



KuSaBa Engineers Pvt. Ltd.



EZ-COMPASS-3A

Tilt Compensated Compass / Linear Dual Axis Tilt System



Low cost advanced Pitch / Roll / Temperature compensated COMPASS / MAGNETOMETER system is built around a state of the art CMOS microcontroller utilizing AOSI's proprietary algorithm on a 1.5" x 2" assembled PCB with a total height including tilt sensing elements of less than 0.5 inch.

The unit outputs continuous heading, magnetic field, dual axis tilt and temperature data over the standard RS-232 and RS-422 and RS-485 interfaces. The AZIMUTH is generated from a 3-axis semiconductor magnetometer with 12 bit (0.08 deg) resolution. The LINEAR tilt information is available with 12-bit resolution for over +-90 arcdeg. COMPASS/TILT module is perfectly suitable for numerous navigation, research, training, construction, entertainment and other precision orientation, navigation and leveling applications.

The COMPASS is able to output multi-sensor information in NMEA-0183 mode and responds to numerous generally used commands. Easy link through the Hyper Terminal Windows accessory facilitates custom calibration, hard iron compensation, data acquisition, data averaging, scan delay, dumping factor and data display.

Parameter	Specification	Units / Description
Azimuth Range	0—360	deg, continuous
Azimuth Resolution	12 (0.08)	bit (deg)
Azimuth Repeatability	< 0.25	deg, typical horizontal
Azimuth Accuracy	< 0.5	deg, typical horizontal
Magnetic Field	+/-2	Gauss typical
Magnetic Resolution	< 1	mGauss typical
Pitch Range	+90 to -90	arcdeg linear
Roll Range	+90 to -90	arcdeg linear
Weight	11	Grams
Dynamic Range	10	Readings/sec
Tilt Resolution	12	bit full scale, both axis
Tilt Repeatability	<2	Bits
Temperature	- 40 to +85	deg C
Communication	1200—38400 baud,8,N,1	RS-232 and RS-422 standards
Supply	6---15	Vdc well regulated
Size	1.5"W x 2"L x 0.5"H	PCB Board
NMEA-0183 mode	5 select modes	1999 Revision

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