OMNICOMM

Omnicomm 3.0 Terminals

Profi, Profi Wi-Fi, Optim, Smart, Smart Promo

User Manual

Omnicomm Configurator 6

22.06.2021

Contents

Omnicomm 3.0 Terminals

Profi, Profi Wi-Fi, Optim, Smart, Smart Promo

General information

Omnicomm terminals – vehicle equipment designed to gather information on the vehicle parameters and transmit data to Omnicomm Online or a third-party fleet monitoring system (except Smart, Smart Promo).

Main functions:

- Determination of location, speed and movement direction of vehicle
- Reading and filtering values from fuel level sensors and a wide range of connected equipment
- Data storage in non-volatile memory
- Data transmission to Omnicomm Online and other transport monitoring systems (except Smart, Smart Promo).

Models of Omnicomm terminal differ from each other in the design and range of connected equipment.

Attention

While carrying out installation, observe the safety rules and regulatory requirements for this type of work.

Technical Specifications

	Omnicomm Profi, Profi Wi-Fi	Omnicomm Optim	Omnicomm Smart Smart Promo
Communication			
Satellite Navigation Systems	GLONASS/GPS	GLONASS/GPS	GLONASS/GPS
GPRS data transmission channel	GPRS Wi-Fi (only for Profi Wi-Fi)	GPRS	GPRS
Number of SIM cards and SIM chips	1 SIM-card + 1 SIM-chip	2 SIM-card or 1 SIM-card + 1 SIM-chip	1 SIM-card
Capability of installing SIM	Yes	Yes	No
Power source			
Power supply voltage, V	8…65	8…65	8…30
Overvoltage protection	Yes	Yes	No
External sensor power supply	Yes	No	No
Backup battery capacity, mAh	1400	1400	-
Data acquisition and transmission			
Data acquisition period, s	1…240	1…240	15…240

Technical Specifications

	Omnicomm Profi, Profi Wi-Fi	Omnicomm Optim	Omnicomm Smart Smart Promo
Communication			
Non-volatile memory capacity, events	150 000	150 000	150 000
SD card for photographs and archieve	No	Yes	No
Inputs and outputs			
Ignition key input	Yes	Yes	Yes
Panic button input	Yes	Yes	Connection to universal input
RPM sensor input	Yes	Yes	Yes
GSM call button input	Yes	Yes	No
Number of universal inputs	6	4	1
Number of digital outputs	2	2	-
Interfaces			
CAN interface	Yes	Yes	Yes
Interface RS-485	2	2	1
Interface RS-232	1	1	-

Technical Specifications

	Omnicomm Profi, Profi Wi-Fi	Omnicomm Optim	Omnicomm Smart Smart Promo
Communication			
USB interface	Yes	Yes	Yes
Voice communication connection	Yes	Yes	No
Interface 1-wire	Yes	Yes	No
Built-in accelerometer	Yes	Yes	Yes
Design			
Dimensions, mm	100,5 x 137,0 x 38,0	101,0 x 90,0 x 31,5	101,0 x 90,0 x 31,5
Working temperature range, C (without the internal battery)	– 40…+85	– 40…+85	– 40…+85
Operating temperature, C (with the internal battery)	Charge 0…45; Discharge -20…60	Charge 0…45; Discharge -20…60	Charge 0…45; Discharge -20…60
Body tampering sensor	Yes	Yes	No
Antenna design	External	External	Built-in
Capabilities			
Connection of fuel level sensors	6	6	2

	Omnicomm Profi, Profi Wi-Fi	Omnicomm Optim	Omnicomm Smart Smart Promo
Communication			
Detection of active signal jamming GSM signal jamming	Yes	Yes	Yes
Detection of active GSM signal jamming	Yes	Yes	Yes
Remote control through GPRS	Yes	Yes	Yes
Data output via external indicator	Yes	Yes	Yes
SMS notifications	Yes	Yes	Yes

Installation

SIM Card Inserting

Before SIM card inserting disable PIN request at activation. For this end insert the card in any cell phone and disable PIN request, according to the cell phone operating instruction.

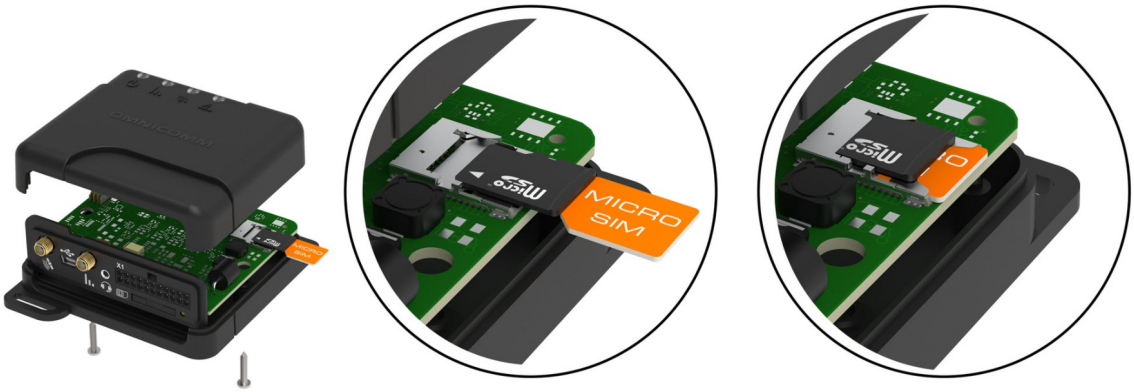
1. Using a sharp-pointed object press the button on the terminal front panel. The SIM card holder will eject
2. Remove the SIM card holder from the connector slots and insert the SIM card into it with contact pieces up
3. Insert the SIM card holder in the connector slots:

Installation

SIM chip installation is available under custom order.

Second SIM Card and SD Card Inserting for Optim

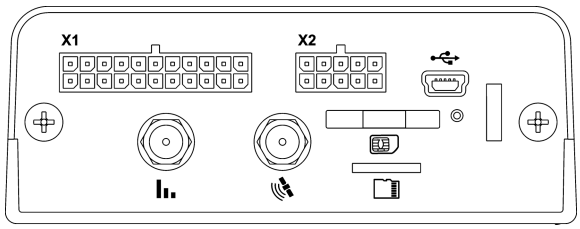
1. Unscrew the two screws fixing the terminal body
2. Remove the upper body part
3. Insert a miniSD card in the slot intended for SD card
4. Insert the second SIM card in the slot as shown in figure:



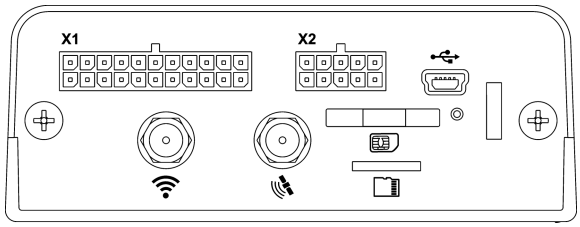
Connector Pin Assignment

Omnicomm Profi terminals:

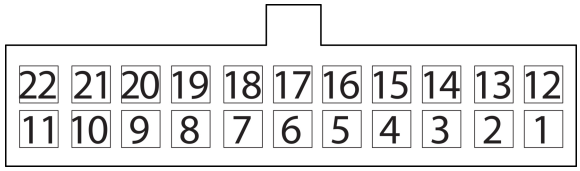
Installation



Omnicomm Profi Wi-Fi terminals:



Connector X1:



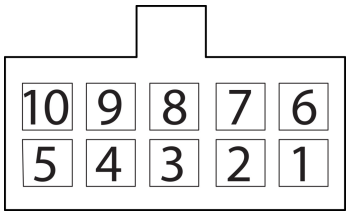
No. of pin	Signal name	Designation	Wire colour in cable
1	Ground (negative) for power supply	Ground (signal)	White
2	Ground (negative) for power supply	Ground (power)	White
3	Panic button	Panic button	White-red
4	Universal input 2	Input 2	Black-white
5	Universal input 4	Input 4	Black-yellow
6	RPM input	Tachometer	Blue

Installation

No. of pin	Signal name	Designation	Wire colour in cable
7	Controlled output 2	Output 2	Yellow-dark blue
8	Line RX RS-232	RS-232 RX	Pink
9	Line B RS-485 №2	B RS-485 №2	Black-blue
10	Line B RS-485 №1	B RS-485 №1	Blue-white
11	CAN L	CAN L	Purple-white
12	Vehicle power supply voltage	Power (positive)	Red
13	Ignition key	IGN	Yellow
14	GSM Activation Button	GSM	Green-black
15	Universal input 1	Input 1	Black
16	Universal input 3	Input 3	Black-red
17	iButton+	iButton+	Pink-red
18	Controlled output 1	Output 1	Yellow-red
19	Line TX RS-232	RS-232 TX	Grey
20	Line A RS-485 №2	A RS-485 №2	White-green
21	Line A RS-485 №1	A RS-485 №1	Orange-white
22	CAN H	CAN H	Purple-orange

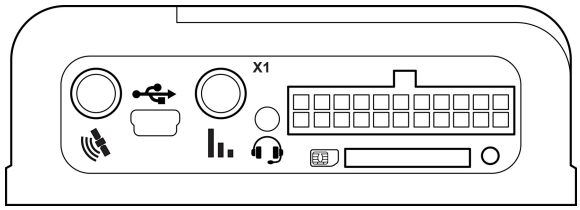
Installation

Connector X2:

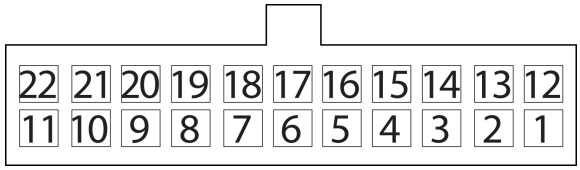


No. of pin	Signal name	Designation	Wire colour in cable
1	Microphone-	Microphone-	Green-yellow
2	Speaker-	Speaker-	Grey-yellow
3	Ground	GND	White
4	Universal input 5	Input 5	Green
5	Ground	GND	White
6	Microphone+	Microphone+	Green-red
7	Speaker+	Speaker+	Grey-red
8	iButton-	iButton-	Pink-blue
9	Universal input 6	Input 6	Purple
10	Plus LLS sensor power supply	PWR LLS	Brown

Omnicomm Optim terminal



Connector X1:

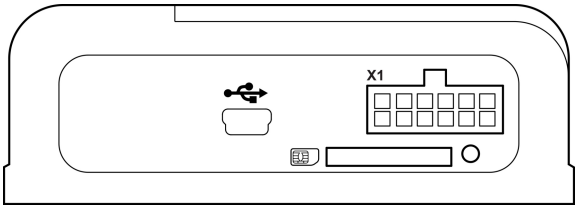


No. of pin	Signal name	Designation	Wire colour in cable
1	Ground (negative) for power supply	Ground (signal)	White
2	Ground (negative) for power supply	Ground (power)	White
3	Panic button	Panic button	White-red
4	Universal input 2	Input 2	Black-white
5	Universal input 4	Input 4	Black-yellow
6	RPM input	Tachometer	Blue
7	Controlled output 2	Output 2	Yellow-dark blue
8	Line RX RS-232	RS-232 RX	Pink
9	Line B RS-485 №2	B RS-485 №2	Black-blue

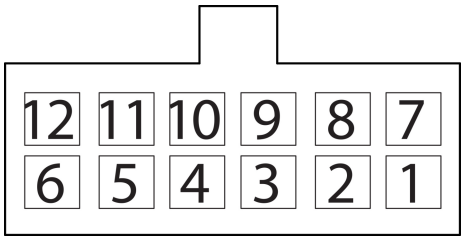
No. of pin	Signal name	Designation	Wire colour in cable
10	Line B RS-485 №1	B RS-485 №1	Blue-white
11	CAN L	CAN L	Purple-white
12	Vehicle power supply voltage	Power	Red
13	Ignition key	IGN	Yellow
14	GSM Activation Button GSM	GSM	Green-black
15	Universal input 1	Input 1	Black
16	Universal input 3	Input 3	Black-red
17	iButton+	iButton+	Pink-red
18	Controlled output 1	Output 1	Yellow-red
19	Line TX RS-232	RS-232 TX	Grey
20	Line A RS-485 №2	A RS-485 №2	White-green
21	Line A RS-485 №1	A RS-485 №1	Orange-white
22	CAN H	CAN H	Purple-orange

Omnicomm Smart terminal

Installation



Connector X1:



No. of pin	Signal name	Designation	Wire colour in cable
1	Ground (minus) for power supply	Ground (signal)	White
2	RPM input	Tachometer	Dark blue
3	Not used	NC	
4	Not used	NC	
5	Line B RS-485 LLS	B RS-485 LLS	Blue-white
6	CAN L	CAN L	Purple-white
7	Vehicle power supply voltage	Power	Red
8	Ignition key	IGN	Yellow
9	Universal input 1	Input 1	Black

No. of pin	Signal name	Designation	Wire colour in cable
10	Not used	NC	
11	Line A RS-485 LLS	A RS-485 LLS	Orange-white
12	CAN H	CAN H	Purple-orange

Protective Insert Placing for Optim

The protective insert is placed after SIM cards inserting, setting the terminal and before the connection of mounting cable connector and antennas.

1. Remove protective film from the insert

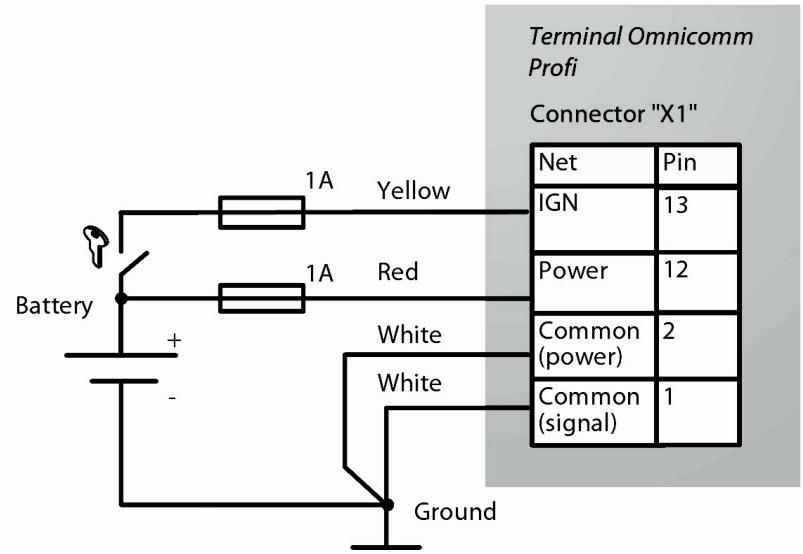
2. Carefully install the protective insert in the terminal body

Reinstallation of the protective insert is not possible

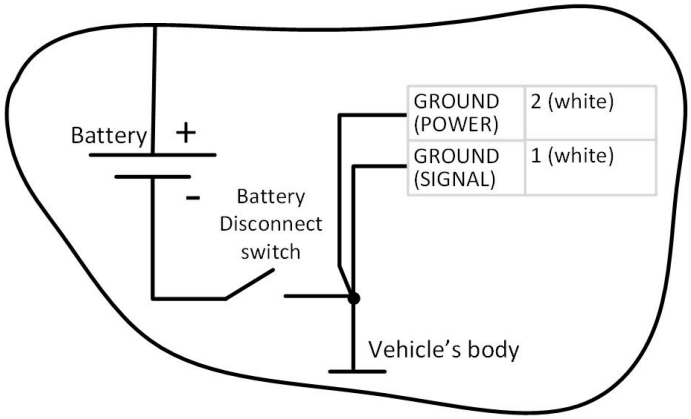
3. Treat the mounting cable connector wire exit points with silicone sealant or hot-melt glue

Power Supply and Ignition Key

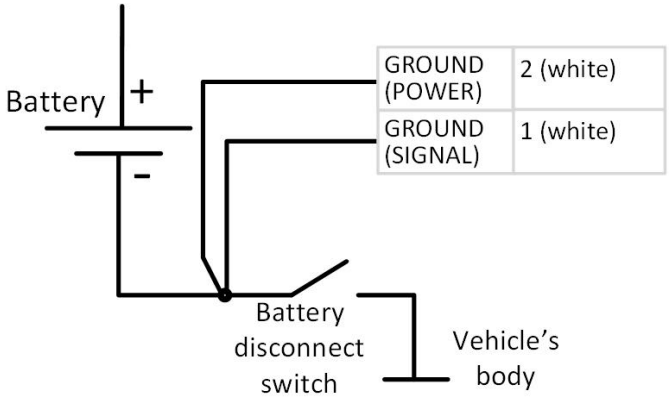
Connect Omnicomm Profi, Profi Wi-Fi terminals as per diagrams without battery disconnect switch:



after ground disconnect switch:

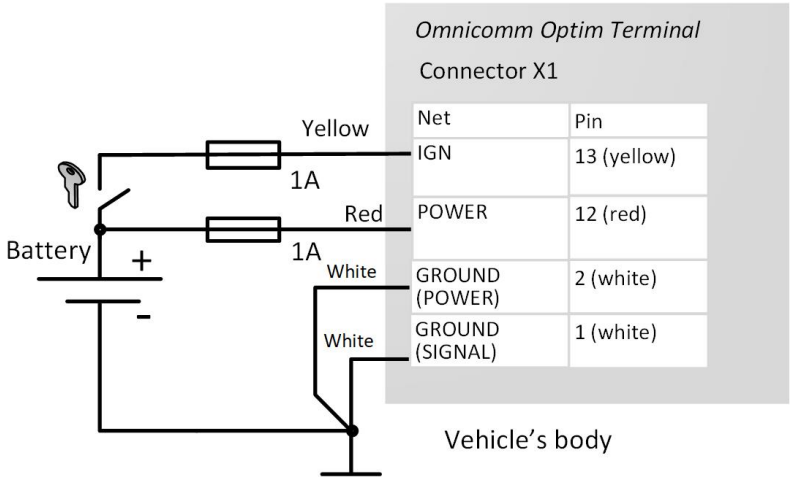


before ground disconnect switch:

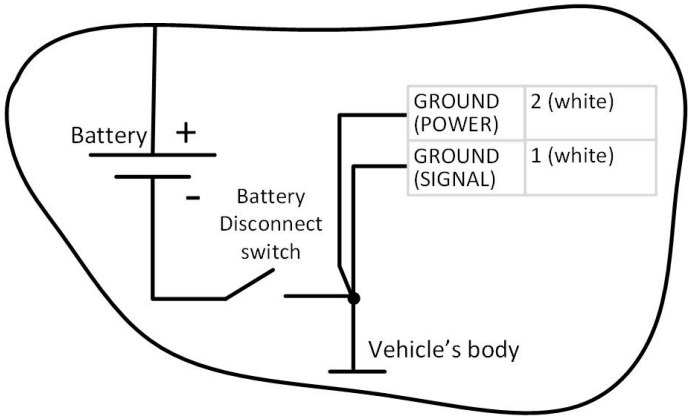


Installation

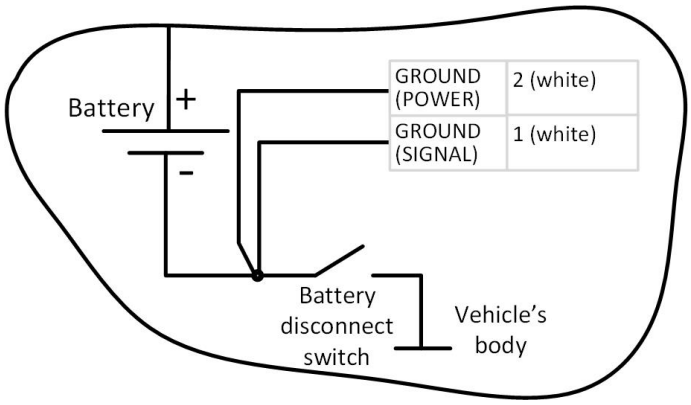
Connect Omnicomm Optim terminals as per diagrams without ground disconnect switch:



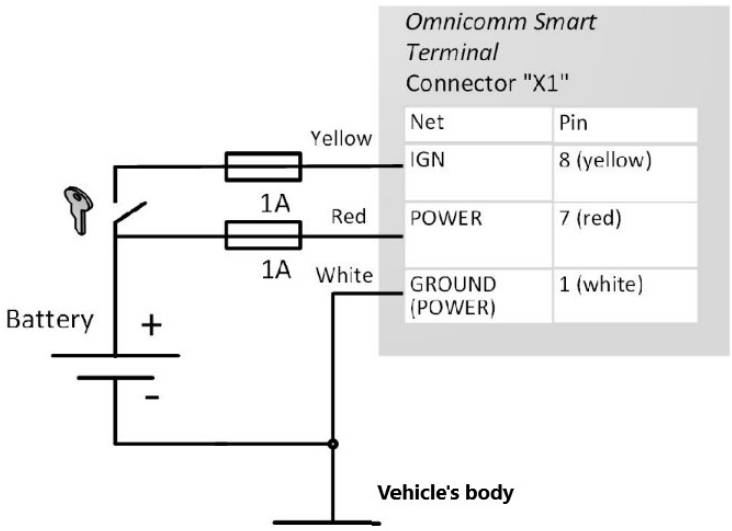
after ground disconnect switch:



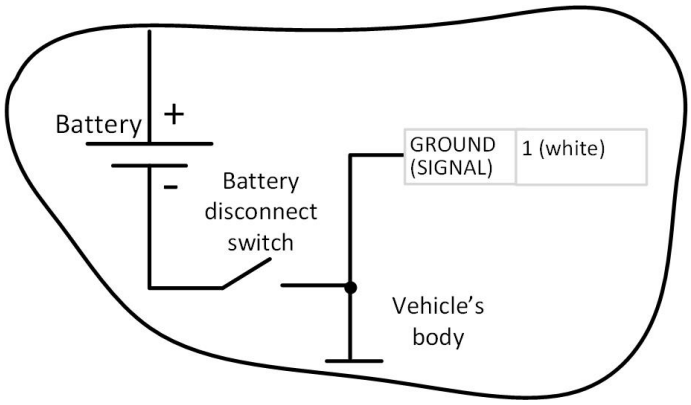
before ground disconnect switch:



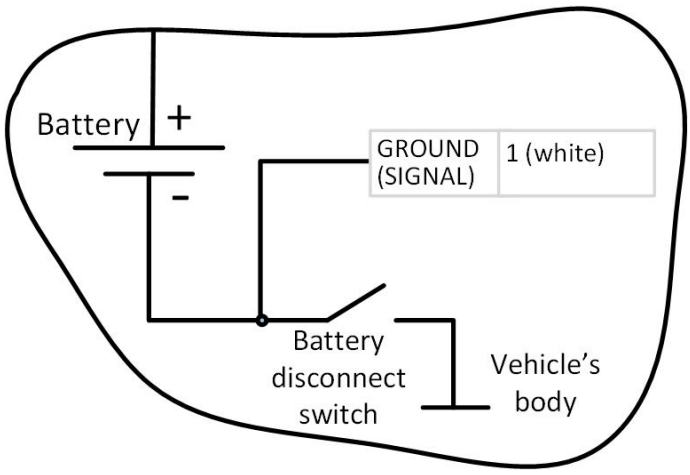
Connect Omnicomm Smart terminals as per diagrams without ground disconnect switch:



after ground disconnect switch:



before ground disconnect switch:



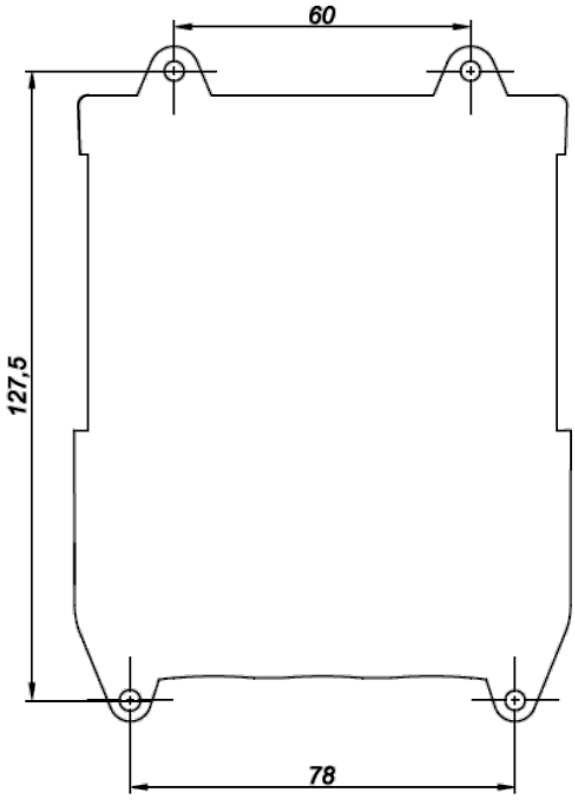
Terminal

Omnicomm terminal shall be installed in the vehicle cabin or in specially equipped electrics boxes on the vehicle protected from atmospheric precipitation.

