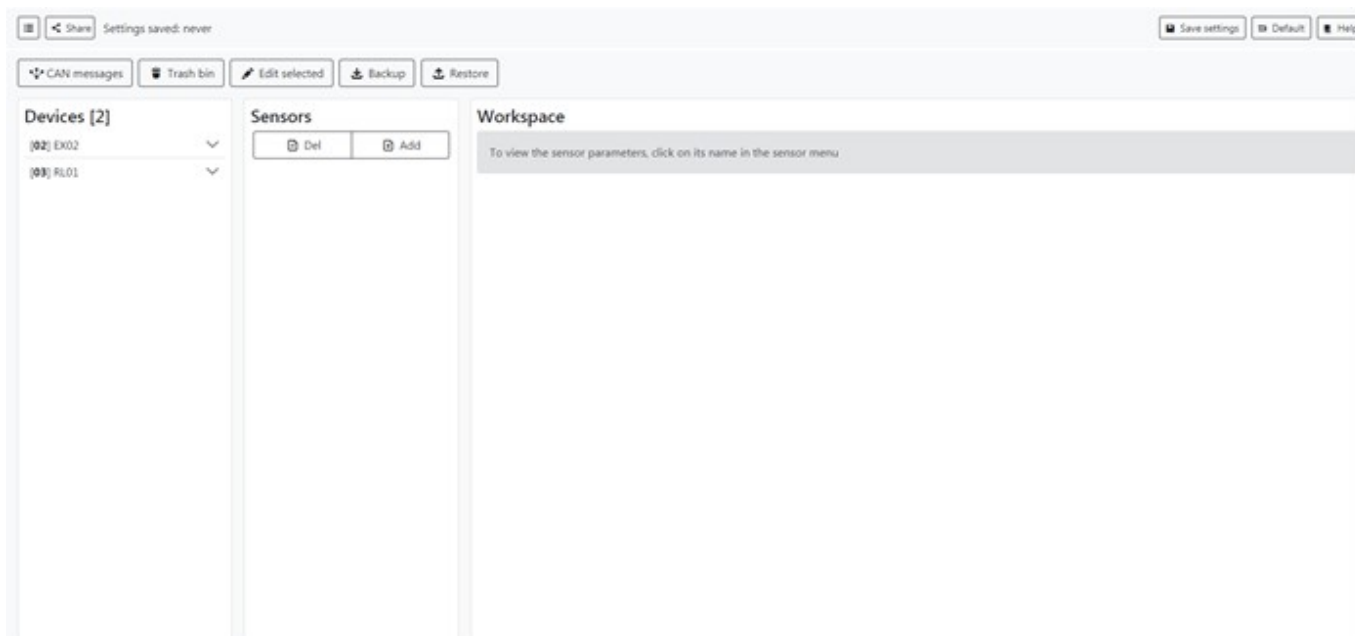


Sensors

Main page

Figure 1 - main page of chapter SENSORS



This chapter allows you to see which devices are connected to mNVR, check out CAN messages, add sensors or delete them, if there are a necessity you can restore them from trash bin

Devices

Figure 2 - menu **Devices**

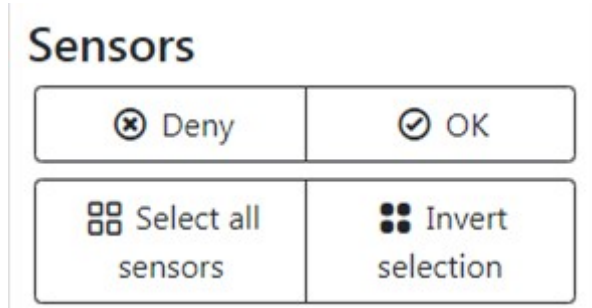
Devices [1]

[01] V202	^
Address	01
Name	V202
Version	0210
Lib	Exist

In menu devices you can check information about devices that are connected to the NVR, their CONNCECT ID, name, version of firmware of devices, and see if there are presets to this device

