

OMNICOMM

Omnicom Smart 3.0 Terminal

User manual

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Contents

4	General Information
4	Installation
4	Installing a SIM Card
5	Output Connectors
6	Power supply and Ignition key
7	Terminal
8	General Configuration Information
8	Omnicom Configurator
9	Remote Configuration Server (RCS)
10	Configuring Operational Parameters
10	GPRS Connection
11	Collecting Data
13	Speed source selection
13	Communication Server Connection
15	Ignition key status
15	Engine RPM
17	Accelerometer

19	Utility Functions
19	Restarting Terminal
19	Setting Up Password for Configuring Parameters
19	Operational Set-up For Remote Configuration Server
20	Identifying Terminal's SIM Card Number
20	Additional equipment
20	Fuel level sensors
23	Universal Inputs
27	Omnicom LLD Indicator
28	Panic Button
29	CAN bus
33	Technical Specifications
35	SMS commands

Omnicom Smart 3.0 Terminal

General Information

Omnicom Terminals are the on-board equipment designed to collect data on the state of the vehicle and transmit these data to Omnicomm Online or a third-party fleet monitoring system of choice.

Terminal key functions are:

- Identifying and recording location, speed, and direction of travel of a vehicle;
- Reading and sorting values received from the fuel level sensors and a wide range of other connected equipment;
- Remote control of any additional equipment connected to the system;
- Non-volatile data storage;
- Transmitting data to Omnicomm Online and/or other fleet monitoring system of choice.

Omnicom Terminal modifications differ from one another by design and type of equipment that can be connected to them. This User Manual describes the Omnicomm Smart Terminal range.

Safety Recommendations

Please take all the necessary safety measures and comply with all relevant standards and regulations when installing the equipment.

Installation

Installing a SIM Card

Before installing a SIM card please disable the PIN code request upon start-up. In order to do that, simply insert the SIM card into any cell phone and disable the PIN code request according to the telephone operating specifications.

1. Use a pointed object to press a button on the Terminal's front panel. This will eject a SIM card holder.
2. Remove the SIM card holder from the slot and install the SIM card in it with the contact side up.
3. Install the SIM card holder back into the slot (see the image below).

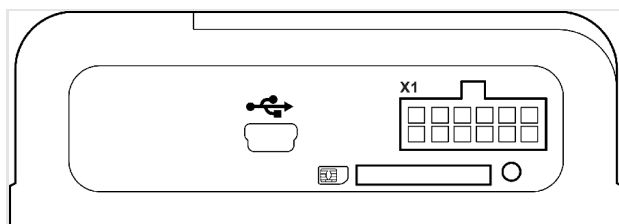
Output Connectors



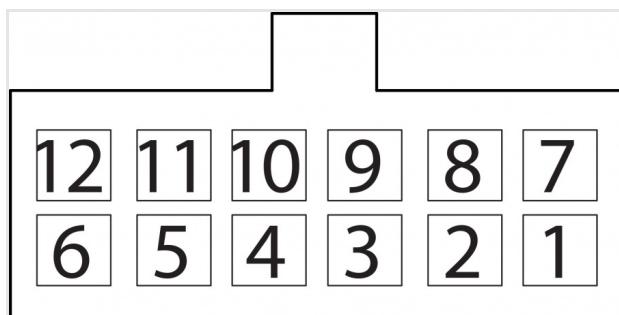
It is possible to custom-order an option for installing a SIM chip.

Output Connectors

Omnicom Smart Terminal



X1 connector:



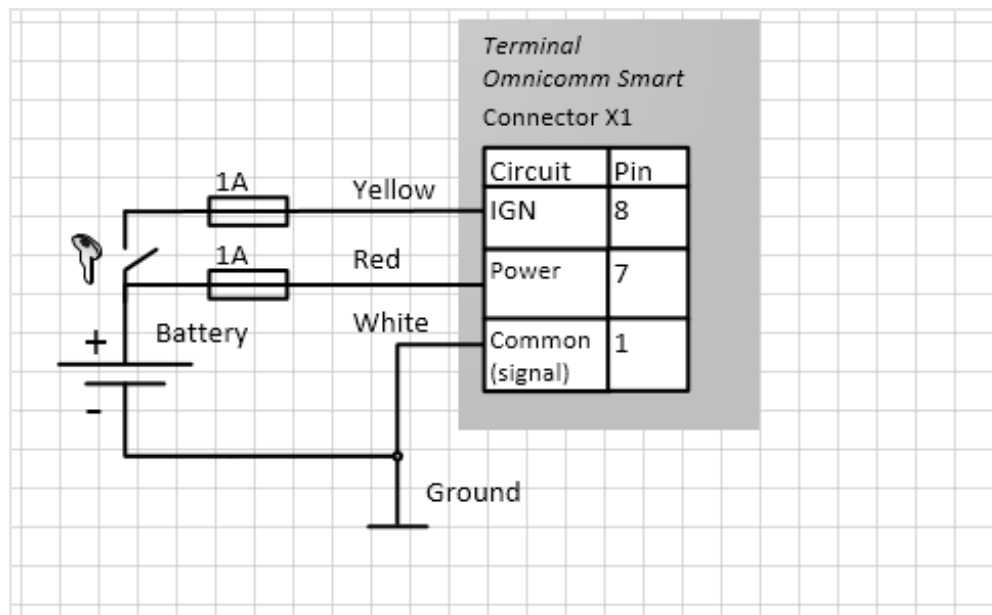
Power supply and Ignition key

Contact number	Signal Name	Designation	Wire Colours Inside Cable
1	Ground (negative) for power supply	General (signal)	White
2	Input RPM	Tachometer	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	Violet-white
7	On-board power voltage	Power supply	Red
8	Ignition key	IGN	Yellow
9	Universal input	Input 1	Black
10	Not used	NC	
11	Line A RS-485 LLS	A RS-485 LLS	Orange-white
12	CAN H	CAN H	Violet-orange

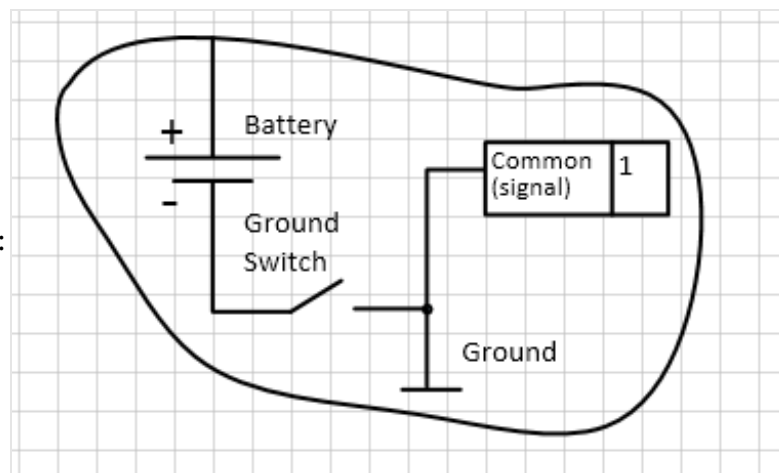
Power supply and Ignition key

Perform the connection of Omnicomm Smart 3.0 Terminals without the main switch according to the diagrams below:

Terminal



Before the main switch:

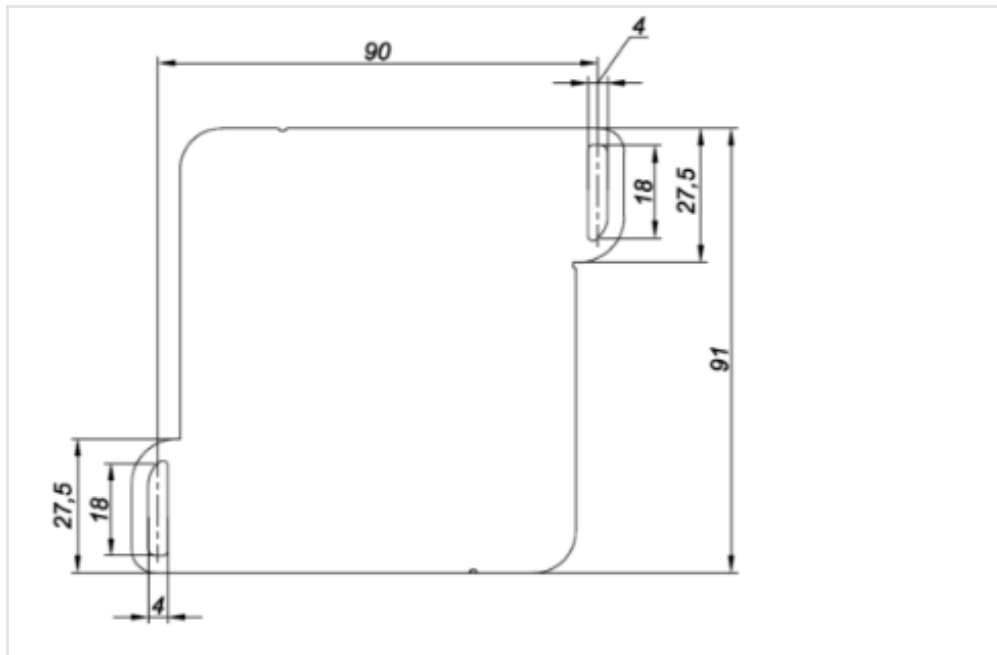


Terminal

The Omnicomm Terminal must be installed inside the vehicle cabin or inside a specially designed electrical equipment box: weather- and precipitation-proofed and fixed on the vehicle. Drill 4 mounting holes, 4 mm in Ø.

Here is an example for Omnicomm Smart Terminals:

General Configuration Information



Install the Terminal and fix it by using self-tapping screws.