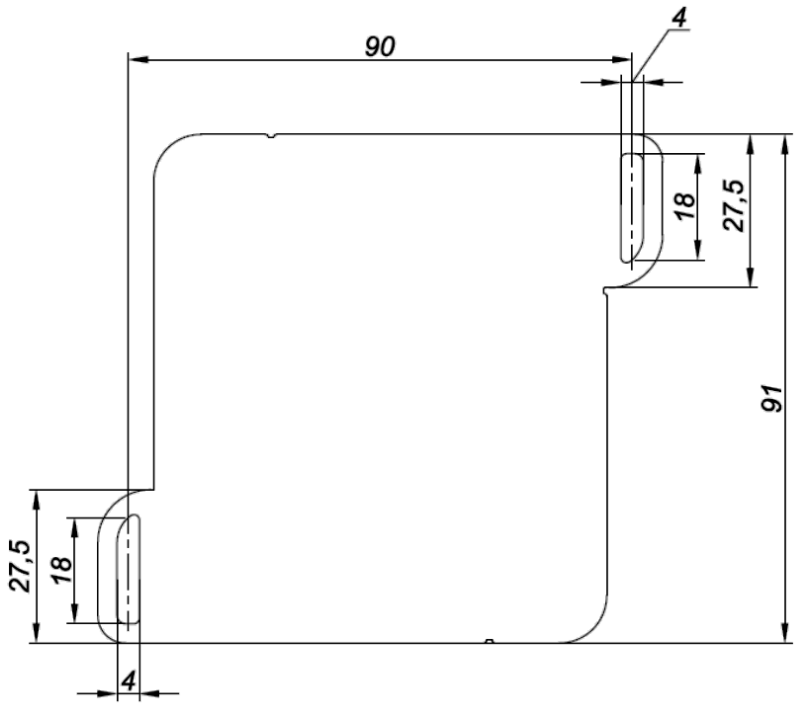
Drill 4 mounting holes Ø4 mm.

For Omnicomm Profi, Profi Wi-Fi terminals:

Installation



For Omnicomm Optim and Smart terminals:



Install the terminal and fix with self-tapping screws.

Antennas

Choose the installation site of antennas based on the antenna cable length.

It is recommended to install the GLONASS/GPS antenna on the roof of the vehicle. The GLONASS/GPS antenna must be installed on a metallic surface. It may be installed on a non-metallic surface if it is secured to the surface using glue.

The GLONASS/GPS antenna may be installed inside the vehicle, in a place providing good access to radio signal from the sky. Inside a vehicle, the antenna must be installed only on a horizontal surface and it is necessary to carry out a check of the reception quality of the GLONASS/GPS satellites.

Recommended installation site of GSM antenna: vehicle windshield or inner side of the vehicle plastic front panel.

Recommended installation site of Wi-Fi antenna of Profi Wi-Fi terminal: vehicle windshield or inner side of the vehicle plastic front panel.

Distance from antennas to any metal surface (except for the surface of installation) should be not less than 50 mm.

1. Degrease the installation site surface
2. Remove protective film from the double adhesive tape on the surface of antenna
3. Attach the antenna with the adhesive side to the installation site
4. Fix the antenna while the adhesive is setting

Setting Overview

Omnicomm terminals may be configured in two ways:

1. In the Omnicomm Configurator when the terminal is connected to a PC
2. In the Remote Configuration Server (RCS) – remotely

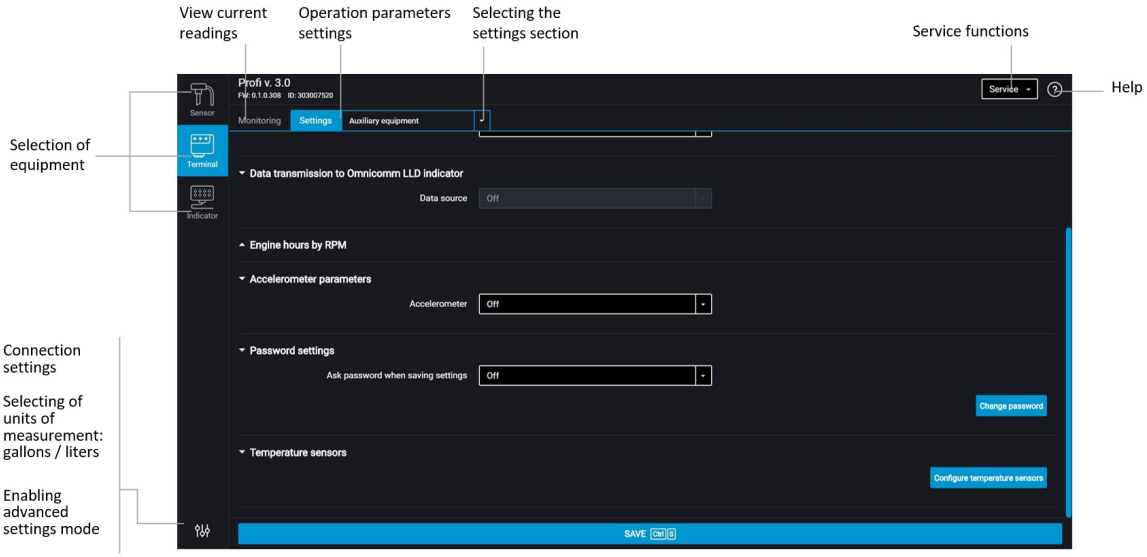
Initial terminal setting shall be carried out in Omnicomm Configurator.

Omnicomm Configurator

1. Connection the terminal to a PC using USB cable

2. Download the latest version of Omnicomm Configurator from the website.

3. Install and run Omnicomm Configurator. A window will open:



4. Select equipment – “Terminal”.

Advanced mode allows you to configure all the equipment parameters available.

Setting Overview

List of parameters shown in advanced mode only:

In the “Communication” section:

- Data collection and transmission blocking
- EGTS protocol settings
- Communication Server No. 2, No. 3 connection settings
- GSM and SMS communication parameters
- Roaming connection parameters
- Roaming parameters

In the “RS-485 and RS-232 Interfaces Configuration” section:

- “CAN-log”
- “J1708”
- “NMEA reception”
- “NMEA transmission”
- “PP-01”
- “Camera”
- “DV-01”
- “Tachograph VDO”
- “iQFreeze”
- “TPMS Pressure Pro”
- “ALM Weight Indicator”
- “Carrier Reefer”

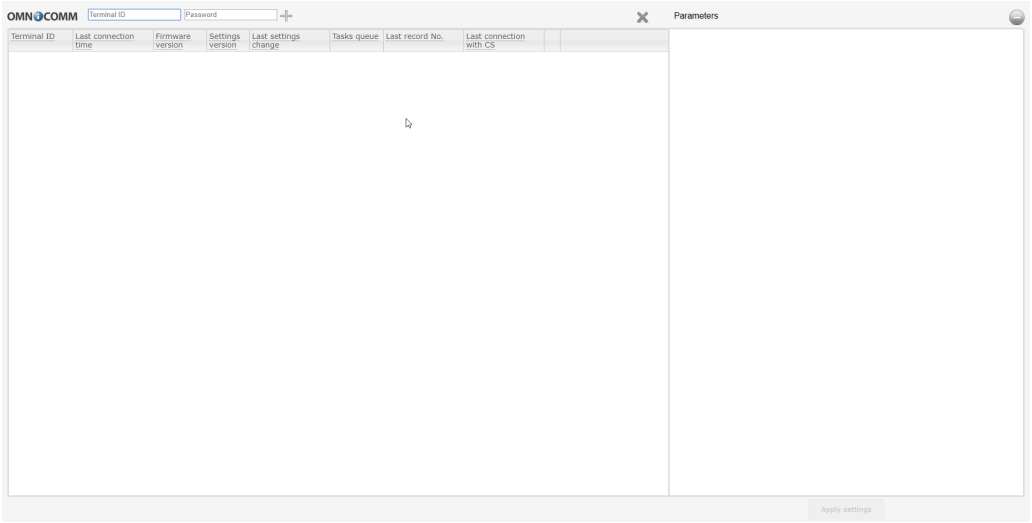
In the “Auxiliary equipment” section:

- Panic button parameters
- Accelerometer parameters

Sections “Universal inputs”, “CAN”, “Identification”, “Geofences”, “Outputs”, “Driving Control”.

Remote Configuration Server (RCS)

To connect to the configuration server, open the browser and in its address bar enter the address http://config.omnicomm.ru:9911/#en. A window will open:



To add terminals:

1. In the “Terminal ID” field enter the terminal identification number
2. In the “Password” field enter the password set in the terminal during its setting using Omnicomm Configurator program
3. Press the “+” button

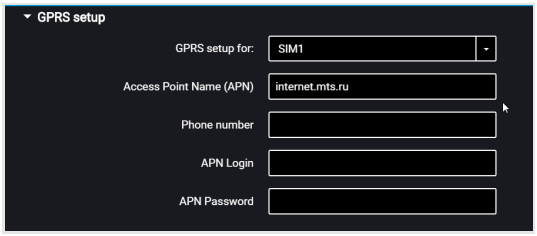
Operation Parameters Setting

GPRS connection

In the **“Settings”** tab select the **“Connection”** section from the list.

In the **“GPRS Setup”** section:

Operation Parameters Setting



For Optim and Profi, Profi Wi-Fi choose the SIM card to perform setting:

- SIM 1 – external SIM card
- SIM 2 – internal SIM card / SIM chip for Omnicomm Optim or SIM chip for Omnicomm Profi, Profi Wi-Fi

“Access Point Name (APN)” – enter the GPRS access point name

- “VimpelCom” (Beeline) – internet.beeline.ru
- “MTS” – internet.mts.ru
- “MegaFon” – internet

For GPRS access point names of other operators, refer to the mobile network operator, whose SIM card is inserted in the terminal.

“Phone number” – number of the SIM card inserted in the terminal.

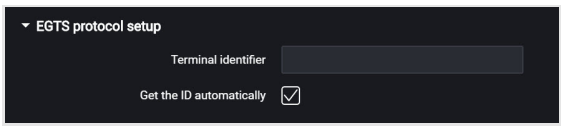
“APN Login” and “APN Password” – if necessary, enter login and password for APN access point. Login and password are provided with the SIM card of a number of mobile network operators.

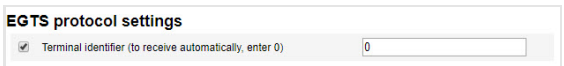
Connection to Communication Servers

Terminals support data transmission to two Communication Servers (CS) through Omnicomm and EGTS protocols.

In the **“Settings”** tab select the **“Connection”** section from the list.

In the **“EGTS Protocol setup”** section:





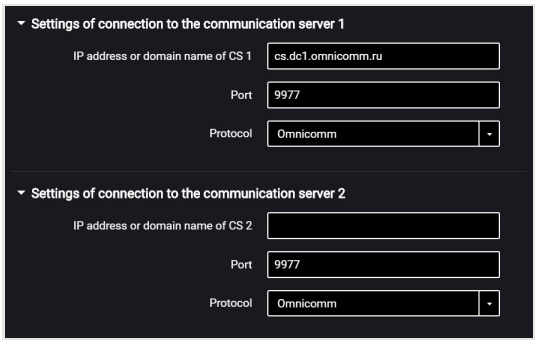
When setting up EGTS data transmission, you must use the TID terminal identification.

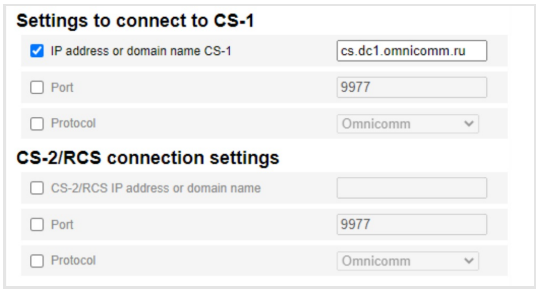
If the settings are not configured, when transmitting data through EGTS protocol ID

Operation Parameters Setting

Omnicomm will be used for terminal identification.

In the **“Settings of connection to the communication server”** sections:





“IP address or domain name of CS” – enter IP address or domain name of the communication server: cs.dc1.omnicomm.ru.

“Port” – enter port to be used by terminal to connect to the communication server: 9977

“Protocol” – select data transmission protocol to the CS. Possible options: Omnicomm or EGTS.

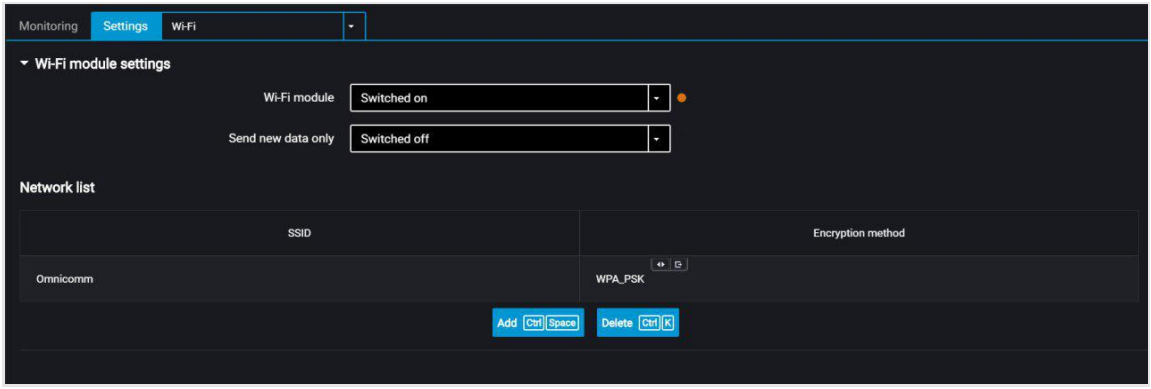
In order to use the Profi Wi-Fi 3.0 remote terminal configuration service using Omnicomm PORT, enter the IP address, specified in the “Static IP” field of the Omnicomm PORT settings, into the “CS 2 IP address or domain name” field in accordance with the Omnicomm PORT Automatic Data Acquisition Module. User Manual. , enter the port number 9910 into the “Port” field.

Wi-Fi Data Transmission

Omnicomm Configurator provides the Omnicomm Profi Wi-Fi terminal with Wi-Fi wireless network data transmission setting option (IEEE 802.11 b/g/n wireless networking standard).

In the **“Settings”** tab select the **“Wi-Fi”** section from the list.

In the **“Wi-Fi module settings”** section:



"Wi-Fi module" – enable/disable data transmission via Wi-Fi wireless network.

"Send new data only" – select:

"Enabled" – when using several LCS (or CS), deployed on different computers with the same domain name or IP address (indicated in the CS field), only the data that has not been previously transferred to any of these CS will be sent.

"Combine CS1 and CS3" When this function is enabled, the terminal will use the setting "Send only unsent data" to communication servers with different IP addresses/domain names and available both via Wi-Fi and GPRS. The data that was transferred to one of the configured servers (CS1 or CS3) will not be transferred to the other configured server again when requested. This feature is used in global networks to avoid the transfer of duplicate data.

"CS 1 IP address or domain name" – displays the CS 1 IP address or domain name assigned during configuration in the "Communication" section.

"CS 3 IP address or domain name" – displays the CS 3 (Local Communication Server) IP address or domain name assigned during configuration in the "Communication" section.

In the **"List of networks"** section:

"SSID" – enter the access point name specified when configuring the Wi-Fi base station

"Authentication and Encryption Method" – select the data authentication and encryption method used in the Wi-Fi base station.

Possible options:

- "Open" – encryption is not used
- "WPA_PSK"
- "WPA_EAP" (FAST)
- "WPA_EAP" (PEAP)

When using encryption, specify "Login" and "Password" to connect to the Wi-Fi base station.

Press the "Add" button.

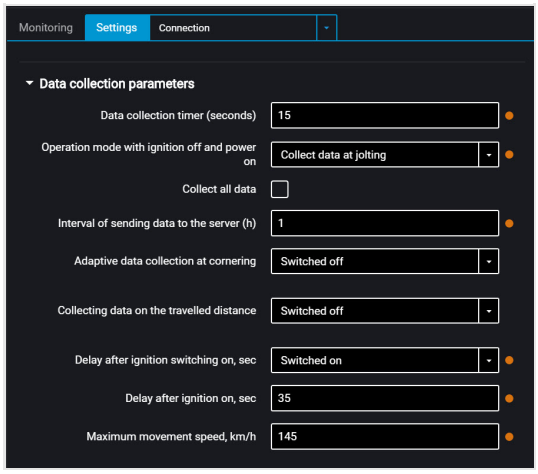
The **"List of networks"** section displays Wi-Fi access points, which the terminal can use for Wi-Fi wireless network data transmission.

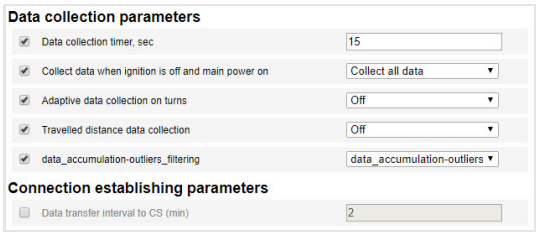
To connect the terminal to a hidden Wi-Fi network, during the setting specify only one Wi-Fi access point.

Data Collection

In the **"Settings"** tab select the **"Connection"** section from the list.

In the **"Data collection parameters"** section:





"Data collection timer (seconds)" – set the value of the period of Terminal requesting modules and external devices connected to it. Default value - 15 seconds. Value range - from 1 to 240 seconds (except for Smart). Value range for Smart - from 15 to 240 seconds.

When the collection timer is set between 5 and 1 sec., the volume of the collected data will increase significantly. Taking into account the limits of data transmission speed in the second generation networks (2G), this can lead to a delay in displaying data in Omnicomm Online and, when the mobile coverage is absent for a long time, it also can lead to a complete or partial overwrite of the terminal archive and, consequently, loss of data.

"Operation mode with ignition off and power on" select:

- "Collect all data" – data collection and transmission same as with ignition turned on.
- "Collect all except GPS" – collection and transmission of data selected during configuration of the terminal, except for the GPS module data
- "Collect data at jolting" – monitoring the status of the panic button and accelerometer. If the accelerometer reading changes by more than 0.2 g or the panic button is pressed, the terminal switches to the "Collect all data" and performs data transmission to the Communication Server in 5 minutes

When selecting "Collect data at jolting" set the following configuration:

Operation Parameters Setting

- "Collect all data" – when this parameter is enabled, the terminal upon expiration of the time specified in the "Period of data sending to Server" switches to the "Collect all data" mode and performs data collection and transmission to the communication server. After the data transmission the terminal switches to the "Collect data during pounding" mode.

- "Interval of sending data to the server (h)" – the time interval between the terminal connections to CS.

Depending on the set mode, the data are acquired from the particular modules and external devices.

"Adaptive data collection at cornering" – enable/disable adaptive data collection on turns, which allows increasing the accuracy of displaying turns on the map by additional data collection from the GPS module more frequently than set in the "Data collection" parameter.

"Collecting data on the travelled distance" – allows increasing the accuracy of displaying the vehicle location on the map by additional data acquisition from the GPS module over the distance travelled between the events with registered coordinates.

"Distance travelled" – enter the mileage travelled from the moment of the last registered event with coordinates, upon achieving which the data will be acquired. Possible values: from 10 to 1000 meters. Default value – 100 meters.

"Coordinate drift filtering" – enable to eliminate runout of coordinates during the "Track" report generation.

When enabling the "Coordinate drift filtering" the following settings are available:

- "Delay after ignition on, sec". Default value – 35 sec. Possible values: from 0 to 900.

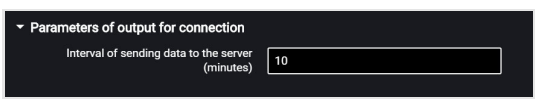
- "Maximum movement speed, km/h". Default value – 180 km/h. Possible values: from 5 to 360.

The default values allow elimination of drift for most cases and do not require correction.

Data Transmission to the Communication Server

In the **"Settings"** tab select the **"Connection"** section from the list.

