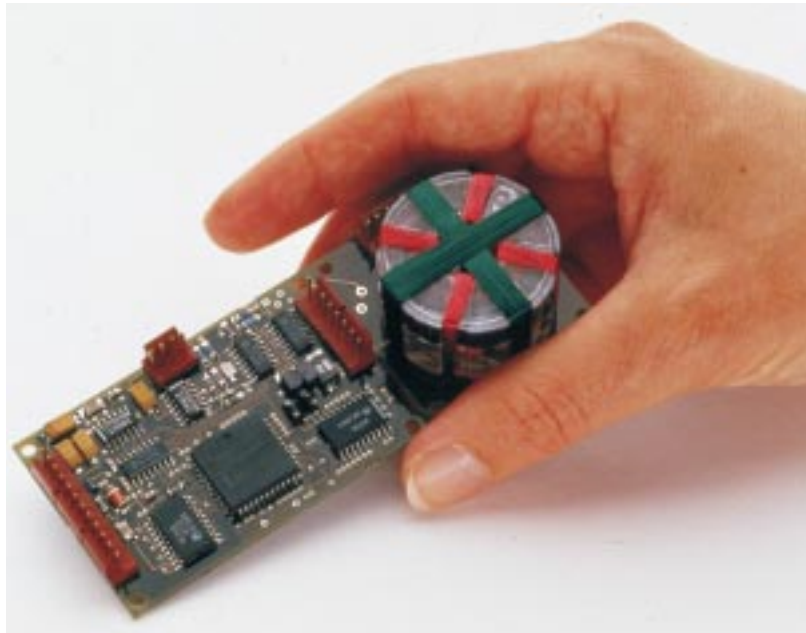




KVH's C100 Compass Engine is an innovative stand-alone design offering small size, low cost, and system flexibility to meet your demanding heading sensor applications.

Key Features & Attributes

- Extremely reliable, stand-alone sensor subsystem
- Multiple digital and analog user selectable outputs
- Automatic compensation
- Operates accurately in latitudes up to 80° magnetic dip.
- Compact design
- Removable sensor element for remote mounting
- Industrial grade, extended temperature components



Introducing the KVH C100 Compass Engine

The KVH C100 is a complete stand-alone sensor subsystem that outputs extremely accurate heading data in any of six user-selectable digital or analog formats. Compact and affordable, the C100 was designed with flexibility in mind making it simple to integrate into your system.

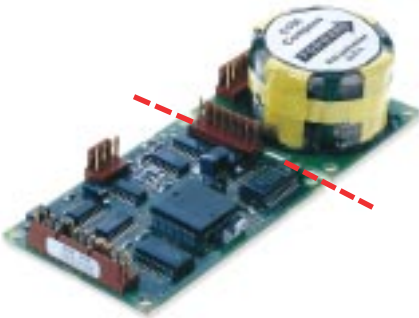
How the KVH C100 Works

The C100 microprocessor-controlled fluxgate compass consists of a detachable toroidal fluxgate sensor element and a small electronics board. Two sensor coil arrangements are offered – the SE-25 for $\pm 16^\circ$ tilt, and the SE-10 for $\pm 45^\circ$ tilt. Each has a saturable ring core housed in a Lexan cylinder, free floating in an inert fluid to keep it horizontal with respect to the earth. Windings surround the Lexan cylindrical housing, electrically driving the ring core into saturation and measuring the amplitude of induced pulses which are proportional to the earth's magnetic field. This data is then sent to the microprocessor which compensates for the hard and soft iron magnetic interference of the host platform. The resulting output is translated into extremely accurate heading data.



KVH's C100 provides survey crews with accurate and instantaneous azimuth data when using Laser Technology's lightweight handheld CRITERION™ rangefinder.

KVH C100™ Compass Engine



The red line indicates where the sensor element may be "broken away" from the electronics portion for remote mounting.

Compact Design Offers Remote Mounting and Housing Options

The C100's mechanical design permits one-piece mounting for simple installations as well as a detachable sensor element for applications where space restrictions or sources of magnetic interference (deviation) require remote sensor mounting. Miniaturization of the unit is achieved using a 6 layer circuit board. A standard aluminum housing (SE-25 coil option only) is available for the C100. This housed unit has been subjected to military specification shock (40G three axis) and vibration (18G RMS for 30 minutes). Housed C100's require factory modification so the C100 and the housing must be ordered together.

Automatic Compensation Assures Accuracy

The C100 automatically corrects for hard and soft iron errors. It also provides an evaluation or "score" of the quality of the compensation and the magnitude of magnetic interference present from the host platform.

Multiple Output Options for Versatility

To facilitate integration of the C100 into your application, a variety of analog and digital outputs may be accessed through a 12 pin Molex[®] connector on the electronics board. A menu-driven software kit allows you to configure the C100's output for your product or to connect it to your PC for prototype testing.

Built to Military Quality Standards by the Worldwide Leader in Electronic Compass Technology

The C100 is built in the U.S.A. by KVH Industries, the recognized leader in modern digital compass technology. The C100 uses industrial grade components rated at -40° C to +85° C and is built to military quality standards to assure years of accuracy and trouble free operation. The C100's solid state design is based on technology fielded in over 100,000 KVH electronic sensors produced for a wide variety of military, marine, and industrial applications. No other company in the world can match KVH's experience in producing high quality electronic compass systems.



Perry Tritech's submersible VOYAGER[™] acquires high quality video and sensor data from underwater inspections and surveys. The C100 keeps VOYAGER heading in the right direction!

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