General Configuration Information

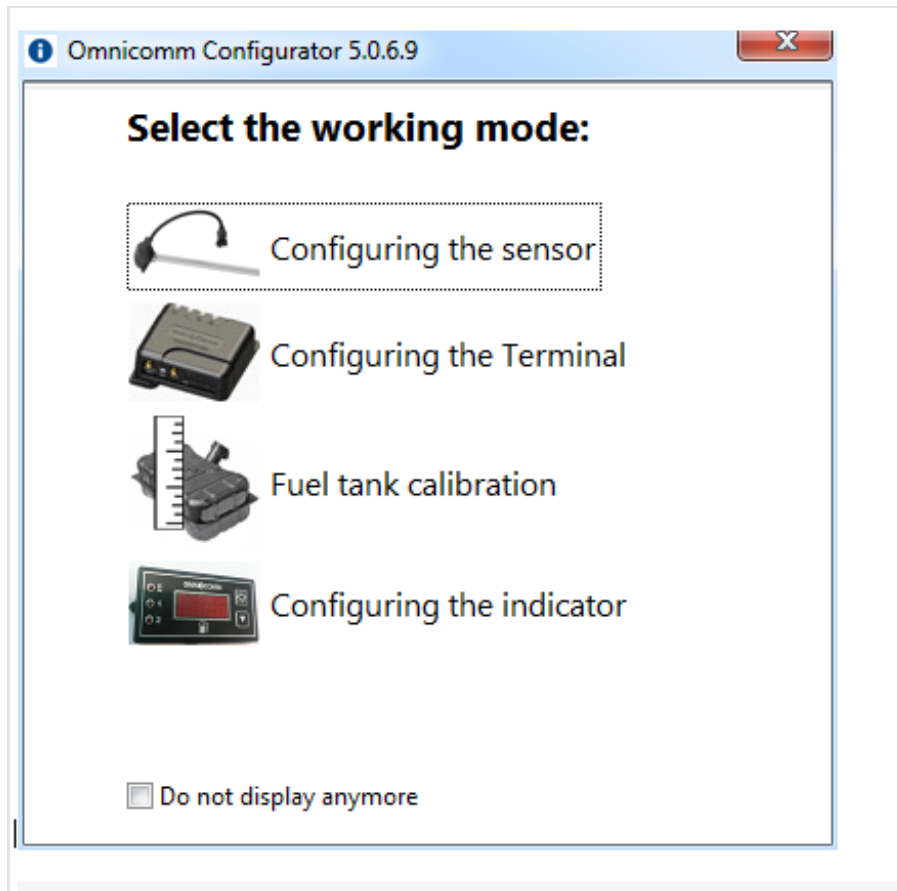
Omnicommm Configurator There are two ways to configure Omnicomm Terminals: 1. Via the Omnicomm Configurator upon connecting the Terminal to a personal computer; 2. Via the Remote Configuration Server (RCS).

Initial Terminal's configuration must be performed via Omnicomm Configurator program.

Omnicommm Configurator

1. Connect the Terminal to the personal computer with a USB cable. 2. Install and run the Omnicomm Configurator. You will be taken to the following screen:

Remote Configuration Server (RCS)

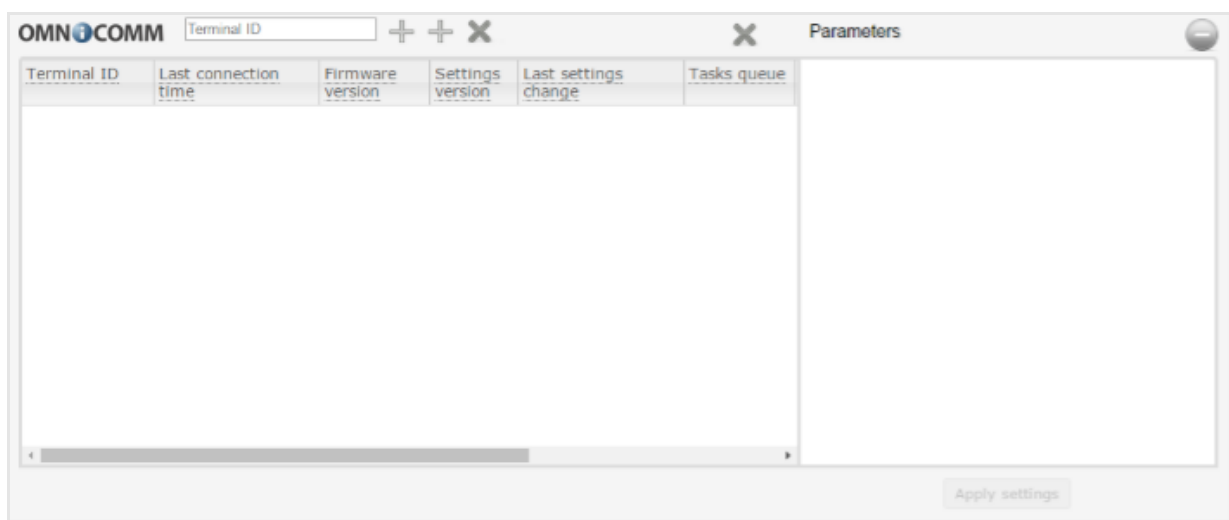


3. Select the 'Configuring the Terminal' operation mode.

Remote Configuration Server (RCS)

Open your browser and enter '<http://config.omnicomm.ru:9911/#en>' in the URL bar to connect to the configuration server. Then, the window will open.

Configuring Operational Parameters



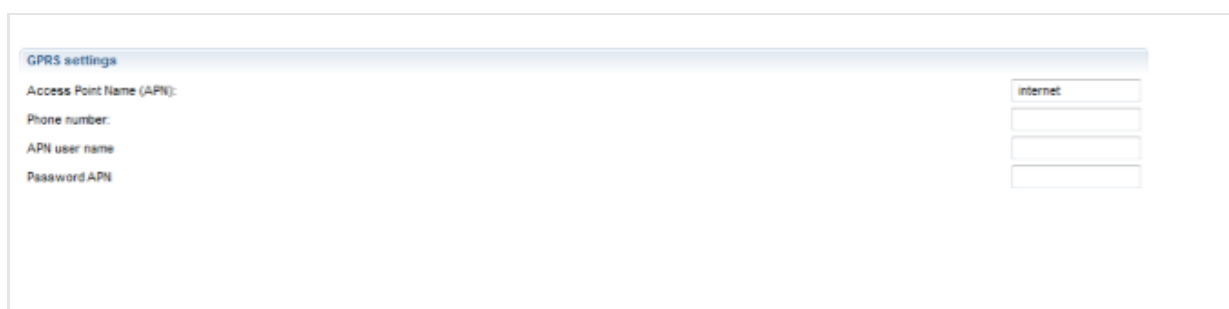
To add the terminal, do the following:

1. Enter the Terminal's identification number in the 'Terminal ID' field.
2. Enter the password that you selected for the Terminal when configuring it via the Omnicomm Configurator in the 'Password' field.
3. Click on the '+' button.

Configuring Operational Parameters

GPRS Connection

Open the “Settings” menu and select the 'Connection' tab. Now refer to “GPRS Settings”:



Collecting Data



Settings GPRS-1		
<input checked="" type="checkbox"/>	Access Point Name (APN)	internet
<input checked="" type="checkbox"/>	Telephone number	
<input checked="" type="checkbox"/>	Login	
<input checked="" type="checkbox"/>	Password	

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

- internet (default)

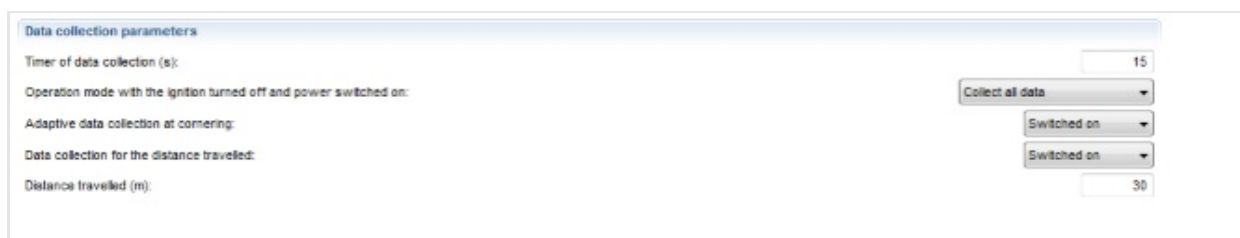
Please enquire from your provider, whose SIM card is installed in the Terminal, of the appropriate GPRS access point name.

“Phone number”: this stands for the telephone number associated with the SIM card installed in the Terminal.

“APN user name” and “APN Password”: Enter your login details for the access point if you're required to do so. Login details are provided along with the SIM card by selected mobile network providers.

Collecting Data

Now refer to “Data Collection Parameters”:



Data collection parameters	
Timer of data collection (s):	15
Operation mode with the ignition turned off and power switched on:	Collect all data
Adaptive data collection at cornering:	Switched on
Data collection for the distance travelled:	Switched on
Distance travelled (m):	30

Collecting Data

Data collection parameters	
<input checked="" type="checkbox"/> Data collection timer, sec	<input type="text" value="15"/>
<input checked="" type="checkbox"/> Collect data when ignition is off and main power on	<input type="text" value="Collect data when poun"/>
<input checked="" type="checkbox"/> Collect all data	<input type="text" value="Off"/>
<input checked="" type="checkbox"/> Data transfer interval to server, h	<input type="text" value="1"/>
<input checked="" type="checkbox"/> Adaptive data collection on turns	<input type="text" value="On"/>
<input checked="" type="checkbox"/> Travelled distance data collection	<input type="text" value="On"/>
<input checked="" type="checkbox"/> Mileage between data collection points, m	<input type="text" value="30"/>

Collection Timer — set up the value for the polling period for the Terminal, its connected modules and external devices. The available value range is from 15 to 240 seconds.

Go to the “Operation Mode for Ignition Off and Power On” and select one of the following:

- “Collect all data”, collecting and transmitting data in the same manner as when the ignition is on.
- “Collect all data except GPS”, collecting and transmitting data selected during the Terminal configuration, except for the GPS module data.
- “Collect Data during jolting”, monitoring the state of the panic button and accelerometer. When the accelerometer readings change by more than 0.2 g, or when the panic button is pressed, the Terminal switches to 'Collect All Data' mode and proceeds to transmit data to the Communication Server for the next 5 minutes.