Deleting sensors

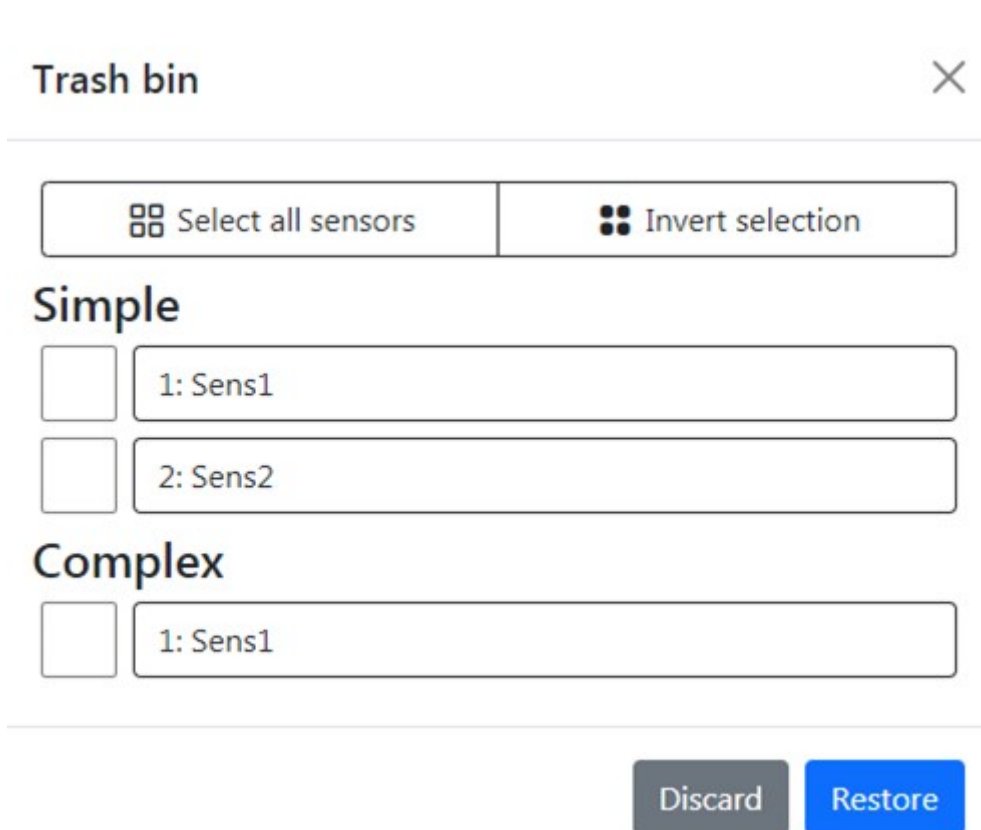
Figure 3 - menu **deleting sensors**



You can select a couple of them, or choose all, or invert selection and delete sensors which you want, deleted sensors will be moved to trash bin

Trash bin

Figure 4 - menu **trash bin**



If you accidentally delete some of your sensors or want to restore old you can do it by **trash bin** menu, you need to select desired sensors and press **restore** button or **discard** if you change your

mind

Workspace

Figure 5 - Workspace

Workspace	
Current value	[Click for update!]
Category	Simple
Name	Sens1
Camera	1
Sensor type	Internal
Resend interval	Disabled
Sub type	INPUT0
Content type	(0) Photo
RTSP source	LOW
Photos count	1
Photos interval	10
Photo quality	50%
'Missing' value	0
Event type	Return to range
Upper limit	0
Lower limit	0
Averaging time	1s

There you can check information about your sensor, it current value, category, sensor type, type of content, etc. and if you want to change some parameters you can press Edit button and configure your sensor

CAN message

Figure 6 - CAN message

CAN messages



Choose device
03

Choose PGN
18F710

01-07-2021 | 15:03:07
 BIN 00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000
 HEX 00 00 00 00 00 00 00 00

Toggle all data table

DEVICE 03

PGN	VALUE	DATE
18F710	00 00 00 00 00 00 00 00	01-07-2021 15:03:07
18F713	52 4C 30 31 30 31 31 35	01-07-2021 15:03:07
18F712	2D 11 00 00 F8 00 00 00	01-07-2021 15:03:07

