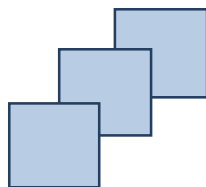# DIGITAL TEMPERATURE SENSOR USER GUIDE

V1.1

Model: Temperature Sensor

Version: V1.1

www.fifotrack.com

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⊙ Please read this user guide carefully before installation to avoid any possible personal injury or property loss.

Document History

Version	Revision Date	Author	Detail
V1.1	July 21, 2016	Vito Hu	Initial Version

Contents

1 Instructions of Safety

This chapter contains information on how to operate sensor and device safely. By following these requirements and recommendations, you will avoid dangerous situations. Please read these instructions fully and follow them strictly before operating the tracker!

Before using, please make sure the tracker has been configured well and LED lights are visible in working status.

When connecting sensor's cables to the vehicle, please power off the vehicle.

2 Applied Model

Digital temperature sensor (hereinafter to be referred as "sensor") is connected to tracker via 1-wire bus, it is applied for:

⊙ A300

3 Basic Description & Specification

⊙ Measure temperature from -55°C ~ +125°C (-67°F ~ +257°F)

⊙ Accuracy: ±0.5°C from -10°C ~ +85°C

⊙ Cable length: 5m

⊙ Protection rank: IP66

4 Installation

4.1 Connect to A300

Sensor Cable	A300 Cable
Red cable	Orange cable/DC5V
Black cable	Black cable/GND
Yellow cable	Brown cable/iBtn

NOTE:

⊙ When using multiple sensors, connect sensors together pin-pin, and then connect to A300 according to the table above.

⊙   Wrap over the naked joints with electrical tape after connection.
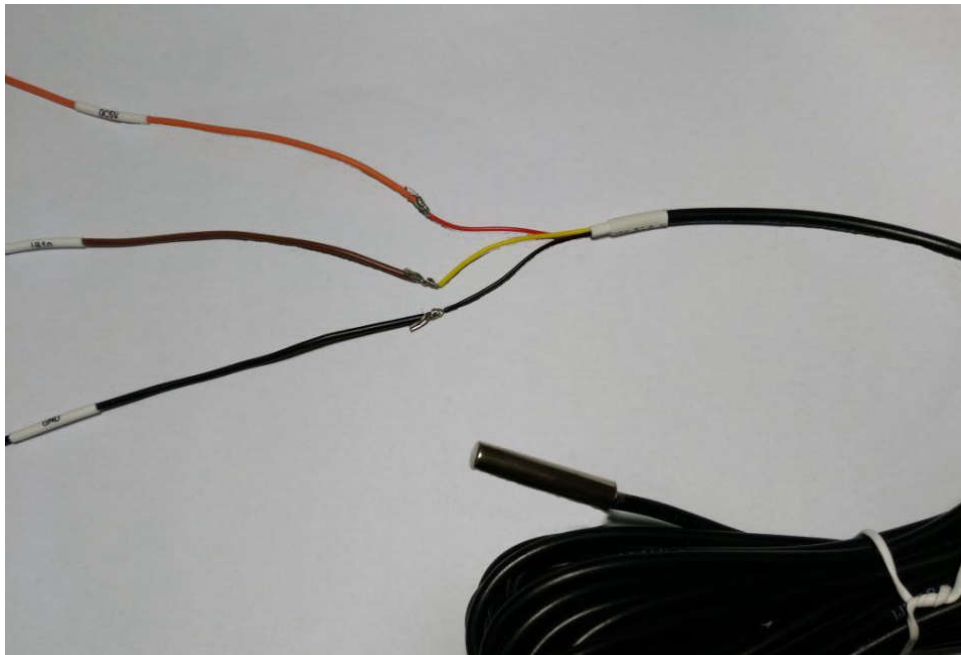
5 Operation

Tracker supports single sensor or multiple sensor according to actual need.

After connect sensor(s) to tracker, power on tracker with external supply, tracker will read sensors' data automatically. The following steps are used to set sensor parameters on tracker and FIMS.

⊙   Setting sensor's sequence number on tracker

⊙   Setting sensor definition on FIMS

According to the number of sensors, there are some difference between single sensor and multiple sensors usage.

5.1 Setting Sensor's Sequence Number

When using single sensor, this step can be omitted, tracker set #1 to the connected sensor automatically.