When selecting “Collect all data during jolting”, configure the following settings:

- “Collect all data”, with this parameter enabled, the Terminal switches to “Collect all data” mode and collects and transmits data to the communication server when the time entered in the “Period of Data Transmission to Server” expires. Having transmitted all available data, the Terminal reverts to “Collect data during jolting” mode.
- Period of data transmission to server, select the time interval in between the Terminal's connection sessions to the server. The available values range from 1 to 6 hours at 1-hour increments.

Speed source selection

Depending on the mode selected, data is collected from pre-specified modules and external devices.

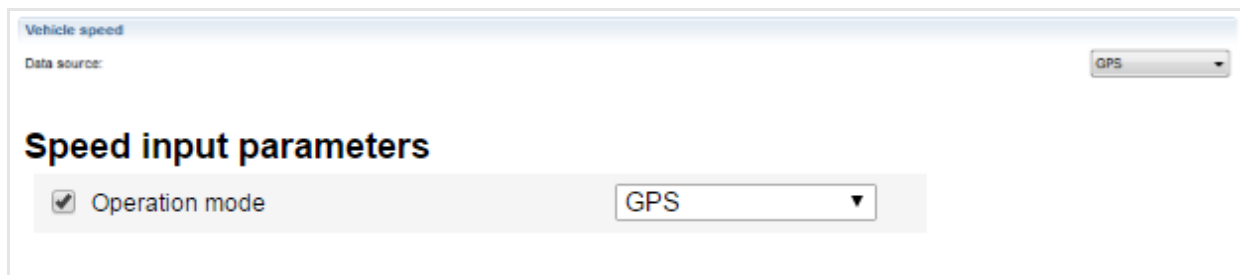
“Adaptive data collection during turns”, enable or disable collecting data when the vehicle makes a turn; enabling it helps increase the accuracy of recording and displaying turns on the map. This is done by collecting additional data from the GPS module more frequently than the “Collection Timer” parameter suggests.

“Collecting data on distance travelled” allows increasing the accuracy of tracking the vehicle location and therefore displaying it on the map. This is done by collecting additional data from the GPS module on the distance travelled between registered events with set coordinates.

“Distance Travelled”, enter the value of the distance travelled from the last registered event with set coordinates that must be reached to initiate data collection. The values range from 10 to 1,000.

Speed source selection

Please refer to the “Vehicle speed” section.



The screenshot shows a software interface for configuring vehicle speed data. At the top, there's a title bar 'Vehicle speed'. Below it, a 'Data source:' label is followed by a dropdown menu currently showing 'GPS'. Further down, the section 'Speed input parameters' is highlighted. Inside this section, there is a checkbox labeled 'Operation mode' which is checked, and next to it is another dropdown menu also showing 'GPS'.

In “Data source” section please select what data should be used to calculate vehicle speed values. You can choose between GPS and CAN bus.

Communication Server Connection

In the section “Connection establishing parameters”:

Speed source selection



Parameters for establishing a connection

Time period for sending data to CS (min)

Connection establishing parameters

☐ Data transfer interval to CS (min)

Connection parameters for roaming

☒ Period of sending data to the CS (min.)

☐ The size of a data packet for transmission to CS (kilobytes)

“Period of sending data to the CS”, enter the number of minutes, upon expiry of which, the Terminal shall connect to the communication server when within the home network of your mobile network provider. The recommended value is 10 minutes.

Now refer to the “Roaming parameters”:



Connection establishing in roaming parameters

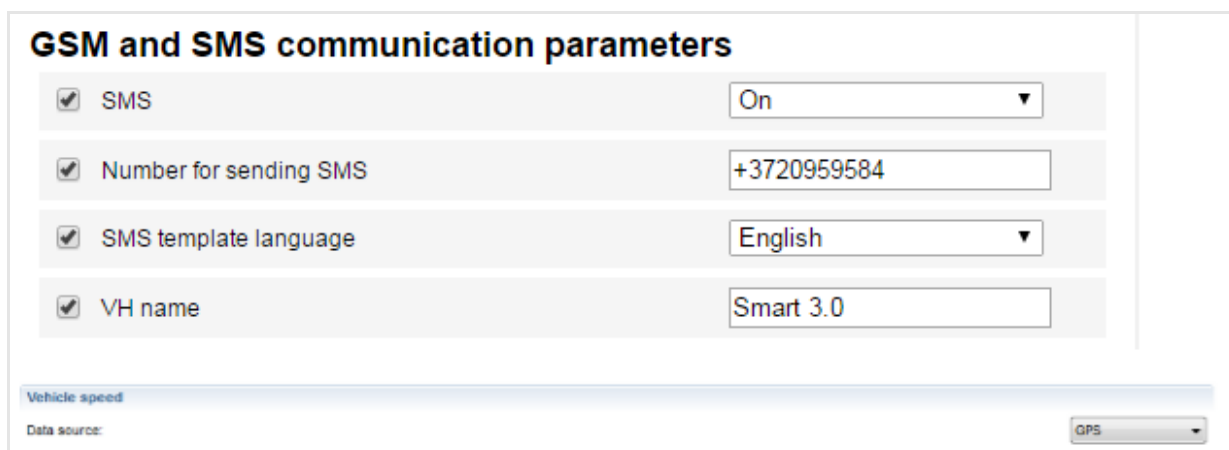
☐ Connection establishing upon event

☐ Period of data transfer to CS (min)

Roaming parameters

Roaming

Roaming: Select one of the roaming options for your SIM card: 'Permitted', 'Disable', or 'According to the list'. To enable SIM card operation “According to the list in roaming” please enter MCC and MNC cellular networks to the Omnicomm Configurator.



GSM and SMS communication parameters

☒ SMS

☒ Number for sending SMS

☒ SMS template language

☒ VH name

Vehicle speed

Data source:

“SMS”, switch on/switch off receipt of orders via SMS and sending of information

Ignition key status

messages by the Terminal. With the "SMS" parameter on, specify the following:

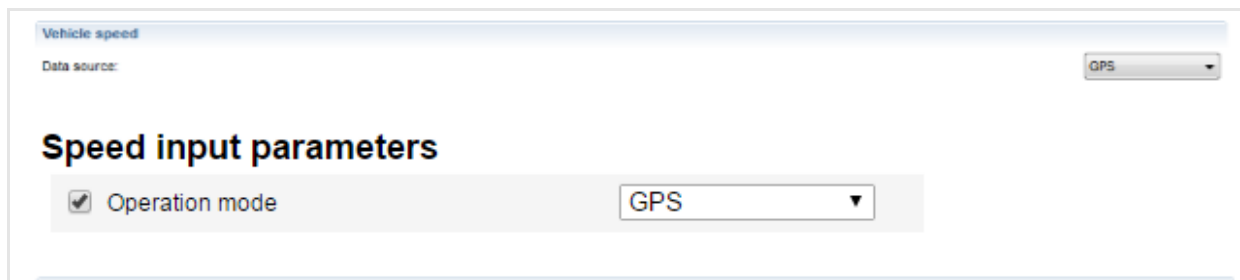
"Number for sending SMS", select a telephone number to which the SMS with information on the Terminal and VH status.

"SMS template language", select a language of the SMS template. You can select Russian, English, Spanish or Portuguese.

"Vehicle name", please enter the vehicle name. This field is mandatory to fill in.

Ignition key status

Please refer to "Ignition Key Status":



The screenshot shows a software interface for configuring vehicle speed. At the top, there's a header 'Vehicle speed' and a 'Data source:' label with a dropdown menu set to 'GPS'. Below this, the section 'Speed input parameters' is highlighted. Under this section, there is a checkbox labeled 'Operation mode' which is checked, and a dropdown menu set to 'GPS'.

"Data source", select the data that should be used to record the events of ignition being switched on or off. Here are the available options: "Ignition key", this records the ignition being switched on or off by evaluating the position of the ignition key, given actual connection to the ignition key.

"On-Board Network Voltage", this records the ignition being switched on or off by evaluating whether the on-board network voltage has reached a pre-configured threshold value. Select the "Threshold Voltage" value in order to define the on-board network voltage value that should trigger recognising the ignition state as "On". The ignition "Off" state gets recognised as soon as the on-board network voltage falls at least 0.5 V below the threshold value.

Engine RPM

In the "Engine revolutions" section:

Ignition key status

RPM input parameters

<input checked="" type="checkbox"/>	Signal type	RPM input ▼
<input checked="" type="checkbox"/>	Pull-up resistor	Off ▼
<input checked="" type="checkbox"/>	RPM calibration factor	1

In the “Data source” select a type of signal. You can choose one of the following options:

- Off - Ignition key - CAN bus - RPM input

Calibrating RPM Input in Omnicomm Configurator

Start the vehicle engine. Adjust the engine rotations to ensure that the RPM rate is stable throughout the calibration process. Open the 'Inputs' tab and click on 'Calibrate'. You will be taken to the following screen:

RPM input calibration

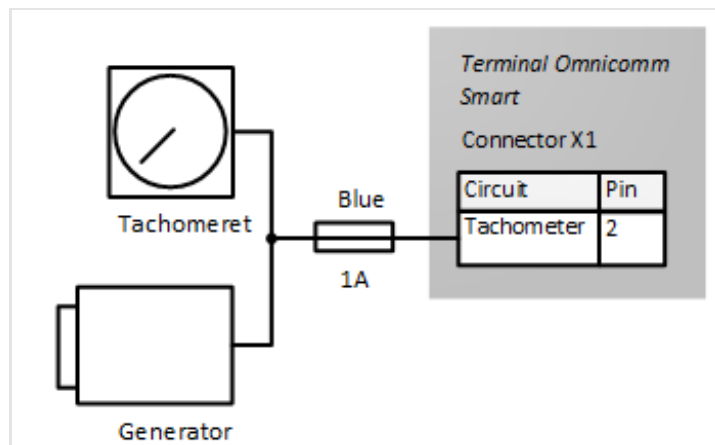
By pushing the accelerator pedal, achieve a stable RPM level. Keep engine RPM at a stable level throughout the calibration process! In the entry field, enter the tachometer reading, and click "Start calibration". Wait at least 15 seconds, and then click "Finish the calibration".

