



FLYSKY FS-iBC01 Current and Voltage Sensor Instruction Manual

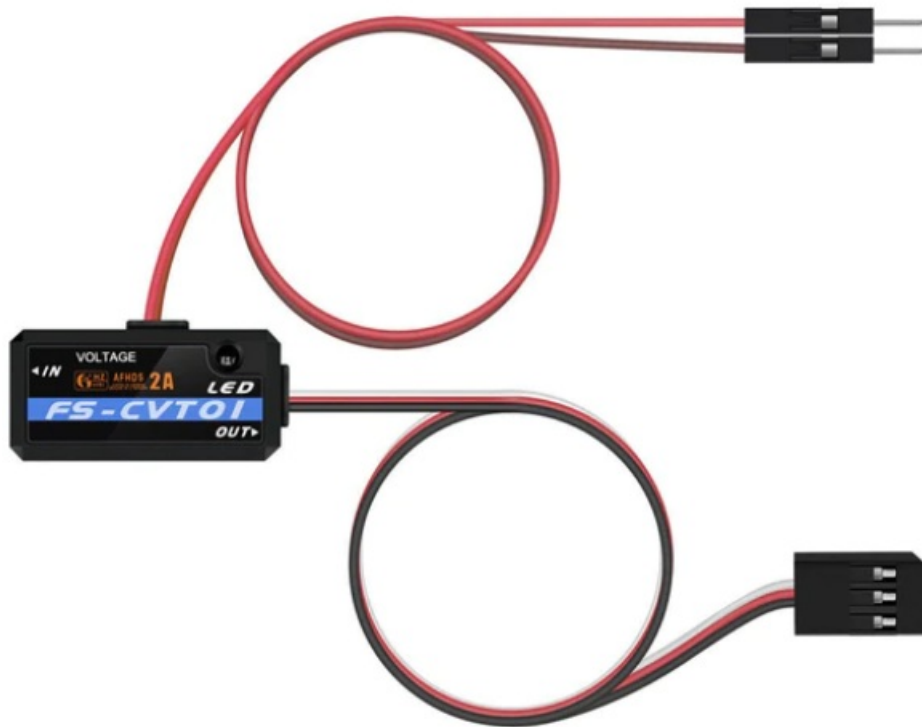
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FLYSKY FS-iBC01 Current and Voltage Sensor



Product Information

- **Product Name:** FS-iBC01 Current and Voltage Sensor
- **Protocol:** i-BUS2
- **Compatibility:** FlySky AFHDS 3 enhanced version receivers

Features

- Transfers real-time information such as voltage, current, and battery consumption capacity of the ESC
- Small size and easy installation
- Adaptable to a wide range of models

Product Usage Instructions

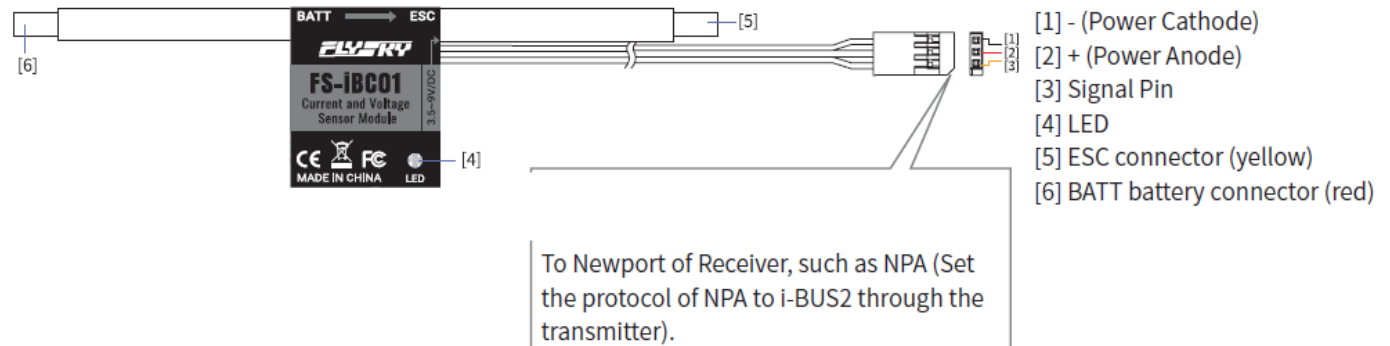
1. Connect the FS-iBC01 sensor to the receiver using the i-BUS2 protocol.
2. Ensure the power cathode (-) of the sensor is connected to the corresponding power cathode (-) of the receiver.
3. Connect the power anode (+) of the sensor to the corresponding power anode (+) of the receiver.
4. Connect the signal pin of the sensor to the designated signal pin of the receiver.
5. Connect the ESC (Electronic Speed Controller) to the ESC connector (yellow) of the sensor.
6. Connect the battery to the BATT battery connector (red) of the sensor.
7. Configure the protocol of NPA (Newport of Receiver) to i-BUS2 through the transmitter.
8. Once properly connected, the LED indicator on the sensor will provide visual feedback.