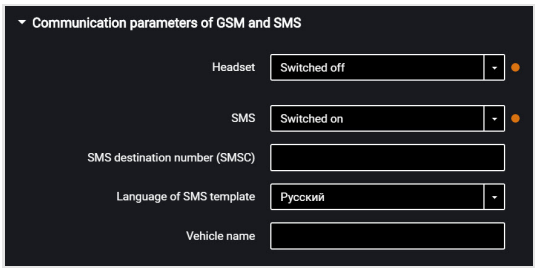
In the **"Parameters of output for connection"** section:

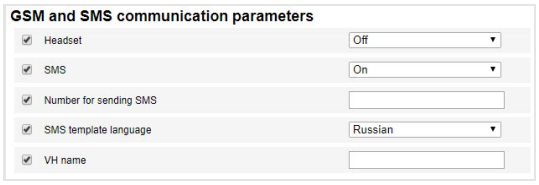


Operation Parameters Setting

"Interval of sending data to the server" – enter the number of minutes, upon expiration of which the terminal must establish connection with the communication server, while being in the mobile operator's home network. Recommended value – 10 minutes.

In the **"Communication parameters of GSM and SMS"** section:





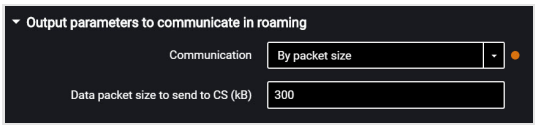
"SMS" – enable/disable the commands reception via SMS and sending the information messages by the Terminal.

"SMS destination number" – enter the phone number, to which the SMS will be sent with information about the status of the Terminal and the vehicle.

"Language of SMS template" – select the language of the SMS template. Possible options: Russian, English, Portuguese, Spanish.

"Vehicle Name" – enter the name of the vehicle. The "Vehicle Name" field is mandatory.

In the **"Output parameters to communicate in roaming"**section:



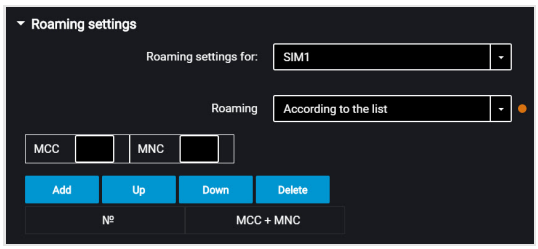
Select the criterion for the terminal connection to the CS: "Interval of sending data to CS" or "Data package size to be sent to CS".

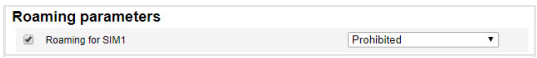
"Interval of sending data to the CS" – enter the number of minutes, upon expiration of which the terminal must establish connection with the communication server, while being in roaming. Recommended value – 180 minutes.

"Data packet size to send to CS" – enter the data batch size, upon achieving which the terminal must establish connection with the communication server, while being in roaming. Recommended value – 100 Kb.

In the **"Roaming settings"** section:

Operation Parameters Setting





“Roaming” – select the option of SIM card using while in roaming. Possible options:

• “Allow” - the terminal will transmit data using the available cellular networks

• “Deny” - the terminal will not transmit data while roaming

• “In roaming as at home” - the terminal will transmit data following the same settings of output parameters as for the home network

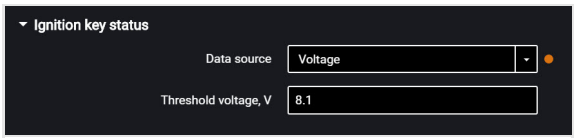
• “According to the list” - the terminal will only transmit data using the cellular networks stated in the list. Enter the MCC and MNC of the required cellular networks in the table

When the terminal operates in roaming, the data transmission is carried out only to the communication server no. 1. To transfer data to two communication servers, select "In roaming as at home".

Selection of Ignition Source

In the **“Settings”** tab select the **“Inputs”** section from the list.

In the **“Ignition key status”** section:



“Data source” – select the data to register ignition on/off. Possible options:

“Ignition key” – the ignition on/off is registered on the position of the key upon direct connection to the ignition key.

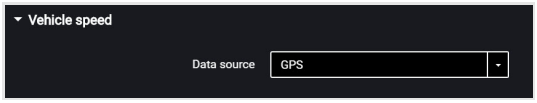
“Onboard voltage” – the ignition on is registered upon reaching the vehicle network power supply threshold voltage. Specify the value “Threshold voltage, V” – the value of the vehicle network power supply voltage, upon reaching which the ignition on will be registered. Ignition off is registered, when the voltage drops to 0.5 V below the threshold.

Selection of Speed Source

Operation Parameters Setting

In the **“Settings”** tab select the **“Inputs”** section from the list.

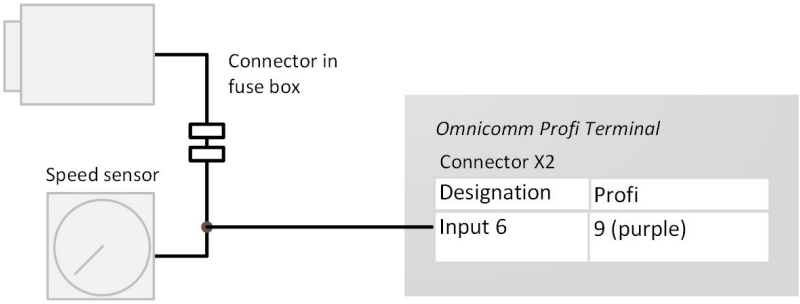
In the **“Vehicle speed”** section:



“Data source” – select the data to process the speed values. Possible options: “GPS”, “CAN bus” or “UI6” (for Omnicomm Profi, Profi Wi-Fi).

Connection to universal input No.6 of the Terminal Omnicomm Profi, Profi Wi-Fi is performed depending on the type of speed sensor.

Connection to pulse speed sensor is made according to the diagram:



Engine RPM

In the **“Settings”** tab select the **“Inputs”** section from the list.

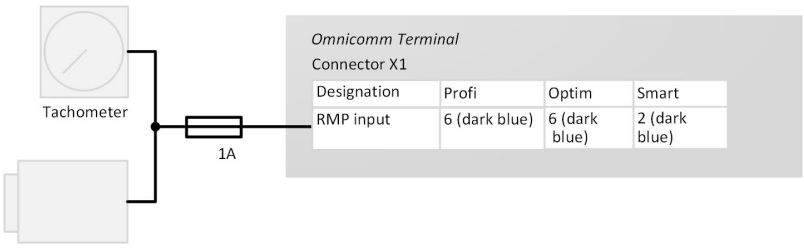
In the **“The engine revolutions”** section:

“Data source” – select the signal type. Possible values:

- “Disabled”
- “Ignition key”
- “CAN bus”
- “RPM input”

Connect the tachometer to the Terminals according to the diagram:

Operation Parameters Setting



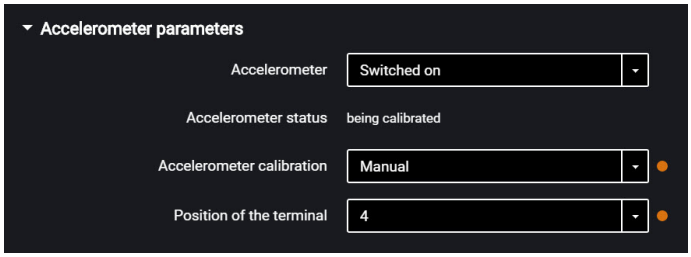
Designation	Profi	Optim	Smart
RMP input	6 (dark blue)	6 (dark blue)	2 (dark blue)

The place of connection to the tachometer shall be the point in the vehicle electric network, in which the pulse signal frequency is proportional to the engine RPM.

Driving Safety Control

In the **"Settings"** tab select the **"Additional equipment"** section from the list.

In the **"Accelerometer parameters"** section:



"Accelerometer" – enable/disable the use of accelerometer for measuring the vehicle acceleration.

"Accelerometer status" – accelerometer condition. Possible options: not used, calibration, calibrated, calibration error.

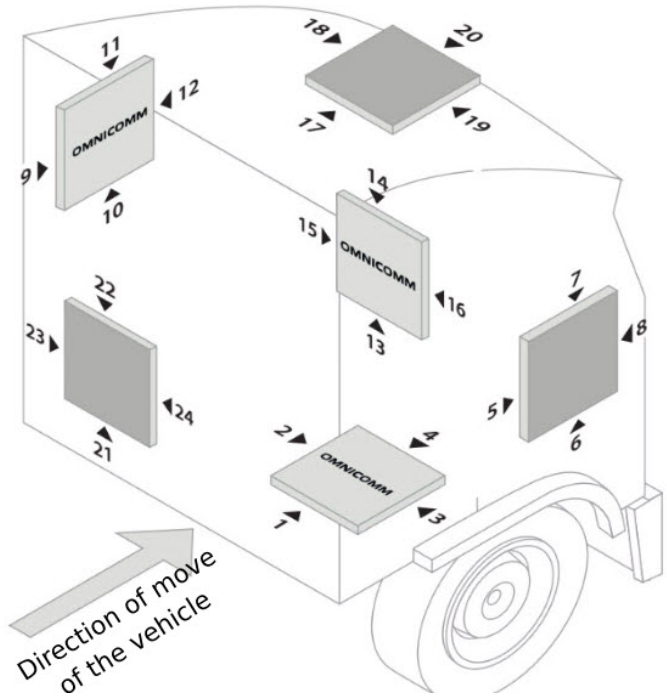
"Accelerometer calibration" – select the accelerometer calibration mode.

Prior to performing the calibration, firmly fix the terminal and do not change its position during operation.

Automatic calibration is recommended for vehicles that are operated mainly at speeds above 50 km/h. Automatic calibration takes from 2 minutes to 24 hours depending on the frequency of accelerations and braking on straight sections of the road.

When selecting manual calibration, in the "Position of the terminal" field, select one of 24 positions as shown in figure:

Operation Parameters Setting



Arrow ► indicates the location of the terminal connector.

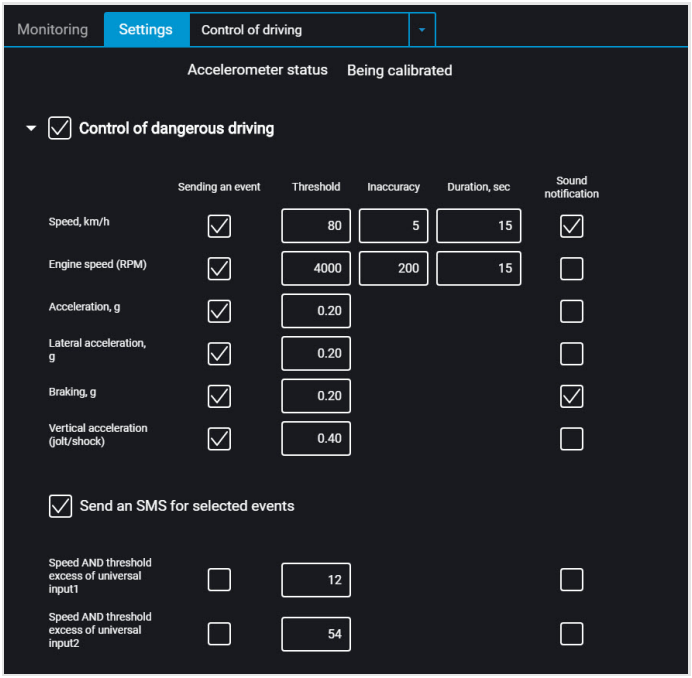
The "Omnicomm" inscription in the figure corresponds to the top cover of the terminal.

Deflection of the terminal from the axes during manual calibration should not be more than 5 degrees.

In the **"Settings"** tab select the **"Driving Control"** section from the list.

"Control of dangerous driving" – enable/disable registration of dangerous driving when exceeding the set values of monitored parameters.

Operation Parameters Setting



Select monitored parameters:

"Event reporting" – enable/disable event sending to Omnicomm Online.

- "Speed" – vehicle speed control

Threshold – enter the maximum permissible speed, upon exceeding which dangerous driving will be registered. Possible values: from 0 to 150 km/h. Default value: 80 km/h.

Deviation – enter the speed value that can be exceeded by maximum permissible speed without triggering dangerous driving registration. Possible values: from 0 to 50 km/h. Default value: 5 km/h.

Duration – enter the period of time allowed to exceed maximum permissible speed without triggering dangerous driving registration. Possible values: from 0 to 300 s. Default value: 15 s.

- "Engine speed (RPM)" – engine RPM monitoring

Threshold – enter the maximum permissible engine RPM, upon exceeding which dangerous driving will be registered. Possible values: from 0 to 10,000 rpm. Default value: 4,000 rpm.

Deviation – enter the RPM value that can be exceeded by maximum permissible RPM without registration of violation. Possible values: from 0 to 1000 rpm. Default value: 200 rpm.

Duration – enter the period of time allowed to exceed maximum permissible engine RPM without registration of dangerous driving. Possible values: from 0 to 300 s. Default value:

15 s.

- "Acceleration" – acceleration control during vehicle speeding up

Threshold – enter the value of acceleration while speeding up, which exceeding will trigger registration of dangerous driving

- "Lateral acceleration" – acceleration control during vehicle turning

Threshold – enter the value of acceleration while turning, which exceeding will trigger registration of dangerous driving

- "Braking" – acceleration control during vehicle braking

Threshold – enter the value of acceleration while braking, which exceeding will trigger registration of dangerous driving

- "Vertical acceleration (jolt / shock)" – acceleration control during vehicle jolting

Threshold – enter the value of acceleration while jolting or shocking, which exceeding will trigger registration of dangerous driving

- "Speed and threshold exceeding of potential UI1"

Threshold – enter the value of speed, which exceeding will trigger registration of dangerous driving, if universal input No.1 is closed/open.

- "Speed and threshold exceeding of potential UI2"

Threshold – enter the value of speed, which exceeding will trigger registration of dangerous driving, if universal input No.2 is closed/open.

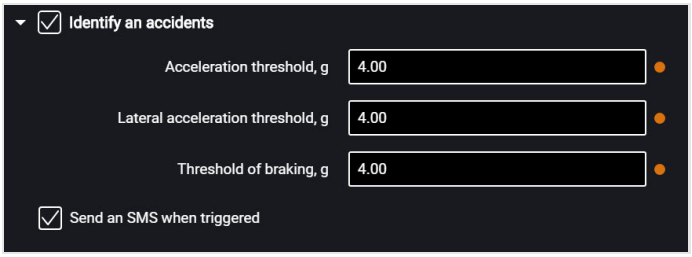
> The notification for the event "Speed and Exceeding of threshold of potential UI1, UI2" is generated only when the selected speed source is "GPS". (see Selection of Speed Source).

- "Send SMS for selected events" – enable SMS sending upon registration of dangerous driving
- "Send photo for selected events" – enable digital camera photo sending upon registration of dangerous driving

"Sound notification" – enable/disable sound notification if thresholds of monitored parameters are exceeded. To run sound notification connect a sound emitter to controlled output No.1.

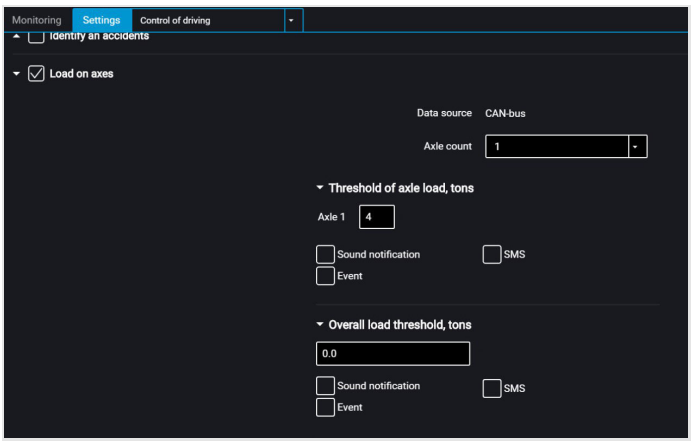
Operation Parameters Setting

"Identify accidents" – enable/disable accident registration upon exceeding the set values of monitored parameters.



- "Acceleration threshold" – value of acceleration while speeding up, which exceeding will trigger registration of accident
- "Lateral acceleration threshold" – value of acceleration while turning, which exceeding will trigger registration of accident
- "Braking threshold" – value of acceleration while braking, which exceeding will trigger registration of accident
- "Send an SMS when triggered" – enable SMS sending upon registration of accident
- "Send a photo when triggered" – enable digital camera photo sending upon registration of accident

"Load on axes" – enable/disable control of vehicle axle load and total vehicle load.



"Data source" displays the axle load data source. Possible options: ALM Weight Indicator and CAN.

To select the ALM Weight Indicator as a data source choose Indicator in the RS-485 or RS-232 interface configuration.

To select the CAN bus as a data source enable SPN 582 and SPN 928 in the CAN settings tab.

If the ALM Weight Indicator and the CAN Bus are both set as data source, the ALM Weight Indicator will be used.

"Axle count" – set the number of vehicle axles. Possible values: from 1 to 8. Maximum value – 8 for CAN, 6 for ALM.

"Axle load threshold, tons" – enter the value of load on each axle, upon exceeding which an event will be registered.

- "Sound notification" – enable/disable sound notification if thresholds of monitored parameters are exceeded
- "Events" – enable/disable event sending to Omnicomm Online
- "Photo" – enable digital camera photo sending upon load exceeding
- "SMS" – enable SMS sending upon load exceeding

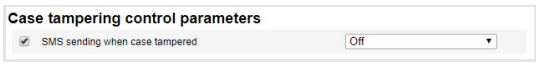
"Overall load threshold, tons" – enter the value of total vehicle load, upon exceeding which an event will be registered.

- "Sound notification" – enable/disable sound notification if thresholds of monitored parameters are exceeded
- "Events" – enable/disable event sending to Omnicomm Online
- "Photo" – enable digital camera photo sending upon load exceeding
- "SMS" – enable SMS sending upon load exceeding

Body Tampering Control

In the **"Settings"** tab select the **"Additional equipment"** section from the list.

In the **"Case tampering detection"** section:

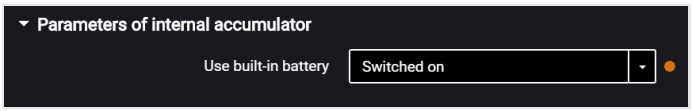


"Send an SMS upon an attempt open the case" – enable/disable SMS sending upon triggering the anti-tamper switch.

Internal Battery

In the **"Settings"** tab select the **"Additional equipment"** section from the list.

In the **"Parameters of internal accumulator"** section:

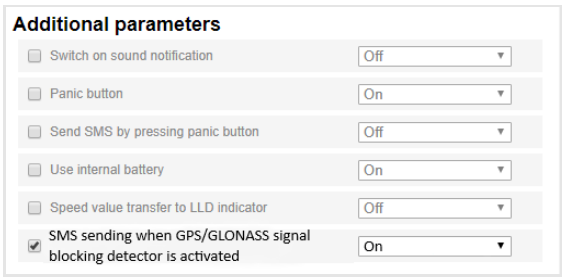


"Use built-in battery" – enable/disable use of internal battery when the main power supply is turned off and the terminal is operating in the "Collect data at jolting" mode.

GPS / GLONASS Signals Jamming Detector

For Omnicomm Optim, Profi, Profi Wi-Fi terminals in the **"Settings"** tab select the **"Additional equipment"** section from the list.

In the **"GPS / GLONASS Signals Jamming Detector"** section:



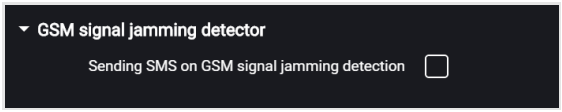
"Send SMS upon GPS/GLONASS signals jamming attempts detection" – check the box to send SMS upon registering the jamming of GPS / GLONASS.

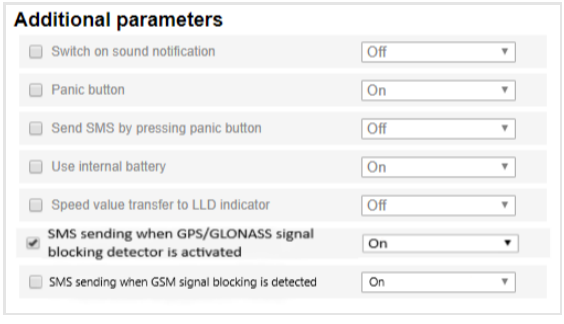
GPS/GLONASS jamming detector can be activated when SMS configuration is enabled (see GSM and SMS parameters).

GSM Signal Jamming Detector

For Omnicomm Profi and Profi Wi-Fi terminals in the **"Settings"** tab select the **"Auxiliary equipment"** section from the list.

In the **"GSM Signal Jamming Detector"** section:





GSM jamming detector can be activated when SMS configuration is enabled (see GSM

and SMS parameters).

“Sending SMS on GSM signal jamming detection” – check the box to send SMS upon registering the GSM network signal jamming.

Service Functions

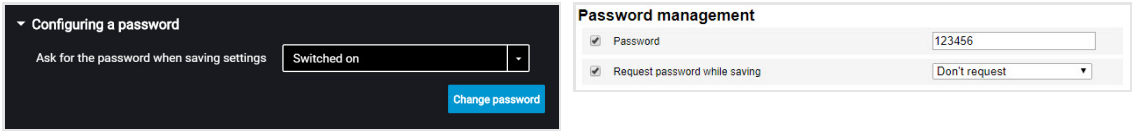
Terminal Reboot

In the “Service” menu select “Restart Terminal”.

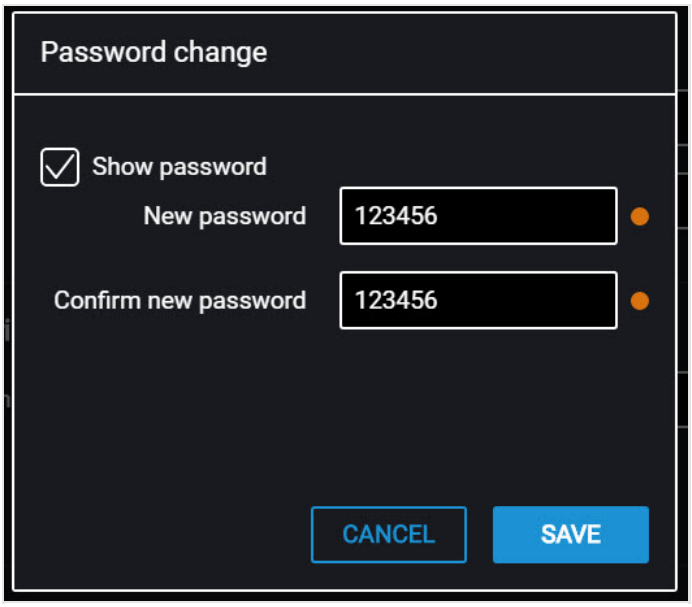
Setting Password on Configuration Changing

In the **“Settings”** tab select the **“Additional equipment”** section from the list.