Engine revolutions: * 0

Start calibration Finish the calibration Cancel

In the “Engine RPM”, enter the number of engine revolutions according to the tachometer readings. Launch the calibration by clicking on the “Start Calibration” button. Wait for 15 seconds, and then click on the “Finish the calibration” button. The Omnicomm Configurator will determine the recalculation coefficient automatically. Save the recalculation coefficient in the Terminal by clicking on the “Record” button. Connect your tachometer to Smart Terminal according to the figure below:

Accelerometer



The tachometer's point of connection must be one in the vehicle's electrical network where the impulse signal frequency is proportional to the engine RPM rate.

Accelerometer

Open the "Settings" menu and select the "Additional Equipment" tab:

Accelerometer parameters

Accelerometer: Switched on [Calibrate](#) ☒

Determine the mode of dangerous driving

Acceleration threshold, g:

Deceleration threshold, g:

Lateral acceleration threshold, g:

Sending SMS upon activation: Switched off

Sending a photo upon activation: Switched off

Detect the accidents ☒

Acceleration threshold, g:

Deceleration threshold, g:

Lateral acceleration threshold, g:

Sending SMS upon activation: Switched off

Sending a photo upon activation: Switched off

Accelerometer

Accelerometer parameters

<input checked="" type="checkbox"/> Accelerometer	On ▼
<input checked="" type="checkbox"/> Dangerous driving behaviour detection	On ▼
<input checked="" type="checkbox"/> Safe acceleration threshold, g	5
<input checked="" type="checkbox"/> Safe deceleration threshold, g	5
<input checked="" type="checkbox"/> Safe lateral acceleration threshold, g	5
<input checked="" type="checkbox"/> Sending SMS when dangerous driving behavior detected	Off ▼
<input checked="" type="checkbox"/> Accident pattern detection	On ▼
<input checked="" type="checkbox"/> Acceleration threshold, g	5
<input checked="" type="checkbox"/> Deceleration threshold, g	5

Accelerometer Parameters: Enable or disable these to switch the use of the accelerometer on or off in order to measure vehicle acceleration. "Dangerous driving detection" enable or disable to engage or disengage the evaluation of dangerous driving whenever pre-configured thresholds are exceeded.

If you choose to enable "Detect Dangerous Driving", you will need to configure the following parameters: "Acceleration Threshold", select the acceleration value during speeding up which must be exceeded to recognise the driving manner as dangerous.

"Slowdown threshold", select the acceleration value during braking which must be exceeded to recognise the driving manner as dangerous.

"Lateral acceleration threshold", select the acceleration value during turning manoeuvres which must be exceeded to recognise the driving manner as dangerous.

- Outgoing SMS Messages: Enable or disable outgoing SMS text messages whenever dangerous driving manner is recognised.

- Send Photo Upon Activation: Enable or disable outgoing digital photos whenever dangerous driving manner is recognised.

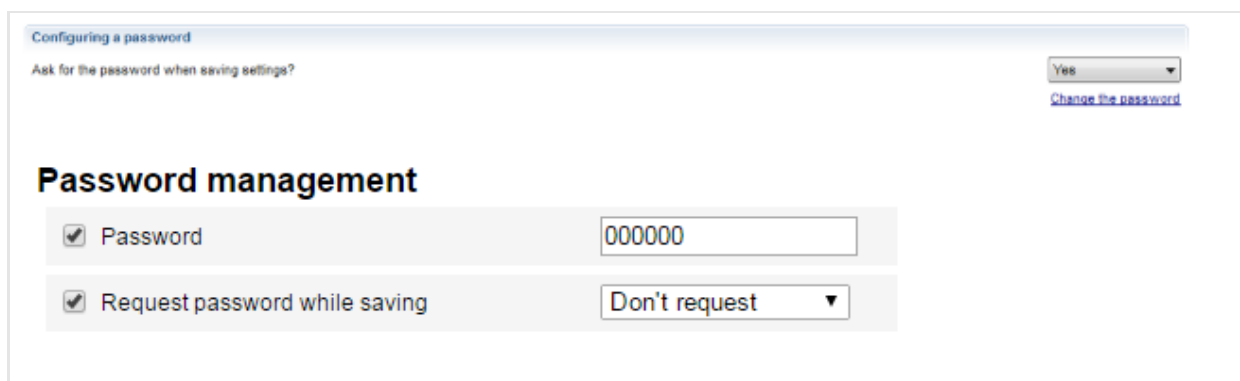
Utility Functions

Restarting Terminal

Open the "Terminal" tab from the Omnicomm Configurator menu and select the "Restarting Terminal" option.

Setting Up Password for Configuring Parameters

Open the "Settings" menu and select the "Additional Equipment" tab. Now refer to "Configuring password":



Configuring a password

Ask for the password when saving settings? Yes [Change the password](#)

Password management

☒ Password 000000

☒ Request password while saving Don't request

If you want to use a password for configuring the Terminal settings, select "Yes" as an answer to the "Ask for password when saving configurations?" field. Password, enter the password that will be used for access to settings configurations. The password must contain at least 8 characters.

Operational Set-up For Remote Configuration Server

You can set up the password for reconfiguring Terminal settings in either of the two ways: - Set up password for reconfiguring Terminal settings in the Omnicomm Configurator that is different from the default password. The default password is just an empty line.

- Send the following SMS command to update the default factory password: *SETPWDID 235009988 12345#"

Identifying Terminal's SIM Card Number

where '235009988' is the Terminal ID; '12345' is the new password you want to use.

The password must contain at least 8 characters and may include any numbers or letters. However, you cannot update a previously amended password in the same manner. It will take the Terminal 6 hours to authenticate with the Remote Configuration Server and become available for any further operations via the Remote Configuration Server.

Identifying Terminal's SIM Card Number

The Terminal's SIM card telephone number is displayed automatically in the Remote Configuration Server after the second established connection to the server. The SIM card must have outgoing SMS text messages enabled.

Additional equipment

Fuel level sensors

In the settings open "Inputs" tab.

The screenshot displays the 'Configuring a password' section of the Remote Configuration Server interface. It includes a dropdown menu for 'Ask for the password when saving settings?' set to 'Yes', with a link to 'Change the password'. Below this is the 'Password management' section, which has two rows: 'Password' with a text input field containing '000000', and 'Request password while saving' with a dropdown menu set to 'Don't request'. The next section is 'Setting up RS-485 and RS-232 interfaces', with a dropdown menu for 'RS-485' set to 'LLS/LLD'. Finally, the 'RS ports setting' section shows 'EIA-485' with a dropdown menu set to 'LLS/LLD'.

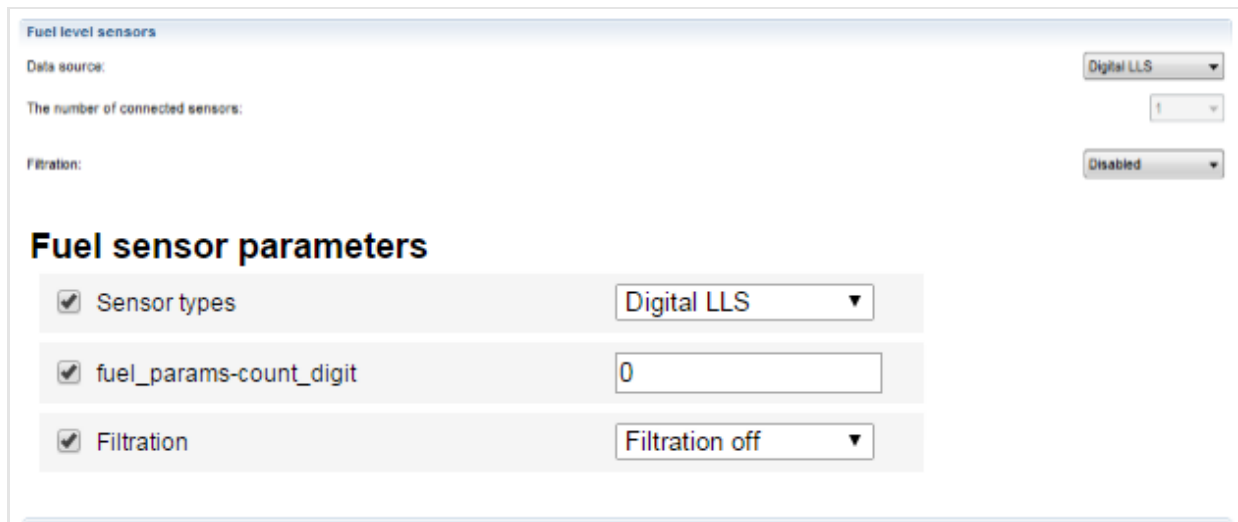
Select the following values for RS-485 interfaces:

- Off: The interface is not in use.

Identifying Terminal's SIM Card Number

- Omnicomm LLS/LLD: The interface is used to connect Omnicomm LLS fuel level sensors or Omnicomm LLD fuel volume indicator.

