

**FIFOTRACK ADVANCED VEHICLE GPS TRACKER**  
**4G+2G VERSION**




Model: S70-Type K

Version: V1.1

[www.fifotrack.com](http://www.fifotrack.com)

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## Revision History

| Version | Author  | Revision Date | Details          |
|---------|---------|---------------|------------------|
| V1.1    | Cici Wu | Dec 16, 2021  | Initial revision |
|         |         |               |                  |

## Related Files

| Version  | File   | Remarks  |
|--|--|--|
| V1.1   | <fifotrack S70 Command List>                                 | Command details of GPRS/SMS/COM                        |
| V1.2   | <fifotrack A01 GPRS Protocol>                                | GPRS communication protocol between tracker and server |
| V1.1   | <fifotrack Parameter Tool User Guide>                        | PC software tool for parameters configuration          |
| V1.1   | <USB Cable Driver Installation Guide>                        | How to install USB cable driver                        |
| V1.1   | <Firmware Upgrade Guide>                                     | How to upgrade firmware                                |
| V1.2   | < fifotrack RFID Reader User Guide>                          | How to use RFID Reader                                 |
| V1.1   | < fifotrack Camera User Guide>                               | How to use camera                                      |
| V1.1   | < fifotrack Ultrasonic Fuel Sensor User Guide>               | How to use ultrasonic fuel sensor                      |
| V1.1   | <fifotrack Fingerprint User Guide>                           | How to use fingerprint scanner                         |
| V1.1   | <fifotrack Vehicle Original Fuel Sensor Solution User Guide> | How to find out Original fuel sensor cable and use it. |
| V1.1   | <fifotrack Fuel Sensor AS10 User Manual>                     | How to use capacitive fuel sensor                      |
| V1.1   | <fifotrack Liquid Sensor User Guide>                         | How to use liquid sensor                               |
| Download link: <a href="https://www.fifotrack.com/user-guide">https://www.fifotrack.com/user-guide</a> |  |  |
| Video Support link: <a href="https://www.fifotrack.com/video">https://www.fifotrack.com/video</a>      |  |  |

## Related Software

| Version  | Software                            | Remarks   |
|--|-------------------------------------|---|
| V1.2   | < Parameter Tool >                  | Parameter configuration tool on PC                  |
| V1.11.0  | < PL2303_Prolific_DriverInstaller > | Driver for USB cable                                |
| V1.0   | < Firmware Upgrade Suite>           | Tool for firmware upgrade                           |
| V1.0   | < GPRS Command Generator>           | Generating GPRS commands for FIMS tracking software |
| Download link: <a href="https://www.fifotrack.com/configure-tool">https://www.fifotrack.com/configure-tool</a> |                                     |   |

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## 1 Product Overview

S70 is an advanced 4G model which is suitable for vehicle, motorcycle, boat, asset tracking, etc.

Power input range is 8-92V with industrial design.

The core features of S70 include internal GPS/GSM antennas, IP66 waterproof, 1 digital input, 1 analog input, 1 output and 1 RS232 port.

S70 uses own FIFOTRACK A01 GPRS PROTOCOL which is simple and practical. The users can integrate protocol into their own platform efficiently.

## 2 Product Functions

### 2.1 Tracking Functions

- GPS+GSM Base Station Dual Tracking
- Real Time Tracking
- Time Interval Tracking
- Distance Tracking
- Direction Change Tracking
- Mobile Phone Tracking

### 2.2 Alarms

- Engine/Door Status Alarm
- Maintenance remind
- GEO-Fence Alarm
- Speeding Alarm
- Idling Alarm
- Fatigue Driving Alarm
- Harsh Acceleration Alarm
- Harsh Braking Alarm
- Parking Overtime Alarm
- Internal Battery Low Alarm
- External Battery Low Alarm
- External Power Cut Alarm
- Fuel Theft Alarm