In the **“Configuring a password”** section:

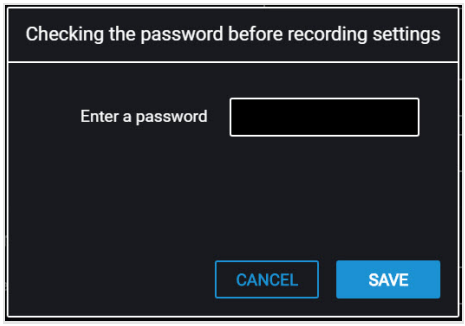


If you need to use a password to configure the terminal settings, in the field “Ask for password when saving settings” select “Enabled”. Press the “Change password” button. A window will open:



"New password" and "Confirm new password" – enter a new password that will be used to get access to settings configuration. The password shall contain 8 characters maximum.

Press the "Save" button. A window will open:



Press the "Ok" button.

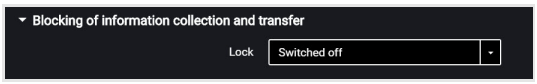
Press the "Record into device" button.

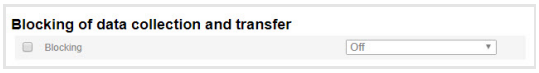
Data Collection and Transmission Blocking

In the **"Settings"** tab select the **"Connection"** section from the list.

In the **"Blocking of information collection and transfer"** section:

To block the terminal data acquisition and transmission in the "Lock" field select "Switced off":





To unlock data acquisition and transmission use Omnicomm Configurator or send SMS command *UNBLOCK# to the SIM card, inserted in the terminal.

Remote Configuration Server Operation Setting

Set password on terminal settings modification by either of the following ways:

- When configuring the terminal using Omnicomm Configurator set password on settings modification that is different from the password set by default. Password set by default – empty line

- Send SMS command to change password set by default: *SETPWDID 235009988 12345#

where: 235009988 – terminal ID; 12345 – password to be set. The password shall contain

8 characters maximum and may include any digits and letters.

> The previously set password cannot be changed in this way.

After 6 hours, the terminal will be authorized on the Remote Configuration Server and will be available for operation via the Remote Configuration Server.

Terminal SIM Card Number Identification

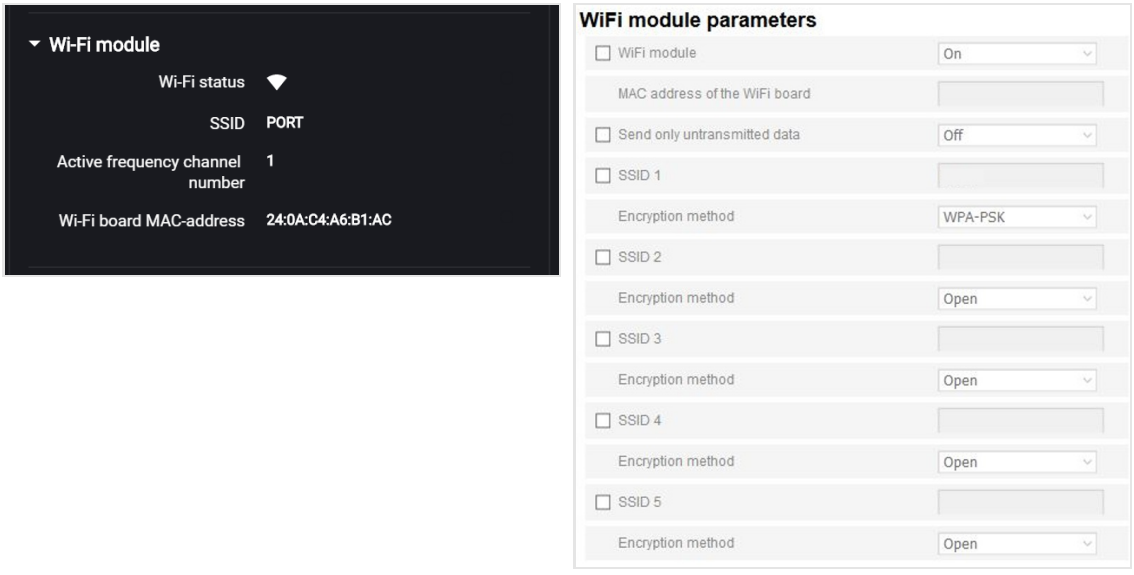
The terminal SIM card telephone number is automatically displayed in the Remote Configuration Server after the second connection to the RCS.

> SMS sending shall be enabled for the SIM card.

Determining the MAC address of a Profi Wi-Fi terminal

The MAC address of an Omnicomm Profi Wi-Fi terminal is determined automatically and displayed in Omnicomm Configurator and in the Remote Configuration Server.

In Omnicomm Configurator, in the **"Monitoring"** tab, in the "**Wi-Fi module"** section:



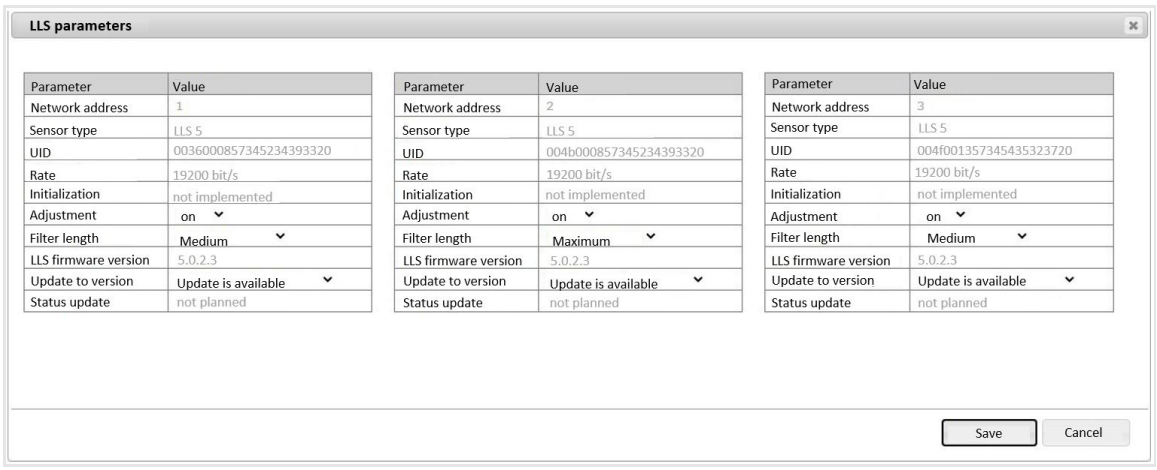
> If the MAC address has not yet been determined, connect the terminal to a WI-Fi access point to receive the IP address. The MAC address will be determined automatically.

The Set Up and an Update of Built-in Firmware for the Omnicomm LLS 5 and LLS-Ex 5 Fuel Sensors

When Omnicomm LLS 5 and LLS-Ex 5 fuel sensors are connected to the video-terminal with an built-in firmware version FW310 or later, there is a possibility to update firmware and change settings via the Remote Configuration Server.

> You can set up or update the firmware only one sensor at a time. The value of the network address of the sensor shall be between 1 and 6.

In the remote configuration server in the **"RS port settings"** click on **"LLS parameters"**:



"Network address" – a network address of the Omnicomm LLS fuel sensor will be displayed.

"Sensor type" – the type of the fuel sensor will be displayed Possible options: LLS 5 and LLS-Ex 5.

"UID" – sensors identification number.

"Speed" – the speed of the data exchange with exterior devices will be displayed.

"Initialization" – the accuracy of the «Full/Empty» calibration for the main and REF-channel will be displayed. Possible options: completed - the «Full/Empty» calibration for the main and REF-channel was completed successfully and the default values were changed; not completed - the «Full/Empty» calibration for the main and REF-channel was not completed, the default values were set.

"Automatic adjustment" – enable to automatically correct the measurements when the dielectric constant of the fuel changes. Upon activation of automatic adjustment, changes of level caused by thermal expansion of fuel will be displayed, i.e. the level will be shown considering the current temperature. The setting is available only after the sensor has

been calibrated.

“Filter Length” – please insert the value of the filters length according to filtration. Possible options: no, minimum, medium, maximum.

“Sensors Firmware version” – the fuel sensors in-built firmware version will be displayed.

“Update to version” – select the version of the in-built firmware of the sensor when the update is necessary. If a newer version is available, “Update available” is displayed.

“Update status” – the status of the update will be displayed. Possible options: planned, not planned.

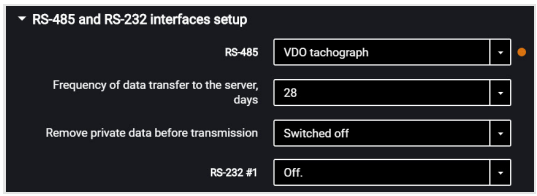
Sensor settings will be updated and / or changed after the connection between the terminal and the remote configuration server is established.

Additional Equipment

RS-485 and RS-232 Interfaces

Connection of auxiliary equipment (CAN-Log, PP-01 passenger throughput sensors, DV-1 driver display, JPEG camera, data reception from vehicle J1708 data bus, reception and transmission of navigation data as per NMEA standard) is carried out through RS-485 and RS-232 interfaces. When needed, it is recommended to use the RS-232 to RS-485 converter.

In the “Settings” window open the “Inputs” tab:



For Omnicomm Smart terminal you may only configure interface RS-485.

For RS-485 and RS-232 interfaces choose the setting:

- “Disabled” – interface is not used
- “CAN-log” (for RS-232 interface only) – connection to a CAN-log device (CAN-LOG P protocol V1, CAN-LOG B protocol V2, CAN-LOG B protocol V4)
- “J1708” – connection to the vehicle J1708 data bus

Additional Equipment

- “NMEA reception” – use of navigation data from an external device. If you select this option, you must specify the data port bit rate. “RS port bit rate for NMEA data” – select the data port bit rate for reception of navigation data from an external device
- “NMEA transmission” – use of the terminal navigation data in an external device
- “PP-01” – use for connection of the passenger throughput sensor
- “Camera” – use for the digital camera connection
- “DV-01” – use for the driver display connection
- “LLS / LLD” – use for connecting fuel level sensors Omnicomm LLS, Omnicomm LLD indicator
- “Tachograph VDO” (only in Omnicomm Configurator) – use for Continental tachograph connection

    “Frequency of data transfer to the server” – select the number of days for the DDD files transmission to the communication server. Possible options: from 1 to 28 days.

    “Remove private data before transmission” - if necessary, enable deleting the driver's personal data prior to data submission to the server.

- “iQFreeze” – use for connection of the refrigerator control device
- “ALM Weight Indicator” – use for connection to the axle load monitoring device
- “Modbus (Struna +, PMP-201)” – use for connection to the level gauge PMP-201 or the Struna + system
- “Custom Modbus” – is used to connect equipment which operates with Modbus protocol standard (except for Smart)

    “Port baud rate” – specify the Modbus port baud rate operation Possible options: 9600, 19200, 38400, 57600, 115200.

    “Port settings” – select the port settings Possible options: 8-N-1, 8-N-2, 8-E-1, 8-E-2, 8-O-1, 8-O-2.

- “TPMS Pressure Pro” (only for RS-232 interface) – use for connection of the tire pressure sensors though TPMS Pressure Pro protocol
- “Truck-TPMS” (only for RS-232 interface) – use for connection of the tire pressure sensors though Truck-TPMS protocol

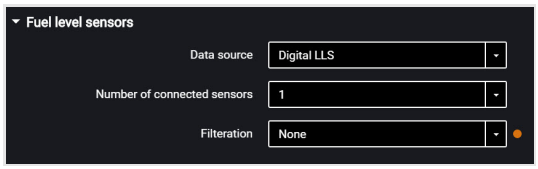
Additional Equipment

- "TPMS 6-13" (only for RS-232 interface) – use for connection of the tire pressure sensors though TPMS 6-13 protocol. The terminal transmits temperature data with an interval of 20 degrees: -40,-20, 0, +20,…, +100. The frequency and transmission depend on the energy-saving settings of the wireless pressure sensors configured in accordance with the TPMS user manual.

Fuel Level Sensors

In the **“Settings”** tab select the **“Inputs”** section from the list.

In the **“Fuel Level Sensors”** section:



“Data source” – select the type of fuel level sensors. Possible options:

- “Digital LLS” – when connecting fuel level sensors Omnicomm LLS
- “Frequency LLS-AF” – when connecting fuel level sensor Omnicomm LLS-AF
- “Vehicle sensor” – when connecting the vehicle standard fuel sensor
- “CAN Bus” – when connecting to the CAN bus
- “Struna +” (except for Smart) – when connecting to the “Struna +” system
- “PMP-201” (except for Smart) – when connecting the level gauge PMP-201
- “Disabled” – in case fuel level control is not required.

When Omnicomm LLS and Omnicomm LLS-AF fuel level sensors are connected:

“Number of connected sensors” – specify the number of sensors connected to the terminal.

When choosing LLS fuel level sensors connected to a universal input, you need to configure the universal input. For automatic configuration of the universal input in Omnicomm Configurator press the “Configure UI” button.

“Filtration” – enter the size of inner filter. Possible options of filtration:

- “None” – filtration is performed only according to the settings in the Omnicomm LLS sensor
- “Weak” – used in case of product installation in stationary fuel storages and non-mobile machinery
- “Medium” – used in case of vehicle's operation in normal road conditions
- “Strong” – used in case of vehicle's operation in normal and severe road conditions
- “Maximum” – used in case of vehicle's operation in severe road conditions and when connecting a standard fuel sensor with analog output

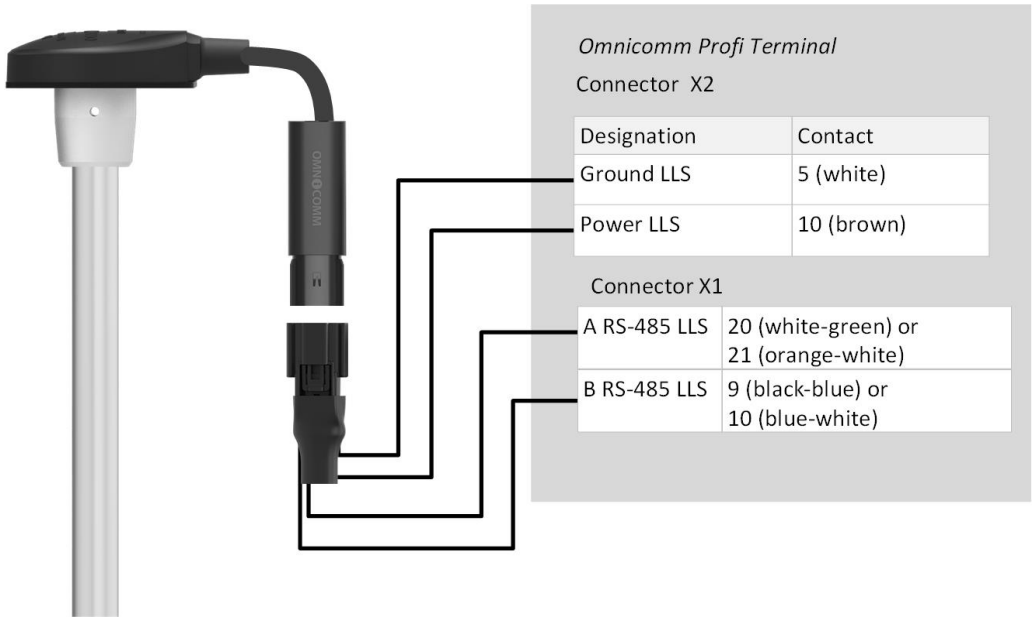
Additional Equipment

When connecting to the “Struna +” system or the “PMP-201” sensor:

- “Fuel tank volume, L” – enter the fuel tank volume. Possible values: 0 to 65,000
- “Current fuel volume, L” – displays the current volume according to the “Struna +” system or the “PMP-201” sensor

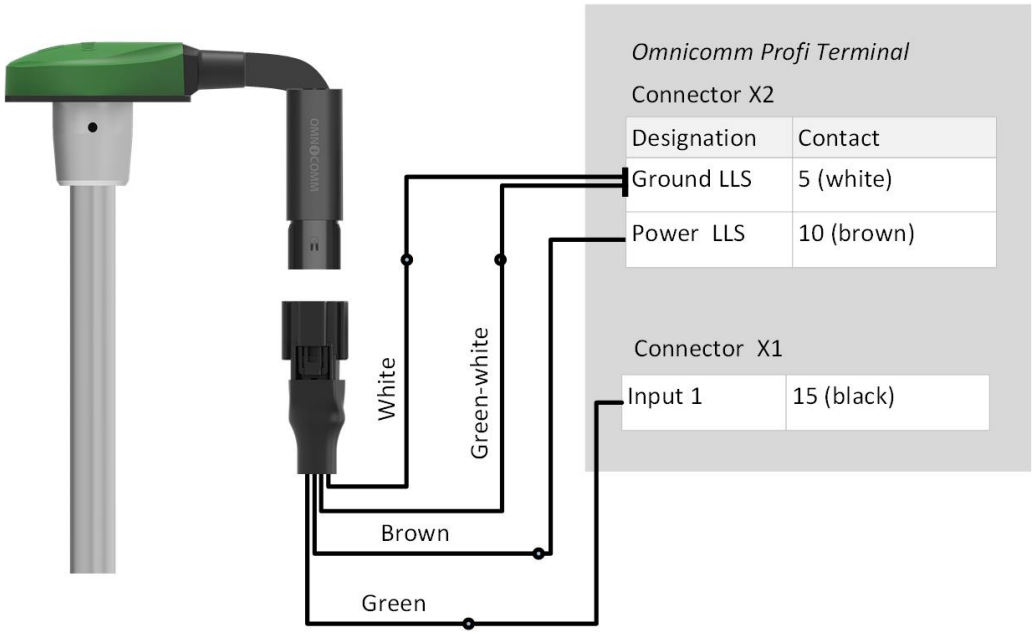
Connect the “PMP-201” sensor and the “Struna +” system according to the documentation on these devices. You may connect only one “Struna +” system. The network address, by default, is 80.

Connect one Omnicomm LLS fuel level sensor to the Terminal Omnicomm Profi, Profi Wi-Fi according to the diagram:



Connect Omnicomm LLS-AF fuel level sensor to the Terminal Omnicomm Profi, Profi Wi-Fi according to the diagram:

Additional Equipment

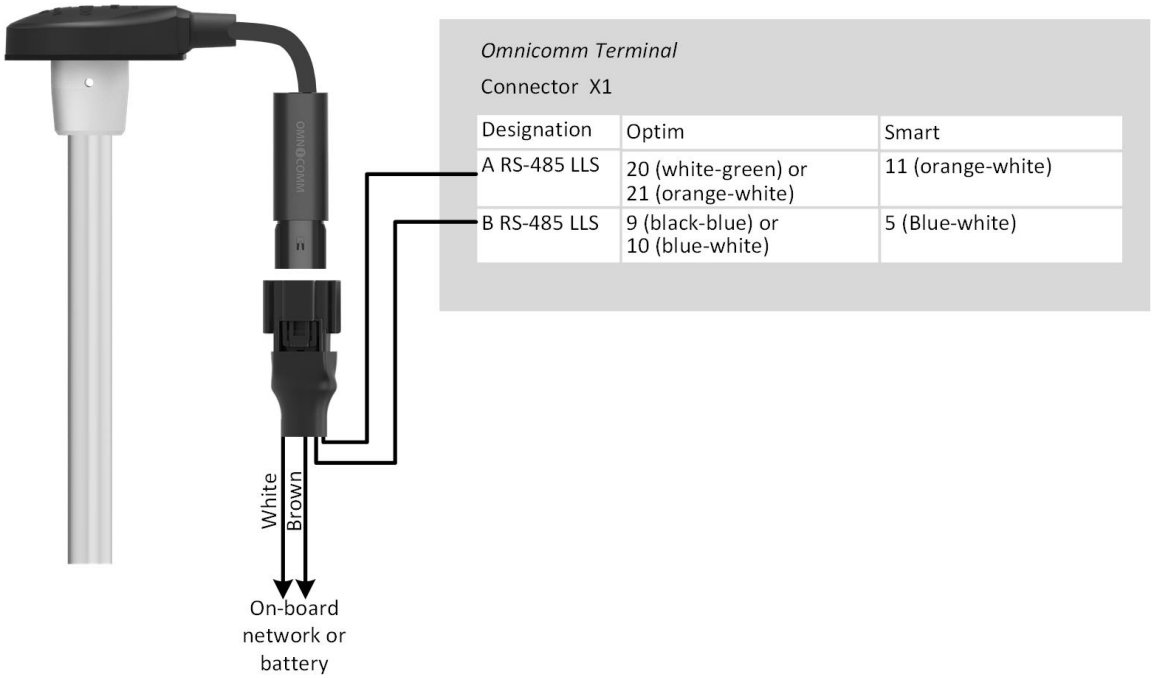


Connect several Omnicomm LLS-AF sensors to the terminal one by one, starting with 1 universal input. Only one Omnicomm LLS-AF sensor can be connected to the Omnicomm Smart and Smart Promo terminals.

Omnicomm LLS-AF sensor must be set to output a frequency signal in the range from 30 to 1053 Hz.

