Attitude reference system：AH100

RTK (Real-time kinematic) carrier phase difference technology, which is a new commonly used GPS measurement method, which can obtain centimeter-level positioning accuracy measurement method in real time in the field. It adopts carrier phase dynamic real-time difference method. It is a major milestone in GPS applications. It appears as engineering stakeout, topographic mapping, and various control measurements greatly improve the efficiency of field operations.

Product real shot

The RTK tilt attitude solution developed by Bewis Sensing Co., Ltd., using the attitude reference sensor, dynamically measures the roll angle, pitch angle and azimuth. In the measurement operation, the user does not need to strictly focus on the middle and the rear to picking point. The built-in attitude sensor can automatically correct the angle based on the angle and orientation of the tilt of the center rod to obtain the correct bottom coordinates, which greatly improves the working efficiency.

Features:

- Roll angle and pitch angle accuracy 0.5
- Azimuth accuracy 2°°
- 5V power supply, low power design
- Small size and light weight
- 15° tilt projection error does not exceed 2CM
- 30° tilt projection error does not exceed 5CM
- Improve work efficiency and reduce the cost of measurement work
- Improve quality, flattening accuracy up to ±3cm
- Unique strapdown attitude algorithm and Kalman filter
- Waterproof design to ensure normal operation in harsh environments
- Anti-vibration shock and anti-electromagnetic interference

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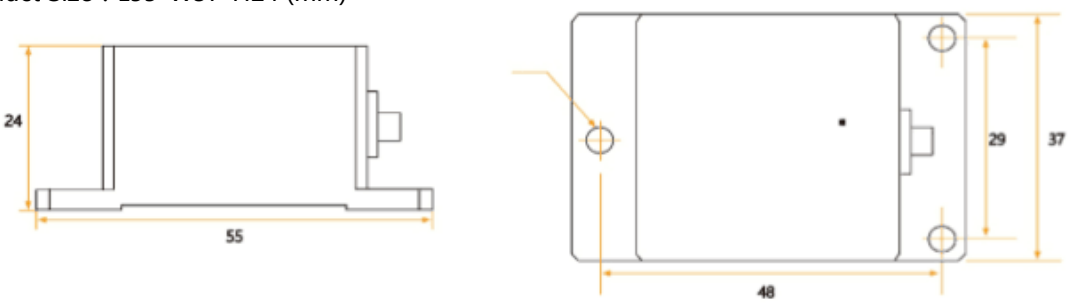
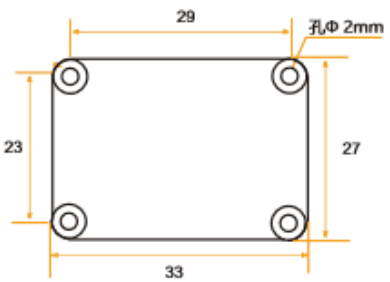
Attitude reference systemAH100：Technical indicators

Attitude parameters	Pitch Accuracy		2° (RMS, dynamic) 0.5° (RMS, Static)
	Roll accuracy		2° (RMS, dynamic) 0.5° (RMS, Static)
	Resolution		0.01°
	Slant Range		Pitch ± 90°, Roll ± 180°
Heading parameters	Heading Accuracy		2° (Pitch<40°)
			2.5° (Pitch<60°)
			3° (Pitch<80°)
	Resolution		0.01°
Physical characteristics	Size		L55 x W37 x H24 (mm)
	Weight		60g
	Output form		RS232/RS485/TTL
Interface characteristics	Start Delay		<3s
	Maximum Output Rate		50Hz
	Serial Communication Rate		2400-115200 Baud rate
	Digital Output Format		Binary high performance protocol
Environment	Vibration Resistance		2000g

Product Size：L55*W37*H24 (mm)



Bare product size：L33*W27*H6 (mm)Note: ±1mm error for length and width dimensions, please refer to actual size.



Attitude reference system:success case

AH100 is a new generation of high-precision attitude measurement module developed by Bewis Sensor Technology Co., Ltd. for the needs of RTK customers. Its hardware and software interface is fully compatible with and improved on the previous version.

This product has the following technical features：

a) This product uses high-precision and high-reliability industrial-grade sensors, all of which meet and partially exceed the original products.。

b) Each product has undergone high-precision temperature compensation and error compensation, which is convenient for users to use in various environments.。

c) This product adopts a new calibration method, which is faster and more convenient than the original.

d) The roll and pitch accuracy of this product can reach 0.5°, and the heading angle accuracy can reach 2°. Can more accurately reflect changes in the system

e) This product enriches the command system compared to the previous products, making it easier for users to use.

The interface of this solution uses TTL level. Thanks to the built-in high-precision digital temperature sensor, the output angle is corrected again within the operating temperature range to ensure high accuracy in high and low temperature environments. The output speed of the product can reach 100Hz. The products are truly industrial grade products with reliable and stable performance and good expandability, suitable for use in a variety of harsh industrial control environments.