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:

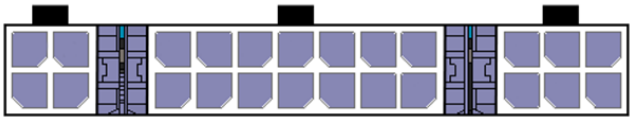
- all the additional equipment (sensors, identification systems, siren, etc.) connected to the SIGNAL device is fully-operable;
- GSM signal level at the proposed installation place of the GSM antenna is satisfactory;
- navigation antenna is installing adjusted its maximum "visibility" of the navigation 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.

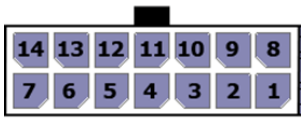
Before installing the device, SIGNAL Operations manual should be carefully studied.

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

SIGNAL S-265X interface connector



Interface connectors



14-pin interface connector (view over the device)

1 – Power supply ($+U_G$)
2 – GND
3 - 1-Wire interface (iBUT)
4 – Universal input 1 (UIN1)
5 – Universal input 2 (UIN2)
6 – Universal input 3 (UIN3)
7 – Linear output of sound signal L_{OUT}
8 – Digital output 1 (OUT1)
9 – Digital output 2 (OUT2)
10 – Digital output 3 (OUT3)
11 – Digital output 4 (OUT4)
12 – Universal input 4 (UIN4)
13 – Universal input 5 (UIN5)
14 – Universal input 6 (UIN6)

Power supply $+U_G$ should be connected through the fuse.

GND should be connected to GND of the car battery.

1-Wire interface (iBUT) is designed for connection of contact pads of TouchMemory keys, Proximity-card readers and digital temperature sensors.

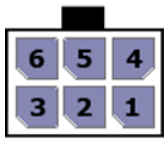
Universal inputs UIN1-UIN6 can be set up as digital, analog, pulse or frequency. It allows connecting to them a wide range of different sensors, for example, frequency (frequency 1-3000 Hz) and analog (voltage 0-31 V) fuel sensors, impulse fuel consumption sensors, buttons or limit switches.

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

Linear output of sound signal L_{OUT} is designed for connection of a low-frequency amplifier with a minimum input voltage of 0.5 - 0.7V to implement the Autoinformer function.

To avoid interferences, GSM antenna should be located as far as possible from the device input connector, amplifier, speaker and from the wires connecting them.

Output 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. Output OUT1 can be configured to work with a buzzer required to signal an incoming call.



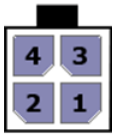
6-pin connector of serial communication interfaces

1 – CAN interface line (CANL)
2 – RS-485 interface line (RS-485B(-))
3 – RS-232 interface line (232RX) in S-2651 and S-2654 / CAN interface line (CANL) in S-2653
4 – CAN interface line (CAN H)
5 – RS-485 interface line (RS-485A(+))
6 – RS-232 interface line (232TX) in S-2651 and S-2654 / CAN interface line (CANH) in S-2653

RS-232 interface is designed for connection of devices transmitting and receiving information to this interface, for example, a fuel level sensor, CAN bus readers, tachographs, RFID, MODBUS devices, etc.

RS-485 interface is designed for connection of devices transmitting and receiving information to this interface, for example, fuel level sensors (up to 16 pcs.), CAN bus readers, tachographs, RFID, MODBUS devices, etc.

CAN interface is designed for connection to CAN bus.



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.