- Fuel Filling Alarm
- Low Fuel Level Alarm
- High Fuel Level Alarm

## 2.3 Other Functions

- IP66 Waterproof
- 8 MB Flash Memory
- Uploading Mode Settings for ACC ON/ACC OFF
- Roaming Time Interval Setting
- Vehicle Battery Low Protection
- Reverse polarity protection
- OTA
- Stop Car Remotely (optional, with relay)
- Vehicle Original Fuel Sensor Supported
- Tacking Picture via Camera (Optional)
- Driver Identification and Management via RFID Reader or fingerprint (Optional)
- Fuel sensor Capacitive type or Ultrasonic Fuel Sensor (Optional)

## 3 Product and Accessories

### 3.1 Standard Packing Box



Main Unit

### 3.2 Optional Accessories

|                        |                     |               |                    |
|------------------------|---------------------|---------------|--------------------|
| USB cable              | Relay (12V/24V)     | Buzzer        | Door sensor        |
| AS10 fuel snesor       | RFID reader and tag | Camera        | Camera(Waterproof) |
| Ultrasonic fuel sensor | Fingerprint scanner | Liquid sensor |                    |

## 4 Product Appearance



Front View



Overview



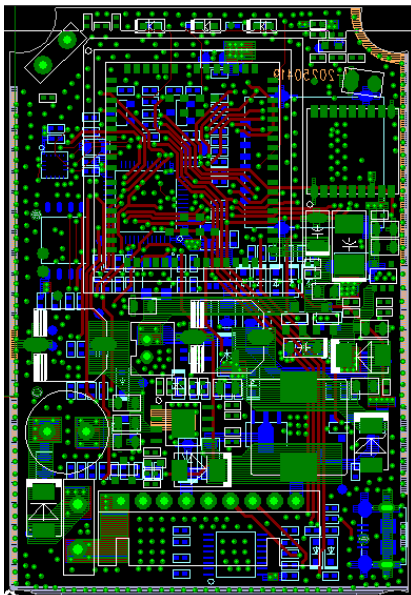
Rear View



Side View



## 5 PCB Overview



## 6 LED Light

|                            |                       |
|----------------------------|-----------------------|
| GPS Light (Green)          |                       |
| Off                        | Power off or sleep    |
| Flash 0.1s on and 3S off   | GPS valid             |
| Flash 2s on and 2s off     | No GPS signal         |
| GSM Light (Orange)         |                       |
| Off                        | Power off or sleep    |
| Flash 0.1s on and 3s off   | GSM available         |
| Flash every 0.1s           | Device is initialing  |
| Flash 2s on and 2s off     | No GSM                |
| External Power Light (Red) |                       |
| Off                        | External power cut    |
| Flash every 0.1s           | External power low    |
| Solid On                   | External power normal |

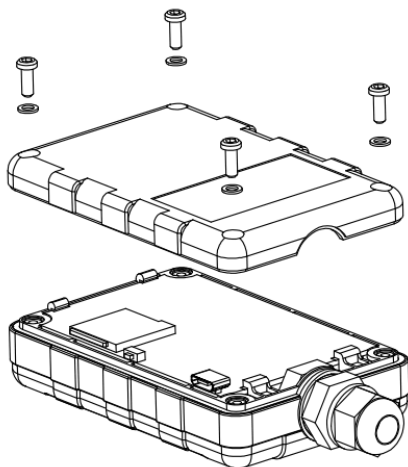
## 7 Specification

| Item                  | Specification  |
|-----------------------|--|
| Dimension             | 80*53*21mm   |
| Weight                | 162g   |
| GSM Module            | Quectel EG915U   |
| GPS Module            | Quectel L70-R  |
| Input Voltage         | DC 8~92V/1.5A  |
| Internal Battery      | 700mAh/3.7V  |
| Power Consumption     | 7.8mA standby current<br>37~185mA at 10 seconds regular tracking mode (GPS signal available).<br>Max 185mA at GPRS data transmitting moment.   |
| Internal Battery Life | 8 hours at every 30 seconds time interval<br>12.8 hours at every 300 seconds time interval   |
| Operating Temperature | -20°C~70°C   |
| Humidity              | 5%~95%   |
| LED Light             | 3 LED lights indicating GPS/GSM/External power status  |
| Button/ Switch        | 1 power switch (inside case)   |
| Flash Memory          | 8MB (GPRS data 10200 units, SMS data 320 units)  |
| GSM Frequency (2G)    | 850/900/1800/1900 MHz  |
| UMTS Frequency (3G)   | Don't support  |
| FDD-LTE (4G)          | B1/B3/B5/B7/B8/B20/B28   |
| GPS Sensitivity       | -165dBm  |
| GPS Start Speed       | Cold start 35s<br>Hot start 1s   |
| Position Accuracy     | 10m  |
| I/O Port              | 1 Digital input, positive, default for ACC detection.<br>1 Analog input, voltage range is 0-36V, can be converted to input1 by command B18. Default is analog input.<br>1 Output<br>1 RS232 port for RFID/Camera/Ultrasonic fuel sensor/Fingerprint scanner (Optional)<br>1 USB port (inside case) |

