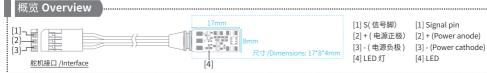# FS-iBA01

Altitude sensor

产品介绍 Introduction

FS-iBA01 是一款采用 i-BUS2 协议适配富斯 AFHDS 3 增强版接收机的高度传感器。设计小巧，易安装，可实时回传高度数据，适配多种车或飞机模型。

FS-iBA01 is a altitude sensor that adapts to Flysky AFHDS 3 enhanced receiver in compliance with i-BUS2 protocol. It features compact design, easy installation, real time altitude data return, and adaption to a variety of car and airplane models.

概览 Overview

舵机接口 /Interface

17mm
8mm
尺寸 /Dimensions: 17*8*4mm

[1] S(信号脚)
[2] + (电源正极)
[3] - (电源负极)
[4] LED 灯

[1] Signal pin
[2] + (Power anode)
[3] - (Power cathode)
[4] LED

产品规格 Specifications

- 产品型号：FS-iBA01
- 适配设备：支持 i-BUS2 协议系列接收机（如 FTr8B、FTr12B、INr6-HS 等富斯 AFHDS 3 增强版接收机）
- 适配机型：车或飞机等
- 协议类型：i-BUS2
- 测量精度：1 米
- 测量范围：-1000 ~ 8000 米
- 爬升率：-150m/s ~ +150m/s
- 输入电源：3.5~9V/DC
- 工作电流：10mA/5 V
- 在线更新：不支持
- 外形尺寸：160mm（长）
- 机身重量：3.5g
- 温度范围：-20°C ~ +85°C
- 湿度范围：20% ~ 95%
- 安规认证：CE，FCC

- Product Type: FS-iBA01
- Compatible Devices: Supports receivers that comply with i-BUS2 protocol series (such as FTr8B, FTr12B, INr6-HS and other Flysky AFHDS 3 enhanced receivers).
- Compatible Models: Cars or airplanes, etc.
- Protocol: i-BUS2
- Measurement Accuracy: 1m
- Measurement Range : -1000 ~ 8000m
- Vario meter : -150m/s ~ +150m/s
- Input Power: 3.5 ～ 9V/DC
- Working Current: 10mA/5 V
- Online Update: No
- Dimensions: 160mm（Length）
- Weight: 3.5g
- Temperature Range: -20°C ~ + 85°C
- Humidity Range: 20% ~ 95%
- Certifications: CE, FCC

安装说明 Installation

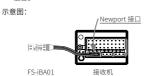**勿将高度传感器安装在密闭位置！**

勿将高度传感器安装在可能会被风或气流撞击的位置！

本传感器利用大气压计算海拔高度。随着海拔的上升，大气压会逐渐降低，FS-iBA01 基于此来估算海拔高度。此外天气状况也会引起大气压变化，如温度、湿度等因素，相同位置下传感器检测到的高度数值可能会有细微变化。

高度传感器安装步骤如下：

1. 使用 3M 贴将高度传感器固定在模型合适位置处，注意固定的面需平整。也可使用扎带将其捆绑在模型上，注意力度，避免扎带勒坏产品；

2. 将舵机接口连接至接收机 Newport 接口。在与此接收机已对码的发射机端，将接收机对应的 Newport 接口协议设置为 i-BUS2，即可在发射机端查看相关信息。

示意图：

Newport 接口

FS-iBA01   接收机

注：

1. 不同应用对线材长度要求不同，如需加延长线，请注意 iBA01 接口为舵机接口，针脚定义参考前面【概览】描述。

2. 适配支持 i-BUS2 协议的发射机：Noble （固件版本 V2.0.93 及以上）、Noble Lite （固件版本 V1.0.10 及以上）、Noble pro、PL18（固件版本 1.0.55 及以上）和 PL18 Lite（固件版本 1.0.65 及以上）；

3. 若高度传感器正常工作，此时 LED 灯常亮；

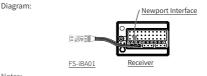4. 若高度传感器已连接电源但未检测到 i-BUS2 信号，此时 LED 灯慢闪。

Do not put the sensor in a sealed location.

Do not install in a location where the wind/air flow can hit the sensor.

The sensor calculates the altitude from atmospheric pressure. Atomspheric pressure will get lower as you go up in altitude. Using this the sensor will estimate the altitude. In addition, atmospheric pressure may changes due to weather conditions, such as temperature, humidity and other factors, The altitude value detected by the sensor at the same position may vary slightly.

Follow the steps below for installing the altitude sensor.

1. Use 3M stickers to fix the temperature sensor at the appropriate location of the model. It should be noted that the fixed surface should be flat. You can also use a cable tie to tie it to the model. In this case, you should control the force.

2. Connect the servo interface to the Newport interface of the receiver. Set the protocol of the corresponding Newport interface of the receiver to i-BUS2 at the transmitter side which is bound to this receiver. As a result, you can view the relevant information at the transmitter side.

Diagram:

Newport Interface

FS-iBA01   Receiver

Notes:

1. The cable length may vary to different applications. If you need to add an extension cable, please note that the FS-iBT01 interface is a servo interface, and for the pin definition, refer to the description in the previous Overview section.

2. The compatible transmitters which support i-BUS2 protocol: Noble (firmware version V2.0.93 or later), Noble Lite (firmware version V1.0.10 or later), Noble pro, PL18 (firmware version 1.0.55 or later) and PL18 Lite (firmware version 1.0.65 or later).

3. If the altitude sensor is working properly, the LED is solid on at this time.

4. If the sensor is connected to power supply but no i-BUS2 signal is detected, the LED flashes slowly at this time.

⚠ 注意事项：
- 为防止损坏传感器，请确保与接收机正确连接。
- 使用高度传感器前，请确保与接收机的 i-BUS2 接口相连。
- 使用前，需先测试功能，测试完成后再使用。

⚠ Attentions:
- Ensure that the sensor is connected properly to the receiver, failure to do so may result in damage to the sensor.
- Ensure that the sensor is connected properly to i-BUS2 interface of the receiver before use.
- To ensure that the sensor is functioning as desired, please test accordingly.

认证相关 Certification

FCC Compliance Statement

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Warning: changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.
If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
-- Reorient or relocate the receiving antenna.
-- Increase the separation between the equipment and receiver.
-- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
-- Consult the dealer or an experienced radio/TV technician for help.

EU DoC Declaration

Hereby, [Flysky Technology co., ltd] declares that the Radio Equipment [FS-iBA01] is in compliance with RED 2014/53/EU.
The full text of the EU DoC is available at the following internet address: www.flysky-cn.com.

RF Exposure Compliance

The distance between user and products should be no less than 20cm.

Environmentally friendly disposal

Old electrical appliances must not be disposed of together with the residual waste, but have to be disposed of separately. The disposal at the communal collecting point via private persons is for free. The owner of old appliances is responsible to bring the appliances to these collecting points or to similar collection points. With this little personal effort, you contribute to recycle valuable raw materials and the treatment of toxic substances.

| 微信公众号 | Bilibili | Website | Facebook |

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