Note: All dimensions and pin configurations are provided in the user manual or as shown below.

Introduction

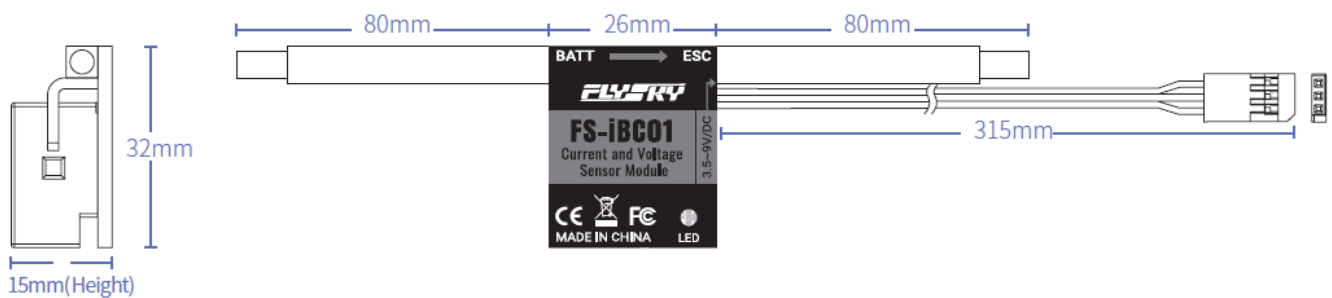
FS-iBC01, in compliance with i-BUS2 protocol, is a current and voltage sensor adapted to FlySky AFHDS 3 enhanced version receivers. The sensor can transfer back the information such as the voltage, current and actual battery consumption capacity of the ESC in real time. With small size, it is easy to install and adaptable to a wide range of models.

Overview



DIMENSION

All dimensions are shown below



Product Specifications

- **Product Type:** FS-iBC01
- **Compatible Devices:** The receivers with i-BUS2 protocol (such as FTr8B, FTr12B, INr6-HS and other Flysky AFHDS 3 enhanced version receivers)
- **Compatible Models:** Cars, boats, airplanes, etc.
- **Protocol:** i-BUS2
- **Input Power:** 3.5~9V/DC
- **Current Measurement Range:** 0.5~400A (100~200A within 15 seconds, >200A within 5 seconds)
- **Voltage Measurement Range:** 0~100V
- **Measurement Capacity:** 0mAh~32767mAh
- **Voltage Measurement Error:** +/- 0.1V
- **Current Measurement Error:** 0.5~100A: <0.5A 100~200A: <1A 200~400A:<1%
- **Online Update:** None
- **Weight:** 31g (Excluding accessory negative cable) 42g (Including accessory negative cable)
- **Temperature Range:** -20°C ~ + 85°C
- **Humidity Range:** 20% ~ 95%
- **Certifications:** CE, FCC

