Smart Module BASE

Universal alarm system with built-in communicator

USER MANUAL

FOR DEVICE VERSION V3

Document version: 1.0 23.05.2025

Dear customer,

Thank you for choosing our product. This manual contains important information about installing and remote controlling the module.

Please read this document carefully before using the product!

The latest version of the product's remoter software and user manual are downloadable from the manufacturer's website: http://tell.hu/en/products/gprs-communicators/pager-7
(select the **Smart Module BASE** product and then scroll down and click on the ***Downloads*** option).

Main features:

- 4G/2G communication
- 6 configurable NO/NC inputs
- 2 NO/NC/COM relay outputs, remote controllable by event
- Configurable event-action pairs
- Customizable active desktop with active tiles
- Configurable Contact ID event codes for every input and custom event
- E-mail sending, SMS sending and voice call option
- Multiplatform application (Windows, Linux, MacOS)
- Cameras can be assigned to zones to display and record their images upon an alarm
- Independent alarm function
- Supports TELLMon and SIA DC-09 protocols

Application area:

- Mini alarm system
- Provide surveillance functions with security cameras
- Connection of alarm systems with contact outputs to remote monitoring station
- Use in building engineering (control based on sensor information)
- Use in agriculture (control based on sensor information)

Table of contents

1. System operation and technical details

1.1 Short description of the device

The **Smart Module BASE** is a versatile 4G-based communicator module, that can be used to perform small automation tasks, surveillance tasks (with camera management) and it can also be used as a stand-alone security system. One of the product's specialities is the multiplatform application for programming the device remotely through the Internet or via USB.

1.2 Automatic power cut function

The product is provided with a built-in automatic power cut function. If the supply voltage drops below 8.3V, the device turns off automatically and it turns back on when the supply voltage is at least 11.6V.

Attention! ***The minimum supply voltage level required to turn the device on is 11.6V! After being turned on with a supply voltage higher than 11.6V, the device can operate stably even from a lower supply voltage, but not lower than 8.3V.***

If the device is powered from a power supply provided with a backup battery and there is no other electrical load on the battery when charging fails (e.g. in case of a mains power cut), while the battery discharges, the device turns off automatically at 8.3V voltage level.

Thereafter, if the battery is in good condition, it can regenerate and can reach the terminal voltage of 11.6V where the device turns back on, then the battery may discharge again below 8.3V. This may result in a continuous switching on and off cycle that lasts until the battery can no longer regenerate to the 11.6V voltage level. If this phenomenon occurs, the battery is flat, and it must be replaced.

1.3 Data traffic

The estimated traffic on the SIM card installed in the device is expected to be approximately ~20 MB per month at a minimum use. The data traffic rate depends on the frequency and duration of use, the stability of the cellular network, and the services used.

Services generating data traffic:

- Remote programming/controlling
- Reporting to a remote monitoring station
- Remote download of event logs and settings
- Remote firmware upgrade
- Notification sending (e-mail, Push messages)
- Report sending

The rate of data traffic increase depends on the frequency and duration of use of the services listed above.

Attention! ***Depending on the services used, the actual data traffic can reach the multiple of the minimum data use!***

1.4 Processing of personal data

For using some of the features, users need to specify certain personal information such as their notification email address and phone number, the PIN code of the SIM card used, and the location details of the device. Personal data is only required if you want to use features like e-mail notification sending.

Users' consent to processing their personal data shall be deemed to be given based on their clear and explicit consent by providing the personal data voluntarily in a direct or indirect way. The purpose of personal data processing is to ensure access to the system and thus to provide permission of use for users who wish to use the system. The system stores the personal data in the memory of the device.

The personal data provided are not accessible for third parties, only for the person(s) who are given access to the settings of the device (e.g., system operator/installer, or the assigned system administrators). Access to the settings is password secured. The assigned system administrators are obliged to treat the personal data confidentially, in line with the legislative provisions, and shall not disclose the data to third parties.

