

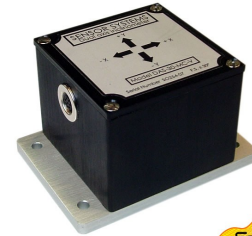
INCLINOMETERS

DAS-XX-MC

DAS-XX-MC

Description

DAS-XX-MC working principle is based on a micromachined silicon capacitive transducer (developed with MEMS technology). 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 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.



- MEMS sensor;
- Measuring range $\pm 10^\circ$, $\pm 30^\circ$ and $\pm 45^\circ$;
- Input voltage: 7 to 30 VDC;
- Output: 0.5-4.5V (4-20 mA optional);
- Aluminium housing IP65 (IP67 optional);
- Dimensions: 85mm x 60 mm height 50 mm;
- Weight: 400g.

Features

- Low power;
- High resistance to mechanical shocks and vibrations;
- No trimmer used for setting;
- Extremely low cross axis sensitivity;
- EMC tests performed according CEI EN 61000-4-3:2003 (80MHz to1000MHz - 10V/m);
- Binder connector.

Technical specifications

Measuring range	°	± 10	± 30	± 45
Input voltage	Volt	7 to 30		
Output	-	0.5-4.5 V 4-20 mA		
X-Y out zero	Volt	2.5 \pm 50 mV 12 mA \pm 50 μ A		
Sensitivity	mV/°	200	66.66	45.51
Zero based linearity	% FS	± 0.2	± 0.5	± 0.5
Resolution	°	0.005	0.015	0.02
Insulation Resistance	MOhm	> 100 @500Vdc		
Temperature compensated Range	° C	-20 +80		
Stocking Temperature	° C	-40 +80		
Response time	s	0.3 (factory calibrated)		
Zero temperature drift T 0-60°	°	< 0.1		
Temperature Sensitivity drift T 0-60°	°	< 0.1		
Transverse sensitivity	%FS	<0.5 at 45° cross angle		
Shock resistance	MIL- STD 202 E 213 B	1000 g		
Vibration resistance	MIL STD 202E 204 C	20 g (10 to 2000 Hertz)		