Now refer to "Fuel Level Sensors":



Data Source: Select the type of fuel level sensors. Here are the available options:

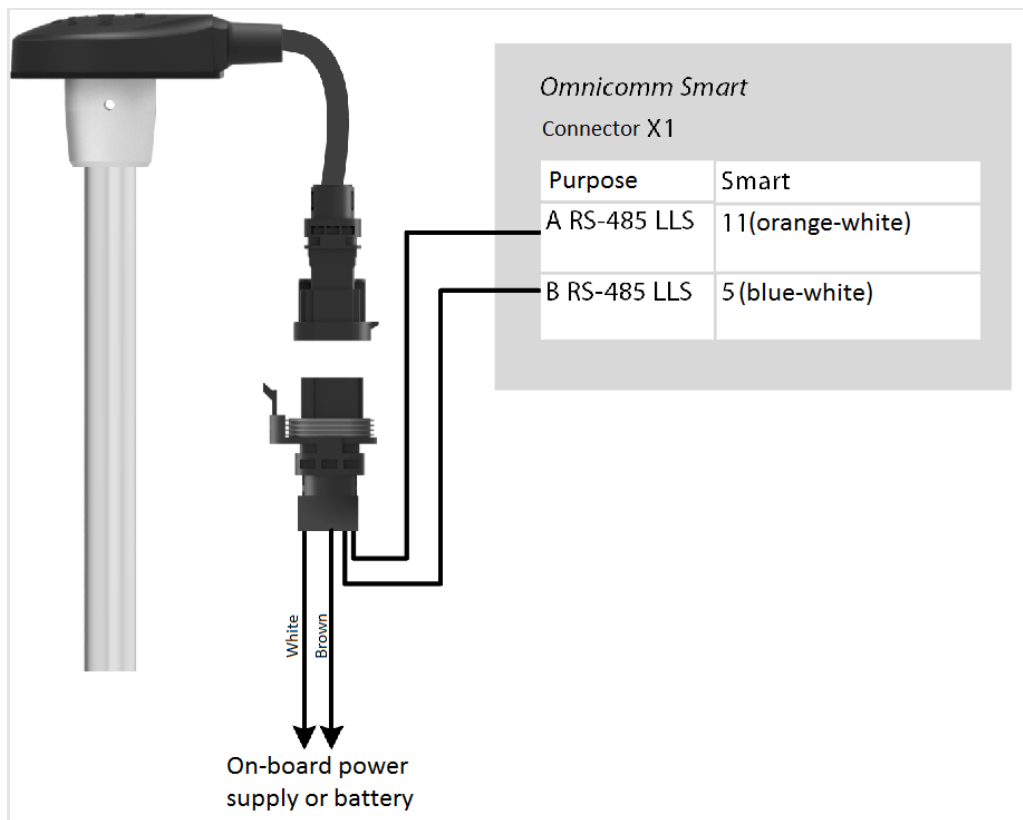
- Digital LLS: This is for Omnicomm LLS fuel level sensors;
- Frequency LLS-AF: This is for Omnicomm LLS-AF fuel level sensors;
- Vehicle Sensor: This is for the vehicle's standard factory fuel sensor;
- CAN Bus: This is for connecting to the CAN bus;
- Off: Select this option if you do not need to monitor your fuel level.

"If you are connecting either Omnicomm LLS or Omnicomm LLS-AF fuel level sensors, you will need to configure the following parameters:

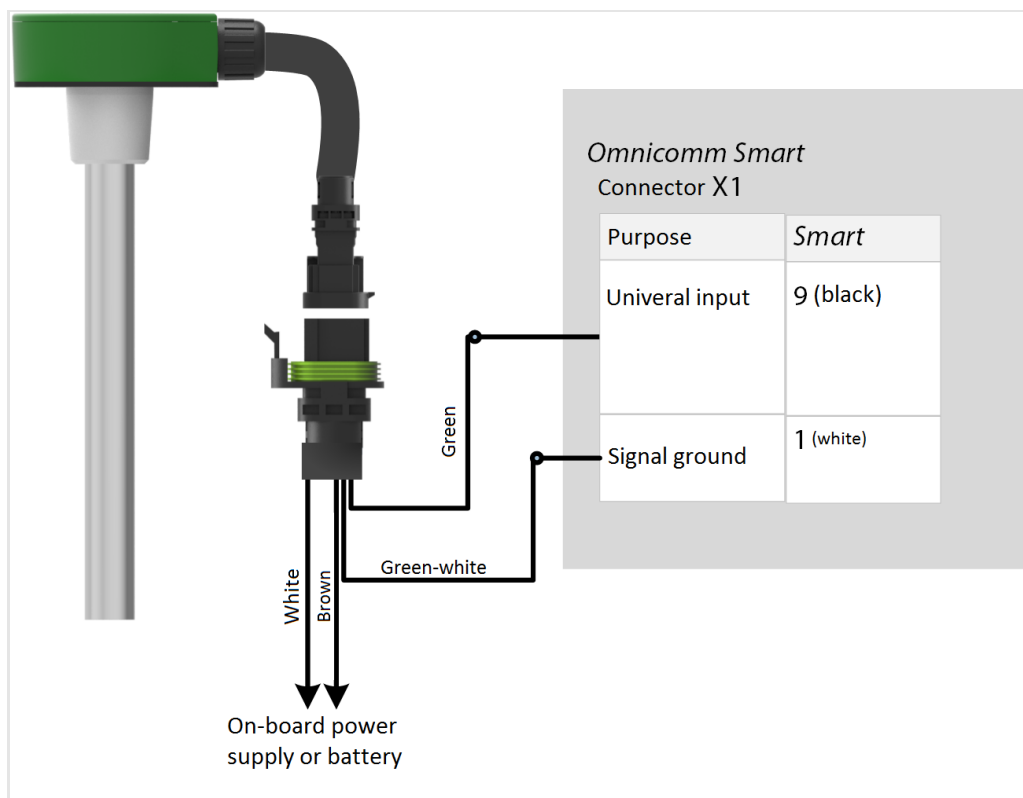
- Filters: Enter the size of the internal filter you intend to use. Here are the available filter options:
- Filters Off: Filtering is performed only according to the Omnicomm LLS sensor settings;
- Weak: Use it when installing sensors in stationary fuel storage objects or low-mobility equipment;
- Medium: Use it for vehicles that operate under normal road conditions;
- Strong: Use it for vehicles that operate under normal and heavy road conditions;
- Maximum: Use it for vehicles that operate under heavy road conditions and/or when employing a vehicle's default factory fuel sensor with analog output.

Connect the Omnicomm LLS 30160 fuel level sensor according to the figure below:

Identifying Terminal's SIM Card Number



Connect the Omnicomm LLS 20310 fuel level sensor according to the figure below:



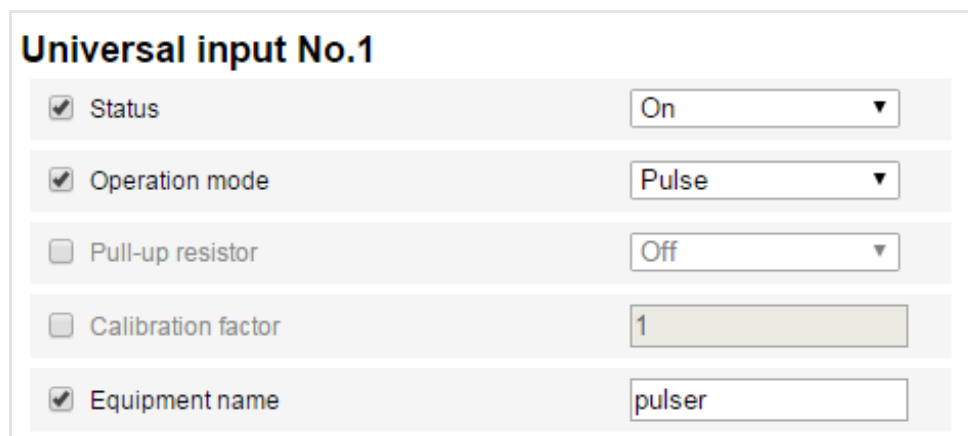
Universal Inputs

Omnicom LLS-AF 20310 fuel level sensor shall be configured to deliver the frequency signal in the range from 30 to 1053 Hz.

Universal Inputs

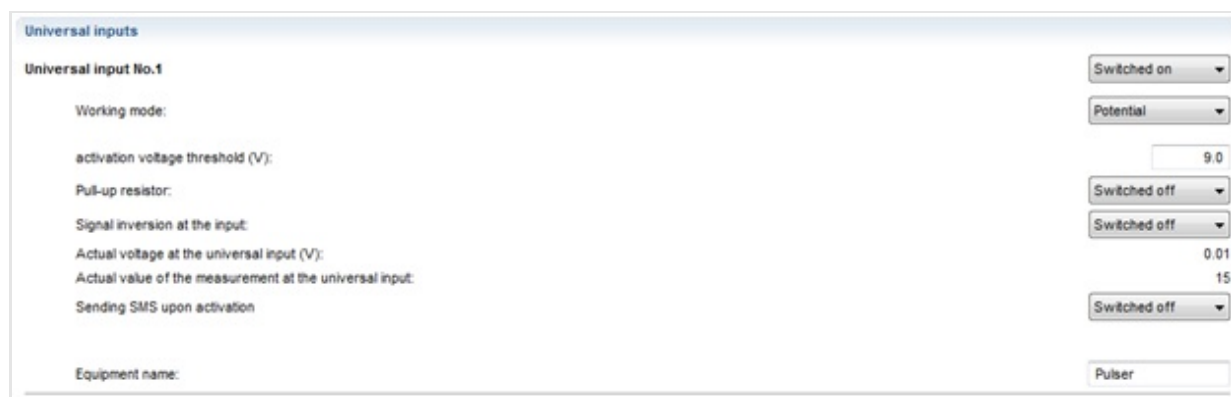
Universal inputs (UIs) are designed to connect additional equipment with impulse, voltage, analog, or frequency outputs and monitor its operations.

Open the "Settings" menu and select the 'Inputs' tab; then go to 'Universal Inputs':



Universal input No.1

<input checked="" type="checkbox"/> Status	On
<input checked="" type="checkbox"/> Operation mode	Pulse
<input type="checkbox"/> Pull-up resistor	Off
<input type="checkbox"/> Calibration factor	1
<input checked="" type="checkbox"/> Equipment name	pulser



Universal inputs

Universal input No.1

Working mode:	Switched on
activation voltage threshold (V):	Potential
Pull-up resistor:	9.0
Signal inversion at the input:	Switched off
Actual voltage at the universal input (V):	Switched off
Actual value of the measurement at the universal input:	0.01
Sending SMS upon activation	15
Equipment name:	Switched off
	Pulser

"Universal input", select "On".

