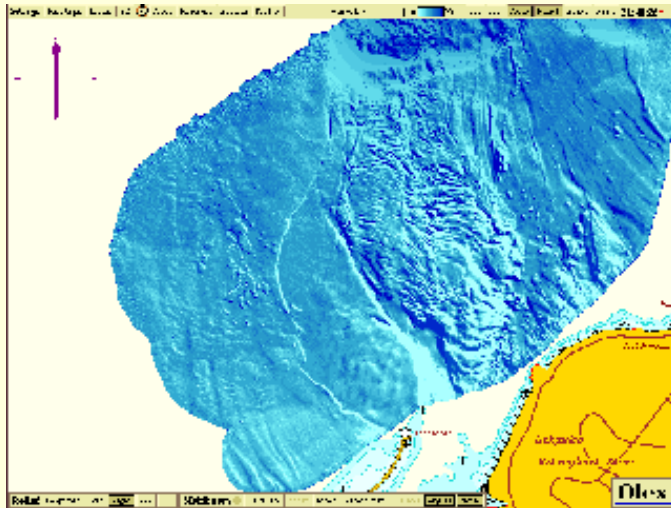


Olex

Spatial all-in-one sensor

Spatial is a small position and attitude sensor, which can be used with ATEC, HGPS etc. It combines accelerometers with GPS and magnetic compass providing: pitch, roll, heave, heading, position, course and speed. A complete ATEC system may consist of Olex with ATEC and HT software modules, ATEC multibeam sonar, and just Spatial. Accuracy is specified as 0.1 degrees in pitch and roll, 0.8 degrees in heading, and 5 cm or 5% in heave. A sound and well-calibrated installation is crucial.



Mounting

The sensor should be mounted close to vessel CG and its antenna must have a clear sky view. A practical site may be low in the wheelhouse, with the antenna outside. Avoid magnetic influences like engines, motors, power cables etc. Normal mounting is on top of a horizontal plate, with cables pointing forward. Other orientations may be used, provided they are specified in the PC configuration software.

If the included GPS cable proves too short, other cables and active antennas may be used. The sensor has 4 mounting holes for M2 bolts. Typically, it is mounted on a small plate, which is then fastened to the boat using three larger screws. Plate and screws are not included. Power is 5-36 VDC, nominally 24 VDC.

Calibration

After mounting, the PC configuration software should be used to configure GPS antenna XYZ relative to the sensor. It should also be used to perform the one-time magnetic calibration, which entail sailing the boat through a 450 degrees turn. The software may also be used to modify other settings, like baud rates and data formats. The sensor's standard configuration is to send GPS and heading on the Auxiliary cable, and attitude, as TSS1, on the GPIO cable. The Primary cable is used to communicate with the configuration software, and is not normally connected.



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