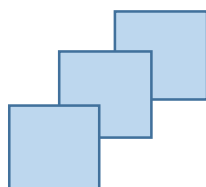



FIFOTRACK ADVANCED VEHICLE GPS TRACKER
3G VERSION



Model: S50
Version: V1.1
www.fifotrack.com

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Revision History

Version	Author	Revision Date	Details
V1.1	Cici Wu	Sep 29, 2019	Initial revision

Related Files

Version	File	Remarks
V1.1	<fifotrack S50 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: http://www.fifotrack.com/Support/Userguide/		
Video Support link: http://www.fifotrack.com/Support/video.html		

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: http://www.fifotrack.com/Support/Userguide/		

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1 Product Overview

S50 is an advanced model which is suitable for vehicle, motorcycle, boat, asset tracking, etc.

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

The core features of S50 include internal GPS/GSM antennas, IP66 waterproof, 1 digital input, 1 analog input, 1 output and 1 RS232 port.

S50 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	Seat sensor

4 Product Appearance



Front View



Overview

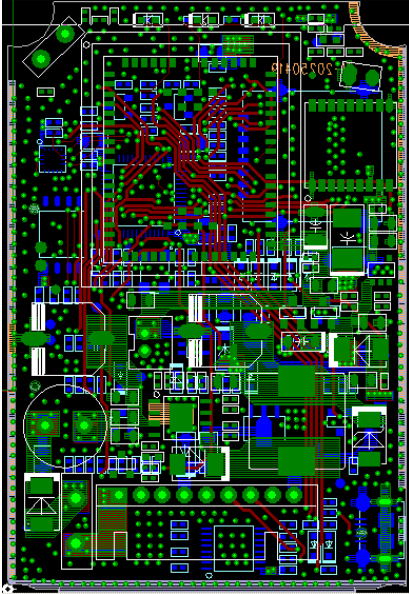


Rear View



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

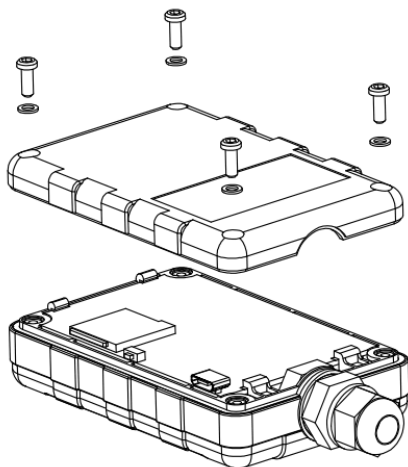
7 Specification

Item	Specification
Dimension	80*53*21mm
Weight	162g
GSM Module	Quectel UG96
GPS Module	Quectel L70-R
Input Voltage	DC 8~92V/1.5A
Internal Battery	700mAh/3.7V
Power Consumption	7.8mA standby current 37~185mA at 10 seconds regular tracking mode (GPS signal available). Max 185mA at GPRS data transmitting moment.
Internal Battery Life	8 hours at every 30 seconds time interval 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	850/900/1800/1900MHz
UMTS Frequency	850/900/1900/2100MHz
GPS Sensitivity	-165dBm
GPS Start Speed	Cold start 35s Hot start 1s
Position Accuracy	10m
I/O Port	1 Digital input, positive, default for ACC detection. 1 Analog input, voltage range is 0-36V, can be converted to input1 by command B18. Default is analog input. 1 Output 1 RS232 port for RFID/Camera/Ultrasonic fuel sensor/Fingerprint scanner(Optional) 1 USB port (inside case)

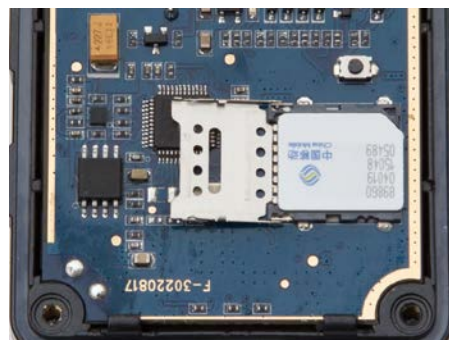
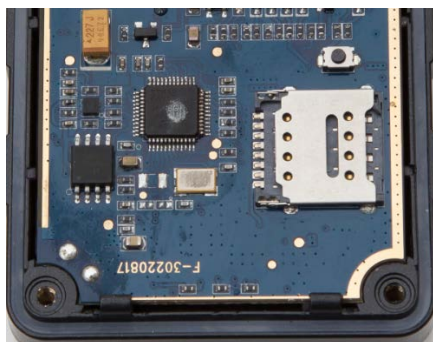
8 First Use

8.1 Installing the SIM Card

- S50 is 3G tracker. Make sure the SIM card is compatible with 3G.
- 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.




