



INCLINOMETERS

DAS-XX-MX (for wheel alignment)

Description

DAS-XX-MX 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.

DAS-XX-MX



- MEMS sensor;
- Measuring range $\pm 10^\circ$ and $\pm 15^\circ$;
- Input voltage: 7 to 30 VDC (5V stabilized optional);
- Output: 0.5-4.5V or RS232TTL;
- PCB mounted sensor, no housing provided;
- Dimensions: 45mm x 45 mm x 8mm;
- Weight: 35g.

Features

- Designed purposely for wheel balancing systems;
- 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);
- Molex connector.

Technical specifications			
Measuring range	°	± 10	± 15
Input voltage	Volt	7 to 30	
Output	Volt	0.5 ÷ 4.5 RS232 TTL	
X-Y out zero	Volt	2.5 +/- 50 mV	
Sensitivity	mV/°	200	133
Linearity	% FS	± 0.3	
Resolution	°	0.005	0.007
Insulation Resistance	MOhm	> 100 @500Vdc	
Temperature compensated Range	° C	-20 +60	
Stocking Temperature	° C	-40 +80	
Frequency Response	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 D	20 g (10 to 2000 Hertz)	