"Operation mode", select "Potential".

"Transmit 1-Wire Sensor Values Instead of UI Values", check this box if you need to transmit data from additional equipment connected via the 1-Wire interface.

"Potential input switching-on voltage threshold", select the voltage threshold value that must be reached by the Terminal to record the sensor as "On". The default value is 9 V.

"Pullup", select "On", if you're working with "open collector" or contact type sensors.

"Invert Input Signal", select "On" for sensors with open contacts or contacts that lock as a

Universal Inputs

result of a specific action or event.

"Current Voltage", displays the Terminal's universal input voltage value.

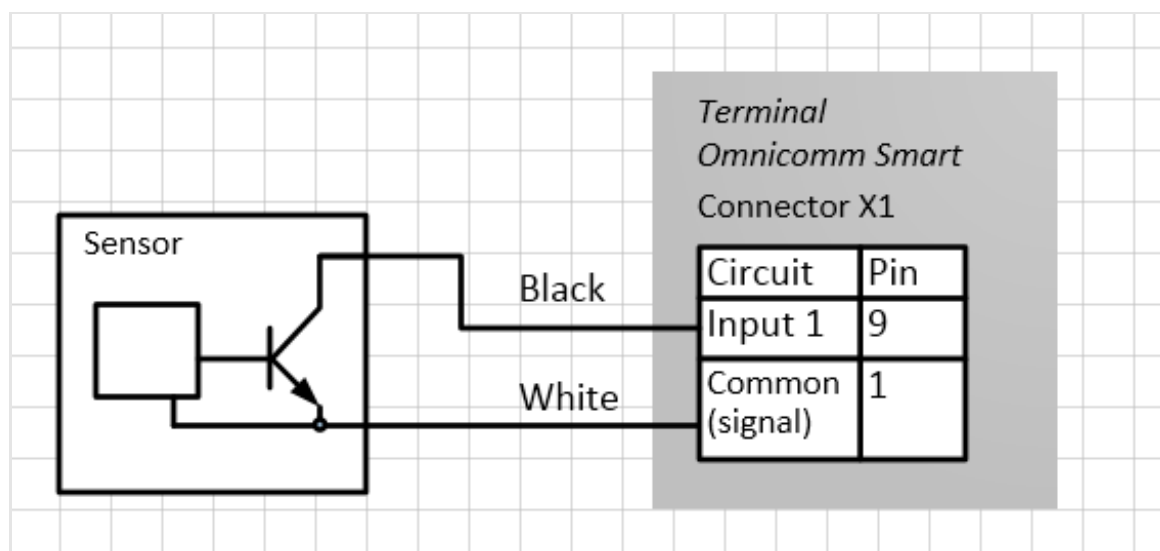
"Current Value", displays if the additional equipment is on or off.

"Send SMS upon triggering", select "On", if you want the Terminal to send SMS text messages when a voltage universal input is activated.

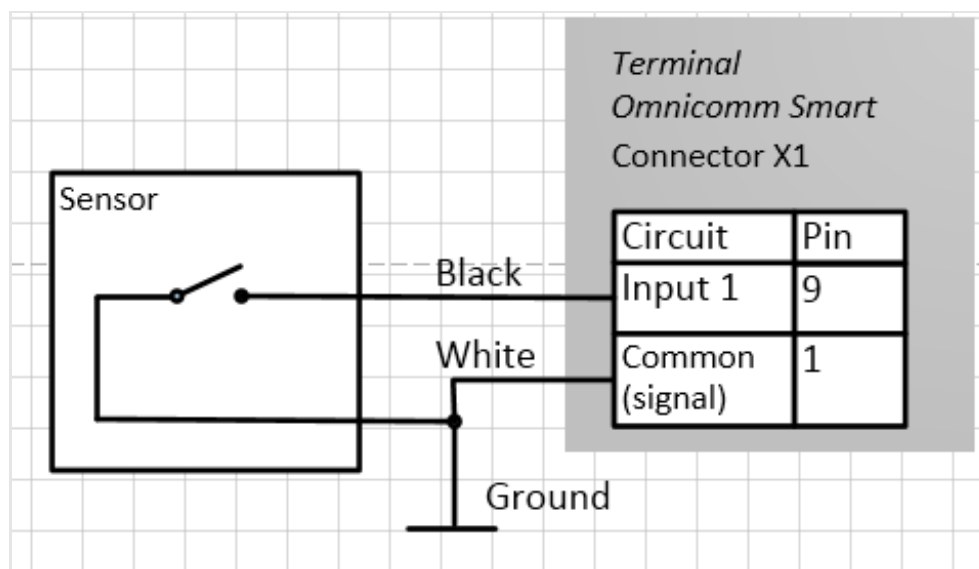
"Equipment name", enter a parameter controlled.

Potential types of sensors: contact or non-contact discrete sensors.

Connect contactless sensors (capacity, induction, optical or magnetic) and N-P-N type sensors with 'open collector' output according to the figure below:



Connect contact sensors according to the figure below:



Universal Inputs

You can use standard factory equipment elements (such as on/off buttons, end switches/sensors that are activated by changes in temperature or pressure values, etc.) as contact sensors, or any additionally installed sensors. We recommend to first examine your options of connecting to a standard device or element, and only installing an additional sensor in case that this is not possible.

Sensors with analogue output:

The screenshot shows a configuration window titled 'Universal inputs'. Inside, 'Universal input No.1' is selected. On the right, there are two dropdown menus: 'Switched on' and 'Analogue'. Below these are several input fields: 'Working mode:' (empty), 'Minimum value of the measurement:' (0.0), 'Maximum value of the measurement:' (20.0), 'Voltage corresponding to the minimum value of the measurement (V):' (0.0), 'Voltage corresponding to the maximum value of the measurement (V):' (20.0), 'Actual voltage at the universal input (V):' (0.01), 'Actual value of the measurement at the universal input:' (0.014), and 'Equipment name:' (Temperature).

The screenshot shows a configuration window titled 'Universal input No.1'. It contains several rows, each with a checked checkbox and a corresponding input field or dropdown menu: 'Status' (On), 'Operation mode' (Analogue), 'Minimum value of measured parameter' (0), 'Voltage corresponding to minimum value' (0), 'Maximum value of measured parameter' (20), 'Voltage corresponding to maximum value' (20), 'Equipment name' (temperature), and 'Accuracy' (3 (0.001)).

Measured Variable Minimum Value, set the minimum value for the variable measured by the sensor, defined in appropriate units. Voltage Associated With Minimum Value, set the voltage value that should be associated with the minimum value of the measured variable. Measured Variable Maximum Value, set the maximum value for the variable measured by the sensor, defined in appropriate units.

Voltage Associated With Maximum Value, set the voltage value that should be associated with the maximum value of the measured variable.

Current Universal Input Voltage, displays voltage value at Terminal's universal input.

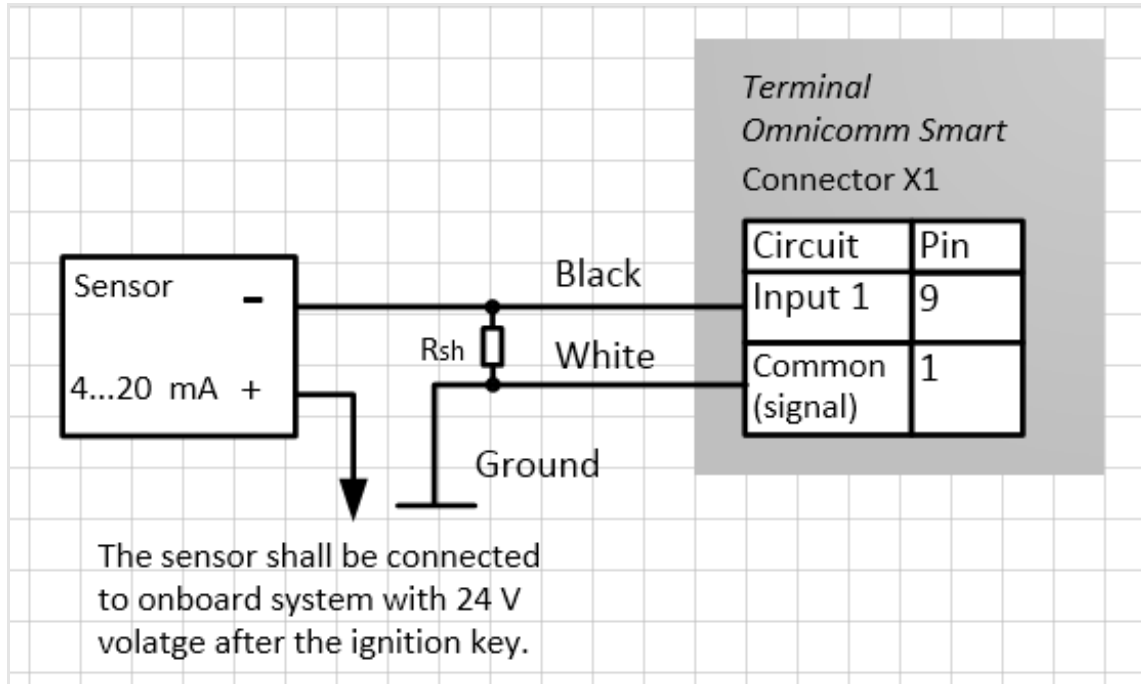
Universal Inputs

Current Universal Input Value, displays current value of the measured variable.