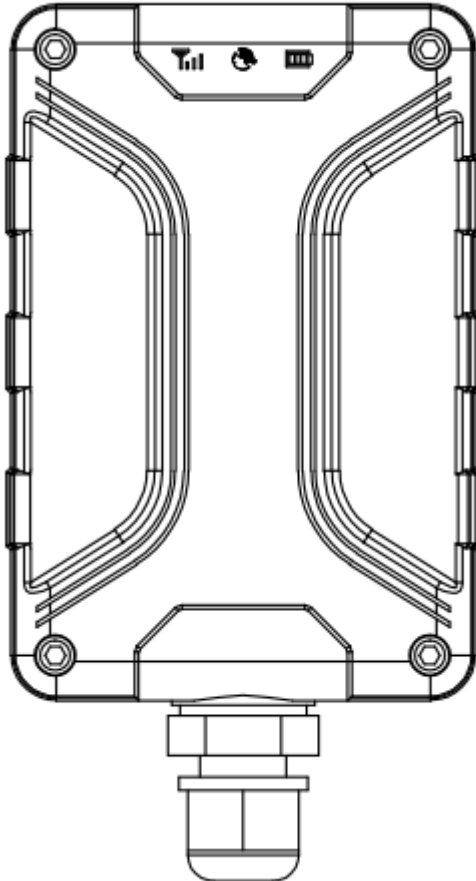
Unscrew and open the rear cover case



8.2 GPS Antenna

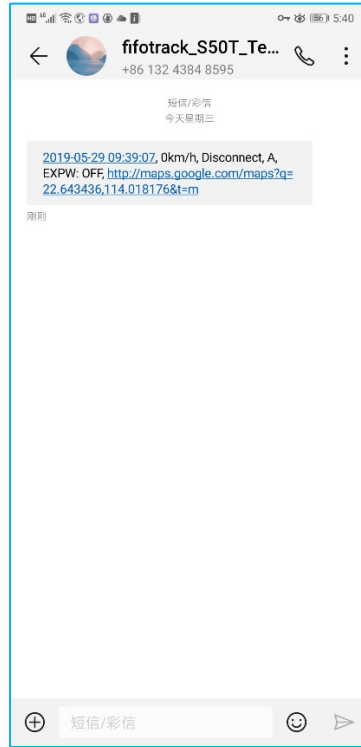
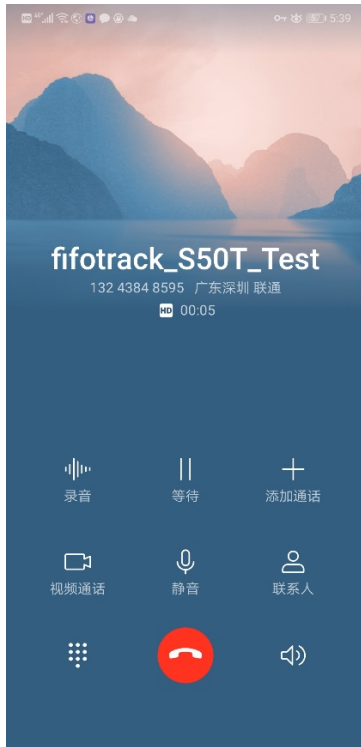
Top side of S50 should face Sky for better GPS signal.

