal
- Easy for mounting
- PCB level
- Fast response time
- Low drift sensitivity
- Low noise level

APPLICATIONS

- Road construction machines
- Vehicle applications
- Building control
- Mobile and stationary cranes
- Hydraulic leveling
- Platform leveling
- Drilling machines

E2-Series Inclinomater

PERFORMANCE SPECIFICATIONS

	Conditions	Min	Type	Max	Unit
Measurement range (1)		-5 / -10/ -15/ -45		+5/ +10/ +15/ +45	°
Resolution (2)		0.001		0.01	°
Accuracy (3)	Ta = 0°...70°C,	0.08 / 0.11 / 0.15 / 0.9			°
Non-linearity		1.5			%[FS]
Cross sensitivity		0.15			%[FS]
Voltage output signal(4),(5)	5°,15° unit	-2		+2	V
Voltage output signal(4),(6)	5°,15° unit	0.5		4.5	V
Voltage output signal(4),(5)	10°,45° unit	-2.2		+2.2	V
Voltage output signal(4),(6)	10°, 45° unit	0.3		4.7	V
Current consumption		9			mA
Power supply		+12		+24	VDC
Operation temperature range		0		+70	°C
Storage temperature range		-40		+85	°C
Weight		20			g
Dimensions (7)	W x D x H	45 x 45 x 14(20)			mm

(1) measurement ranges +/-5°, +/-10°, +/-15°, +/-45° available

(2),(3) depend on measurement range

(4) depending on the circuitry wiring, see pinning schema

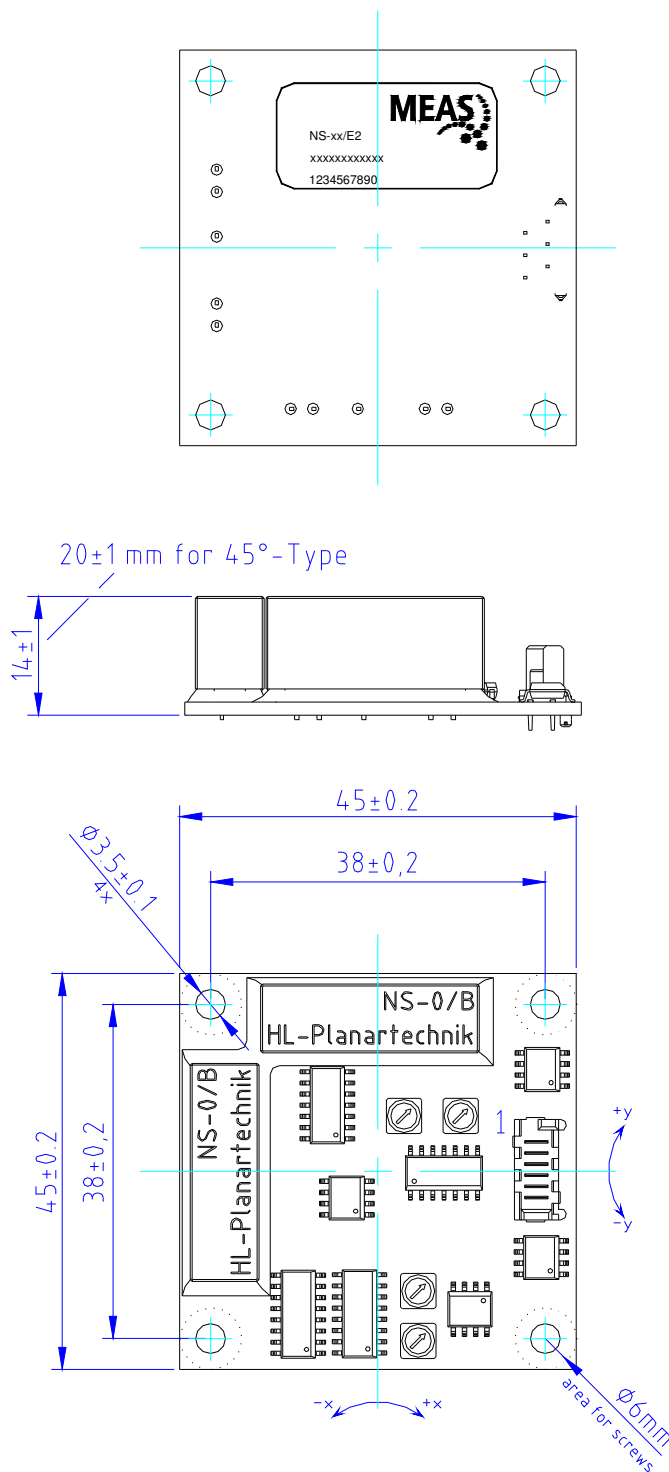
(5) to get ratiometric signal, a Vref. Input signal + 2.5VDC as a S-GND (signal ground) is needed