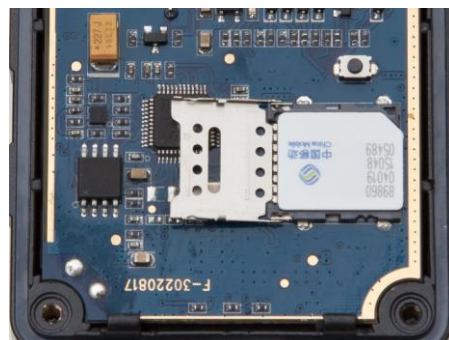
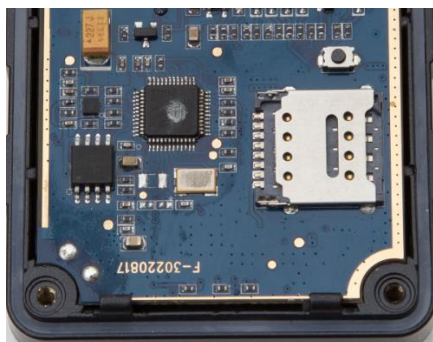
## 8 First Use

### 8.1 Installing the SIM Card

- S70 is a 4G tracker. Make sure the SIM card is compatible with 4G.
- SIM card is Micro type, 15\*12mm.
- Ensure the SIM card has enough balance.
- SIM card should have GPRS data plan for platform tracking.
- Ensure PIN code has been closed.
- Authorization SOS numbers can't work well if SIM card doesn't have caller ID service. E.g.: device can't reply SMS to authorization SOS number because SIM card can't identify incoming call.
- Turn off device before SIM card installation.




