

Electro-
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Ultra-small Water-proof Digital Absolute Pressure Sensor

Fujikura has developed an ultra-small water-proof digital output absolute pressure sensor (the ABS5 series). As this sensor has a waterproof structure, it will find applications in measuring altitude and depth using waterproof electronic equipment for outdoor use.

This new product is even smaller than a current analog output absolute pressure sensor (the FPBS series). In terms of functions, the new product digitally outputs accurate pressure and temperature data since it performs a correction calculation of the output signals using its built-in temperature sensor and signal processing circuit.

Thanks to these additional functions, this absolute pressure sensor requires no complicated adjustment or corrective calculation on the customer's part and enables easy incorporation into a device.

The sales of the product starts in December 2016.

Features

1. High waterproofness

Package design capable of standing high pressure of 1 MPa (equivalent to water pressure at 90 m depth)

2. Miniaturized

Small-sized package of ϕ 4.0 mm \times 1.85 mm

3. Digital output

16-bit digital output of pressure data and temperature data compensated for accuracy

4. High resolution

Pressure resolution of 0.02 hPa (equivalent to about 16 cm height resolution near ground surface)



External view of product
Package as small as grain of rice

Product specifications

Model	ABS5-100KA	ABS5-450KA	Unit
Outer diameter of package	ϕ 4.0 \times 1.85		mm
Pressure / temperature output data format	16 bit, I2CTM		-
Pressure measurement range	300 ~ 1100	300 ~ 4500	hPa
Pressure resolution	0.02	0.084	hPa/count
Pressure medium	Noncorrosive gasses, water, salt water		-
Operating temperature range	-40 ~ 85		$^{\circ}$ C
Accurate compensation temperature range	-10 ~ 60		$^{\circ}$ C
Operating voltage	1.8 ~ 3.6		V
Average consumed current	9		μ A/sample/sec

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