Connect one Omnicomm LLS fuel level sensor to the terminal Omnicomm Optim and Smart according to the diagram:

Additional Equipment



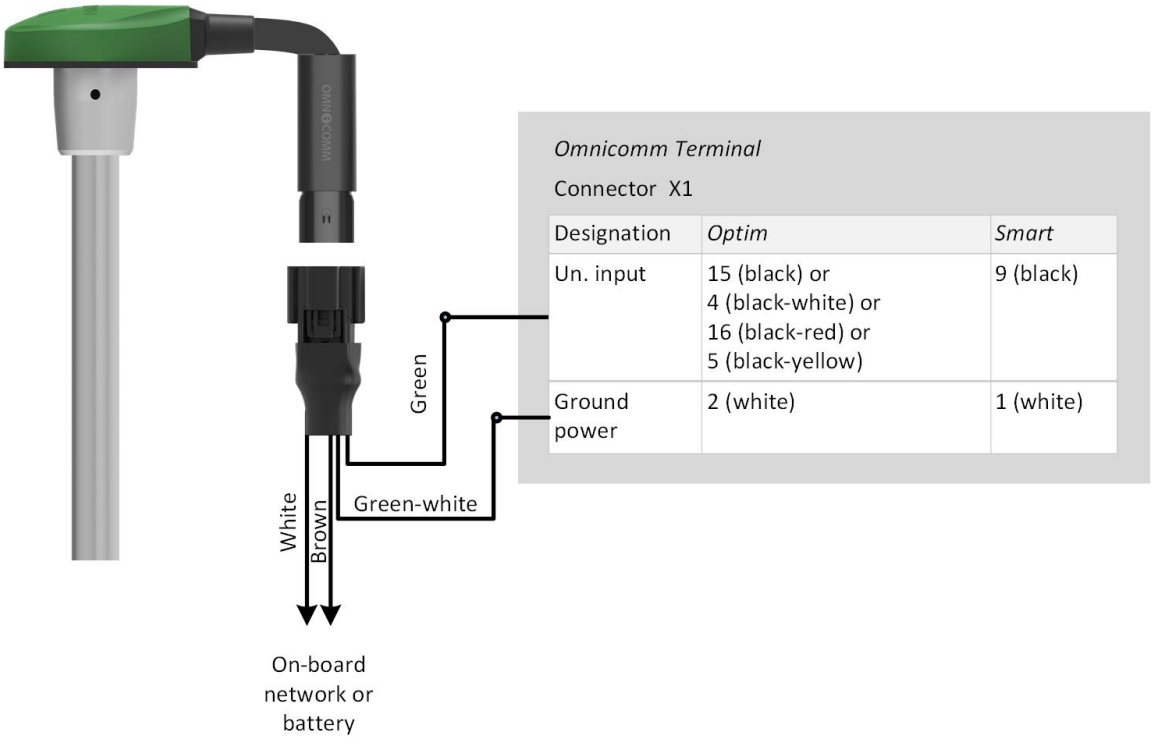
Omnicomm Terminal

Connector X1

Designation	Optim	Smart
A RS-485 LLS	20 (white-green) or 21 (orange-white)	11 (orange-white)
B RS-485 LLS	9 (black-blue) or 10 (blue-white)	5 (Blue-white)

Connect one or more Omnicomm LLS fuel level sensors side-by-side via the RS-485 interface.

Connect Omnicomm LLS-AF fuel level sensor to the terminals Omnicomm Optim and Smart according to the diagram:



Omnicomm Terminal

Connector X1

Designation	*Optim*	*Smart*
Un. input	15 (black) or 4 (black-white) or 16 (black-red) or 5 (black-yellow)	9 (black)
Ground power	2 (white)	1 (white)

Additional Equipment

When connecting the terminals to the “Struna +” system or the “PMP-201” sensor:

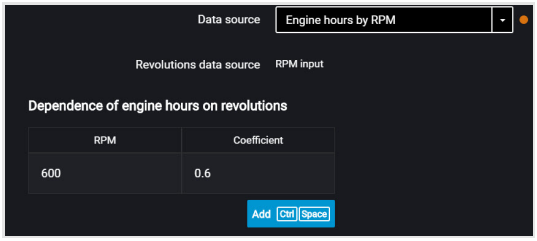
- “Fuel tank volume, L” – enter the fuel tank volume. Possible values: 0 to 65,000
- “Current fuel volume, L” – displays the current volume according to the “Struna +” system or the “PMP-201” sensor

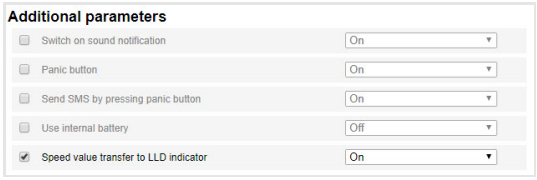
Connect the “PMP-201” sensor and the “Struna +” system according to the documentation on these devices. You may connect only one “Struna +” system. The network address, by default, is 80.

Omnicomm LLD Indicator

In the **“Settings”** tab select the **“Additional equipment”** section from the list.

In the **“Data transmission to Omnicomm LLD indicator”** section





“Data source” – select the data source to display the value on the Omnicomm LLD indicator. Possible options:

- “GPS speed” – displays the vehicle speed
- “Universal input“ – displays the status or values on the terminal universal input depending on the connected auxiliary equipment
- “Engine hours by RPM” (only for Profi, Profi Wi-Fi, Optim) – displays vehicle engine hours

When selecting “Motor hours by RPM”, fill in the table of RPM recalculation to motor hours as follows:

In the field “Revolutions per minute” enter the value of RPM, in the field “Factor” enter the value of conversion factor to calculate the motor hours value.

The conversion factors are determined based on the operating conditions of the vehicle.

Maximum number of rows – 5.

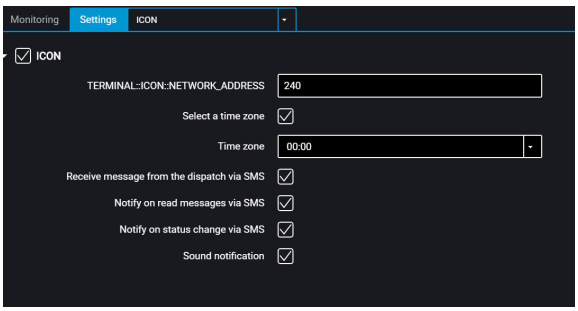
Engine hours are displayed on the LLD indicator as hour values with a fractional part (1.50 means 1 hour 30 minutes) in the format HH.XX in the range of up to 100 hours and HHH.X in the range of 100.0 to 999.9 engine hours. If the number of engine hours is more than

1000, the last three significant figures are displayed and one symbol after the decimal point.

Motor hours are fully recorded in the terminal and sent to the CS on a continuous accrual basis.

Omnicomm ICON Display

In the **"Settings"** tab select the **"ICON"** section from the list.



"ICON" – check the box to display data from the terminal on the Omnicomm ICON Display

- "Network address" – select the display network address. Possible values: from 7 to 254
- "Select a time zone" – check the box to select the time zone with reference to UTC. The value of the time zone is used in case where automatic accounting of time zones is not required

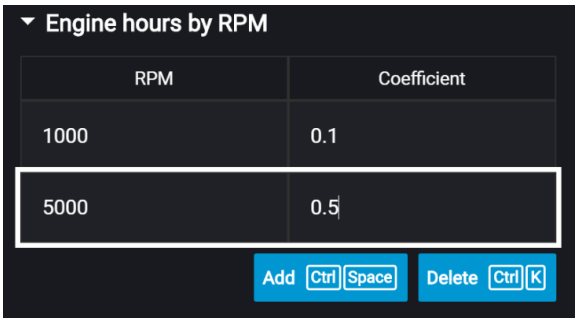
"Time zone" – select the time zone

- "Notify on status change via SMS" – check the box to send SMS to the dispatcher's number about changing the driver's status. Notification contains the new status of the driver.
- "Sound notification" – check the box to enable sound notification when registering the event specified when configuring the terminal and the display

In the **"Settings"** tab select the **"Additional equipment"** section from the list.

"Engine hours by RPM", fill in the RPM to engine hours conversion table:

Additional Equipment



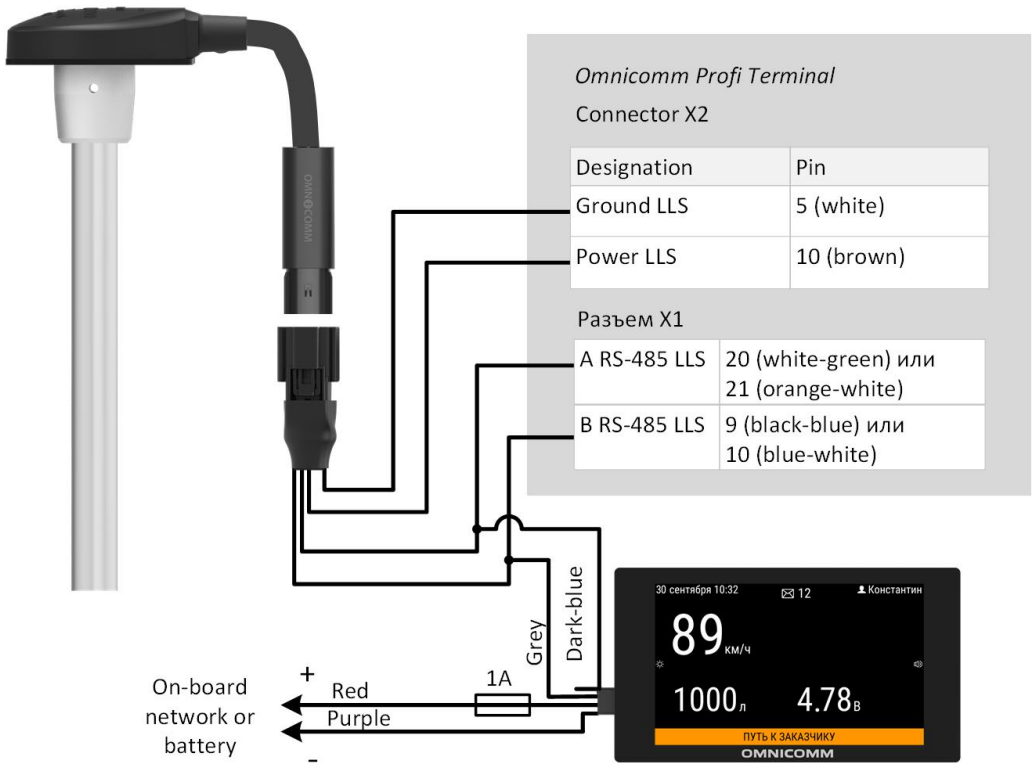
Enter the RPM value in the “RPM” field, in “Coefficient” field enter the value of conversion factor to calculate engine hours.

The conversion factors are determined based on the vehicle operating conditions. Maximum number of rows – 5.

The engine hours are displayed in hours with a decimal part (1.50 equals to 1 hour and 30 minutes) in the format HH.XX within the range of up to 100 engine hours and HHH.X for 100.0 - 999.9 engine hours. If the number of engine hours is higher than 1000, the last three significant digits and one symbol after the decimal point are displayed.

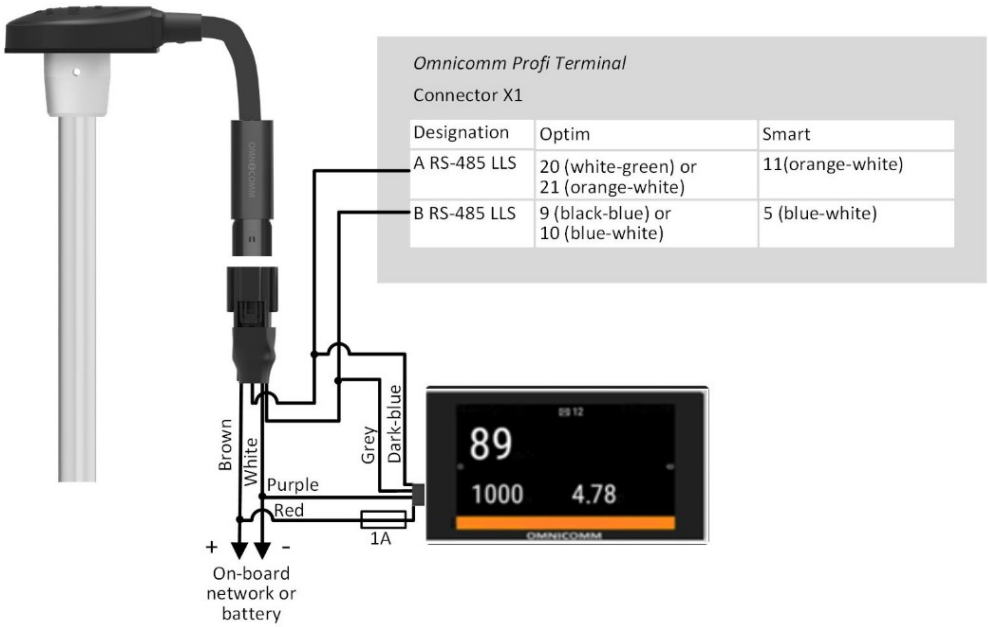
All engine hours are recorded in the terminal and sent to the CS as accrued total.

Connect Omnicomm Profi terminal to Omnicomm ICON display according to the diagram:



Connect Omnicomm Profi, Smart terminal to Omnicomm ICON display according to the

diagram:



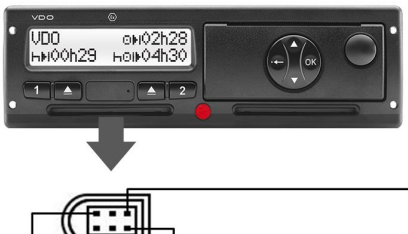
Omnicomm Profi Terminal

Connector X1

Designation	Optim	Smart
A RS-485 LLS	20 (white-green) or 21 (orange-white)	11(orange-white)
B RS-485 LLS	9 (black-blue) or 10 (blue-white)	5 (blue-white)

Tachograph

Connect the Continental tachograph to the Optim terminal via RS-232 and RS-485 according to the diagram:



Omnicomm Terminal

Designation	Optim, Profi
RX RS232	8 (pink)
TX RS232	19 (grey)
Ground (signal)	1 (white) or 2 (white)

Power connections of the terminal and the tachograph must be made similarly: either both before, or both after the vehicle battery disconnect switch.

If needed, it is recommended to use the RS-232 to RS-485 converter.

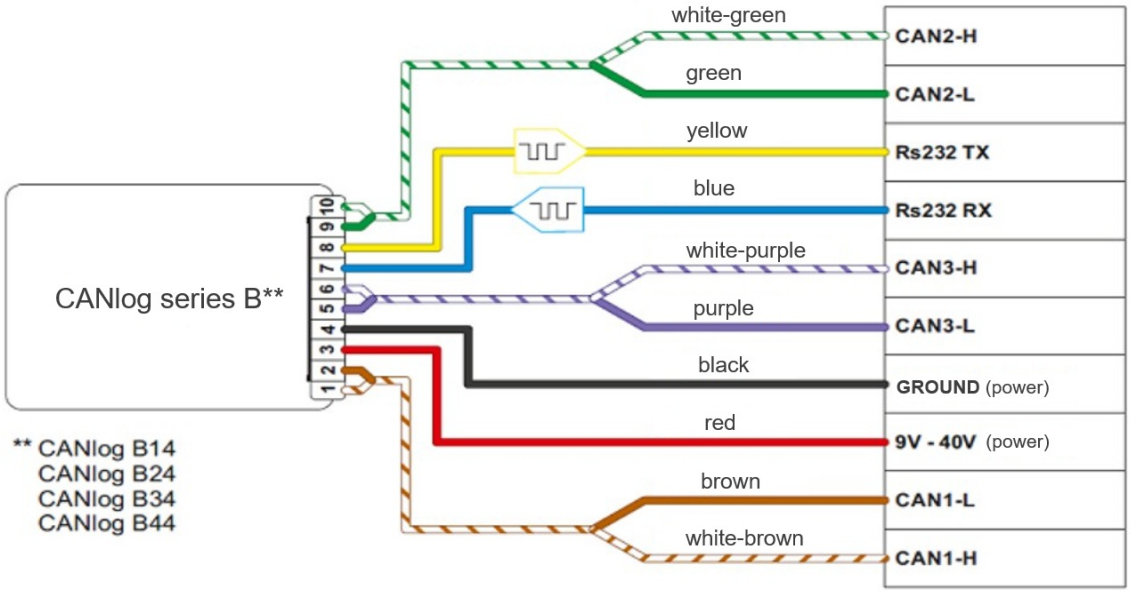
To read the DDD files from the Continental tachograph, in the program configure the RS-232 or RS-485 interface of the terminal.

CAN-LOG controllers

Additional Equipment

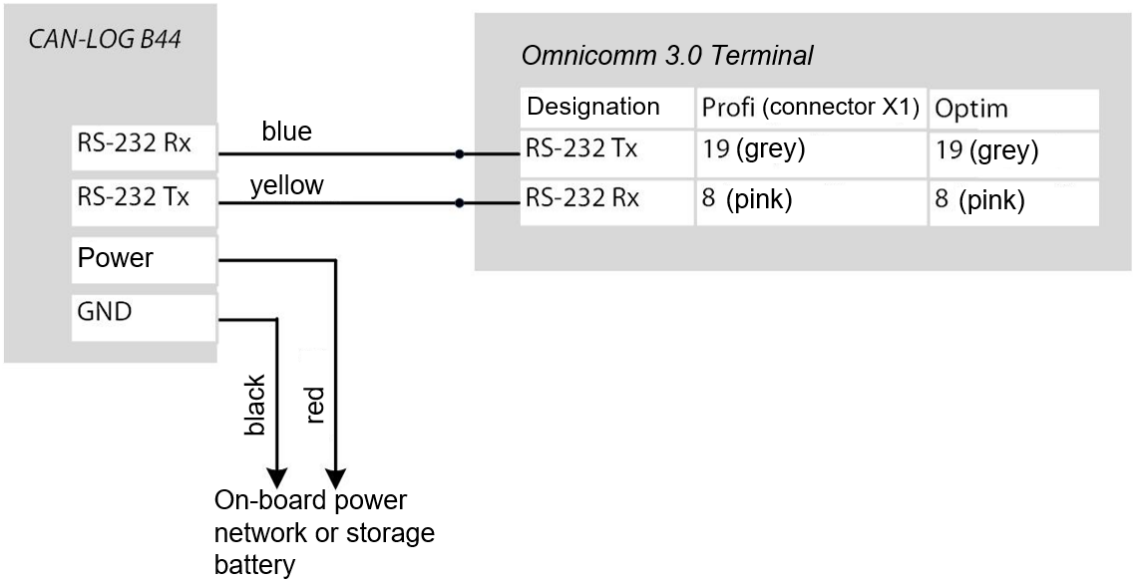
Omnicomm terminals (except for Smart) support the connection of CAN-LOG controllers.

Connect the CAN-LOG, series B14, B24, B34, B44, to the vehicle's CAN bus, as shown in the diagram:



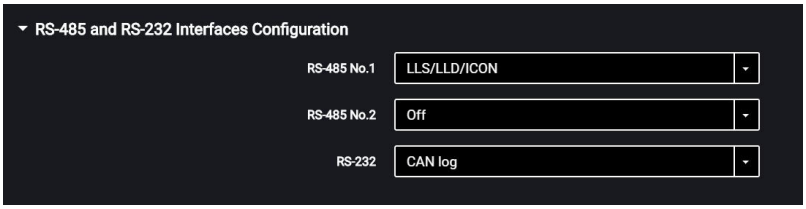
Follow the instructions provided by the CAN-LOG manufacturer during connection.

Connect the CAN-LOG to the terminal via the RS-232 interface as shown in the diagram:



In Omnicomm Configurator, in the “Settings”/“Inputs” window, in the “RS-485 and RS-232 Interface Configuration” section:

Additional Equipment



“RS-485” - select CAN log.

CAN-LOG parameters, displayed in Omnicomm Online and in Omnicomm Configurator

SPN	Omnicomm Online	Configurator	CAN-LOG series B V4	CAN-LOG series B V2	CAN-LOG series P V1
70	Park. brake status	Parking brake status	Yes	Yes	Yes
91	Acceler. pedal pos., %	Accelerometer pedal position (%)	Yes	Yes	Yes
96	Fuel level		Yes	Yes	Yes
110	Eng. coolant temp., °C	Engine coolant temperature	Yes	Yes	Yes
175	Eng. oil temp.,°C	Engine oil temperature			Yes
182	Daily fuel cons., l	Daily fuel consumption	Yes	Yes	
190	Engine RPM, rpm	Engine RPM	Yes	Yes	Yes
244	Daily mileage, km	Daily mileage	Yes	Yes	
245	Odometer reading, km	Total mileage	Yes	Yes	Yes

Additional Equipment

SPN	Omnicomm Online	Configurator	CAN-LOG series B V4	CAN-LOG series B V2	CAN-LOG series P V1
247	Engine hour meter reading, hour:min	Total engine operation time	Yes	Yes	Yes
250	Fuel consumption meter reading, l	Overall fuel consumption	Yes	Yes	Yes
527	Cruise Control status	Cruise Control status	Yes	Yes	
582	Axle load, kg	Axle load	Yes	Yes	Yes
597	Serv. br. ped. status	Status of the service brake pedal	Yes	Yes	Yes
598	Clutch ped. status	Status of the clutch pedal	Yes	Yes	
914	Mileage before maintenance, km	Mileage before next maintenance	Yes	Yes	
916	Engine hours before maintenance, h	Time before next maintenance	Yes	Yes	
1624	Inst. speed, km/h	Instantaneous speed	Yes	Yes	Yes

Custom Modbus

The Omnicomm Profi and Optim terminals with the firmware version of FW310 or higher support the connection of an external device operating via the Modbus protocol.

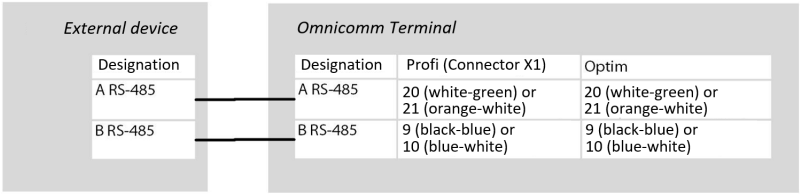
Additional Equipment

Only one device working via the Modbus protocol can be connected to the terminal.

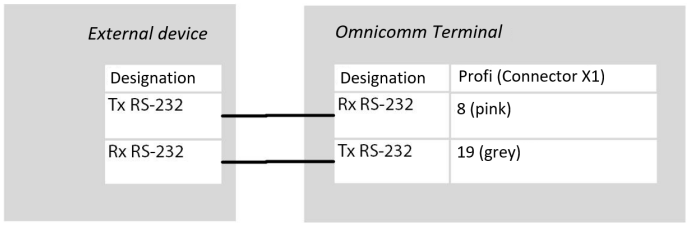
Pre-check the settings of an external device: port, baud rate, and device IP-address.

Connect an external device via the RS-485 or RS-232 interface.