DEVICE 02

PGN	VALUE	DATE
18F710	00 00 00 00 01 01 01 01	01-07-2021 15:03:07
18F720	00 00 00 00 00 00 F0 00	01-07-2021 15:03:07
18F730	00 00 00 00 00 00 00 00	01-07-2021 15:03:07
18F740	00 00 00 00 00 00 00 00	01-07-2021 15:03:07
18F741	76 06 00 00 04 00 00 00	01-07-2021 15:03:07
18F742	02 00 00 00 00 00 00 00	01-07-2021 15:03:07
18F743	66 04 00 00 FD 04 00 00	01-07-2021 15:03:07
18F744	03 00 00 00 0D 00 00 00	01-07-2021 15:03:07
18F750	00 00 00 00 00 00 00 00	01-07-2021 15:03:07
18F713	45 58 30 32 30 31 30 33	01-07-2021 15:03:06
18F712	4B 0F 00 00 F1 00 00 00	01-07-2021 15:03:06

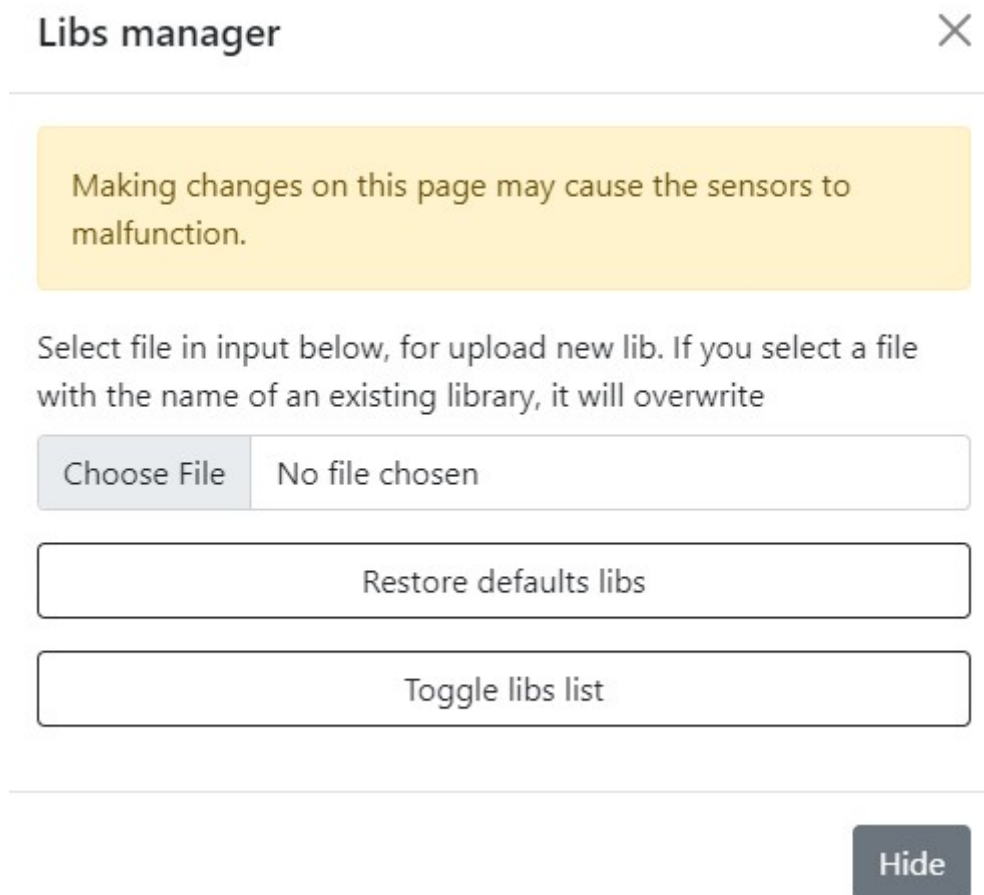
You can check the state of your devices by pressing CAN messages button, there you can choose the device which you want to check by choosing his address on CONNECT ID, and PGN and see the value which devices will be send. Value will be send in HEX system, to convert in DEC system you need to highlight it and lower right corner will be converted value

✓ HEX(FLIP) -> DEC
4C -> 76;

