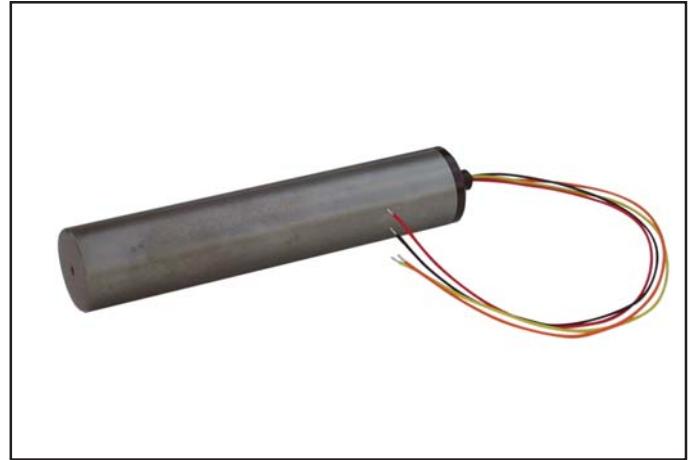


Heading Sensor

TOWED ARRAY

- ▼ Heading Accuracy 0.5° RMS
- ▼ Operates in dynamic environments with 360 degrees continuous roll
- ▼ Available in 1.1 inch, 1.0 inch or 0.9 inch diameter
- ▼ 2500 psi pressure rated housing
- ▼ RS232 or RS422 digital output



Applications

- ▼ Towed Sonar Arrays
- ▼ Seismic Streamers
- ▼ Buoy Orientation
- ▼ Magnetic Compassing

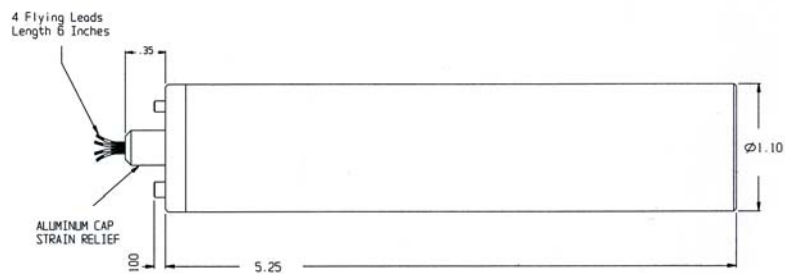
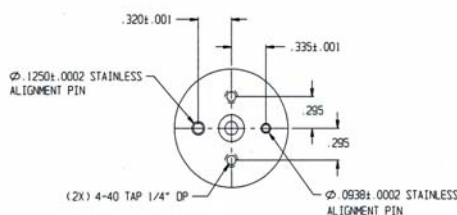
CHS Series

The CHS series of high performance fully calibrated, small diameter heading sensors are ideally suited for towed sonar array and seismic streamer applications.

The CHS heading sensor is a solid-state "strapdown" configuration that avoids the performance limitations of typical gimbaled systems and offers improved reliability. A 3-axis fluxgate magnetometer and 3-axis micro-machined accelerometer are combined with digital signal processing electronics and fully integrated within a small diameter pressure rated housing. The digital signal processor samples and converts the internal sensor

signals to 16-bit digital data and automatically compensates for any temperature and misalignment effects. Factory calibration of scale factor, bias and misalignment angles is achieved by placing the heading sensor in high precision fixtures that apply rotational and magnetic fields. Scale factor and bias calibration coefficients are measured over the operating temperature range of the sensor.

The calculated roll, pitch, and azimuth angles are provided on a bidirectional serial data link that can be factory configured for RS232 or RS422 and is user programmable for data transfer rates of up to 9600 baud.



CHS110TB Dimensions

Specifications	CHS110TB	CHS100TB	CHS090TB
Performance			
Digital Resolution	16 bit	16 bit	16 bit
Heading (° rms)	1.0	0.5	0.5
Roll and Pitch (° rms)	0.5	0.3	0.3
Environmental			
Operating Temperature (°C)	-5 to +40	-5 to +40	-5 to +40
Operating Pressure (psi)	2500	2500	2500
Electrical			
Power ¹	+5V @ 75 mA	+5V @ 75 mA	+5V @ 75 mA
Output Data Rate (Hz)	5	5	5
Output Format ²	RS232 (300 to 9600 baud)	RS232 (300 to 9600 baud)	RS232 (300 to 9600 baud)
Physical			
Length (inches)	5.25	5.25	5.25
Diameter (inches)	1.1	1.0	0.9
Weight (oz.)	5.0	5.0	4.5
Electrical Interface	Flying leads 6" long	Flying leads 6" long	Flying leads 6" long
Housing	Anodized Aluminum	Anodized Aluminum	Anodized Aluminum

Notes

¹ Other power input configurations available

² RS422 is also offered as an option

Specifications subject to change without notice



Wire Color	Function
Red	+5 VDC
Black	Ground
Orange	RS-232 serial in
Yellow	RS-232 serial out

Pin Diagram for +5V RS232 Configuration

magnetometers

Ordering Information

Model	Description	Diameter
CHS110TB	Heading sensor	1.1 inch
CHS100TB	Heading sensor	1.0 inch
CHS090TB	Heading sensor	0.9 inch

CALL FACTORY FOR OTHER CONFIGURATIONS