The Manufacturer takes any kind of responsibility for and in connection with the functionality and use of the system – including proper use of hardware and software – according to the relevant provisions of law.

1.5 Technical specification

Supply voltage:	12-30 V DC or 12-24V AC
Nominal current consumption:	130mA
Maximum current consumption:	500mA @12V DC
Maximum relay output load:	1A @ 24V DC
Transmission frequency (4G modem):	GSM/GPRS/EDGE: 900/1800 MHz LTE/FDD: B1/B3/B5/B7/B8/B20
Dimensions:	88.4 x 119 x 23.1 mm
Weight:	135g (296g packed)
Operation temperature:	-20°C - +70°C

RF emission power:

Frequency	Power	Minimum power
EGSM900 (GMSK)	33dBm ± 2dB	5dBm ± 5dB
DCS1800 (GMSK)	30dBm ± 2dB	0dBm ± 5dB
EGSM900 (8-PSK)	27dBm ± 3dB	5dBm ± 5dB
DCS1800 (8-PSK)	26dBm +3/-4dB	0dBm ± 5dB
LTE-FDD B1	23dBm +/-2.7dB	<-40dBm
LTE-FDD B3	23dBm +/-2.7dB	<-40dBm
LTE-FDD B5	23dBm +/-2.7dB	<-40dBm
LTE-FDD B7	23dBm +/-2.7dB	<-40dBm
LTE-FDD B8	23dBm +/-2.7dB	<-40dBm
LTE-FDD B20	23dBm +/-2.7dB	<-40dBm

1.6 Contents of the package

- Smart Module BASE + terminal connector
- GSM antenna
- Quick Guide
- Warranty card

2. Wiring and putting into operation

2.1 Inputs and outputs

Attention! ***Do NOT connect the terminals of the device directly or indirectly to the protective ground, because this may damage the device!***

2.1.1 Connecting the inputs

Both the inputs of the device and the event/actions generated by the inputs can be customized, so **NO** or **NC** wiring can also be used according to the chosen use.

The normally closed and normally open contacts are considered between the selected input (**IN1…IN6**) and the **GND** terminal, and need to be connected accordingly.

For a proper operation of the inputs, it is essential to specify the type of inputs (NO or NC) and enable them in the programming software. These settings are explained in detail in section 4.2 of this manual.

2.1.2 Connecting temperature sensors

Each input of the device can handle a temperature sensor of type **easyTEMP**. Connect the signal output of the temperature sensor to the chosen input on the device and set the input type to *temperature sensor* in the programming software. This setting is explained in detail in section 4.2 of this manual.

Mount the sensor in a vertical position with the cable outlet facing downwards to prevent water from seeping into the sensor if it were permanently exposed to water. Fasten the sensor and the cable properly to avoid damage of the unit.

2.1.3 Connecting the outputs

The product has two independent **OUT** relay outputs. The outputs have ***NO***, ***NC***, and ***COM*** terminals with potential free (dry) contacts. The relay output terminals support a maximum load of ***1A @ 24V DC***.

2.2 Powering the device

For powering the device, 12-30V DC or 12-24V AC is required. The nominal current consumption of the device is 130mA. However, it may occasionally increase up to 500mA at 12V DC. If the supply voltage is not adequate, it may lead to the malfunction of the device!

If the proper supply voltage and current cannot be assured otherwise, an auxiliary power supply can be ordered from the manufacturer.