When using multiple sensors, follow below steps to set/retrieve all sensor's sequence number, if they are put in variable environment.

a)   Connect sensor-A to tracker. (NOTE: only one sensor)

b)   Use the following SMS command to retrieve the sequence number if it has been set, or automatically set a number for new sensor. The reply of the command indicates sensor's number.

SMS command: 000000,B37

Reply: B37,< t_sensor_sn>, while _t_sensor_sn_ is sensor's sequence number

c) Mark the set sequence number to the sensor, disconnect sensor-A; Connect sensor-B to tracker, using step-b to set sensor-B sequence number.

d) Repeat step-b and step-c to set other sensors sequence number.

e) After all sequence number are set, connect sensors together pin-pin, and then connect to tracker, refer to chapter-4 for connection details.

f) Refer to the following figure for sensor's sequence number setting/retrieving.
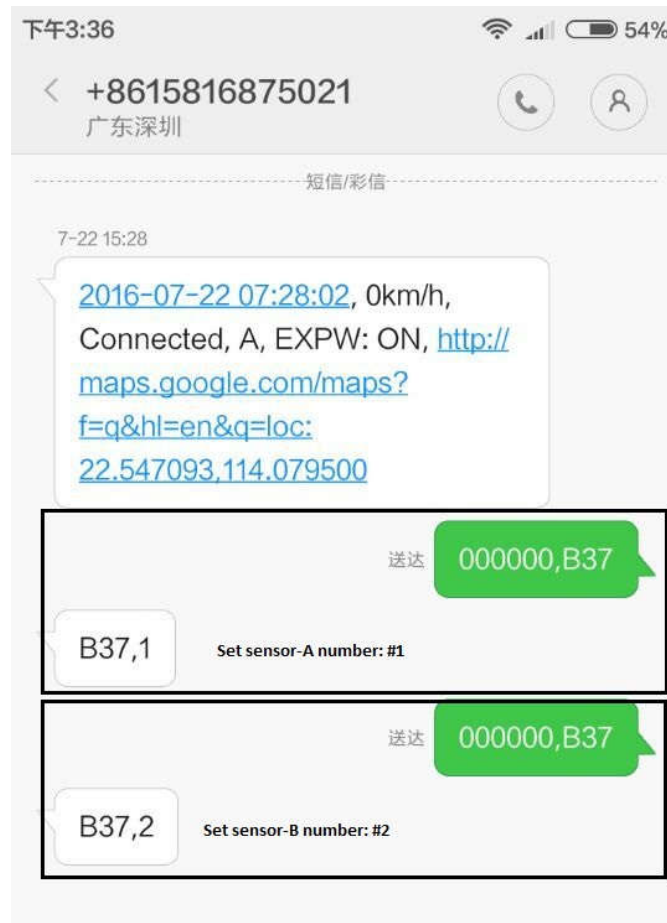
g) After all sensor(s) connected and set, use the following SMS command to verify connection.
SMS command: 000000,B40
Reply: B40,<tsensor1_temp| tsensor2_temp|….|tsensorN_temp>, while
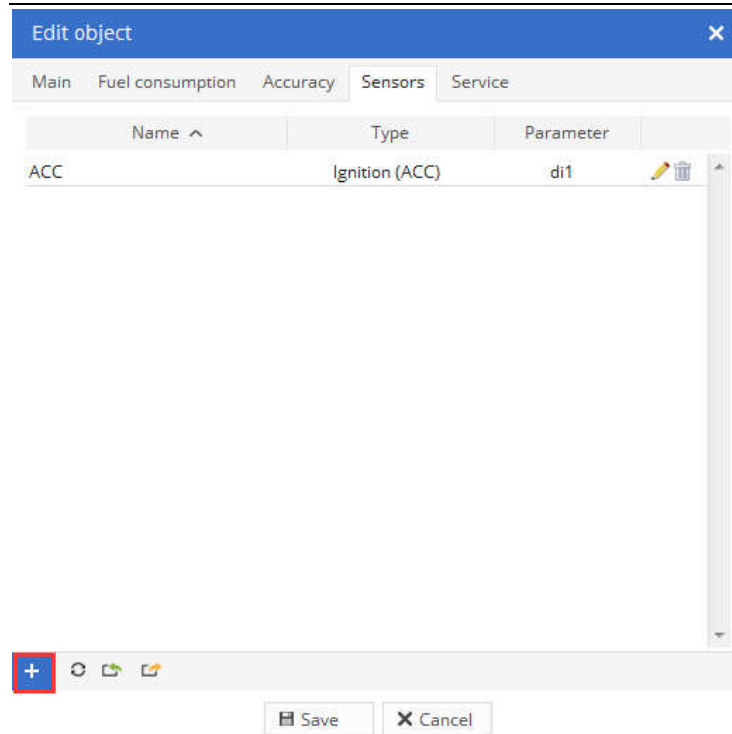_tsensor[1,N]_temp_ is the temperature of all sensors
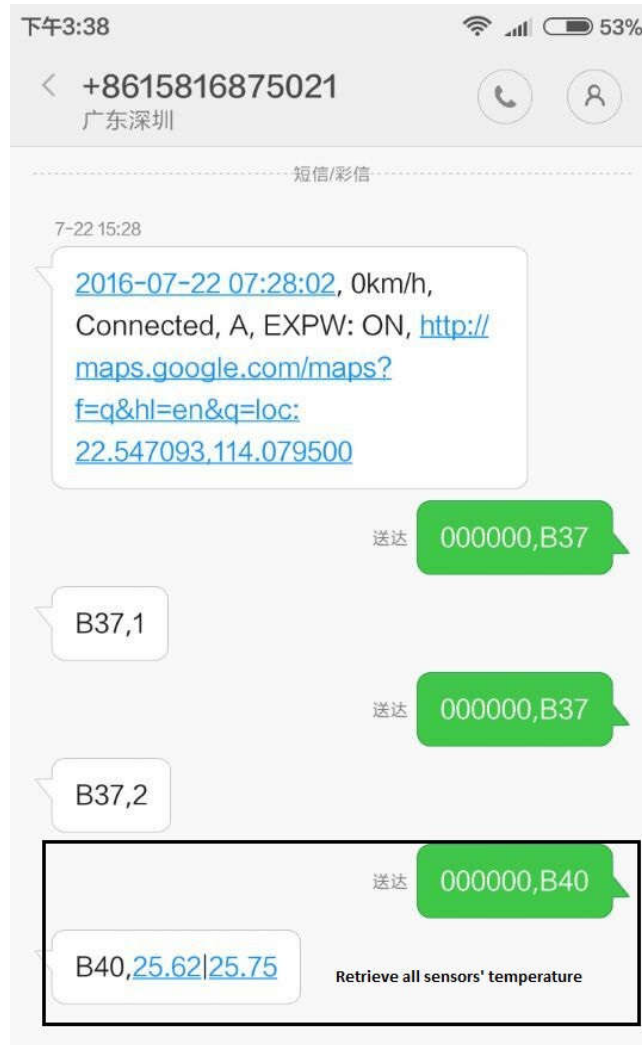
5.2 Setting on FIMS