(6) in reference to GND

(7) dimensions 45 x 45 x 20 mm , valid for the NS-45/E2

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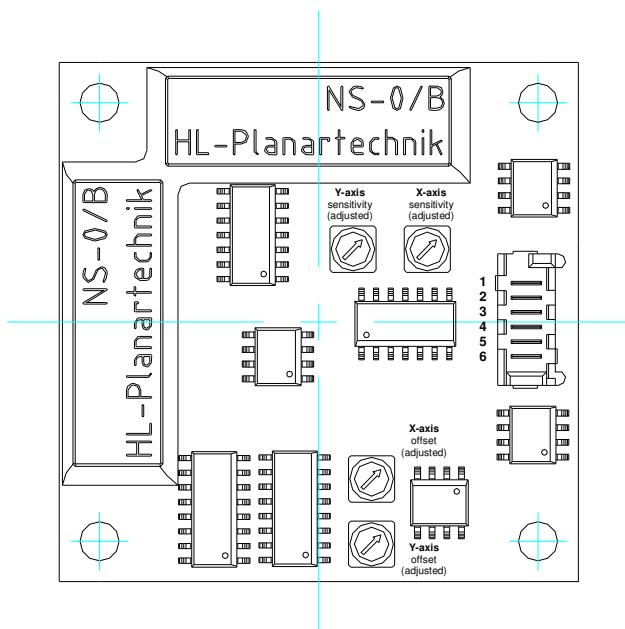
DIMENSIONS [MM]



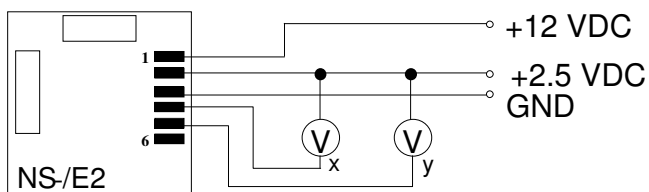
E2-Series Inclinomometer

PINNING

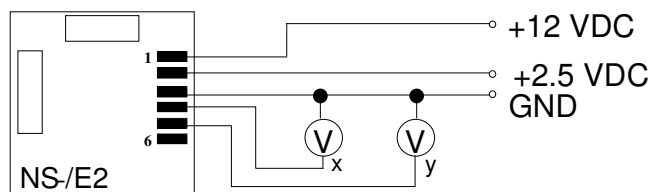
Pin	Name	Description	Type
1	Vcc	Positive power supply +12...+24VDC	Supply, Input
2	Vref	Reference potential +2.5VDC, S-GND	Input
3	GND	Ground, negative supply voltage	Supply, Input
4	Out X	Output voltage signal X axis	Output
5	Out Y	Output voltage signal Y axis	Output
6	n.c.	n.c.	-



Pinning Vout x,y in reference to Vref.: +2.5VDC



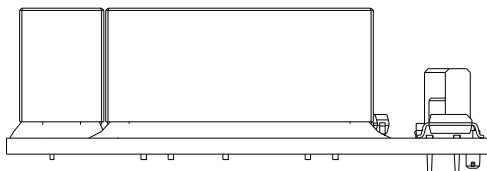
Pinning Vout x,y in reference to GND



If the unit will be used in this configuration, the Vref: +2.5 VDC must not connect.

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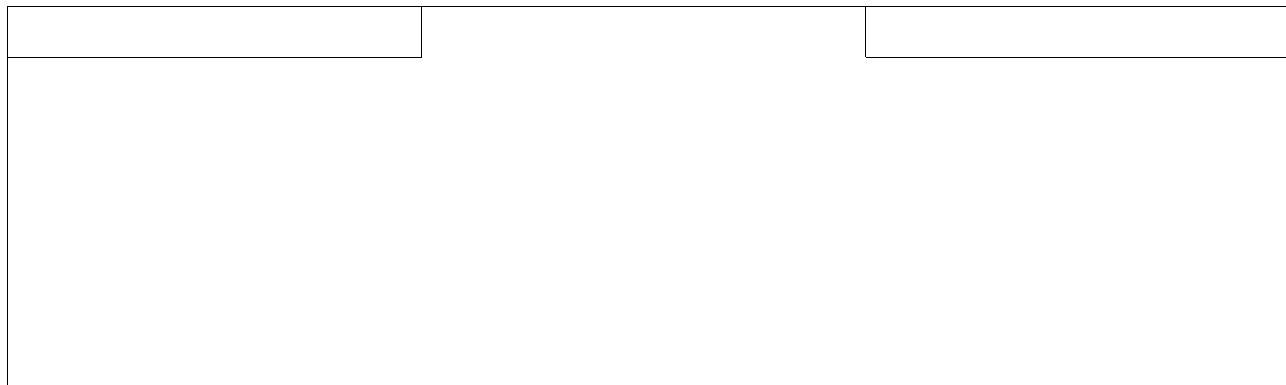
MOUNTING



This kind of unit is for horizontal mounting only suitable.

ORDERING INFORMATION

PART NUMBERING	UNIT	SHORT DESCRIPTION
G-NSE2-003	NS- 5/E2	dual axis, +/- 5° angle, Vcc: +12...24VDC, output V
G-NSE2-004	NS-10/E2	dual axis, +/- 10° angle, Vcc: +12...24VDC, output V
G-NSE2-010	NS-15/E2	dual axis, +/- 15° angle, Vcc: +12...24VDC, output V
G-NSE2-020	NS-45/E2	dual axis, +/- 45° angle, Vcc: +12...24VDC, output V
G-NSMIS-014	Cable	6- pin Molex-Connector, 20cm ribbon cable



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