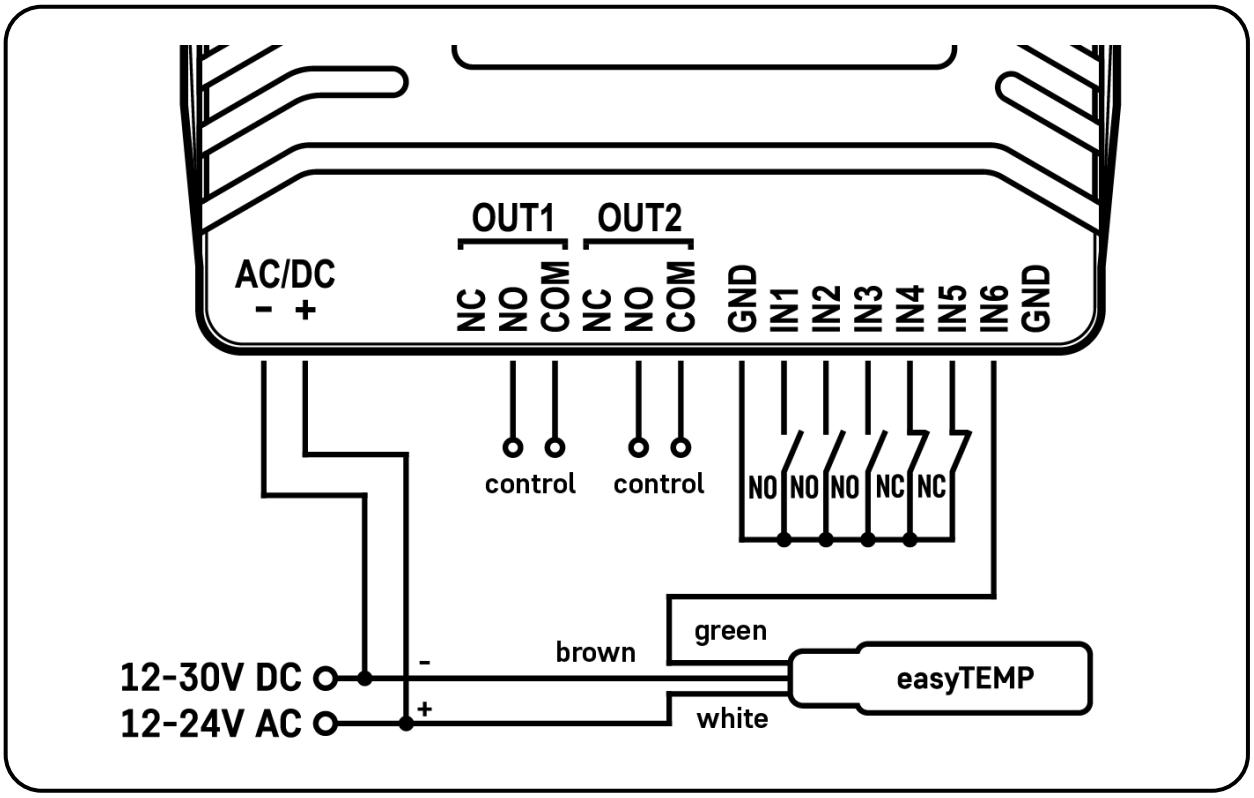
An uninterruptible power supply with adequate power is essential for the product to operate properly. The power supply must provide a power that can serve the minimum operating voltage and the maximum power consumption of the device. The power feed must be continuous and transient-free even when the power feed switches to backup battery operation due to a mains power failure.

An ideal solution for the above purposes is the power supply designed and manufactured by TELL, which we expressly recommend using for our communicators.

- Recommended TELL power supply: **TT25VA-12V5**

2.3 Wiring diagram

2.3.1 Wiring of the Smart Module BASE



In the example above, inputs IN1, IN2 and IN3 are illustrated as normally open (NO) inputs, IN4 and IN5 are normally closed (NC), while input IN6 is a temperature sensor (easyTEMP) input.