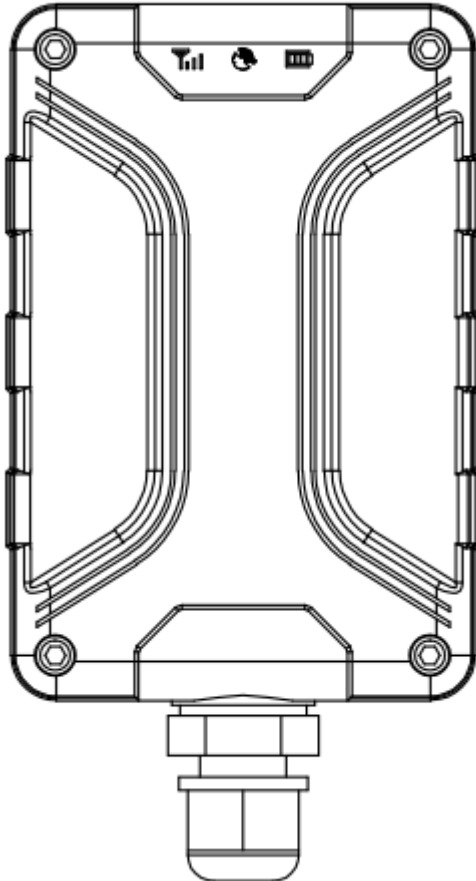
Unscrew and open the rear cover case



## 8.2 GPS Antenna

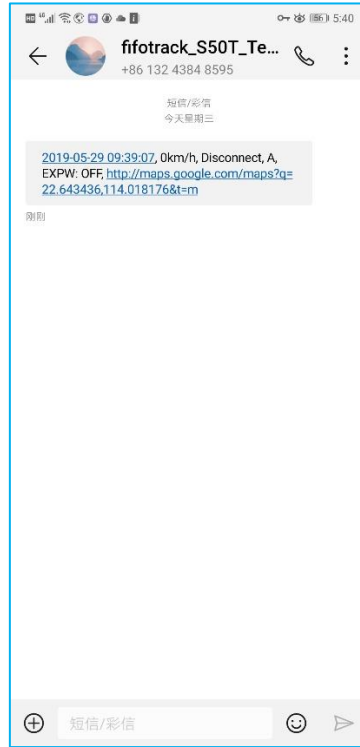
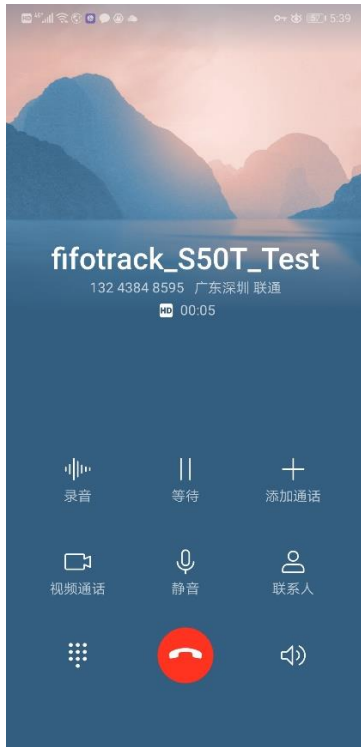
**Top side of S70 should face Sky for better GPS signal.**

 Don't install the Device where is shielded by metal. For example, inside a metal can.



## 8.3 Tracking by Calling

Call the SIM card number inside S70, you will get a SMS reply with Google map link. Click it for specific map location.



### 8.4 SMS Reply Content Example

2019-05-29 09:41:01, 0km/h, Disconnect, A, EXPW: OFF,  
<http://maps.google.com/maps?q=22.643105,114.018258&t=m>

## SMS Reply Format:

| Field  | Detail   | Remarks   |
|--|--|---|
| 2019-05-29<br>09:41:01                                 | Date and time, format<br>YYYYMMDD hh:mm:ss   | Date and time   |
| 0Km/h  | Speed is 0km/h   | Speed   |
| Disconnect   | GPRS disconnect  | GPRS connection status, "Disconnect" or "Connect".  |
| A  | GPS fixed  | GPS Status, "A" means GPS valid, "V" means GPS invalid.                                   |
| EXPW:OFF   | External power off   | External power status. "ON" means external power normal, "OFF" means external power cut.  |
| http://maps.google.com/maps?q=22.643105,114.018258&t=m | Google map link, latitude in the front of longitude. Unit degree<br>Latitude=22.643105°<br>Longitude=114.018258° | Google map link with latitude and longitude, which can be opened directly on smart phone. |

## 8.5 Tracking by SMS Command- C01

SMS Command: 000000,C01

SMS Reply: Current location

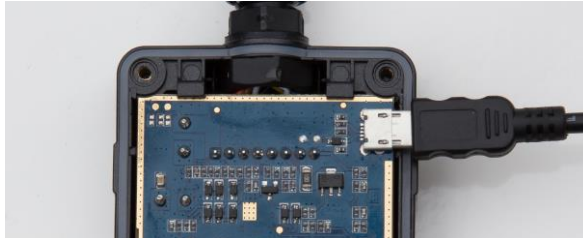


Note: Default SMS password is "000000", set new SMS password with B10 command.