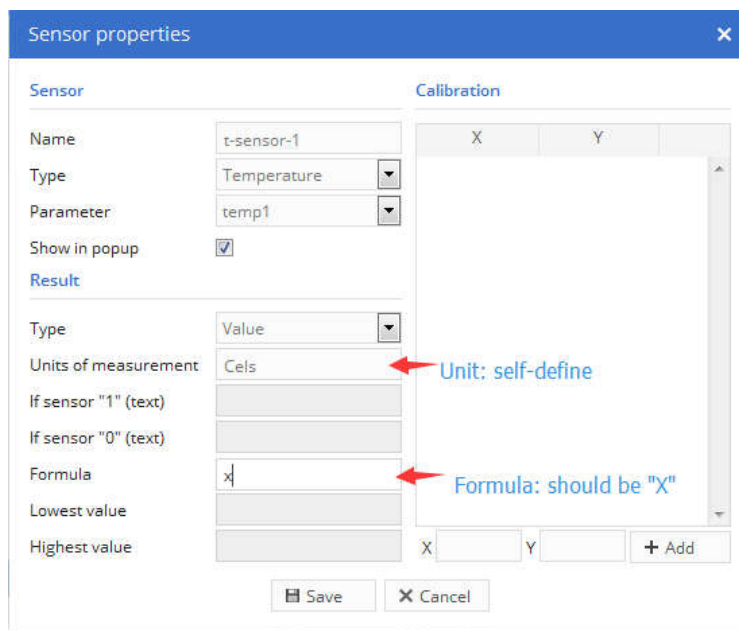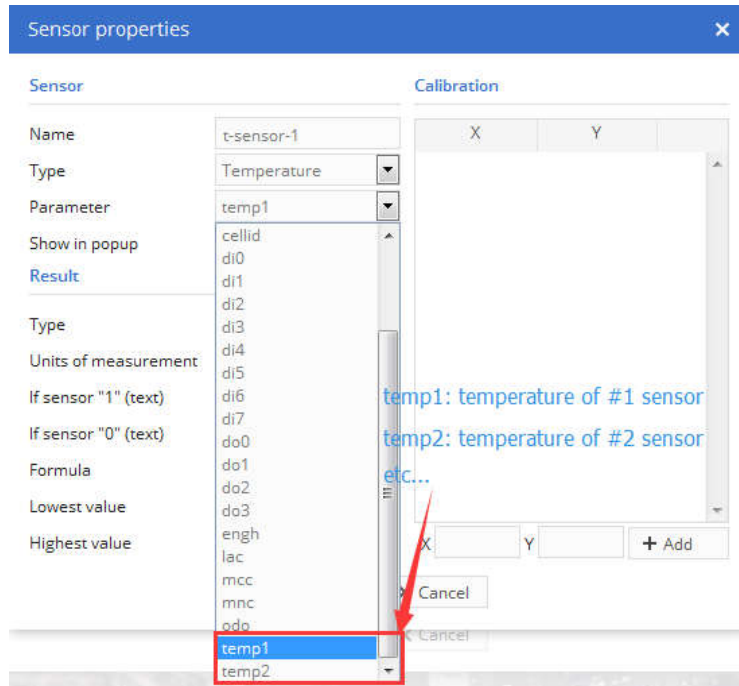Login FIMS, select target tracker->Edit->Sensors->Add,
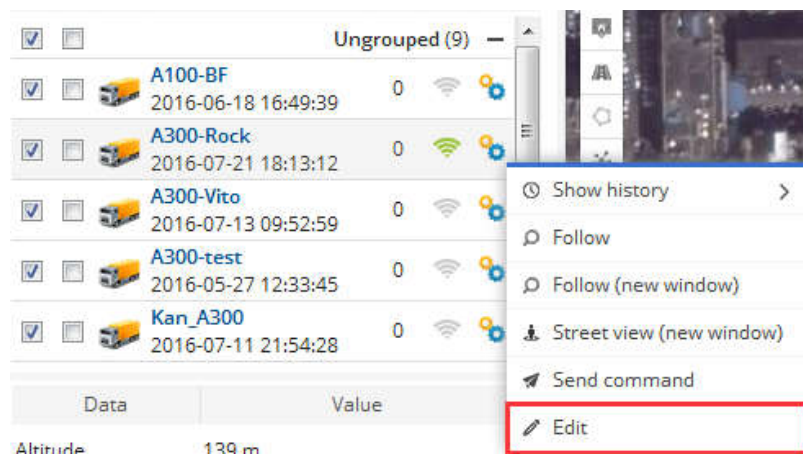
At "Sensor Properties" dialog, set parameters as below:

Sensor

- ⊙ Name: Input self-define string

- ⊙ Type: Select "Temperature"

- ⊙ Parameters: Select "Tempx"

  - ■ If single sensor is using, "Temp1" is shown in the "Parameters" box

  - ■ If multiple sensors are using, "Tempx" corresponds to #x sensor's temperature, while 'x' is the sequence number of sensor set/retrieved by B37 command.

- ⊙ Show in popup: selected

Result

- ⊙ Type: Select "Value"

- ⊙ Units of measurement: self-define, the unit of sensor is °C.

- ⊙ Formula: should be "x"

Click "Save", all sensors' temperature will be display at "Object page", as below:

5.3 Temperature Report

FIMS supports one type of temperature report:

⊙   Temperature graph

Export "temperature graph" as below:

<u>Temperature graph</u>

6 NOTE

- ⊙ Sensor works only when external power on.
- ⊙ After connection sensor(s) and setting sequence number, wrap over the naked joints with electrical tape.

Please e-mail us at info@fifotrack.com if any question or feedback.