

# Model 545

## Towed Array Heading Sensor

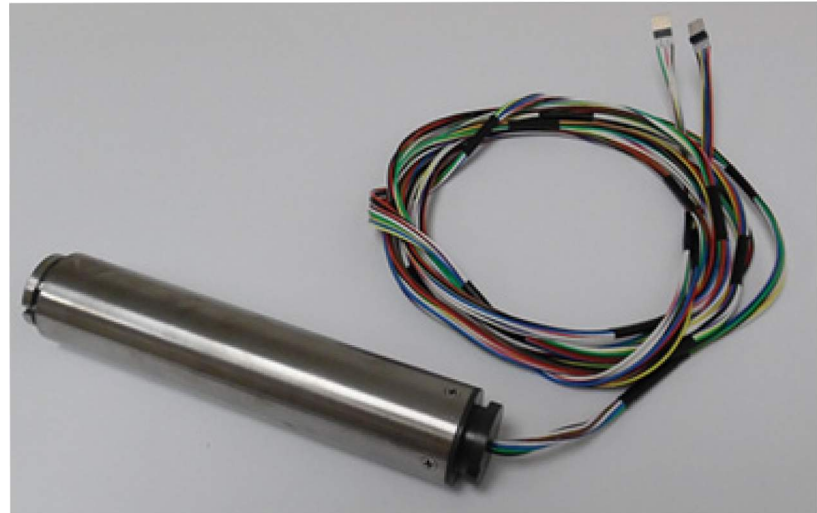


### Applications

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

### Features

- Operates in dynamic environments with 360 degrees continuous control
- Available in 1.1" (28mm), 1.0" (25mm) and 0.9" (23mm) diameter units available
- 2500 psi pressure rating
- TTL, RS232 or RS422 digital output



The **Model 545** series of high performance, fully calibrated, narrow diameter heading sensors are ideally suited for **sonar array** and **seismic streamer** applications.

The 545 series sensors utilize a solid state "strapdown" configuration that avoids the performance limitations of typical gimballed systems and offers improved reliability. A 3-axis fluxgate magnetometer and a 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 instrument in high precision fixtures that apply rotational and magnetic fields. Scale factor and bias coefficients are measured over the operating temperature range of the sensor.

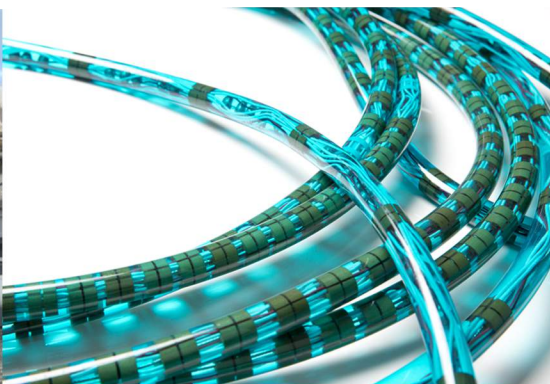
The calculated roll, pitch and azimuth angles are provided on a bi-directional serial data link that can be factory configured for RS232 or RS422 and is user programmable for data transfer rates of up to 9600 baud.

# Model 545 Series Heading Sensors

## Model Specifications



Specification		Model 545C	Model 545TB	Model 545JH
<b>Angular Accuracy</b>				
	Azimuth	1.2°	1.2°	1.2°
	Inclination	0.5°	0.5°	0.5°
	Roll	0.5°	0.5°	0.5°
<b>Temperature Range</b>		0°C to 45°C	0°C to 45°C	0°C to 45°C
<b>Analog Heading Outputs</b>		N/A	2V Full Scale	N/A
sine, -sine, cosine, -cosine				
<b>Power</b>		4.9V-12V	±8V	4.9V-12V
<b>Digital Outputs</b>		Logic level	RS422	TTL/Analog
		Protocol	ASCII or binary	ASCII or binary
<b>Connection</b>		Flying Leads	Flying Leads (80"/2M)	Flying Leads (8"/20cm)
<b>Physical Dimensions</b>		(English)	0.900" x 4.970"	0.982" x 5.106"
		(metric)	23mm x 126mm	33mm x 130mm
<b>Pressure Rating</b>		Operational	600 psi	1500 psi
		Survival	1500 psi	2500psi
		Housing Material	Aluminum	Titanium
		Chassis Material	N/A	Aluminum
<b>Weight</b>			3.88 Oz/110g	5.96Oz/169g
<b>Vibration (random)</b>			10Grms, 5-100Hz	10Grms, 5-100Hz
<b>Shock</b>			1000G 1ms half sine	1000G 1ms half sine



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