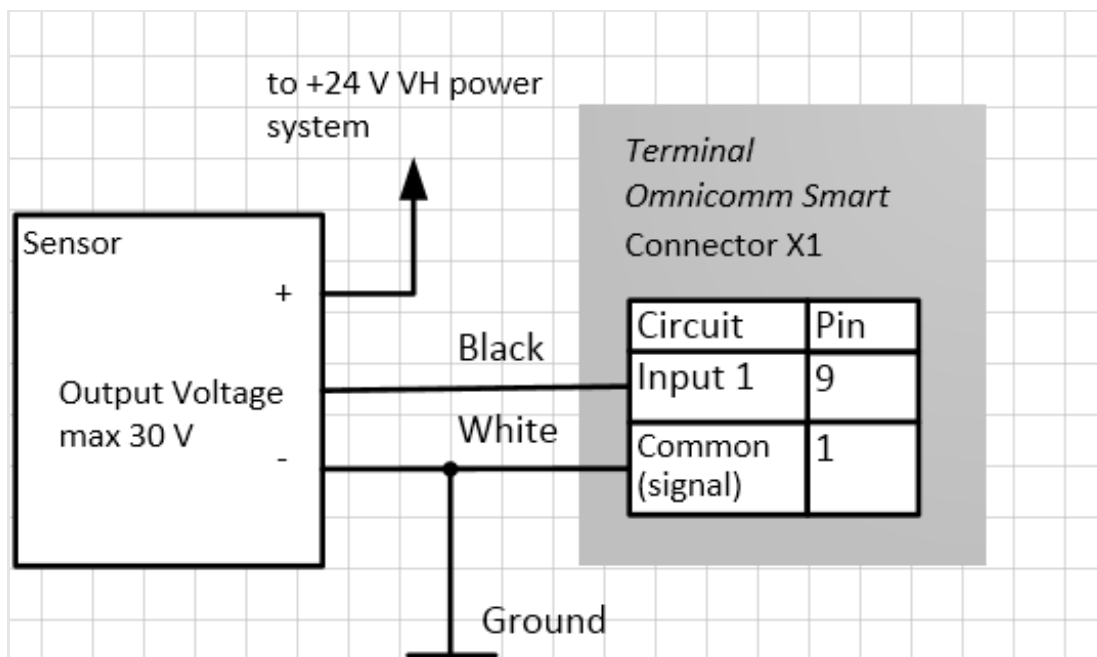
Equipment Name, enter the name of the monitored parameter.

Types of analogue sensors:

Standardised current output



Standardised voltage output



Omnicom LLD Indicator

Sensors with frequency output

The screenshot shows the configuration page for 'Universal input No.1'. At the top, there are four dropdown menus: 'Universal input No.1' (set to 'Switched on'), 'Working mode' (set to 'Frequency'), 'Pull-up resistor' (set to 'Switched off'), and 'Equipment name' (set to 'Revolutions'). Below this, the 'Actual value of the measurement at the input' is displayed as '17'. The main section, titled 'Universal input No.1', contains four rows, each with a checked checkbox and a dropdown menu: 'Status' (On), 'Operation mode' (Frequency), 'Pull-up resistor' (Off), and 'Equipment name' (revolutions). At the bottom, a small blue bar contains the text 'Parameters for transmitting the values to LLD indicator'.

Universal Input, select "On".

Operation Mode, select "Frequency".

"Transmit 1-Wire Sensor Values Instead of UI Values", check this box if you need to transmit data from additional equipment connected via the 1-Wire interface. This will prevent data transmission from the universal input.

"Pull-up", select "On" if you're working with "open collector" or contact type sensors.

Current Universal Input Value, displays the current value of the measured variable.

Omnicom LLD Indicator

Open the "Settings" menu and select the "Additional Equipment" tab:

Panic Button

Parameters for transmitting the values to LLD indicator

Data output mode: Universal input

Maximum number of characters in the fractional part: 0

No. of the universal input: 1

Additional parameters

☐ Panic button: Off

☒ Speed value transfer to LLD indicator: On

Data Mode, select the data source that should be used to display values on the Omnicomm LLD indicator.

Here are the available options:

- GPS Speed Tracking, displays vehicle speed.
- Universal Input, displays state of or value at the Terminal's universal input, depending on the additionally connected equipment.

Panic Button

Open the "Settings" menu and select the "Additional Equipment" tab:

Additional parameters

☐ Panic button: Off

☒ Speed value transfer to LLD indicator: On

Panic Button parameters

Data source: UI "Panic Button"

Sending SMS upon activation: Switched on

CAN bus

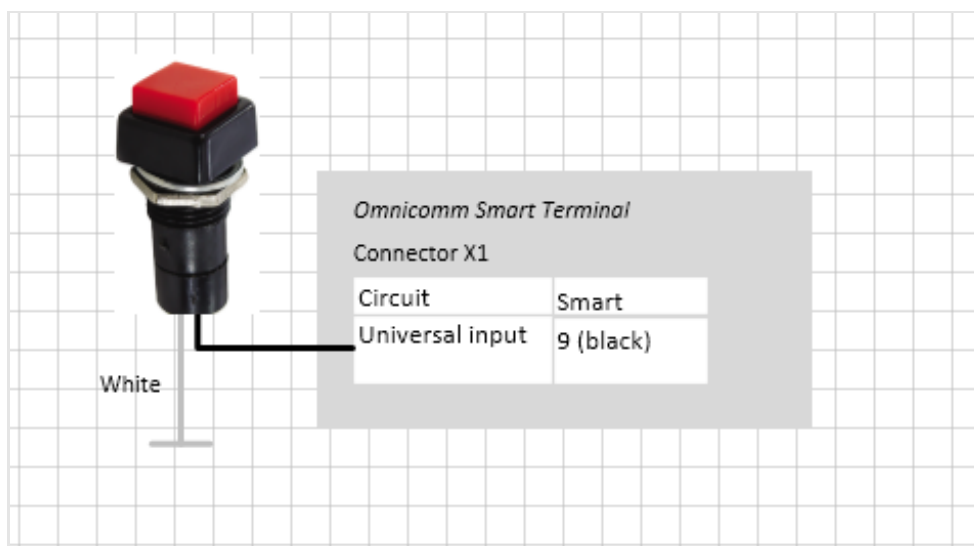
Additional parameters

<input checked="" type="checkbox"/> Panic button	On ▼
<input checked="" type="checkbox"/> Send SMS by pressing panic button	On ▼
<input type="checkbox"/> Speed value transfer to LLD indicator	Off ▼

Panic Button, enable or disable monitoring the panic button state.

Send SMS Messages Upon Activation: Enable or disable outgoing SMS text messages whenever the panic button is pressed.

Connect the panic button according to the figure below:





The panic button shall be installed on the vehicle's front panel, or anywhere inside the vehicle cabin that is convenient for use. Once you've chosen the installation place, drill a 12-mm hole, mount the button and secure it with a ring and a tab washer.

CAN bus

Open the "Settings" menu and select the "CAN" tab:

CAN bus

Monitor  Settings  Save

Connection Inputs Auxiliary equipment CAN

Add

Change

Delete

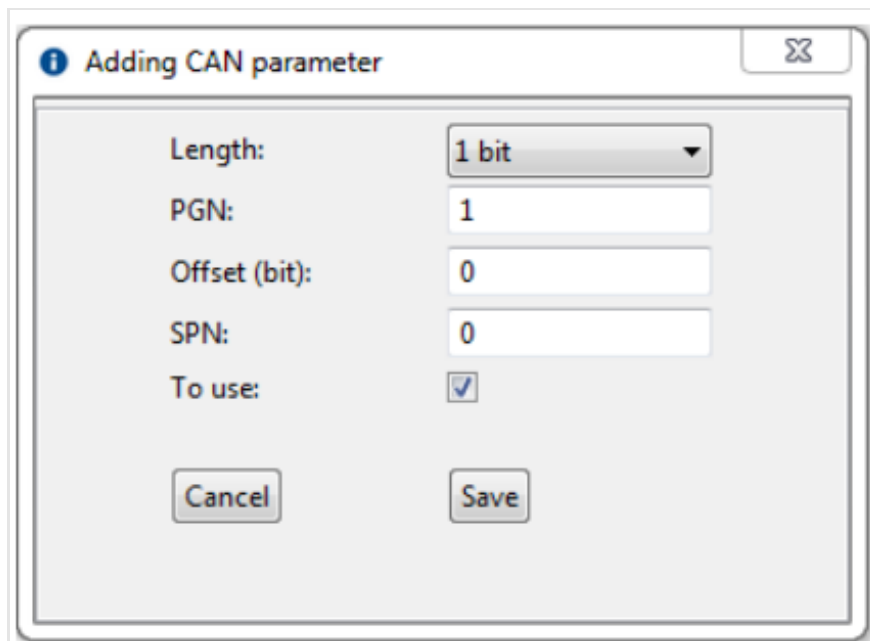
<input type="checkbox"/>	No.	Length	PGN	Offset (b...	SPN	Actual value	<input type="checkbox"/> To use
<input type="checkbox"/>	1	Parking brake status	65265	2	70	Disabled in the Terminal settings	<input type="checkbox"/>
<input type="checkbox"/>	2	Accelerator pedal position	61443	8	91	Disabled in the Terminal settings	<input type="checkbox"/>
<input type="checkbox"/>	3	Engine oil pressure	65263	24	100	Disabled in the Terminal settings	<input type="checkbox"/>
<input type="checkbox"/>	4	Engine coolant temperature	65262	0	110	Disabled in the Terminal settings	<input type="checkbox"/>
<input type="checkbox"/>	5	Fuel temperature	65262	8	174	Disabled in the Terminal settings	<input type="checkbox"/>
<input type="checkbox"/>	6	Engine oil temperature	65262	16	175	Disabled in the Terminal settings	<input type="checkbox"/>
<input type="checkbox"/>	7	Daily fuel consumption	65257	0	182	Disabled in the Terminal settings	<input type="checkbox"/>
<input type="checkbox"/>	8	Instantaneous fuel economy	65266	16	184	Disabled in the Terminal settings	<input type="checkbox"/>
<input type="checkbox"/>	9	Engine revolutions	61444	24	190	Disabled in the Terminal settings	<input type="checkbox"/>
<input type="checkbox"/>	10	Daily mileage	65248	0	244	Disabled in the Terminal settings	<input type="checkbox"/>
<input type="checkbox"/>	11	Total mileage	65248	32	245	Disabled in the Terminal settings	<input type="checkbox"/>
<input type="checkbox"/>	12	Total engine runtime	65253	0	247	Disabled in the Terminal settings	<input type="checkbox"/>
<input type="checkbox"/>	13	Total fuel consumption during the total time	65257	32	250	Disabled in the Terminal settings	<input type="checkbox"/>
<input type="checkbox"/>	14	Brake pedal position	61441	8	521	Disabled in the Terminal settings	<input type="checkbox"/>
<input type="checkbox"/>	15	Clutch pedal position	61442	24	522	Disabled in the Terminal settings	<input type="checkbox"/>
<input type="checkbox"/>	16	Cruise control status	65265	53	527	Disabled in the Terminal settings	<input type="checkbox"/>
<input type="checkbox"/>	17	Axle load	65258	8	582	Disabled in the Terminal settings	<input type="checkbox"/>
<input type="checkbox"/>	18	Brake pedal status	65265	28	597	Disabled in the Terminal settings	<input type="checkbox"/>
<input type="checkbox"/>	19	Clutch pedal status	65265	30	598	Disabled in the Terminal settings	<input type="checkbox"/>
<input type="checkbox"/>	20	Mileage before the next routine maintenance	65216	8	914	Disabled in the Terminal settings	<input type="checkbox"/>
<input type="checkbox"/>	21	Engine runtime before the next routine maintenance	65216	48	916	Disabled in the Terminal settings	<input type="checkbox"/>
<input type="checkbox"/>	22	Axis index	65258	0	928	Disabled in the Terminal settings	<input type="checkbox"/>
<input type="checkbox"/>	23	Instantaneous velocity	65132	48	1624	Disabled in the Terminal settings	<input type="checkbox"/>
<input type="checkbox"/>	24	State of doors	65102	1	1821	Disabled in the Terminal settings	<input type="checkbox"/>
<input type="checkbox"/>	25	State of safety belts	57344	30	1856	Disabled in the Terminal settings	<input type="checkbox"/>