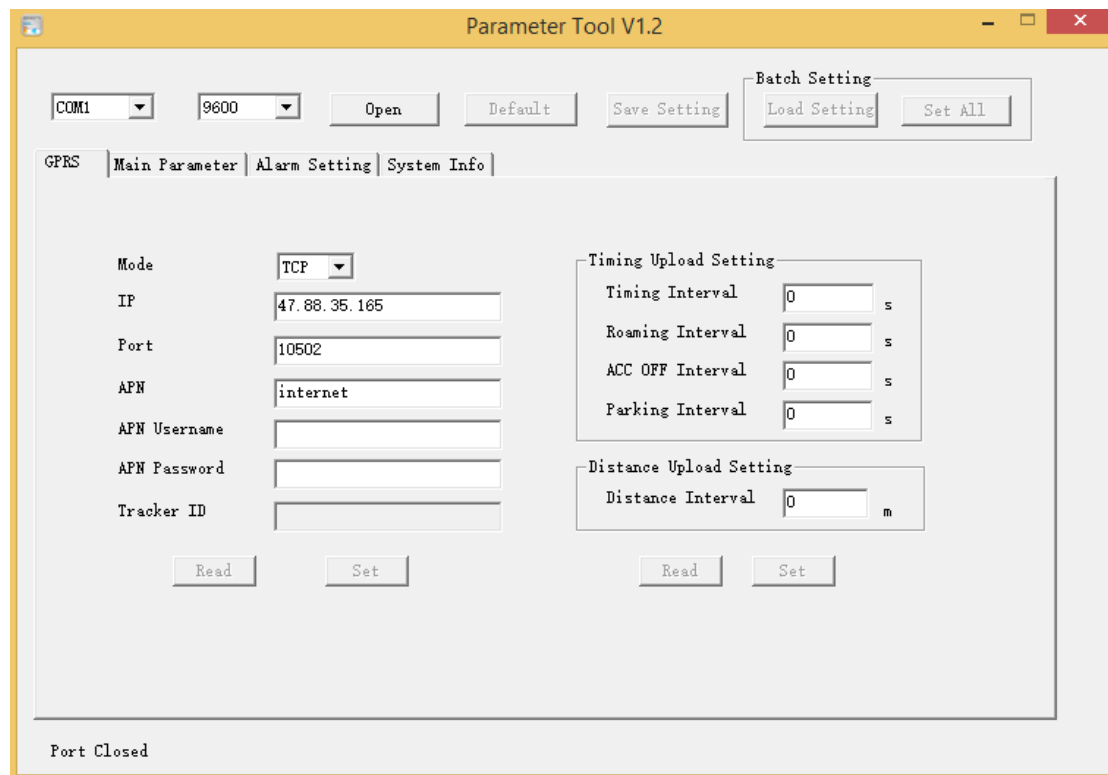
Please refer to <fifotrack S70 Command List > for more details.

## 8.6 Configuration on PC

fifotrack company provides “Parameter Tool” software for configuration. Please download USB cable driver and install it before using parameter tool. Refer to <USB Cable Driver Installation Guide> if need.



Connect S70 to PC with USB cable. Run “Parameter Tool” software which will identify port automatically and read all of the current parameters.



Please read < fifotrack Parameter Tool User Guide > for more details.

## 8.7 Platform Tracking

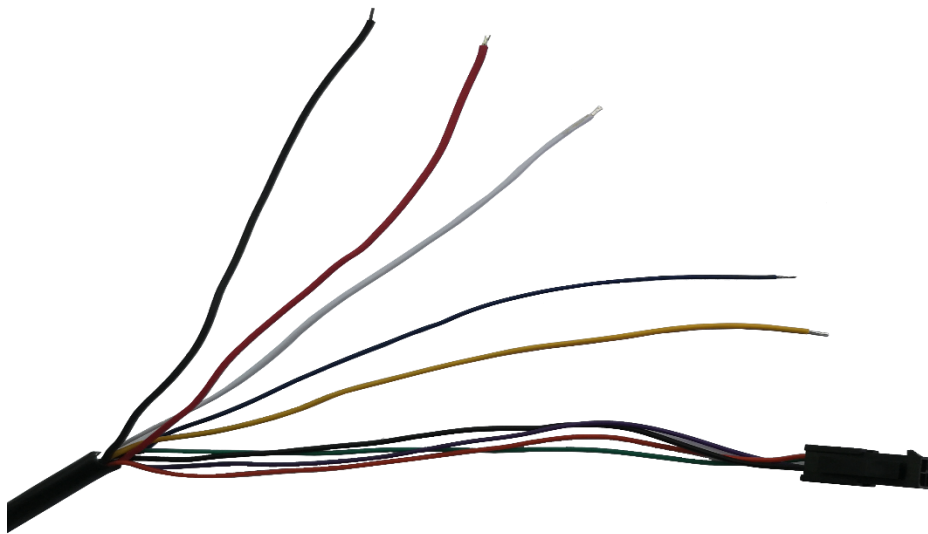
You can use SMS commands B00, B01, B02, B03 to set server IP, port, APN and GPRS uploading interval. Sales will send specific guide file to you for sample trial.