Also, you can press **Toggle all data table** button for more information

Libs manager

figure 7 - Libs manager



If you have a library, that you created manually, you can download it with the help of libs manager. To do that, you need to press **Choose file** button and download file of **.xml** format. To choose **one of presetted** libraries you need to press **Toggle libs list** button, to restore default libraries press **Restore default libs**

Bluetooth Low Energy (BLE) scanner adding

Figure 8 - BLE scanner

Bluetooth low energy scan ✕

STOP

Updated: 10/22/2021, 1:59:21 PM

MAC	RSSI	Meters	Name	RAW	Last seen
5A:88:FF:9D:BD:37	-66dBm	2.00m	GENERIC	0x02011A020A0C08FF4C0010061E1A2588A7C0	3 sec ago
48:3A:18:7C:5A:70	-82dBm	12.59m	GENERIC	0x02011A020A080AFF4C0010050318C986D6	5 sec ago
D4:EA:C8:AD:E6:F5	-86dBm	19.95m	GENERIC	0x02010618FF570102FFFFFFFFFFFFFFFFFFFFFFFF03D4EAC8ADE6F5	3 sec ago

If you have BLE sensor you can connect it to mNVR. First you need to scan it by pressing **BLE scan** button and then press **Start** button, after that you can find the desired sensor in the list below, also in this list you can check the information such as: • MAC address • Signal quality level • Distance to the object (in meters) • Information about the signal • Time from the sensor detection After that in sensor menu is need to press **BLE settings** button and add your sensor to **favorite**, in this way you can add sensors from favorite in adding sensor menu

Figure 9 - BLE settings

Bluetooth low energy settings ✕

Remember to stop scanning and add some found items to your favorites. If the favorites are empty, you should not be able to add a sensor - no BLE fields will be displayed for addition.

Clear favorites

START

Updated: 10/22/2021, 1:29:37 PM

MAC	RSSI	Meters	Name	RAW	Fav
18:04:ED:4E:A9:A1	-68dBm	2.51m	BITREK	RAW	<input type="text"/> <input type="checkbox"/>
D4:EA:C8:AD:E6:F5	-78dBm	7.94m	GENERIC	RAW	<input type="text"/> <input type="checkbox"/>
18:04:ED:4E:9A:FD	-80dBm	10.00m	BI_T1	RAW	temp <input checked="" type="checkbox"/>