Connect an external device via the RS-485 interface to the Omnicomm Profi and Optim terminals according to the diagram:

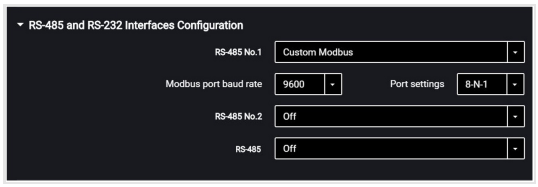


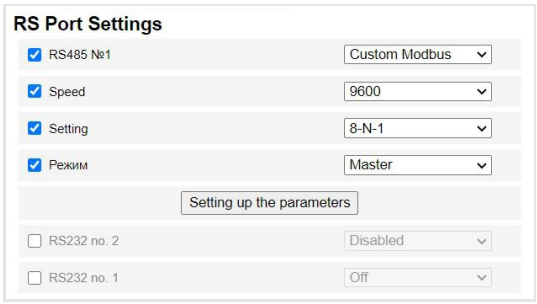
Connect an external device via the RS-232 interface to the Omnicomm Profi and Optim terminals according to the diagram:



Follow the instructions provided by the external device manufacturer during connection.

In the Omnicomm Configurator program in the “Settings” / “Inputs” window or in the remote configuration server in the “RS-485 and RS-232 interfaces configuration” section:





“Custom Modbus” is used to connect equipment which operates with Modbus protocol standard (except for Light, Smart).

When selecting “Custom Modbus”:

“Port baud rate” – specify the Modbus port baud rate operation Possible options: 9600, 19200, 38400, 57600, 115200.

“Port settings” – select the port settings. Possible options: 8-N-1, 8-N-2, 8-E-1, 8-E-2, 8-O-1, 8-O-2.

In the Omnicomm Configurator, the terminal operation mode is configured and the parameters are added in the “Settings” / “Modbus” (see Modbus).

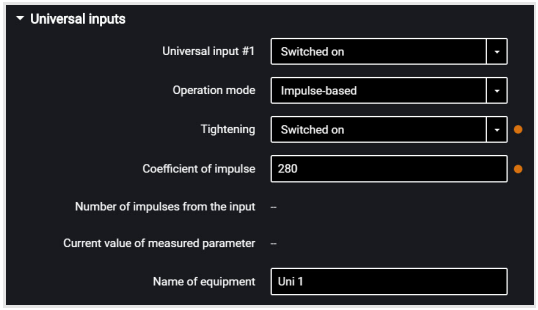
Universal Inputs

Universal inputs are intended for connecting the auxiliary equipment with pulse, direct-current, analog or frequency output and its operation monitoring.

In the **“Settings”** tab select the **“Inputs”** section from the list.

In the **“Universal Inputs”** section:

Sensors with pulse output



“Universal input” – select “Enabled”.

“Operation mode” – select “Pulse”.

“Equipment name” – enter the monitored parameter name.

“Tightening” – select “Enabled” when working with “open collector”-type sensors or contact sensors.

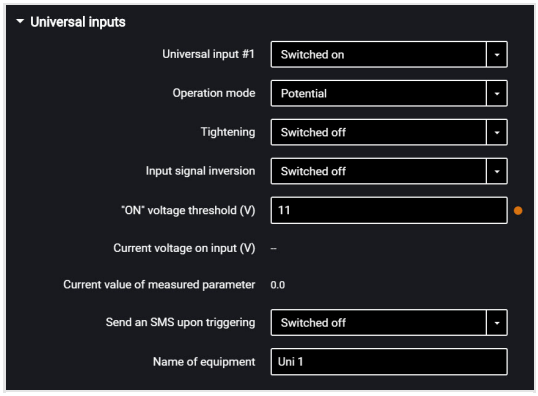
“Coefficient of impulse” – enter the calibration factor converting the number of pulses to the determined physical quantity.

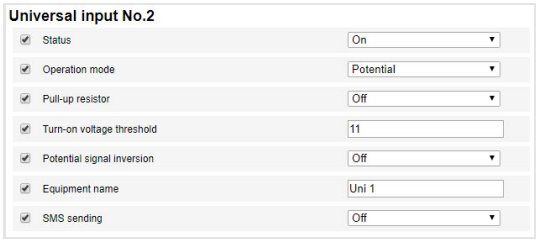
“Number of impulses from the input” (in Omnicomm Configurator) – number of pulses coming at the universal input.

“Current value of measured parameter” – displays the value at the input with account for the calibration factor.

Sensors with potential output

Additional Equipment





"Universal input" – select "Enabled".

"Operation mode" – select "Potential".

"Potential input activation voltage threshold" – set the value of voltage threshold, after which the terminal will record activation of the sensor. Default value – 9 V.

"Tightening" – select "Enabled" when working with "open collector"-type sensors or contact sensors.

"Input signal inversion" – set "Enabled" for the sensor with open contacts or contacts closing on commission of any action.

""ON" voltage threshold" – value of the voltage at the universal input of the terminal.

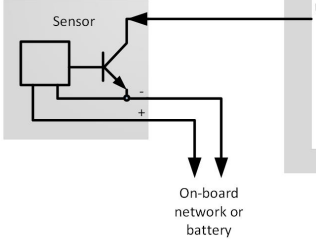
"Current value on input" – auxiliary equipment switched on or off.

"Send an SMS upon triggering" – select "Enabled" to send SMS when the direct-current universal input is triggered.

"Equipment name" – enter the monitored parameter name.

Possible sensor types: contact or contactless digital sensors.

Connect contactless sensors (capacitance, inductance, optical magnetic) and N-P-N sensors with "open collector"-type input according to the diagram:

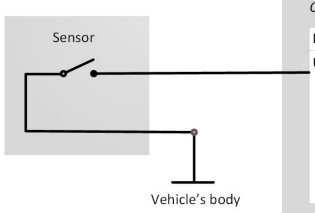


Omnicomm Terminal

Designation	Profi	Optim	Smart
Un. input	Connector X1 15 (black) or 4 (black-white) or 16 (black-red) or 5 (black-yellow) or Connector X2 4 (green) or 9 (purple)	15 (black) or 4 (black-white) or 16 (black-red) or 5 (black-yellow)	9 (black)

Connect the contactless sensor according to the scheme:

Additional Equipment

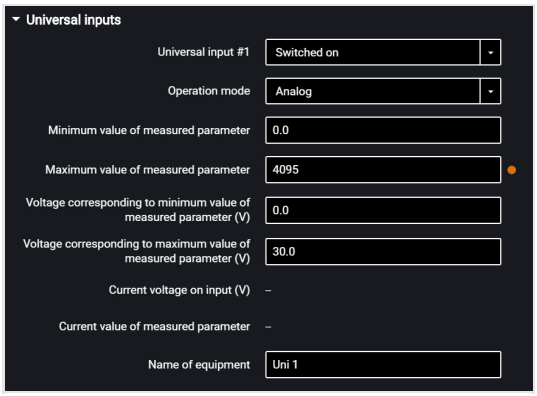


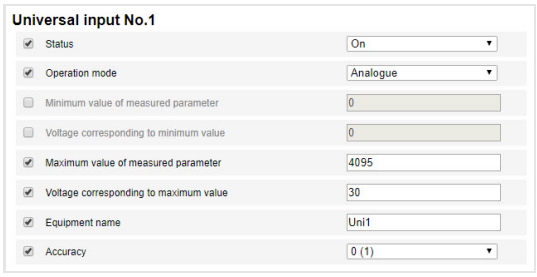
Omnicomm Terminal

Designation	Profi	Optim	Smart
Un. input	Connector X1 15 (black) or 4 (black-white) or 16 (black-red) or 5 (black-yellow) or Connector X2 4 (green) or 9 (purple)	15 (black) or 4 (black-white) or 16 (black-red) or 5 (black-yellow)	9 (black)

As the contact sensor you can use standard elements of equipment control (activation buttons / limit switches / sensors triggered by excess pressure or temperature, etc.) or an additionally mounted sensor. We recommend that you first look for possibility of connection to a standard device and install an additional sensor only if there is none.

Sensors with analog output





"Minimum value of measured parameter" – set the minimum value to be measured by the sensor (in the units of measurement of this value).

"Voltage corresponding to the minimum value of measured parameter" – set the value of voltage corresponding to the minimum measured value.

"Maximum measured value" – set the maximum value to be measured by the sensor (in the units of measurement of this value).

"Voltage corresponding to the maximum value of measured parameter" – set the value of voltage corresponding to the maximum measured value.

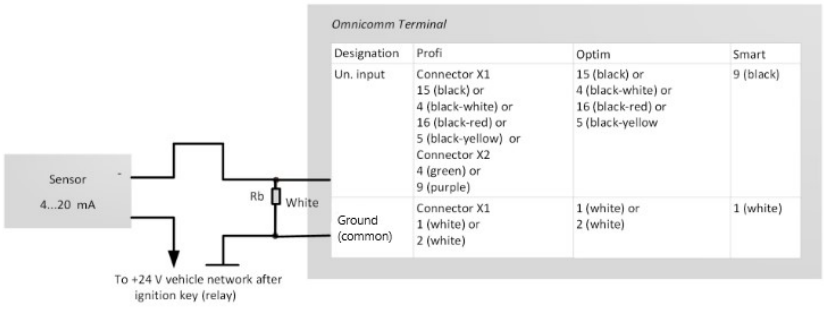
"Current voltage at universal input" – value of the voltage at the universal input of the Terminal.

"Current value of measured parameter" – current measured value.

"Equipment name" – enter the monitored parameter name.

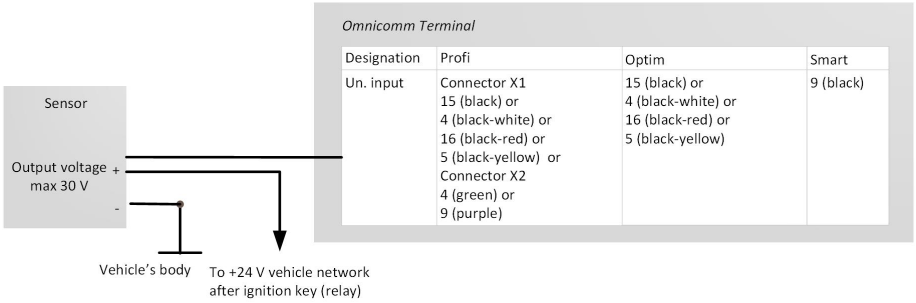
Analog sensor types:

- with uniform current output:

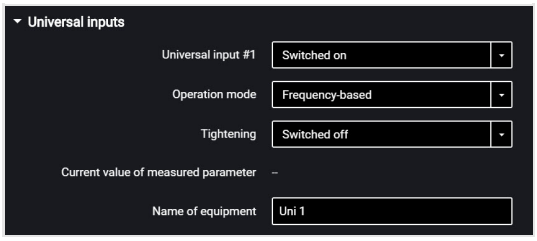


- with uniform voltage output:

Additional Equipment



Sensors with frequency output



"Universal input" – select "Enabled".

"Operation mode" – select "Frequency".

"Tightening" – select "Enabled" when working with "open collector"-type sensors or contact sensors.

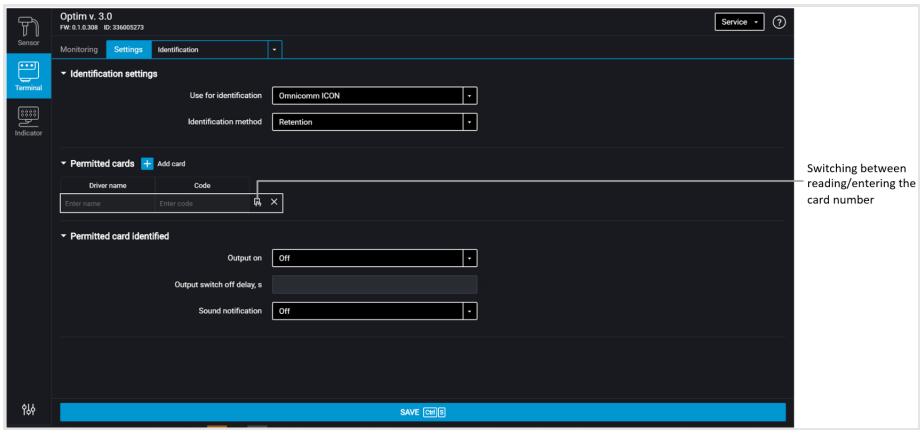
"Current value at universal input" – current measured value.

"Equipment name" – enter the monitored parameter name.

Driver Identification

In the **"Settings"** tab select the **"Identification"** section from the list.

For Omnicomm Optim, Profi, and Profi Wi-Fi terminals, in **"Identification settings"** section:



Additional Equipment

"Use for identification" – select the identification method. Possible options:

- "1-wire" – when performing identification with iButton key
- "Omnicomm ICON" – when performing identification with Omnicomm ICON display

"Identification method" – select the method of identification. Possible options:

- "Applying" – the identification is performed when a card or a key is applied for the period of time specified in the parameter "Key/card identification time".
- "Retention" – identification is performed by holding the card on the reader. This method is applied for identification via Omnicomm ICON display using the cardholder.

"Key/card identification duration" – specify the time value when iButton/card key is applied, after which will be enabled the second digital output of the terminal. Possible values: from 0 to 60 seconds.

In the **"Authorized keys"** section press the **"Add key / card"** button and enter the iButton / card key numbers, which application will enable the second digital output. The key number is indicated in 6-byte format. For automatic reading of the card number, connect Omnicomm ICON display to the terminal, switch on the readout mode and apply card.

For example, for a key you must enter: 000015AF6D2B

If no key/card is indicated in this section, the events will be recorded for all applied keys/cards.

"Output activation" – select "enabled" if you want to activate the second discrete output when the iButton / card authorized key is applied.

"Output cut off delay" – specify the time after disconnecting the iButton / card key from the readout device, after which the second digital output will be disabled. Possible values: from 0 to 3600 seconds.

If necessary, enable/disable the sound reminder of the driver's authorization in the field

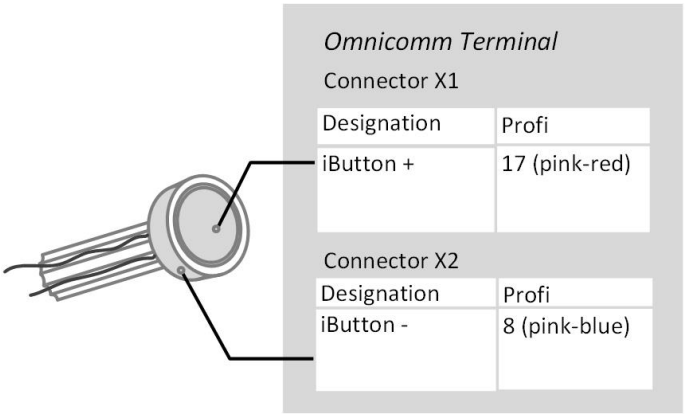
Additional Equipment

“Enable sound reminder” – “Yes”/”No”, respectively.

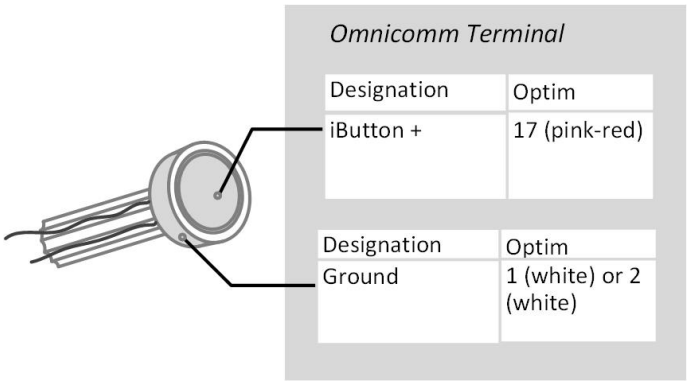
iButton readout device connection and installation

Determine the correspondence of the wire colours to the readout device contacts, ringing out the wires and readout device body contacts with each other using multimeter.

Connect iButton readout device to the Omnicomm Profi, Profi Wi-Fi Terminal according to the diagram:



Connect iButton readout device to the Omnicomm Optim Terminal according to the diagram:



iButton readout device must be installed on the vehicle front panel or in the service cover on the vehicle front panel.

At the installation site, drill a hole Ø9 mm, install the iButton readout device, put on the ring and lock washer.

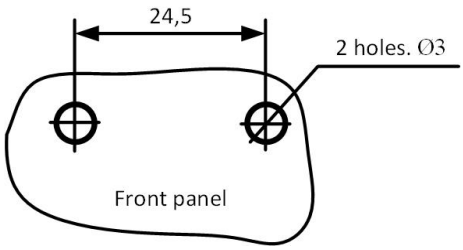
Connect the sound emitter:

1. Connect the yellow-red wire of the sound emitter to the controlled output of the terminal, connect the brown wire to +12 V /(+24 V) vehicle network

2. Perform installation on/under an inclined or horizontal surface of the vehicle cabin

front panel, fixing it with screws (self-tapping screws) or glue

3. At the installation site, when using screws, drill holes as shown in figure:



4. Mount the sound emitter on the prepared surface and fix.

Temperature Sensors

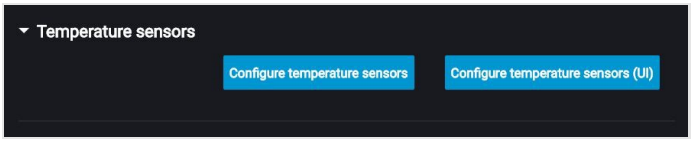
The Omnicomm Optim, Profi, and Profi Wi-Fi terminals support the connection of up to 8 temperature sensors.

On the **“Settings”** tab select section **“Auxiliary equipment”** from the list.

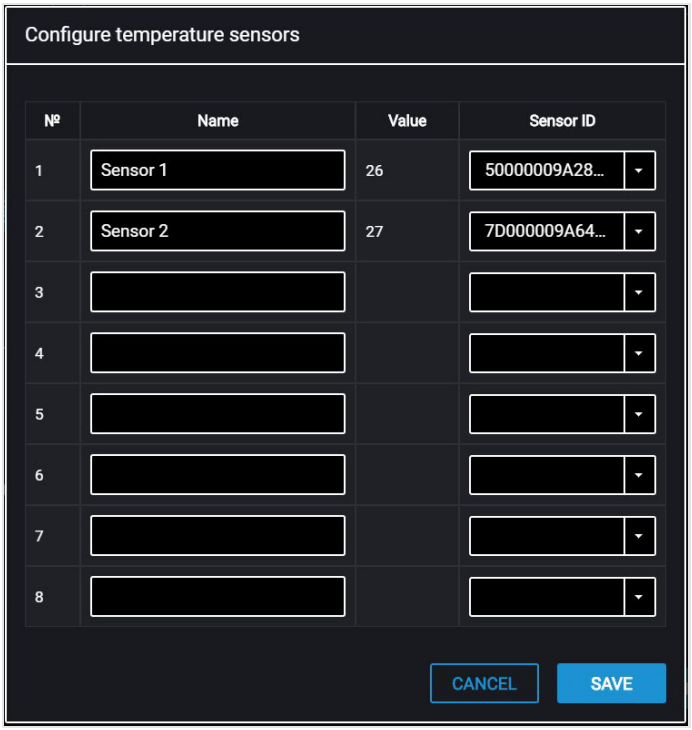
The **“Temperature sensors”** displays the temperature readings from the sensors, connected via 1-Wire interface.

Set up the temperature sensors. Choose the set up option:

- set up of the 1-Wire interface. Press the “Set up the temperature sensors” button
- set up via the universal input. Press the “Set up the temperature sensors (UI)” button



Set up of the 1-wire interface:



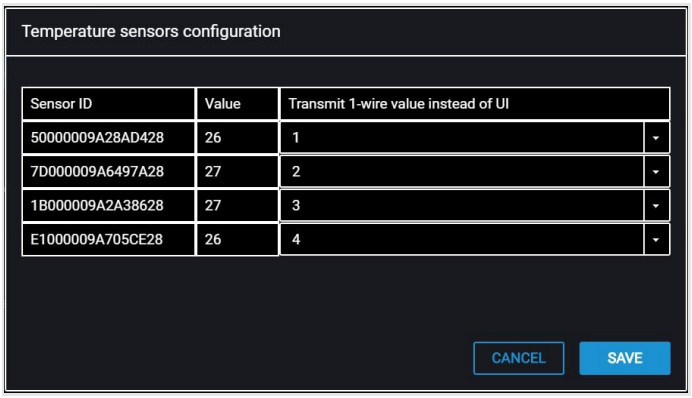
“Name” – input the name of the temperature sensor.

“Value” – displays the readings from the sensor.

“ID” – select the ID number of the temperature sensor.

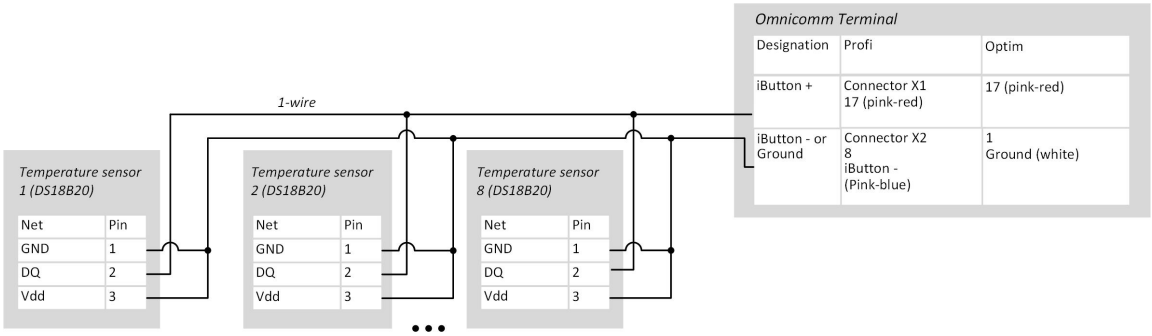
Set up via the universal input:

Additional Equipment

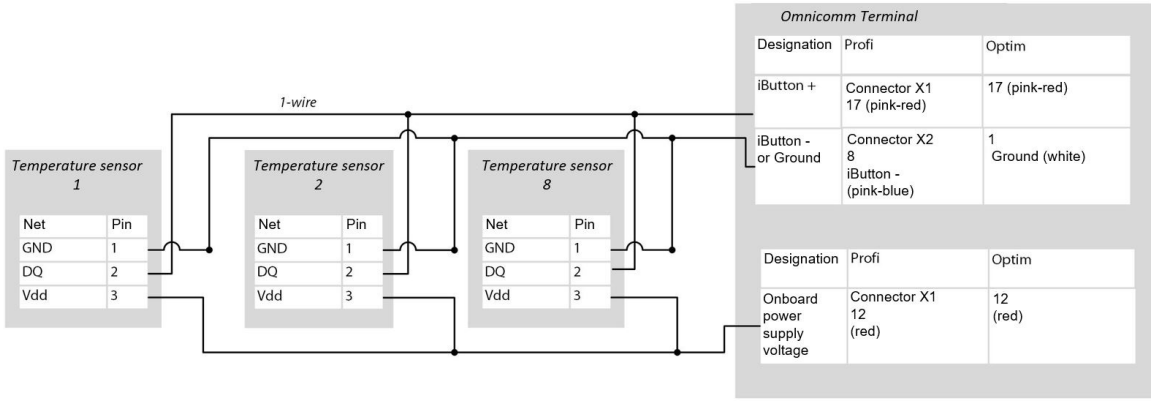


"Transmit the readings of the 1-Wire sensor instead of UI" – select the number of the universal input for displaying the temperature readings in Omnicomm Online.

