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Exploring the oceans

It has been said that the Earth's oceans are the last great unknown frontier. One company, Metocean Data Systems, has set out to measure them. Metocean has selected the Vaisala BAROCAP® Barometer PTB110 compact pressure sensor to assist in this task, as it offers excellent long-term stability and low power consumption for its drifting buoys.

Metocean has responded to the maturing drifting buoy market by introducing a compact and low-cost drifting buoy known as the SVP (Surface Velocity Program Drifter). Metocean produces over 400 spherical drifting buoys per year, and it has now teamed up with Vaisala to meet its customers' demanding pressure measurement needs.

Stability to endure the rough seas

"Metocean features state-of-the-art electronics and embedded software in all of its products. Barometric pressure is one of the most important atmospheric variables. Therefore, the stability of the sensor

readings over time is very important," says Shanthi Bhushan, Senior Embedded Software Engineer at Metocean.

The PTB110 has the accuracy and stability that is expected in any industry. In Metocean's case, these variables are paramount. The buoys travel with ocean currents and are deployed for 12 – 18 months at a time. They are subjected to temperature extremes and rough seas. This type of application demands readings that are both accurate and stable. In addition, because of a finite battery life, low power consumption is a must. The PTB110, with an average power consumption of less than 4 mA, and long-term stability of $\pm .1$ hPa/year, meets this challenge.

Many of Metocean's customers are from the scientific community, and therefore they require long-term, accurate data for their studies. According to Greg Connor, Sales Manager at Metocean, one of the largest customers is the Data Buoy Cooperation Panel. This organization maintains over 1250 SVP buoys at any

given time. The more pressure readings they have in the ocean, the more accurate the mathematical models. Mr. Bhushan explains how the versatility of the PTB110 makes it a good choice for end-users: "The PTB110 barometer provides excellent stability over time, and the temperature readings are highly reliable. It is easy to incorporate into Metocean's electronics and software as there are no calibration coefficients to be stored in the buoy electronics, and no complex math is required to calculate the barometric pressure."

Excellent service and high quality products

"Vaisala is the industry standard for monitoring various meteorological parameters. Excellent customer service and high quality products convinced Metocean to choose Vaisala barometers for its drifting buoys," says Mr. Bhushan. ■

Further information:

www.vaisala.com/barometricpressure