You can also configure those parameters via parameter tool software on PC.

## 9 Device Installation

### 9.1 I/O Installation

I/O wire has 9 pins, details as follows.

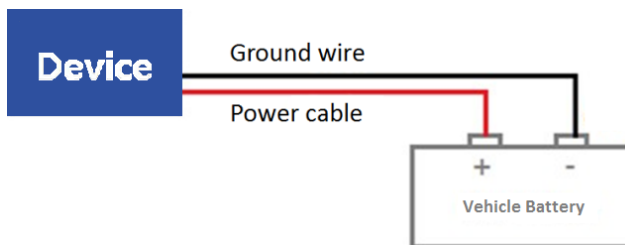


| I/O | Color | Function   |
|-----|-------|--|
| VCC | Red   | Positive power, connect to positive of vehicle battery, input voltage range 8-92V  |
| GND | Black | Ground, connect to negative of vehicle battery or the vehicle's iron part.   |
| IN2 | White | Digital input2, positive input, default connect to ACC for status detection.   |
| AD1 | Blue  | 12 bits analog input, voltage range 0-36V, adjustable, default 0-5V range. Connect to external sensor. For example, fuel sensor.<br>AD1 is smart, can be converted to input1 by command B18. |

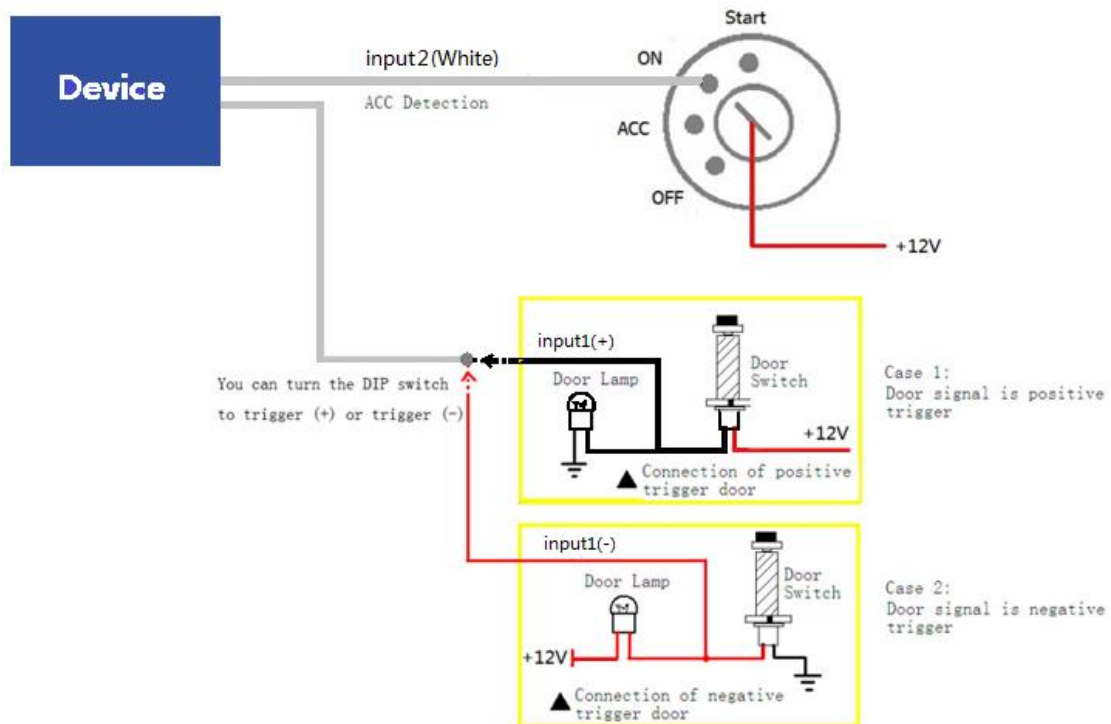


|            |        |   |
|------------|--------|---|
