



KuSaBa Engineers Pvt. Ltd.

EZ-COMPASS-3A-DIVE / MAGNETOMETER
Submersible Tilt Compensated Compass / Linear Dual Axis Tilt System



High reliability submersible advanced pitch/roll compensated COMPASS / MAGNETOMETER system is built around a state of the art CMOS micro-controller utilizing AOSI's proprietary algorithm on a 1.5" x 2" assembled PCB with a total height including tilt sensing elements of less than an inch.

Packaged in a marine grade black anodized cylindrical aluminum housing the unit outputs continuous heading, field, dual axis tilt and temperature data over the standard RS-232, RS-422 or RS-485* interfaces at depth up to 3500 meters. 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 and includes flash adjustable gain for up to ± 90 arcdeg.

COMPASS/TILT module is perfectly suitable for numerous underwater navigation, research, training, construction, entertainment and other precision orientation, navigation and leveling applications. Bottom exterior surface is calibrated for accurate zero level. The COMPASS is able to output heading information in NMEA-0183 and local LCD modes. Easy link via Hyper Terminal Windows accessory facilitates custom calibration, hard/soft iron compensation, data acquisition, data averaging, and data display. For applications requiring custom tilt range, the compass can be supplied with any AOSI's single axis tilt sensors.

Parameter	Specification	Units/description
Azimuth Range	0—360	deg, continuous
Azimuth Resolution	12 (0.08)	bit (deg)
Azimuth Repeatability	< 0.25	deg, typical
Azimuth Accuracy	< 1	deg, typical
Magnetic Field	+2	Gauss typical
Magnetic Resolution	< 1	mGauss typical
Pitch Range	+90 to -90	arcdeg linear
Roll Range	+90 to -90	arcdeg linear
Bandwidth	10	reading/sec (Hz)
Housing	Aluminum, anodized	Black, marine grade
Tilt Resolution	12	bit full scale, both axis
Tilt Repeatability	<2	Bits
Operational depth	3500	Meters
Temperature	-40 to +85	deg C
Storage Temp.	-50 to +100	deg C
Communication	300--38400 baud,8,N,1	RS-232 standard
Supply	8 to 18	Vdc, 12Vdc typical
Size	5.8"diam x 3.85"H	w/o connector
NMEA-0183 mode	5 sentences	must use CR LF

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