Adding sensor

Рисунок 9 - add sensors menu

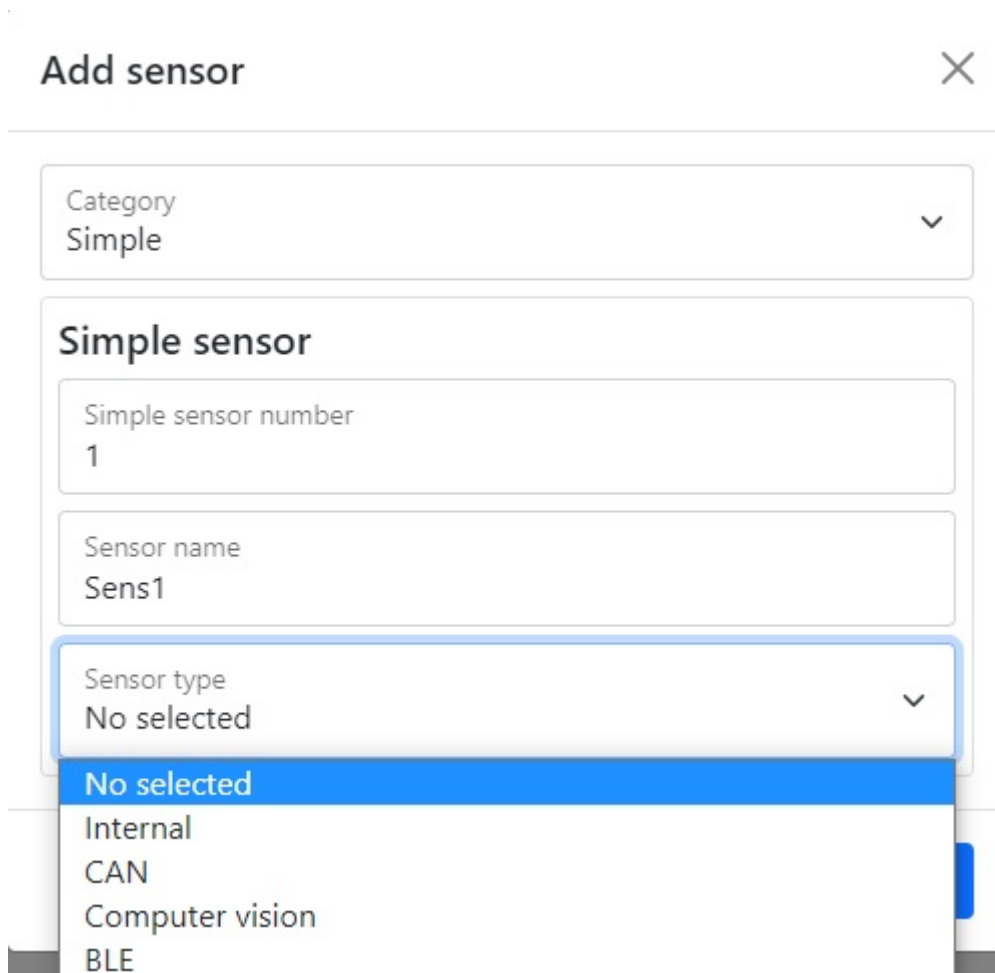


Table 1 - adding new sensor parameter description

Parameter	Parameter description
Category	Sensor class, simple or complex
Sensor number	Sensor number selection
Sensor type	Sensor type, Internal, CAN, BLE or Computer vision

Internal sensor type

The section contains the selection of the sensor subtype, camera number, photo count and its interval, RTSP source and reference to it, the maximum video time associated with the event, the number of photos and frames per second, video time, the interval between photos associated with the event, its count and quality content type, event type, upper and lower limit, average latency, and resubmission interval

Figure 10 - menu of internal sensor type

Add sensor



Category
Simple



Simple sensor

Simple sensor number
1

Sensor name
Sens1

Sensor type
Internal



Internal sensor settings

Internal sensor subtype
No selected



No selected

INPUT0

INPUT1

Analog

Speed

Voltage

Movement

Ignition state

Event settings

Event type
Return to range ▼

- Return to range
- Exit from range
- Return to/exit from range
- Monitoring
- Monitoring & return to range
- Monitoring & exit from range
- Monitoring & return to/exit from range
- Change the input value (delta)
- Monitoring & change the input value(delta)

Averaging time
1

Range: 1..99999

Resend interval
0

Range: 0..99999

Content type
No selected ▼

Value when 'missing' value
0

Determines the value on the sensor when there is no value on the sensor

Discard

Add

Table 2 - the description of parameters of the subtypes of the sensor internal:

Parameter	Parameter description
INPUT 0	Digital input 0
INPUT 1	Digital input 1
ANALOG	Analog input 1
SPEED	Speed sensor
VOLTAGE	Voltage at the input of the device
MOVEMENT	The status of the motion sensor on the device
OVERCURRENT	Overcurrent sensor

Table 3 - description of the menu parameters Content type

Parameter	Parameter description
Photo	Allows you to select the RTSP source, photo count, photo interval, and photo quality
Fixed time video	Allows you to select the RTSP source and the fixed video recording time
Event related video	Allows you to select the RTSP source and the maximum video time associated with the event
Time-lapse video	Allows you to select RTSP links, the number of photos, the interval between them and the number of frames per second
Event centered video	Allows you to select RTSP links and video time
Event related photo	Allows you to select the RTSP source, the interval between the photos associated with the event, their quantity and quality
Φoto + Email	Allows you to select the RTSP source, photo count, interval between them and their quality