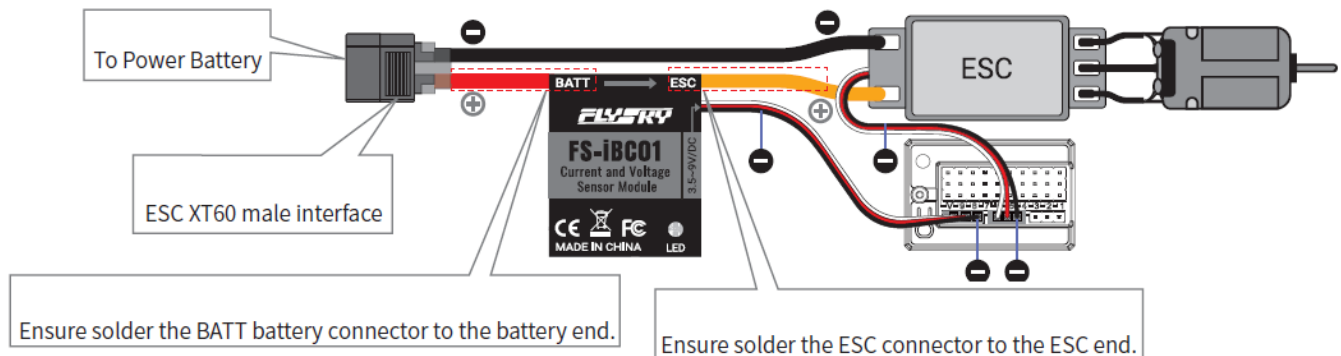
Installation and Cable Connecting

Cable connecting instructions for the current and voltage sensor

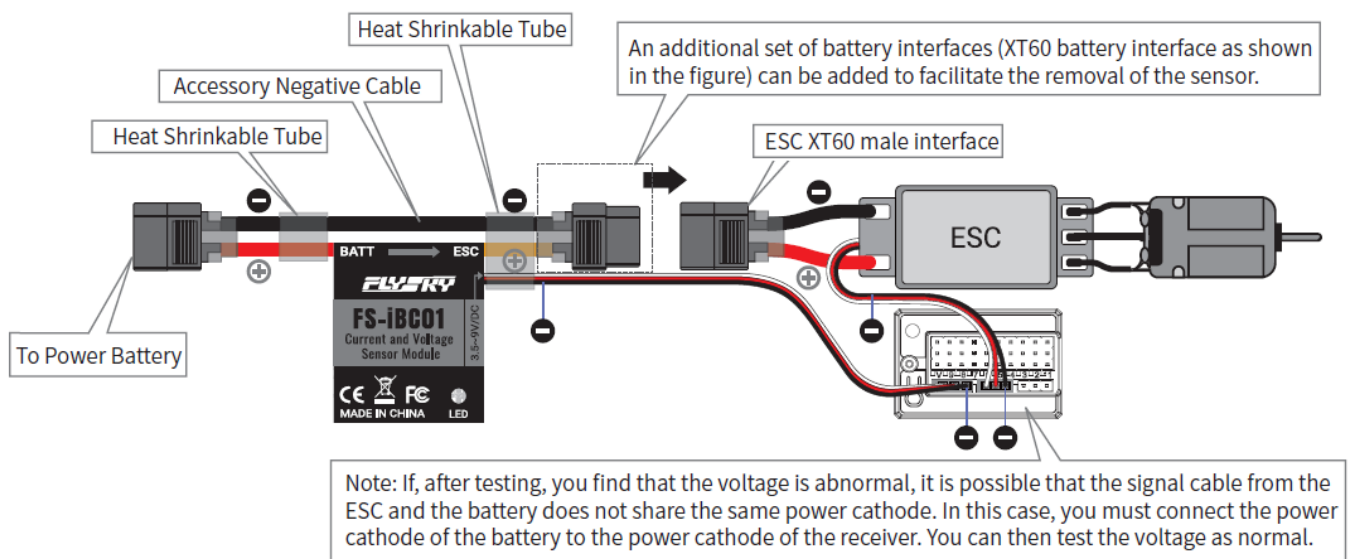
This sensor is delivered without a battery interface. Therefore, you need to select a suitable battery interface and solder it yourself. Check the positive and negative terminals carefully when soldering. The cable should be connected as shown in the following diagrams, taking the XT60 battery as an example(You can select the appropriate interface for your specific battery interface. Make sure that the FS-iBC01 sensor is located on positive cable(The positive cable is marked \oplus in the diagrams below).

Cable connecting method I (sensor not removed):

Refer to the following diagram, taking the ESC as an example which has an XT60 interface. Firstly, solder the sensor to the ESC positive cable(red cable), the BATT battery connector of the sensor(red cable) is soldered to the XT60 end, while the ESC connector of the sensor(yellow cable) is soldered to the ESC end. Secondly, connect the Dupont interfaces of the sensor and the ESC to the Newport of the receiver respectively.



Cable connecting method II (sensor removed): Add a set of battery interfaces as required. Additionally, choose whether to use heat-shrinkable tubes as your desire.



