AAL-Series Inclinometer

Dual axis inclinometer
Measurement range
+/-2 up to +/- 30°
with analog output signal



The AAL-Series conductive inclination sensor offers a full calibrated inclination sensor module on a PCB. The sensor provides voltage output depending on the inclination angle and related to the specific axis, as well as a voltage based temperature output signal. An optional integrated e^2-prom contains data on the characteristic curve resp. calibration data. This allows for a high integration into a specific application with excellent performance regarding accuracy and long-term stability.

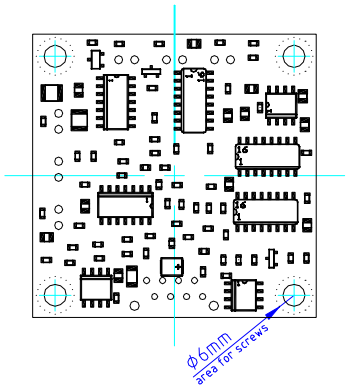
FEATURES

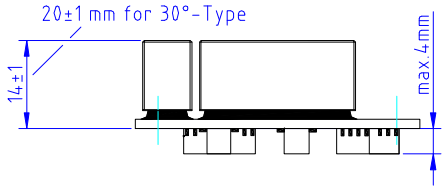
- PCB level
- High accuracy
- Temperature compensated
- High resolution
- Analog output signal
- e^2-prom on board

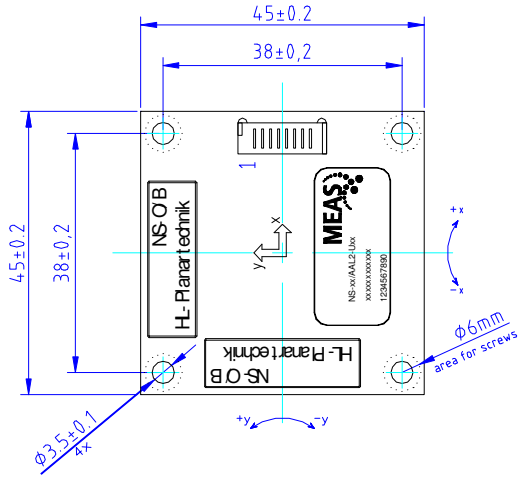
APPLICATIONS

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

Dimensions [mm]







AAL-Series Inclinometer

performance specifications

PARAMETERS

	Conditions	Min	Type	Max	Unit
Measurement range (1)		-2 (-30)		+2 (+30)	°
Resolution (2)		0.001		0.01	°
Accuracy (absolute) (3)	Ta = 0°…50°C,	0.08	0.1	0.3	°
Tempertur drift offset			8		mV
Non-linearity			1.5		%[FS]
Cross sensitivity			0.15		%[FS]
Voltage output signal		0.3		4.7	V
Current consumption			15		mA
Power supply		4.75	5	5.25	VDC
Operation temperature range		-40		+85	°C
Storage temperature range		-40		+85	°C
Weight			20		g
Dimensions	W x D x H		45 x 45 x 14(20)		mm

(1) measurement ranges +/-2°, +/-5°,+/-10°,+/-15°,+/-30° available
(2),(3) depend on measurement range

Pinning

Pin	Name	Description	Type
1	Vcc	Positive power supply +5VDC	Supply, Input
2	Vref	Reference potential +2.5VDC	Output
3	GND	Ground (negative supply voltage)	Supply, Input
4	Out X	Output signal X axis	Output
5	Out Y	Output signal Y axis	Output
6	Out T	Output Signal Temperature in use	Output
7	Data	I2C like bus for EEPROM	Input/Output
8	Clock	I2C like bus for EEPROM	Input

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

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ordering info

PART NUMBERING	UNIT	SHORT DESCRIPTION
G-NSAAL-006	NS- 2/AAL2-UDD	Range +/-2°, Vcc +5 VDC, voltage output , T-signal, e^2-prom
G-NSAAL-017	NS- 5/AAL2-UDD	Range +/-5°, Vcc +5 VDC, voltage output , T-signal, e^2-prom
G-NSAAL-003	NS-10/AAL2-UFG	Range +/-10°, Vcc +5 VDC, voltage output
G-NSAAL-010	NS-10/AAL2-UDG	Range +/-10°, Vcc +5 VDC, voltage output , T-signal, e^2-prom
G-NSAAL-018	NS-15/AAL2-UDG	Range +/-15°, Vcc +5 VDC, voltage output , T-signal, e^2-prom
G-NSAAL-019	NS-30/AAL2-UDN	Range +/-30°, Vcc +5 VDC, voltage output , T-signal, e^2-prom
G-NSMIS-004	Connector,cable	Connector, 8 pin, 20 cm ribbon cable for AAL-series