Connection description

Before SIGNAL tracker installation, first of all, it should be determined the type and kit of the used sensors, identification systems, control devices and other additional equipment. Moreover, it should be ascertained that all the additional equipment connected to the SIGNAL device is fully-operable.

Just before the device installation and additional equipment connection it should be ascertained that the selected mobile operator provides satisfactory quality of communication.

The navigation antenna should be installed in such a way as to provide maximum «visibility» of the navigation satellites in the upper hemisphere.

It is recommended to start the connection with the 14-pin Microfit connector. At connection of the equipment to the Microfit-14 harness the connector itself should not be connected to the device. Each pin of this connector has numerical reference. The function of each pin of the Microfit-14 connector is shown in the figure below.

In the phase of verification of the correct connection and configuration of the SIGNAL device, it is not recommended to connect actuators directly to the output circuits. It is more practical to do it in the final phase of verification.

Supplying of digital and analog fuel sensors should be connected through the fuses included with the sensors, directly to the power supply. Interface lines of fuel sensors are connected directly to the device without additional elements. Commutation should be made with disconnected power.

GND of all the external sensors should be combined with GND contact of SIGNAL device.

Connection of the CAN bus must be provided with the ignition off.

The microphone and speaker are allowed to be connected at any time. It is only important to avoid closing of these contacts with any other contacts and polarity reversal of the microphone contacts.

Before installing a SIGNAL device, it is necessary to be ascertained that:

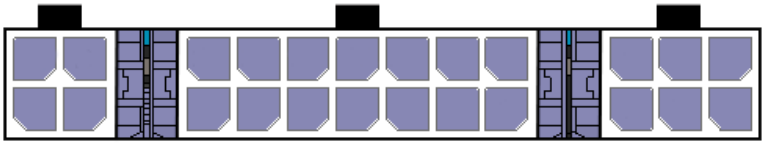
- all the additional equipment (sensors, identification systems, siren, etc.) connected to the SIGNAL device is fully-operable;
- GSM signal level at the proposed installation place of the GSM antenna is satisfactory;
- navigation antenna is installing adjusted its maximum "visibility" of the navigation satellites in the upper hemisphere for the best reception of signals from navigation satellites;
- you have enough funds in your SIM card balance installed in SIGNAL;
- operating conditions of the device (temperature, humidity, vibration) are relevant to the passport data.

During installation it is necessary to follow safety measures prescribed in the operating documentation of the vehicle manufacturer where device is going to be installed, as well as the regulatory documentation requirements for this vehicle type.

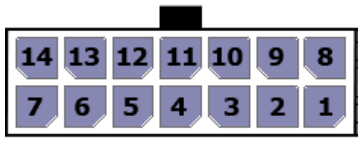
Before installing the device, SIGNAL Operations manual should be carefully studied.

It is forbidden to install device components in places of strong heat (engine cooling elements, air-conditioner).

SIGNAL S-2613 interface connector



Interface connectors



14-pin interface connector (view over the device)

1 – Power supply (+U_G)
2 – GND
3 – Not connected (NC).
4 – Digital input 1 (IN1+).
5 – Digital input 2 (IN2-).
6 – Analog input 3 (AIN3).
7 – Not connected (NC).
8 – Digital output 1 (OUT1).
9 – Digital output 2 (OUT2).
10 – Digital output 3 (OUT3).
11 – Digital output 4 (OUT4).
12 – Digital input 4 (IN4-).
13 – Digital input 5 (IN5-).
14 – Not connected (NC).

Power supply +U_G should be connected through the fuse.

GND should be connected to GND of the car battery.

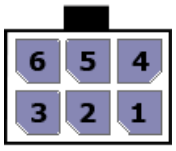
Digital input IN1+ is recommended to be connected to the ignition because some functions of the device depend on this signal. However, such a connection is not mandatory. This input is triggered when a voltage more than 5,5 V is supplied to it. In addition to the ignition determination notifications, it is used in coordinates processing algorithms (for example, at their averaging and on the parking) and also for controlling of internal engine hours counter. Due to the particular influence of this signal on the entire system operation, it is recommended to connect the ignition only for the intended purpose.

Digital inputs IN2, IN4, IN5 are triggered at a potential less than 0,7 V (i.e. at closing the contact to GND). These inputs are intended for the control of door limit switches, hood/trunk limit switches and others.

Input AIN3 can be used not as an analog input for measuring voltages in the range from 0 to 31 V, but also as a digital input that is controlled by a positive potential (triggered at a positive potential). It is possible to set the triggering and normal thresholds in volts (V). I.e. at certain values of the voltage, the input will be in a triggered state, and at others - in a normal state.

Attention!
It is forbidden to apply voltage more than 50 V to the device inputs, as this can lead to device failure.

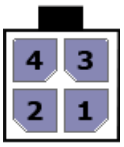
Outputs OUT1-OUT4 are designed to control low-current loads up to 500 mA. At activation, a negative signal (GND) is formed on these lines. External actuators with a load current more than the maximum allowed should be connected through additional switching relays. Relays type is choosing based on the requirements for the value of the switched current, voltage, and also depending on the power of the connected actuator.



6-pin connector of serial communication interfaces

1 – Not connected (NC)
2 – RS-485 interface line (RS-485B(-))
3 – Not connected (NC)
4 – Not connected (NC)
5 – RS-485 interface line (RS-485A(-))
6 – Not connected (NC)

RS-485 interface is designed for connection of fuel level sensors (up to 6 pcs).



4-pin connector of speakerphone interface

1 - Negative contact of the microphone (MIC -)
2 - Negative contact of the speaker (SPK -)
3 - Positive contact of the microphone (MIC +)
4 - Positive contact of the speaker (SPK +)

Observe the polarity connecting the microphone.