 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 S50, 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>

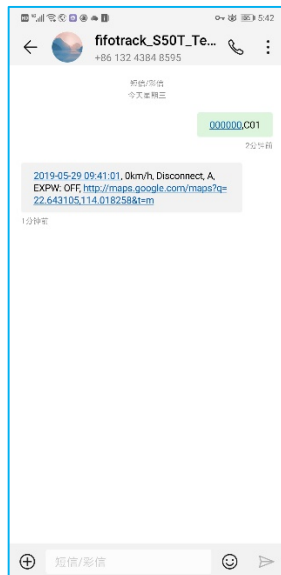
SMS Reply Format:

Field	Detail	Remarks
2019-05-29 09:41:01	Date and time, format 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 Latitude=22.643105° 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

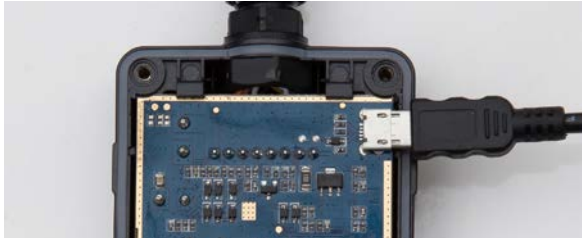


Note: Default SMS password is "000000", set new SMS password with B10 command.

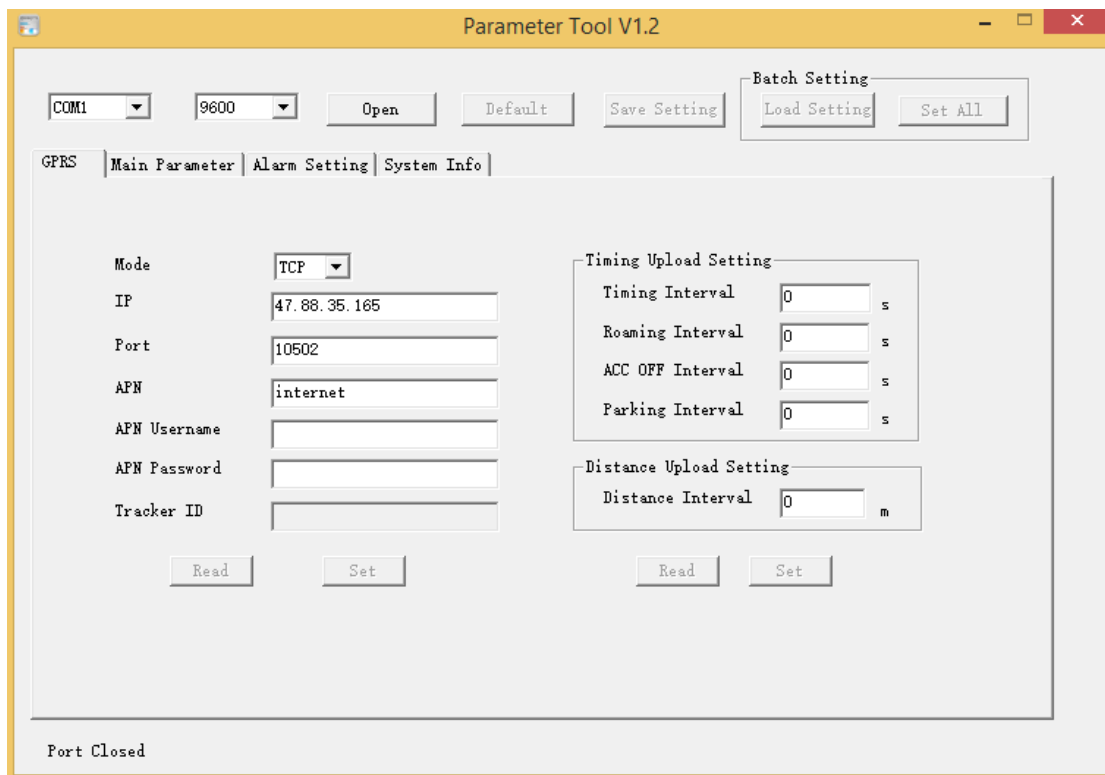
Please refer to <fifotrack S50 Command List > for more details.

