

INCLINOMETERS

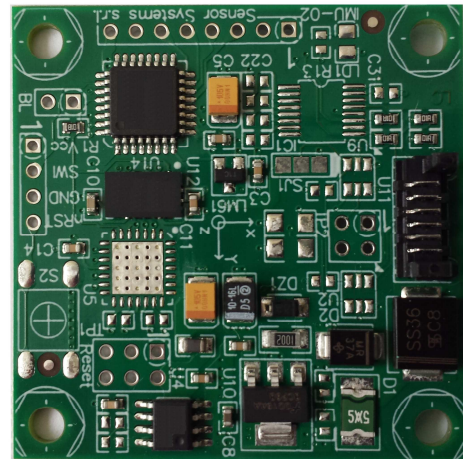
DAS-HP-XX-MX DUAL AXIS INCLINOMETER

Description

The inclinometer Model DAS-HP-XX-MX is a dual axis inclinometer with very high performance for use in wheel alignment machine .The working principle is based on a MEMS sensor with high performance in terms of resolution , long term stability and temperature characteristics . Output signal from the sensing element, coming as a duty-cycle modulated waveform with carrying frequency of 100 Hz, is acquired by a microprocessing unit. The microprocessor provides continuous sampling of X and Y axes every 25 ms and gives as an output the angular information after performing Arcsin (X,Y) calculation. The sensor is temperature-compensated and provides analog 12 bit data output for angular value coming from axis X and Y. Also RS-232-TTL and PWM communication is available for temperature and X,Y axis inclination values. This dual axis inclinometer was developed to satisfy the technological, assembling, maintenance needs of automotive wheel-testing machines ensuring a high degree of stability over time.

Features

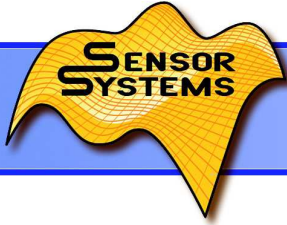
- Measuring range From $\pm 10^\circ$ To $\pm 15^\circ$
- Supply Voltage 4,5 to 15 VDC
- Resolution 0,005 degree
- Linearity 0,15 % FS MAX
- Temperature compensated range 0 $^\circ\text{C}$ to 60 $^\circ\text{C}$
- New MEMS sensor
- Low power consumption
- High resistance to mechanical shocks;
- Digital or analog input;
- No trimmers used for settings;
- Autozero function;
- Extremely low cross sensitivity;
- RS232 and PWM Output



Technical specifications

Measuring range	$^\circ$	10 $^\circ$ to 15 $^\circ$
Power supply	Volt	4,5 to 15 volt 5 VDC \pm 50 mV stabilized (opzional)
Y-X out zero	Volt	2.5 V \pm 50mV
Output	Volt	0,5----4,5 Volt RS232 TTL PWM
Linearity	% FS	0,15
Precision	A	10$^\circ$ 0,03 5$^\circ$ 0,01 3$^\circ$ 0,01
Resolution	$^\circ$	0.005
Insulation Resistance	Mohm	> 100 Mohm @500Vdc
Temperature compensated Range	$^\circ\text{C}$	0 $^\circ\text{C}$ to 60 $^\circ\text{C}$ optional – 20 $^\circ\text{C}$ + 80 $^\circ\text{C}$
Stocking Temperature	$^\circ\text{C}$	-40+ 80 $^\circ\text{C}$
Frequency Response	sec	0.3 (factory calibrated)
Zero temperature drift T 0- 60	$^\circ$	< 0.10

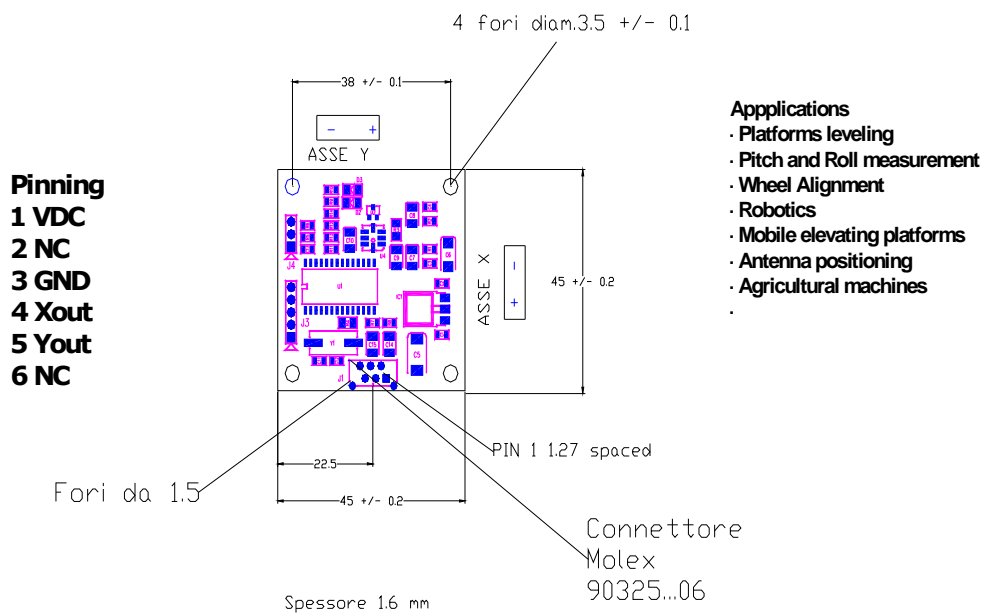




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Temperature Sensitivity drift T 0 -60	°	< 0.1
Cross axis error	% FS	<0, 5 % at max tilt
Shock resistance	MIL- STD 202 E 213 B	1000 g
Vibration resistance	MIL STD 202E 204 C	20 g (10 to 2000 Hertz)
Dimensions	mm .	45mmX45mm
Wheigt	gr	25gr

Dimensions



Ordering specification

1. DAS-XX-MX (supply 5-15 VDC output 0.5 4,5 Volt)
2. DAS-XX-MX-RS232 (supply 4,5-15 VDC output RS232TTL)
3. DAS-XX-MX-5V (supply 5 VDC stabilized output 0.5 4,5 Volt)
4. DAS-XX-MX-5V-RS232 (supply 5 VDC stabilized output RS232TTL)