CAN bus

CAN parameters	
<input checked="" type="checkbox"/> Parking brake status	Off ▼
<input checked="" type="checkbox"/> Accelerator pedal position	Off ▼
<input checked="" type="checkbox"/> Engine oil pressure	Off ▼
<input checked="" type="checkbox"/> Engine coolant temperature	Off ▼
<input checked="" type="checkbox"/> Fuel temperature	Off ▼
<input checked="" type="checkbox"/> Engine oil temperature	Off ▼
<input checked="" type="checkbox"/> Daily fuel consumption	Off ▼
<input checked="" type="checkbox"/> Instantaneous fuel economy	Off ▼
<input checked="" type="checkbox"/> Engine RPM	Off ▼
<input checked="" type="checkbox"/> Daily mileage	Off ▼
<input checked="" type="checkbox"/> Total mileage	Off ▼
<input checked="" type="checkbox"/> Total time of engine operation	Off ▼
<input checked="" type="checkbox"/> Total fuel consumption per total time	Off ▼
<input checked="" type="checkbox"/> Service brake pedal position	Off ▼
<input checked="" type="checkbox"/> Clutch pedal position	Off ▼
<input checked="" type="checkbox"/> Cruise control status	Off ▼
<input checked="" type="checkbox"/> Axle load	Off ▼
<input checked="" type="checkbox"/> Service brake pedal status	Off ▼

Refer to the list and select the parameters whose values you need to display in Omnicomm Online by ticking the box in the 'Use' column appropriately. If you need to add parameter readings from the CAN bus that are missing from this list, go to Omnicomm Configurator and click on 'Add'. You will be taken to the following screen:

CAN bus



The screenshot shows a software dialog box titled "Adding CAN parameter". It contains the following fields and controls:

- Length:** A dropdown menu currently set to "1 bit".
- PGN:** A text input field containing the value "1".
- Offset (bit):** A text input field containing the value "0".
- SPN:** A text input field containing the value "0".
- To use:** A checkbox that is checked.
- Buttons:** "Cancel" and "Save" buttons at the bottom.

Length: Select the data packet length. Here are the available options: 1, 2, 3, or 4 bits; 1, 2, or 4 bytes.

PGN: Enter the parameter group number that determines the content of each specific message according to SAE J1939. You can choose a number from 1 to 262,143.

Offset: Enter the offset value in relation to the basic address of the bit storage area. You can choose values from 0 to 63.

SPN: Enter the parameter code according to SAE J1939. You can choose between values from 0 to 4,294,967,295.

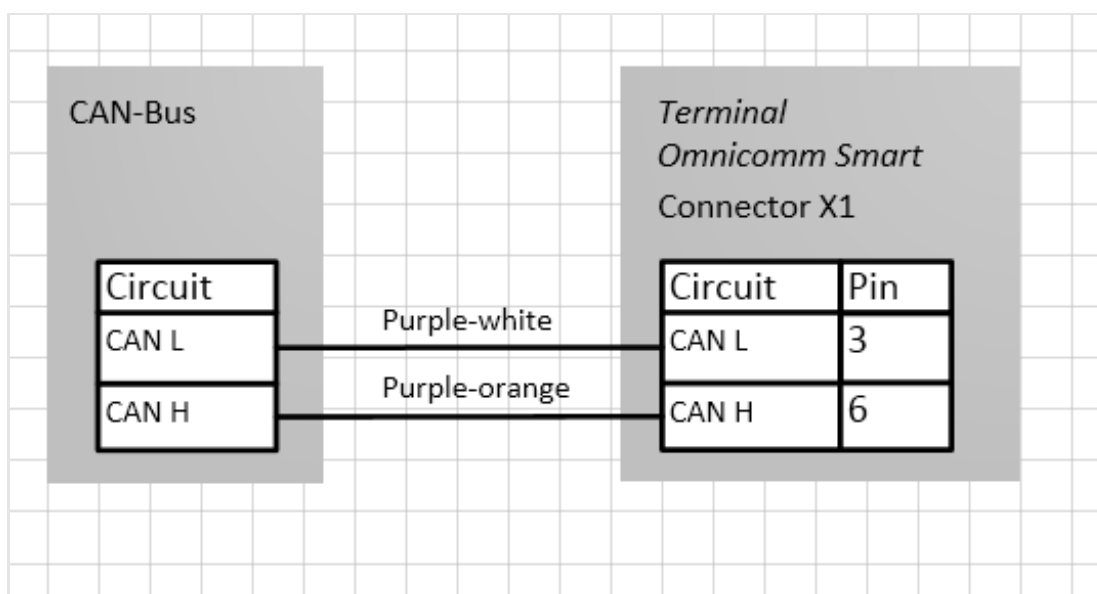
Use: Check if you want to read this parameter from the CAN bus.

Click on "Save".

Connect to the vehicle's CAN bus via the wireless CAN reader (or CAN alligator clip).

When using wireless CAN readers, connect the Terminals according to the diagram below:

Technical Specifications



Use the "Monitoring" tab to check how the fuel sensor readings are displayed; the available value range is from 0 to 4,095.

If you choose to obtain data on fuel volume in the tank from CAN bus readings, select the "Collect Data During Joilting" Terminal operation mode for the event of ignition "Off".

Otherwise, the fuel chart will display inaccurate information.

Technical Specifications

	Omnicom Smart
Connection	
Satellite Navigation Systems	GLONASS/GPS
Data transmission channel	GPRS
Number of SIM card and SIM chips	1 SIM card
SIM chip installing option	No

Technical Specifications

	Omnicom Smart
Connection	
Data collection and transfer	
Data collection period, sec	15...240
Nonvolatile data memory (events)	150 000
	Omnicom Smart
Inputs and outputs	
Ignition key input	Yes
RPM sensor input	Yes
Number of universal inputs	Yes
Interfaces	
CAN interface	Yes
RS-485 interface	Yes
USB interface	Yes
Built-in accelerometer	Yes
Body	
Dimensions, mm	101.0 x 90.0 x 31.5

SMS commands

	Omnicom Smart
Connection	
Operational temperature range, °C	– 40...+85
Body-opening sensor	No
Antenna type	Buit-in
Features	
Fuel level sensors connection	1
Remote GPRS control	Yes
Data output via external indicator	Yes
SMS notifications	Yes

SMS commands

SMS commands for Terminal configuration

Command	Function	
Command text in SMS message	Reply to SMS command	

SMS commands

Command	Function	
Command text in SMS message	Reply to SMS command	
*CONNECT#	CONNECT url_CS:port	Request to establish connection between the Terminal and the CS
*GETLINK#	LINK ip4_url_CS:port date_and_time	Enquiry on state of connection to the CS
*GETINFO#	INFO DID=device ID HW=code_hardware_version BL=loader_version FW=wiring_version REC=number_of_archived_records IMEI=unique_identifier_of_GSM_modem	Enquiry on the terminal state
*RESET#	RESET param Possible parameter readings: param = OK (when command is sent) param = ER (when no command is sent)	Restarting the Terminal

SMS commands

Command	Function	
Command text in SMS message	Reply to SMS command	
*GETSTAT#	STAT Terminal_date_and_time GPS=GPS coordinates SPD=speed IGN=state_of_ignition L1=fuel_level:sensor_state ... L6=fuel_level:sensor_state LLS/LLS-AF fuel level sensor state codes: 0 - sensor off; 1 - sensor not ready; 2 - sensor ready, frequency of 20 to max. Hz; 3 - error, frequency of 0 to 19 Hz	Request to check vehicle state
*SETPWDID vid pwdid# vid is the Terminal's ID, pwdid is password/identificator	SETPWDID ERRID/ERRNulPWD/ERRAlrSet/PWD:pwdid OK	Setting the "password" parameter
*CONNECTSC#	RESET param Possible parameter readings: param = OK (when command is sent) param = OK (when command is sent) param = ER (when no command is sent)	Enquiry on establishing connection of the terminal with the configuration server
*SETAPN apn# apn – operator's APN	SETAPN apn ERR/OK	APN installation
*GPSCOLD#	GPSCOLD ERR/OK	Cold start of GPS receiver

OMNICOMM

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