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 S50 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

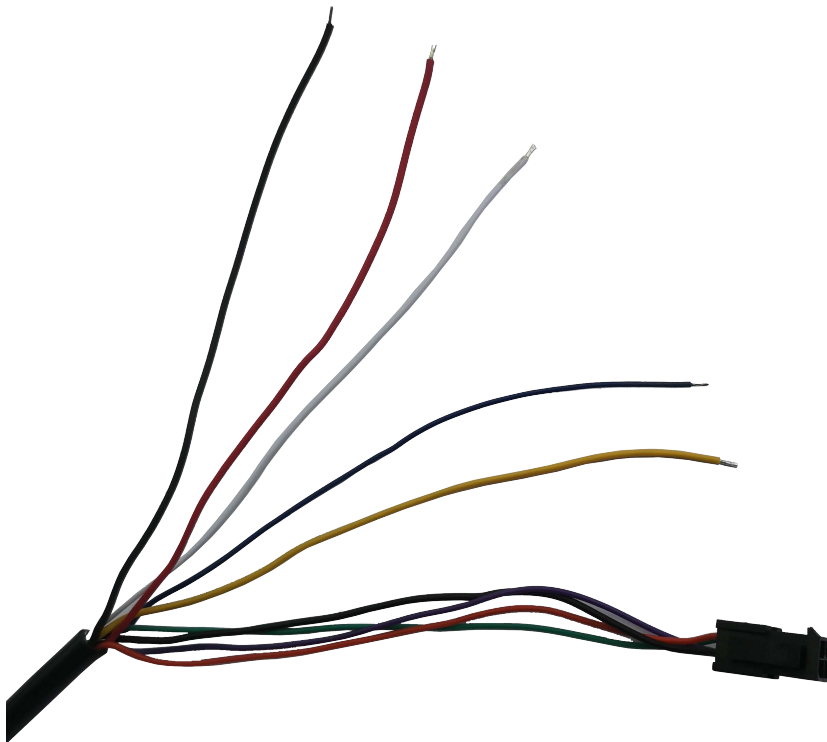
You can use SMS commands B00, B01, B02, B03 to set server IP, port, APN and GPRS uploading interval. Sales will send specific guide file to you for sample trial.

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

9 Device Installation

9.1 I/O Installation

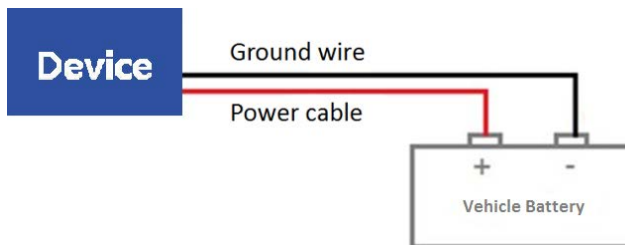
I/O wire has 9 pins, details as follows.



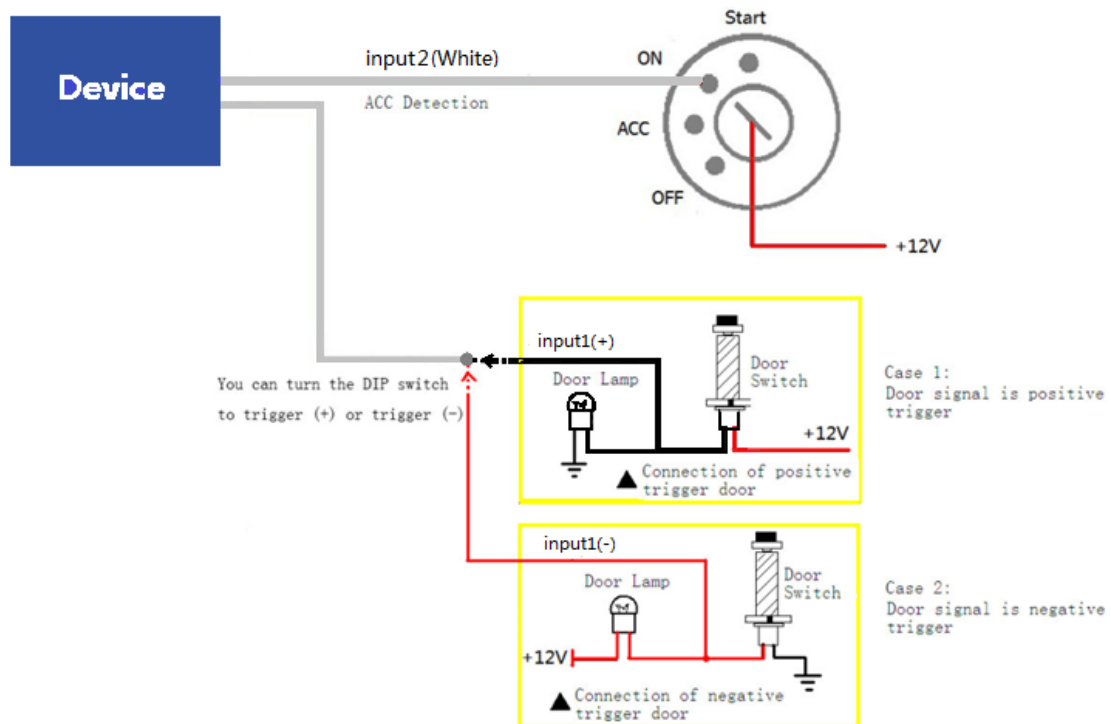
I/O	Color	Function
VCC	Red	Positive power, connect to positive of vehicle battery, input voltage range 8-92V
GND	Black	Ground, connect to negative of vehicle battery or the vehicle's iron part.
IN2	White	Digital input2, positive input, default connect to ACC for status detection.
AD1	Blue	12 bits analog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

