Compass / Orientation Sensor MAG2-C

Applications:

Complete under-water orientation system in a pressure-proof and sea water resistant vessel for completion of sensor packages, ROVs or AUVs;

Applications that require information about the orientation relatively to the earth magnetic field as well as about the inclination and – optionally – the depth (MAG2-CP) or the GPS position (MAG2-CG).

Working principle:

Three-axial magneto-resistive magnetometer combined with micro-mechanical three-axial inclination sensor.
Options: Pressure sensor or rate gyro and GPS. Calculation of compass direction (heading, electronically gimbaled) and pitch and roll angle; Hard and soft iron compensation;
Optionally depth (absolute pressure) or GPS position.

Simple handling:

Connection via under-water micro-WetCON or custom specific plug; Power supply 8 to 15 V; Serial interface and communication with a simple ASCII protocol (diverse output formats).
Several mounting positions configurable.

Key data:

Angle resolution:	0.1°
Compass:	0...360° ± 0,5/1/1,5° (inclinations 0/30/60°)
Roll-/Pitch angle:	full rotation; typical ± 1° (with 30° inclination)
Measuring rate:	up to 40 per second
Housing:	sea water resistant CuZn35Ni2 Ø 40 mm x 145 mm (without plug)
Depth rating:	2000 m (100 m with GPS)
Termination:	8-pin Micro-WetCON plug (standard)
Temperature:	-20 .. 70 °C
Power supply:	8..15 Vdc ca. 35 mA
Output:	serial RS232 or USB
Communication:	ASCII (1 start, 8 data, 1 stop, 0 parity) Baud rate programmable (up to 115 kbaud)

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