

# Compass Heading

## Starmon Compass

Gear movement studies

### Advantages at glance

- Multiple sensors
- Vertical or horizontal
- Shallow to deep ocean
- Long life rechargeable battery

### Applications

- Towed gear
- Moorings
- Robotics

**STAR : ODDI**

Logging Life Science

**Compact with multiple sensors** Built-in sensors provide time-stamped measurements of compass heading, pitch & roll, 3-D tilt, pressure, depth and temperature.

**Long life rechargeable battery** The battery can last several years on a single charge. At an interval of 1 min it can last 2 years on a single charge and can be recharged 500 times.

**Fast response and large memory** The logger has a fast response temperature probe with a time constant of 2 seconds. The memory capacity is 2.2 million measurements per sensor,

**Vertical or horizontal placement** The user selects if the logger will be placed horizontally or vertically. This gives more flexible mounting options.

## Technical specifications

Sensors	Compass heading, pitch & roll, 3D tilt-acceleration, depth/pressure, temperature
Size (Diameter x Length)	40 mm x 236 mm, titanium housing
Weight	761 g in air / 500 g in water
Heading Range	0-360°
Heading Resolution	0.1°
Heading Accuracy RMS (Route Mean Square)	+/-5 for tilt range 0-45° from horizontal or vertical position, +/-7° for tilt range 46-60°
Acceleration Range	+/-3 g for each of the axis X, Y and Z
Acceleration Resolution	0.0025 g
Temperature Resolution	0.002°C (0.004°F)
Temperature Accuracy	+/-0.025°C (+/-0.045°F)
Temp Response Time	2 seconds time constant (63% of full value)
Depth Ranges	50 m, 100 m, 200 m, 500 m, 1000 m, 2000 m, 4000 m, 4500 m. 11km housing available
Depth Resolution	0.005% FS (Full Scale) of selected range
Depth Accuracy	Better than +/-0.3% of selected range
Pitch Roll Accuracy	+/-2° for tilt range of 0-45°, +/-3° for tilt range 46-60°
Pitch and Roll Range	Pitch (X axis) +/-90°, Roll (Y axis) +/-180°
Pitch and Roll Resolution	0.1°
Memory Capacity	2.2 million measurements per sensor
Measurement Interval	User defined in sec, min or hours
Communications	USB 2.0 cable, for computer connection
Battery Life	2 years on a single charge *
Replaceable Battery	Yes, with the use of a soldering iron. Battery is rechargeable

\* For sampling interval of 1 min.  
10 sec interval = 4.5 months, 2 sec interval = 28 days.  
Number of recharges: 500 times