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

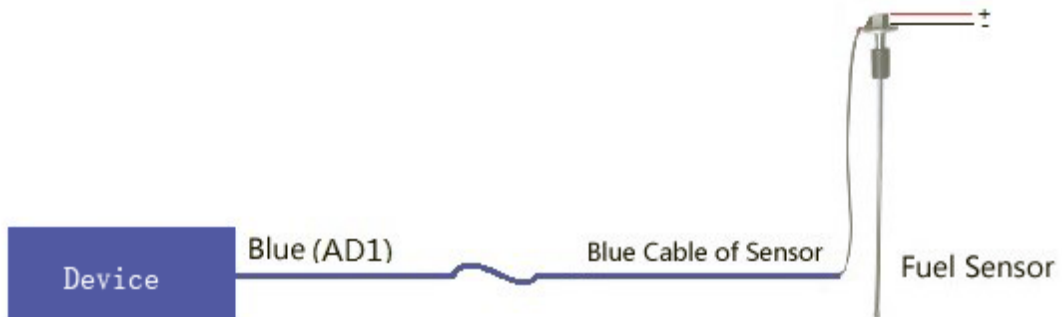
9.2 Power/Ground Cable



9.3 Positive/Negative Digital Input (IN1/IN2)



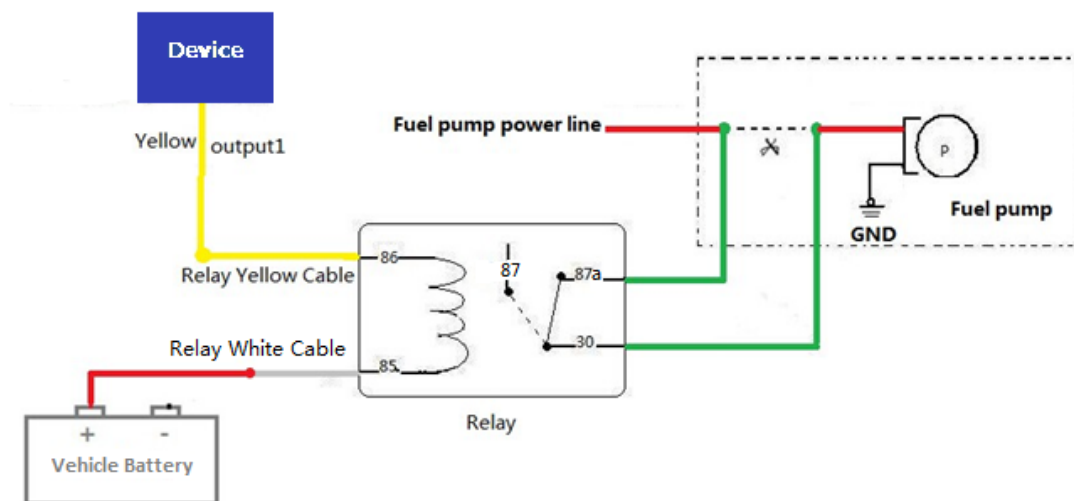
9.4 Analog Input(AD1)



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 if any question or feedback.