| OUT1       | Yellow | Output1<br>Output active: low level (0V)<br>Output inactive: open drain (OD)<br>Max open-drain (inactive) voltage: 45V<br>Max current for output low voltage (valid): 500mA |
| RS232 Port | Orange | DC5V  |
|            | Black  | Ground  |
|            | Green  | Sensor_RS232_TX   |
|            | Purple | Sensor_RS232_RX   |

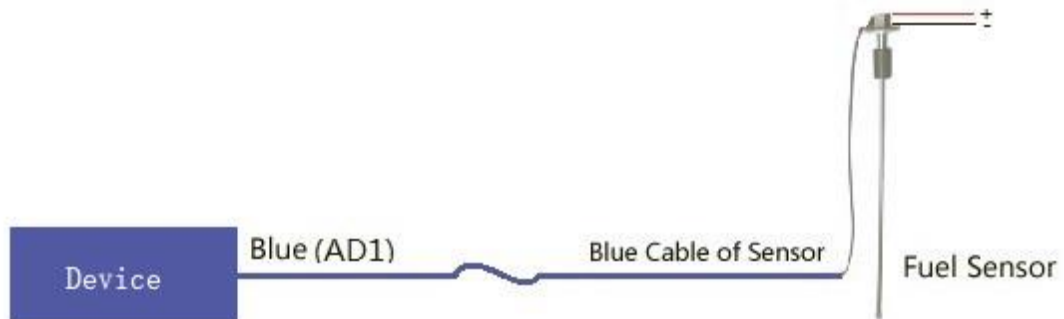
### 9.2 Power/Ground Cable



### 9.3 Positive/Negative Digital Input (IN1/IN2)



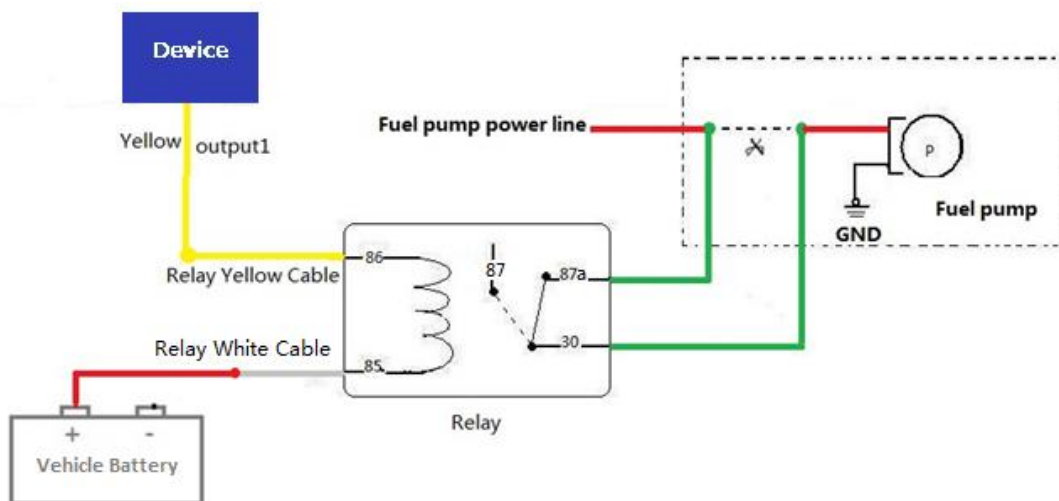
## 9.4 Analog Input( AD1)



Note:

1. AD1 default voltage range is 0~5V, can adjust voltage range by command B34
2. Raw data is in Hex, need convert to decimal, range is 0~4096. 0 means empty, 4096 means full.

## 9.5 Output control (OUT1)



Please e-mail us at [info@fifotrack.com](mailto:info@fifotrack.com) if any question or feedback.