Figure 11 - types of the content

Content type
0 - Photo

Content settings

RTSP source
LOW

Photos count
1

Range 1..10 pcs

Photos interval
10

Range 10..60s

Photo quality
50%

Range 10..100%

Camera number
1

Value when 'missing' value
0

Determines the value on the sensor when there is no value on the sensor

Discard Add

Content type
1 - Fixed time video



Content settings

RTSP source
LOW



Fixed time video time
10

Range 5..9999s

Camera number
1

Value when 'missing' value
0

Determines the value on the sensor when there is no value on the sensor

Discard

Add

Content type
2 - Event related video

Content settings

RTSP source
LOW

Event related video max time
10
Range 5..9999s

Camera number
1

Value when 'missing' value
0

Determines the value on the sensor when there is no value on the sensor

Discard Add

Content type
3 - Time-lapse video

Content settings

Check settings in `Cameras => Timelapse`

Camera number
1

Value when 'missing' value
0

Determines the value on the sensor when there is no value on the sensor

Discard Add

Content type
4 - Event centered video

Content settings

Check settings in `Cameras => Timelapse`

Camera number
1

Value when 'missing' value
0

Determines the value on the sensor when there is no value on the sensor

Discard Add

Content type
5 - Event related photo

Content settings

RTSP source
LOW

Event related photo interval
10

Range 10..999s

Event related max photo count
10

Range 2..999

Event related photo quality
50%

Range 10..100%

Camera number
1

Value when 'missing' value
0

Determines the value on the sensor when there is no value on the sensor

Discard Add

Content type
6 - Photo + Email

Content settings

RTSP source
LOW

Photos count
1

Range 1..10 pcs

Photos interval
10

Range 10..60s

Photo quality
50%

Range 10..100%

Camera number
1

Value when 'missing' value
0

Determines the value on the sensor when there is no value on the sensor

Discard Add

Content type
7 - Send SMS

Camera number
1

Value when 'missing' value
0

Determines the value on the sensor when there is no value on the sensor

Discard Add

Content type
8 - Send Email

Camera number
1

Value when 'missing' value
0

Determines the value on the sensor when there is no value on the sensor

Discard Add

CAN Sensor type

In the section you can select the type of device and find out information about it, device variable, camera number, photo count and its interval, RTSP source and link to it, maximum video time associated with the event, number of photos and frames per second, video time , the interval between the photo associated with the event, its count and quality, the type of content and event, the upper and lower limit, the average waiting time of the bus address CAN, PGN and CAN settings

Figure 12 - menu of CAN sensor type

Sensor type
CAN

CAN sensors settings

Available devices libs
[ONLINE] [02] EX02 > 0103

Контроллер цифровых входов, модель CONNECT

Current device variable
Модель устройства

Select the device variable to which the event will be linked

Address
02

Address on the CONNECT bus

PGN
18F713

PGN address on the CONNECT bus

Advanced CAN settings

Bitness
4

Start bit
0

Bit total
32

Timeout
10

Table 2 - the description of parameters of the CAN sensor settings:

Parameter	Parameter description
Available device libs	Available preset for connected devices
Current device variable	Available variables for devices
Address	CONNECT ID
Bitness	Amount of bit the will be send by defined PGN
Start bit	Initial value of the bit
Bit total	The total number of bit

Parameter	Parameter description
Timeout	The pause between sending values

Computer vision

In the section you can select the type of event, camera number, photo count and its interval, RTSP source and link to it, maximum video time associated with the event, number of photos and frames per second, video time, interval between photos associated with event, its count and quality content type and events upper and lower limit, average latency and forwarding interval

Figure 13 - menu of Computer vision sensor type

The image shows a 'Add sensors' dialog box with the following configuration:

- Category: Simple
- Simple sensor number: 1
- Sensor name: Sens1
- Sensor type: Computer vision
- CV sensors settings:
 - Computer vision subtype: No selected (dropdown menu is open showing options: No selected, Blind camera 1, Blind camera 2, Blind camera 3, Blind camera 4, Movement camera 1, Movement camera 2, Movement camera 3, Movement camera 4)

Adding complex sensor

When you create **two** or more sensor, you can combine it by creating complex sensor. To do that you need choose the sensor type, set output action time and write expression that should show the relationship between the sensor for their correct operation

Figure 14 - adding complex sensor menu

Add sensors ✕

Category
Complex ▼

Complex settings

Complex sensor number
1

Sensor name
Sens1

Camera number
1

Content type
No selected ▼

Output action time
0

Range 0, 1..65000s 0 - disabled

Expression

Examples: '(4 and (3 or (1 and 2))) or 2'; '1 and (3 or 2)'; '1 and 2'

Discard Add

To set the **default** settings, click the Default button. To save settings in NVR click **Save settings** button.

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