Note: If, after testing, you find that the voltage is abnormal, it is possible that the signal cable from the ESC and the battery does not share the same power cathode. In this case, you must connect the power cathode of the battery to the power cathode of the receiver. You can then test the voltage as normal.

Mounting Instruction

Follow the steps below to install:

1. Use 3M stickers to fix the sensor at an 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. Finish cable connecting according to the cable connecting diagrams as shown above.
3. Connect the Dupont interface to the Newport interface of the receiver as shown above. Then set the protocol of

the corresponding Newport interface of the receiver to i-BUS2 at the transmitter side that has bound with this receiver. As a result, you can view the relevant information and set the functions on the transmitter side.

Notes:

1. The cable length may vary for different applications. If you need to add an extension cable, please note that the FS-IBC01 interface is a Dupont interface, and for the pin definition, refer to the description in the previous Overview section.
2. Adapts Noble pro transmitter (Firmware version 1.0.3 or later).
3. If the sensor is working properly, the LED is solid on at this time.
4. If the sensor is connected to the power supply but no i-BUS2 signal is detected, the LED flashes slowly at this time.

Function Instruction

The sensor transfers back the information such as voltage, current and actual battery consumption, run time, limit values (maximum/ minimum voltage and maximum current), and average current of the ESC in real-time. You can view the information on the transmitter side.

In its default state, the sensor saves data instantly. Relevant functions can be set at the transmitter side:

- **Clearing of Sensor Data**

This includes the maximum/minimum voltage, maximum current, average current, battery consumption capacity, and run time.

- **Calibration of Voltage**

There may be a voltage difference between the monitored voltage and the actual battery voltage. A calibration factor can be set with this function to bring the monitored voltage closer to the actual battery voltage.

- **Automatic Data Clearing Upon Power-on**

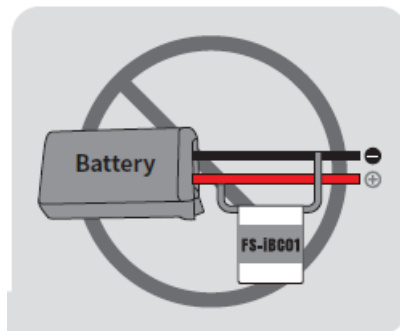
Set whether to enable the function of automatic data clearing upon power-on. By default, it is disabled. If the function is enabled, the sensor clears the previously stored data upon power-on, including maximum/minimum voltage, maximum current, average current, battery consumption capacity, and run time. Record data again. If the setting is disabled, data continues to be added based on the previously stored data.

Note: Refer to the transmitter manual for related settings.

Attentions:

- Ensure that the sensor is connected properly to i-BUS2 interface of the receiver before use.
- Ensure that the positive and negative connectors of the interface are correctly connected! If connected incorrectly, an explosion or fire may occur.
- Make sure that the connectors of all interfaces are connected securely! If the connectors fall out during use, the model may be out of control, resulting in a danger.
- Make sure that this sensor is installed away from magnetic objects.
- Do not install this sensor in a flammable location. Otherwise, there may be a fire.
- Check carefully whether the battery is over-discharged.
- Make sure that the current does not exceed the measurement range. Otherwise, the sensor may be damaged.

- Never connect the sensor to a battery directly. Otherwise, there may be a fire.



Certifications

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 the receiver.
- Connect the equipment to 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-IBC01] is in compliance with RED 2014/53/EU. The full text of the EU DoC is available at the following internet

www.flyskytech.com/info_detail/10.html.

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 free. The owner of old appliances is responsible for bringing the appliances to these collection points or to similar collection points. With this little personal effort, you contribute to recycling valuable raw materials and the treatment of toxic substances.





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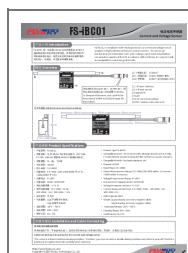
Website



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 - Figures and illustrations in this manual are provided for reference only and may differ from the actual product appearance. Product design and specifications may be changed without notice.
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Documents / Resources



[FLYSKY FS-iBC01 Current and Voltage Sensor](#) [pdf] Instruction Manual
FS-iBC01, FS-iBC01 Current and Voltage Sensor, Current and Voltage Sensor, Voltage Sensor, Sensor

References

- [FLY](#)