Connect the temperature sensors to Omnicomm terminals according to the diagram:



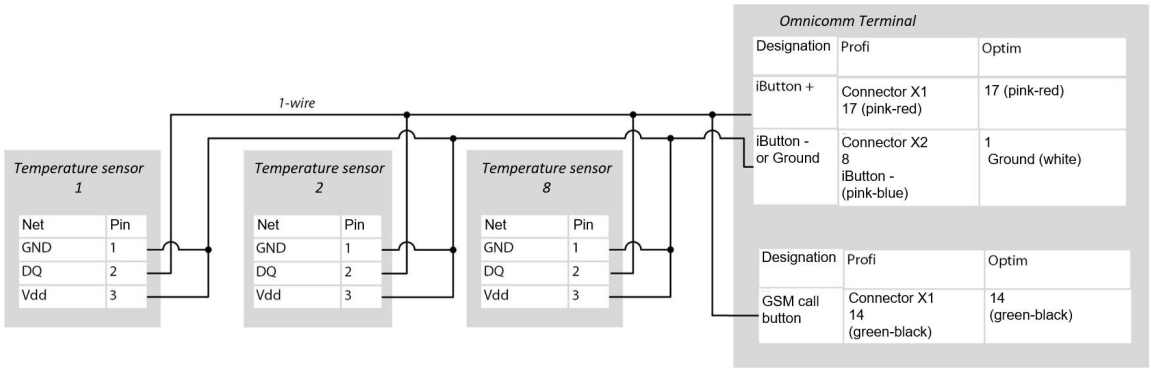
1-Wire sensor connection diagram with an extended range of external power supply:



Make sure that the onboard voltage does not exceed the max power supply voltage of the temperature sensor specified in the sensor passport.

1-Wire DS18B20 sensors connection diagram on a double-wire circuit with additional power supply from the terminal for operation in an extended range below -20 C and above +60 C:

Additional Equipment



In case of configuring the terminal in Omnicomm Configurator it is necessary to disable the possibility to use GSM call button (in the “GSM and SMS connection parameters” / “Headset” section – off, see Data Transmission to a Communication Server).

RFID Reader Connection

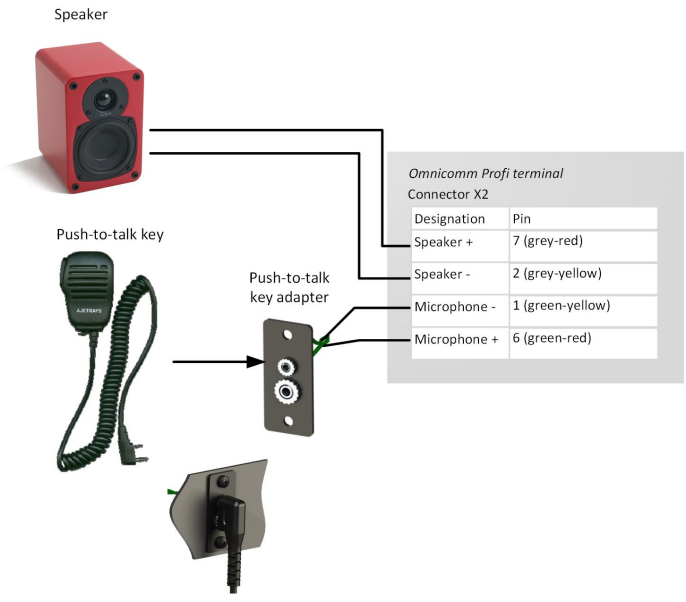
The terminal supports connection of swipe card readout devices via 1-Wire physical interface.

The connected readout device must fully simulate the exchange protocol of DS1990A product.

Timing diagrams must be executed for all officially declared specifications.

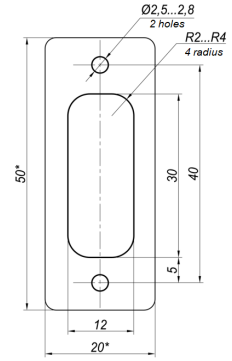
Voice Communication

Connect the voice communication set for Omnicomm Profi, Profi Wi-Fi terminal according to the diagram:



Additional Equipment

1. At the installation site, drill two holes Ø2.5 mm:

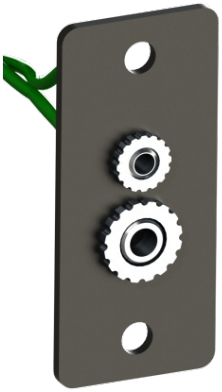


* - adapter panel dimensions

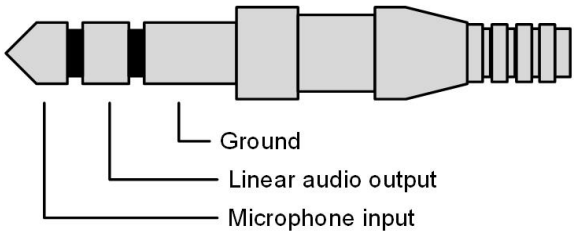
2. Drill a rectangular hole 30×12 using a milling cutter or drilling bit and install a push-to-talk key adapter

3. Fix the push-to-talk key adapter on the surface with self-tapping screws

4. Connect the push-to-talk key connector with the adapter connector:



5. Mini Jack 2.5 mm connector pin array to connect active speaker and Auxiliary Equipment Omnicomm 3.0 Terminals 65 microphone to the Omnicomm Optim terminal is shown on the diagram:



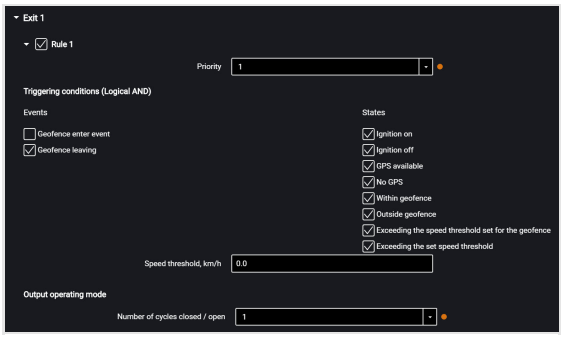
Controlled Equipment

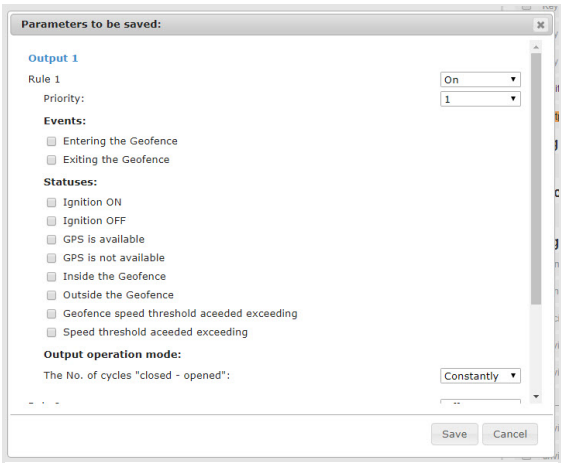
In the terminals, for each controlled output, up to three rules are provided for operation.

The rules are set by event or by a combination of events and states.

Additional Equipment

In the **“Settings”** tab select the **“Outputs”** section from the list.





“Rule priority” – set the priority of the rule. When at the same time several rules apply, a rule with the highest priority is used.

Possible options: 1 (highest), 2, 3 (lowest).

Select “Events”:

- Entering the geofence
- Leaving the geofence

Select “States”:

- Ignition on
- Ignition off
- GPS available
- No GPS
- Being in geofence
- Being outside geofences
- Exceeding the speed threshold set for the geofence
- Exceeding the set speed threshold

In the “Output operation mode” section:

Number of “closed-open” cycles – specify the number of output enabling/disabling.

Possible options:

- continuous – the output is always enabled (only available for states)
- from 1 to 9 – (only relevant for events, because for states fulfillment of this condition would lead to indefinite cycles repeating)

When selecting the number of cycles, specify:

"Delay before closing" – specify the time period until the output will be activated. Possible values: from 0.1 to 9.9 s.

"Duration of closing" – specify the time, during which the output must be activated. Possible values: from 0.1 to 9.9 s.

"Duration of opening" – specify the time until the next output activation. Possible values: from 0.0 to 29.9 s.

Example 1.

The following values are set:

- State – "Being in geofence"
- Number of "closed-open" cycles – 5

If the vehicle is inside the geofence, the output will be enabled and disabled 5 times. Output enabling/disabling (5 times each) will be repeated until the vehicle exits the geofence.

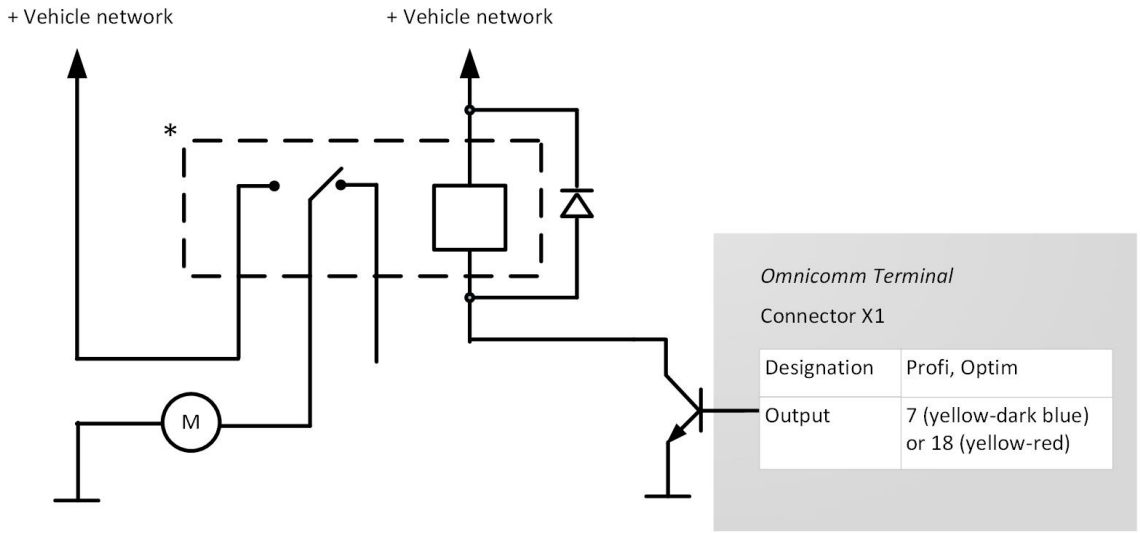
Example 2. The following values are set:

- State – "Being outside geofence", "GPS available"
- Number of "closed-open" cycles – "Continuous"

If the vehicle is outside the geofence and the GPS module data are valid, the output will be enabled, until the moment of entering the geofence or GPS data absence.

Connect auxiliary equipment to controlled outputs of Omnicomm Optim terminals according to the diagram:

Additional Equipment



- Relay with operation voltage suitable for the voltage of this vehicle network (12 or 24 VDC)

You can also control digital output by SMS commands: *SETDOUT param#, *GETDOUT#, *CLRDOUT param#

Voice Communication Kit

The voice communication kit is installed in the vehicle's cabin.

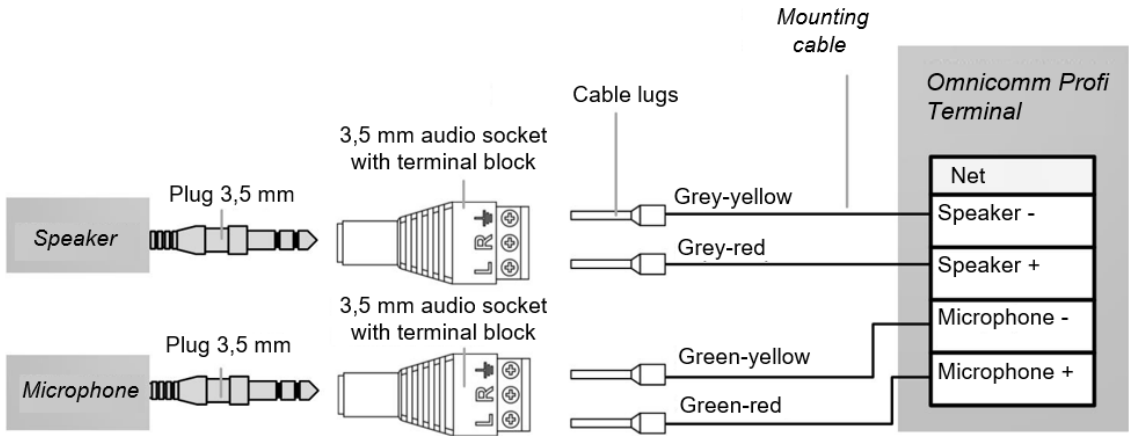
To mount the microphone holder, remove the protective film from the double-sided tape and press it against the prepared surface.

To mount the speaker, use the bracket and self-tapping screws.

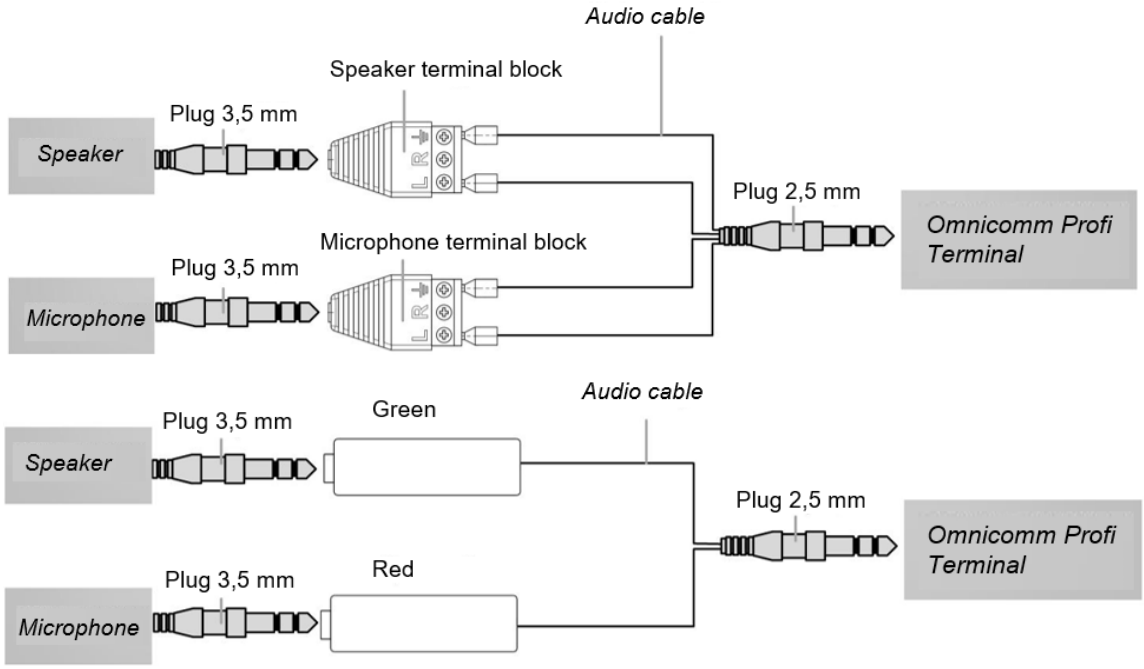
To connect the voice communication kit to the Omnicomm Profi and Profi Wi-Fi terminals:

- crimp the wires of the Omnicomm Profi terminal with cable lugs using a crimping tool (e.g. HT-864; HT-866; PKVK-10) or pliers and connect as shown in the diagram

Additional Equipment



Connect the voice communication kit to the Omnicomm Optim terminal using an audio cable as shown in the diagram:

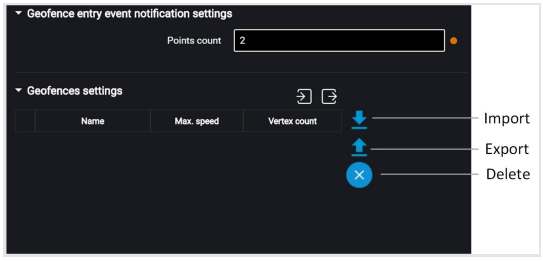


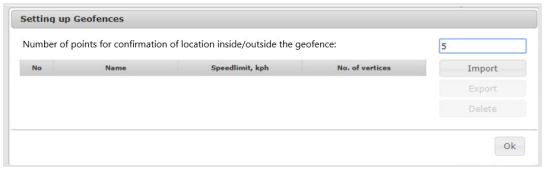
Geofences Setting

In the terminals, geofence setting is provided to enable the controlled outputs.

In the **"Settings"** tab select the **"Geofences"** section from the list.

Additional Equipment





"Number of points to confirm being inside/outside the geofence" – specify the number of successively defined vehicle coordinates required to register the vehicle being inside or outside the geofence. Coordinates determination period – 1 sec. Possible values: from 1 to 10.

To add a geofence, press the "Import" button and select the .xml file with geofence settings.

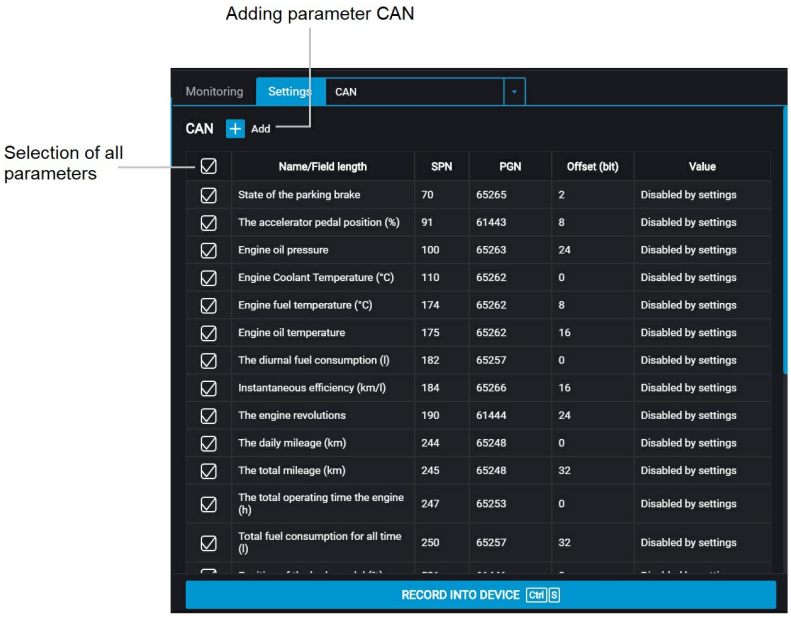
> The geofence name must be not more than 8-character long and consist of symbols, digits and Latin letters.
>
> Geofence should not contain consecutive points with the same coordinates.

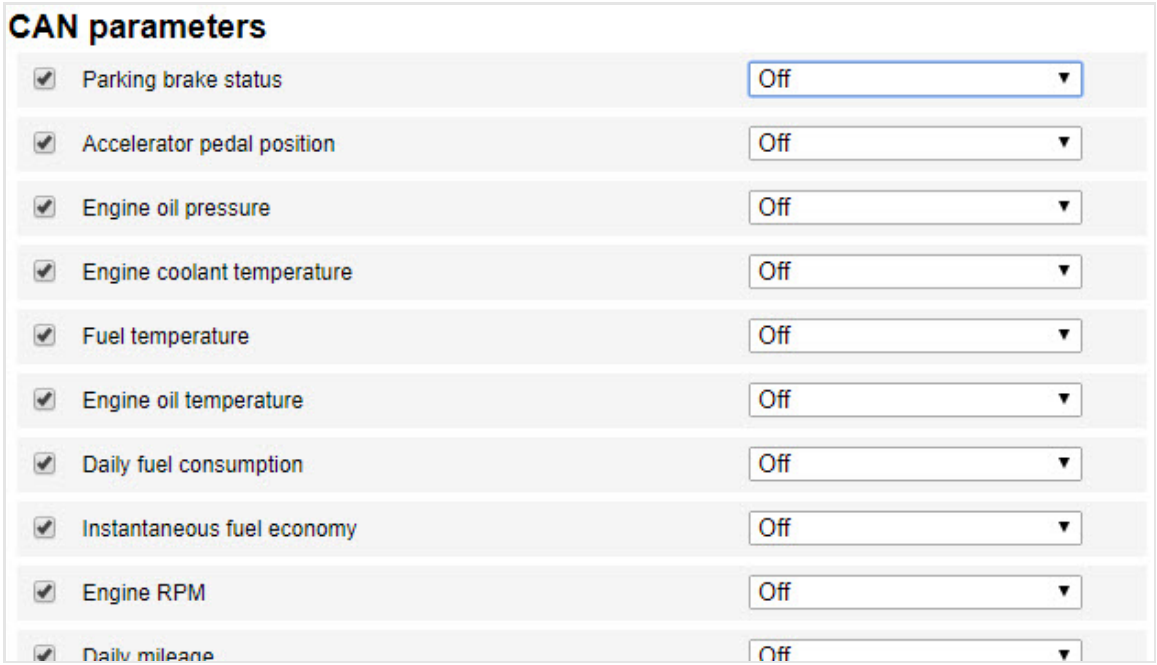
Maximum number of geofences – 60.

Maximum number of peaks – 240.

CAN Bus

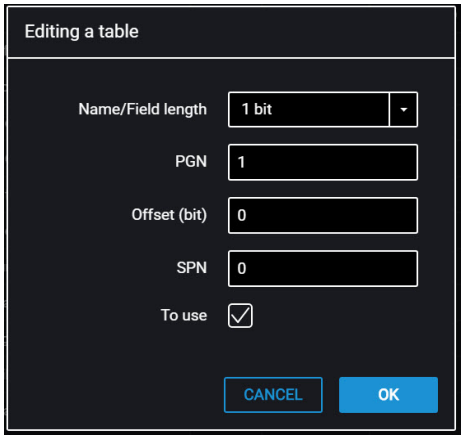
In the **"Settings"** tab select the **"CAN"** section from the list:





From the list, select the parameters, which value shall be displayed in Omnicomm Online, and check the corresponding boxes in the column “Use”.

If you need to add parameters for reading from the CAN bus, which are not on the list, in Omnicomm Configurator press button “Add”. A window will open:



“Length” – select the length of data packet. Possible values: 1, 2, 3, 4 (bit), 1, 2, 4 (bytes).

“PGN” – enter the parameter group number that defines the contents of the corresponding message according to SAE J1939. Possible values: from 1 to 262143.

“Offset” – enter the offset value relative to the base address of the bit storing area. Possible values: 0 to 63.

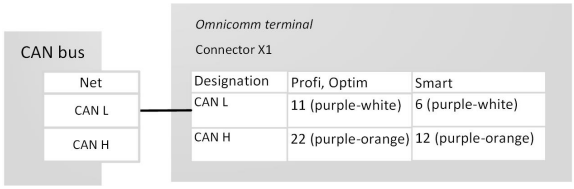
“SPN” – enter the parameter code according to SAE J1939. Possible values from 0 to 4294967295.

“To use” – check the box if you want to read this parameter from the CAN bus.

Press the “Save” button.

Perform connection to the vehicle CAN bus using wireless CAN reader device (CAN-crocodile).

When using wireless CAN reader devices, connect the terminals according to the diagram:



Configuring the reception of data on the fuel volume in the tank from the vehicle CAN bus Connect and configure reception of the vehicle equipment operation parameters from CAN J1939 data bus and set the setting of fuel sensor – “CAN Sensor”.

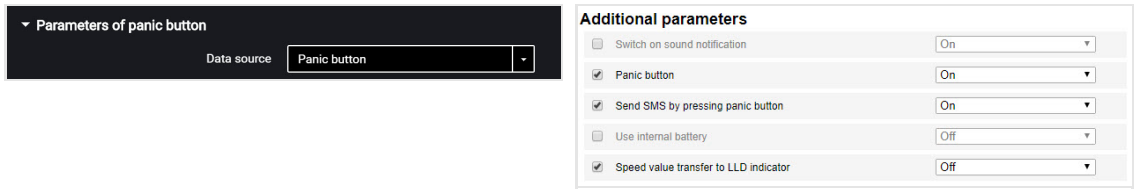
Check indication of the fuel sensor values in the “Monitoring” tab, the value must be from 0 to 4095.

When reading the fuel level in the tank from the CAN bus, set the operating mode of the terminal while ignition off to “Acquire data during pounding” mode. Otherwise, the fuel level graphic will not be displayed correctly.

Panic Button and GSM Call Button

In the **“Settings”** tab select the **“Additional equipment”** section from the list:

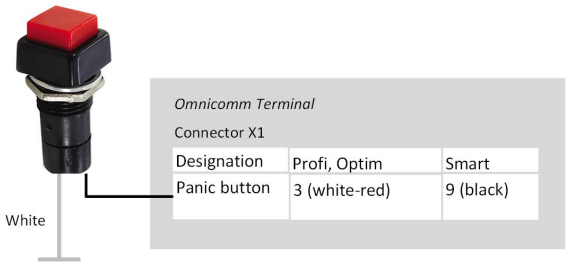
In the **“Parameters of panic button”** section:



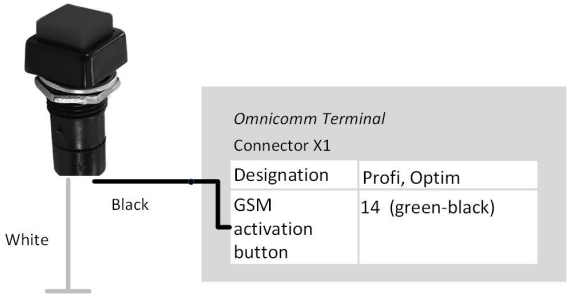
“Data source” – enable/disable condition control of the panic button.

“SMS sending upon triggering” – enable/disable SMS sending upon the panic button pressing.

Connect the panic button according to the diagram:



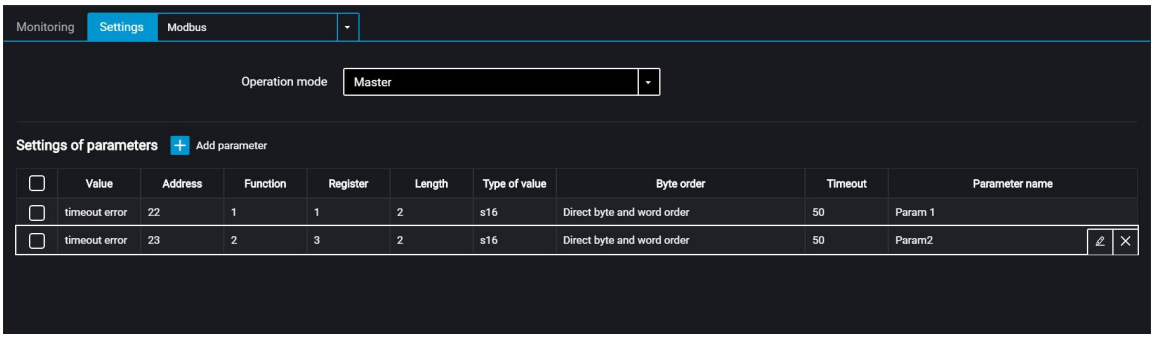
Connect the GSM activation response button to Omnicomm Optim, Profi and Profi Wi-Fi terminals according to the diagram:



Modbus

In Omnicomm Configurator, on the “Settings” tab select the **“Modbus”** section from the list:

Additional Equipment

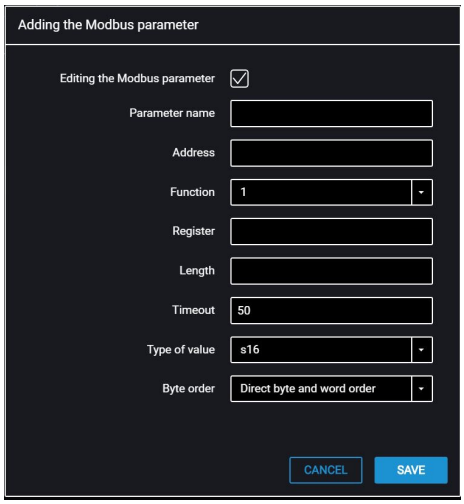


Select the operation mode:

“Master” – terminal sends requests for the access to the registers from the external devices via Modbus protocol

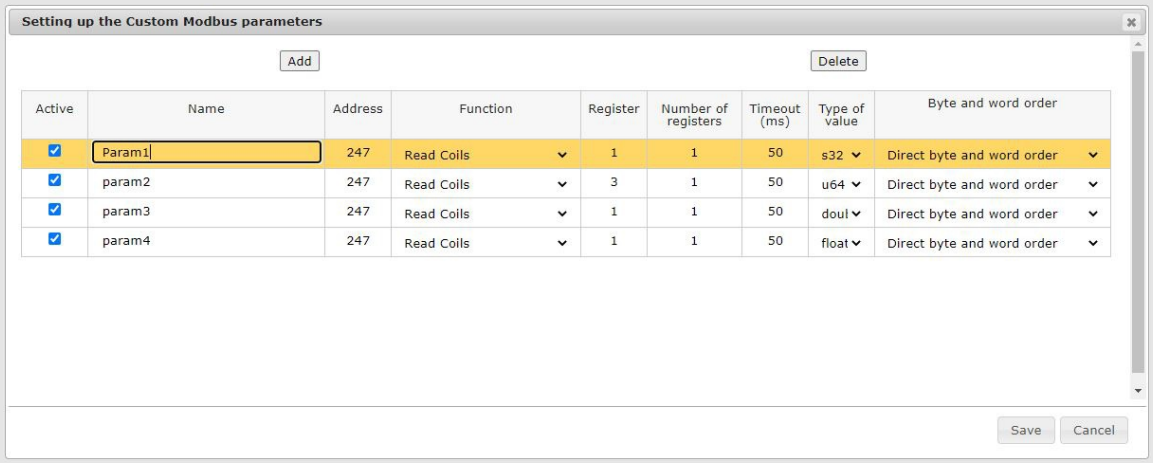
“Listener” – terminal listens and receives the required data during the exchange via Modbus protocol

When is necessary to add parameters press the “Add” button. A window will open:



In the remote configuration server, in the **“RS ports configuration”** section, select the terminal operation mode and, if necessary, add the parameters by clicking the “Parameters configuration” button.

LED and Sound Notification



“Name of parameter” – enter the name of the parameter. Maximum length: 16 symbols.

“Address” – address of the tracked device. Possible values: 1 to 247.

“Function” – – enter the function number Possible values: 01 – Read coils, 02 – Read discrete inputs, 03 – Read holding registers, 04 – Read input registers.

“Register” – enter the register value. Possible values: 0 to 65535.

“Number of registers”. Possible values: for functions 1, 2 – from 1 to 64; for functions 3, 4 – from 1 to 4. Default value – 1.

“Time out” – enter the waiting time for the response of the device. Default value – 50 ms. Possible values: from 50…12500 ms.

“Value type” – select the data type. Possible values: S16, U16, S32, U32, U64, float, double, bin.

“Byte order” – select the order of words and bytes. Possible values: direct order of words and bytes, reverse order of words and bytes, reverse order of bytes, reverse order of words. Default value - direct order of words and bytes.

Maximum parameter number – 36.

LED and Sound Notification

Indicator	Indication mode	Value
Power red/green	Out	Power: absent

LED and Sound Notification

Indicator	Indication mode	Value
	Alternately flashes red-green	Off Power: Main Ignition: Off Operating Mode: “Collect all data except GPS“
	Flashing red at interval 4 times per second	Power: from USB (if there is charger backup battery)
	Permanently lighted green	Power: main Ignition: On or Power: Main Ignition: Off Operating mode “Collect all data”
	Flashing red at interval 1 time per two seconds	Power: Main or backup battery (if any) Ignition: Off Operating mode: «Sleeping»
GPS red/green	Off	Module power supply off
	Alternately flashes red/green	In case of module failure, the indicator “Accident” is lighted
	Permanently lighted green	Valid data from satellites are recieved
	Permanently lighted red	No data reception from satellites or invalis data recieved
GSM red/green	Off	Module power supply off

LED and Sound Notification

Indicator	Indication mode	Value
	Permanently lighted red	Out of coverage or GSM network search
	Permanently lighted green	Within the GSM network coverage, exchange with communication server through GPRS channel is not performed
	Flashing red	Module activation. Module switches to working mode
	Flashing green	Active GPRS session. No exchange with communication server through GPRS channel
	Flashing orange (simultaneous flashing red and green indicator)	Within the GSM network coverage, available data exchange with communication server through GPRS channel
	Alternately flashes red-green	Module error
Accident red/green	Off	No failures
	Permanently lighted red	Failure in operation (damage) of internal elements, satellite navigation module or GSM module
	Alternately flashes red-green	Failure of exchange with one or more Omnicomm LLS sensors
		Check Omnicomm LLS settings, communication lines, Omnicomm LLS power supply voltage as per “User Manual Omnicomm LLS 20160, LLS 30160,LLS4, LLS 20230”

LED and Sound Notification

Indicator	Indication mode	Value
Power and Accident	Simultaneously flashing red at c interval 1 time per second	Terminal is locked. Contact your dealer
* Note: in case of internal fault (the “Accident” indicator is on), the failure of GSM modules and satellite receiver can be assessed by the status of indicators.		

Sound notification for Omnicomm Profi Wi-Fi terminal

Number of sound signals	Designation
One beep	The terminal has connected to a Wi-Fi access point that was specified when configuring the terminal
Two beeps	Terminal has disconnected from Wi-Fi access pointk
Three beeps	The terminal has finished data transmission over the Wi-Fi network

SMS Commands

SMS commands for terminal management

Command		Designation
Command text in SMS	Reply to a command in SMS	
*SOUND 1#	SOUND ON	Request for turning on the siren
*SOUND 0#	SOUND OFF	Request for turning off the siren
*SETDOUT param# Param=0 Param=1 Param=0,1	SETDOUT Possible parameter values: param = OK if the command is forwarded to execution param = ER if the command is not forwarded to execution	Request for enabling digital output
*GETIMG#	GETIMG param Possible parameter values: param = OK if the command is forwarded to execution param = ER if the command is not forwarded to execution	Request for taking picture (if the camera is connected)
*CLRDOUT param# Param=0 Param=1 Param=0,1	CRLDOUT param Possible parameter values: param = OK if the command is forwarded to execution param = ER if the command is not forwarded to execution	Request for enabling digital output

SMS Commands

Command		Designation
Command text in SMS	Reply to a command in SMS	
*GETDOUT#	DOUT 0=1 1=0 где: output_number=output_state	Request for state of digital output
*CONNECT#	CONNECT CS_address:port	Request for establishing connection of Terminal with CS
*GETLINK#	LINK # LINK ip4_CS_address:port date_and_time	Request for status of connection to CS
*GETINFO#	INFO DID=deviceID HW=hardware_code_version BL=bootloader_version FW=firmware_version REC=number_of_records_in_archive IMEI=GSM_modem_unique_identifier	Request for state of terminal
*RESET#	RESET param Possible parameter values: param = OK if the command is forwarded to execution param = ER if the command is not forwarded to execution	Reset of terminal

SMS Commands

Command		Designation
Command text in SMS	Reply to a command in SMS	
*GETSTAT#	STAT terminal_date_and_time GPS=position as per GPS SPD=speed IGN=ignition_state L1=fuel_level:sensor_state L6=fuel_level:sensor_state Fuel level sensor state codes LLS/LLS-AF: • 0 - disabled; • 1 - not ready; • 2 - ready, , frequency 20 - max Hz; • 3 - error, frequency 0 - 19 Hz;	Request for vehicle state
*SETPWDID vid pwdid# vid - identification of Terminal; pwdid - password/identification.	SETPWDID ERRID/ERRNulPWD/ERRAlrSet/PWD:pwdid OK	Setting parameter “Password”
*CONNECTSC#	CONNECT SC	Request for connection of terminal with configurator server
*SETAPN apn# apn - APN of the operator	SETAPN apn ERR/OK	Setting APN
*SETAPN2 apn# apn - APN of the operator of second SIM card	SETAPN apn ERR/OK	Setting APN for second SIM card

SMS Commands

Command		Designation
Command text in SMS	Reply to a command in SMS	
*GPSCOLD#	GPSCOLD ERR/OK	Cold start of GPS reciever
*UNBLOCK#		Unblocking the terminal
*SGPSINFO#	Smooth position type: N, VID=xxxxxxxxxx N = 0/1/2 0 – smoothing disabled 1 – smoothing enabled, filter 1 in use 2 – smoothing enabled, filter 2 in use VID – terminal ID	Request information about the current status of the coordinate filtering algorithm
*SGPS0#	OFF smooth position, VID=xxxxxxxxxx	Disable smoothing algorithm
*SGPS1#	ON smooth position method 1, VID=xxxxxxxxxx	Enable smoothing (filter 1)
*SGPS2#	ON smooth position method 2, VID=xxxxxxxxxx	Enable smoothing (filter 2)
*GETCNTINFO#	GETCNTINFO LLS1: CNTmin1, CNTmax1, CNT_T LLS2: ….VID = 336xxxxxxx	Request current CNT readings

SMS Commands

Command		Designation
Command text in SMS	Reply to a command in SMS	
*SETCNT pwd numlls CNTmin2 CNTmax2#	SETCNT OK – SMS worked correctly SETCNT PWD ERR – wrong or no password entered (see Limitations) SETCNT ERRVALUE – the entered CNT values do not comply with the Limits SETCNT ERRPARAM – incorrect SMS format	Set new CNT_empty/full values (CNTmin2 and CNTmax2)
*SETCNTFULL pwd numlls koef_empty#	SETCNTFULL OK – SMS worked correctly SETCNT PWD ERR – wrong or no password entered (see Limitations) SETCNTFULL ERRVALUE – Conditions outlined in the Limitations were not met SETCNT ERRPARAM – wrong SMS format	Automatic correction of the CNT_empty/full values
*SETCANSPD X# X – data rate of CAN 0 - 250 kb/s 1 - 125 kb/s 2 - 250 kb/s 3 - 500 kb/s 4 - 1 Mb/s 5 - 50 kb/s 6 - 62,5 kb/s	SETCANSPD OK – SMS worked correctly	Set data rate of CAN-interface (starting from FW-311) Default value - 250 kb/s

SMS Commands

Command		Designation
Command text in SMS	Reply to a command in SMS	
*GETCANSPD#	can speed = X X – data rate value CAN 0 - 250 kb/s 1 - 125 kb/s 2 - 250 kb/s 3 - 500 kb/s 4 - 1 Mb/s 5 - 50 kb/s 6 - 62,5 kb/s CAN SPEED = ER - incorrect value of data rate (default value - 250 kb/s)	CAN interface data rate request (starting from FW-311)

For the command Automatic correction of the CNT_empty/full values:

Recalculation formula:

CNTmin2 = CNTmin1 + koef_empty*(|CNTmax1-CNT_T|)

CNTmax2 = CNT_T

If koef_empty = 0, then CNT_empty does not change (CNTmin2=CNTmin1)

If koef_empty = 1, then CNT_empty increases by the same Δ as CNT_full

CNT_full (CNTmax2) is assigned the value of the current CNT_T level

SMS from the Terminal

Event	Message format	Example
Panic button triggering	Panic button. Vehicle name; VID; http://google.com/maps?q=Latitude, Longitude; dd/mm/yyyy; hh:ss.	Panic button. E777KX_97; ID336011133; http://google.com/maps?q=55.7889,37.5887; 01/04/19; 09:25.
Dangerous driving is detected	Dangerous driving. a=xx.xx g on the X-axis; Vehicle name; VID; http://google.com/maps?q=Latitude, Longitude; dd/mm/yyyy; hh:ss.	Dangerous driving. Suspension impact>0.20 g, E777KX_97; ID336011133; http://google.com/maps?q=55.7887,37.5887; 01/04/19; 09:29. Dangerous driving. Sharp turn>0.20 g, E777KX_97; ID336011133; http://google.com/maps?q=55.7887,37.5887; 01/04/19; 09:29. Dangerous driving. Acceleration>0.20 g, E777KX_97; ID336011133; http://google.com/maps?q=55.7886,37.5887; 01/04/19; 09:33. Dangerous driving. Braking>0.20 g, Suspension impact>0.20 g, E777KX_97; ID336011133; http://google.com/maps?q=55.7886,37.5889; 01/04/19; 09:40.
An accident is detected	Accident. a=xx.xx g on the X-axis; Vehicle name; VID; http://google.com/maps?q=Latitude, Longitude; dd/mm/yyyy; hh:ss.	Accident. a>0.40 g; E777KX_97; ID336011133; http://google.com/maps?q=55.7887,37.5891; 01/04/19; 09:45.

Firmware Change Log

Event	Message format	Example
Universal input triggering	Sensor. Equipment name. UI. Vehicle name; VID; http://google.com/maps?q=Latitude, Longitude; dd/mm/yyyy; hh:ss.	Uni 1 sensor. E777KX_97; ID336011133; http://google.com/maps?q=55.7887,37.5888; 01/04/19; 09:29.
Body tampering (excluding Light, Smart)	Body tampering. Vehicle name; VID; http://google.com/maps?q=Latitude, Longitude; dd/mm/yyyy; hh:ss.	Body tampering. E777KX_97; ID336011133; http://google.com/maps?q=55.7886,37.5888; 01/04/19; 09:36.
Overspeeding	Speed. Speed value>Value of the speed threshold; km/h; Vehicle name; VID; http://google.com/maps?q=Latitude, Longitude; dd/mm/yyyy; hh,ss	Speed. 88>60 km/h; E777KX_97; ID336011133; http://google.com/maps?q=55.7886,37.5888; 01/04/19; 09:36.
Exceeding of RPM	RPM. RPM value>Value of RPM threshold, rpm; Vehicle name; VID; http://google.com/maps?q=Latitude, Longitude; dd/mm/yyyy; hh:ss	RPM. 42000>20000 rpm; E777KX_97; ID336011133; http://google.com/maps?q=55.7886,37.5888; 01/04/19; 09:36.

Firmware Change Log

Date	Firmware Version	Changes
July 26, 2018	FW 305	- upgraded GPS connection (satellite loss, track gaps solved) - failure after page reloading rectified - track gaps in case of CS failure eliminated

Firmware Change Log

Date	Firmware Version	Changes
January 14, 2019	FW 307	- solved factory reset issue when cleaning the terminal data archive or in case of on-board network voltage drop - enhanced GPS communication (eliminated periodic coordinate discarding at 00-00 UTC) - solved a problem of lack of communication with Profi Wi-Fi terminals, if there is a 0 in IP-address (for example, 192.168.0.1) - rectified freezing of OmnicommLLS-AF fuel level sensor values when the terminal switches to Collect all except GPS mode
March 20, 2019	FW 308	- implemented the function of collecting arbitrary CAN-parameters from VH operating according to FMS, and displaying CAN data in Omnicomm Online - terminal factory reset eliminated - solved failures of terminal time stamps, VID, PID - added protection from satellite loss due to QZSS (Japanese Quasi-Zenith Satellite System) - implemented the function of the terminal calling back to the number in case of bad voice connection

Firmware Change Log

Date	Firmware Version	Changes
October 31, 2019	FW 309	- a new speed filtration algorithm when selecting GPS data source developed - it is now possible to transfer data to 3 Communication Servers simultaneously - a possible period of data collection has been decreased to one time per 1 second - now up to 2 digital LLS fuel level sensors can be connected to Smart terminals, and up to 4 digital sensors – to Light 3.1 - GSM / Wi-Fi signal level is displayed now - GPS and GSM signals jamming detector added for Optim and Light terminals (starting from January 1, 2019 release date) - CAN-LOG universal controller series B now supported - ContiPressureCheck tyre pressure monitoring system now supported - automatic detection of MAC-address of Profi Wi-Fi terminals added - accelerometer calibration state is now displayed at the Remote Configuration Server - sending of non-transmitted data is implemented over GSM network for Profi Wi-Fi terminals - the number of geofences has been increased to 60, and the number of peaks to 240
September 21, 2020	FW 310	- Custom MODBUS protocol supported - operation with iQFreeze R and Pro supported - temperature sensor connection settings have been changed
March 5, 2021	FW 311	

- added SMS command to set speed value for communication with CAN bus
- implemented support for the Omnicomm OKO Light video recorder |

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