2.3.2 System terminal inputs and outputs

AC/DC	**-**	Power input (negative for DC)	**12-30VDC or 12-24VAC minimum 500mA**
	+	Power input (positive for DC)	
OUT1	**NC**	Normally closed terminal	**Relay output 1** (dry contacts) max. 1A / 24V DC
	NO	Normally open terminal	
	COM	Common terminal	
OUT2	**NC**	Normally closed terminal	**Relay output 2** (dry contacts) max. 1A / 24V DC
	NO	Normally open terminal	
	COM	Common terminal	
IN1		Contact / sensor input 1	Use potential free (dry) contacts only
IN2		Contact / sensor input 2	
IN3		Contact / sensor input 3	
IN4		Contact / sensor input 4	
IN5		Contact / sensor input 5	
IN6		Contact / sensor input 6	
GND		Common terminal of the contact inputs	

2.4 SIM card related information

2.4.1 Choosing services

To choose the services to be activated on the SIM card, you need to know which features of the device you would like to use.

Ask the service provider to activate the VoLTE service on the SIM card. This is essential for voice calls to work on the 4G network.

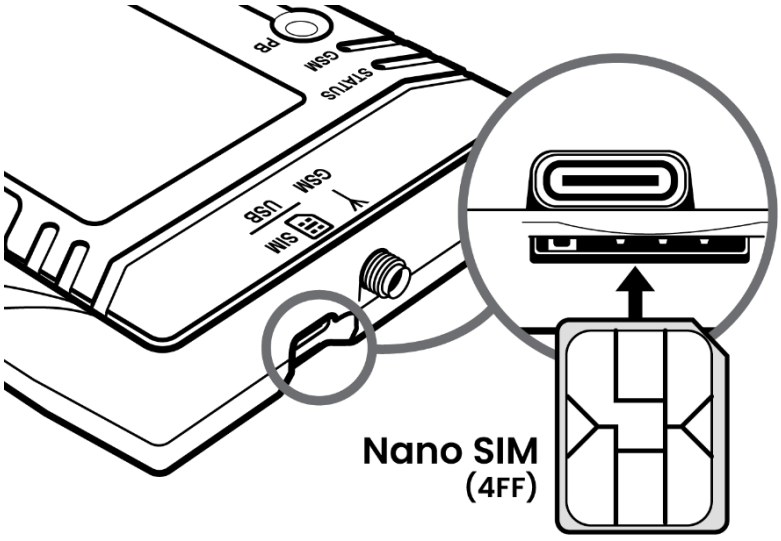
Several features of the device require a mobile internet (data) connection. Such features are e.g., mobile app use, remote programming, remote firmware update, reporting to a remote monitoring station, and certain notification options such as e-mail or Push message sending. If the SIM card has no data service, the device can only be programmed through USB connection, and it can only send SMS and call notification.

To use the data service, the Access Point Name (APN) that belongs to the SIM card is needed. The device attempts to set the APN automatically from the provider. If this fails, you can also set the APN manually. When leaving the setting field blank, automatic APN setting will be used (restarting the device is necessary after changing the APN settings). The APN is available on the provider's website. APN settings are explained in detail in section 4.1.1 of this manual.

The functions that use SMS sending require SMS service, and the ones that use calls require voice call service.

2.4.2 Installing the SIM card

The device requires a Nano (4FF) size SIM card. Install the SIM card as shown in the figure below. Push the card into the socket until you hear a click. If you want to remove the SIM card, press it again, and then pull it out.



2.5 Connecting the antenna

Attention! ***Do NOT connect the metallic parts of the antenna connector directly or indirectly to the protective ground, because this may damage the device!***

Connect the antenna to the SMA-F socket. The device comes with an antenna which provides good transmission under normal reception circumstances. In case of experiencing signal strength problems or/and wave interference (fading), use another (directed) type of antenna or find a more suitable mounting place for the antenna.

2.6 Installation environment

Before installing the device, check the GSM signal strength with your mobile phone. It may happen that the signal strength is not sufficient in the desired mounting place. In this case the planned installation place can be changed before mounting the device.

Do not mount the unit:

- In places where it could be affected by strong electromagnetic disturbances (e.g. in the vicinity of electric motors, high voltage, etc.)
- In wet places or places with a high degree of humidity.

2.7 Putting into operation

- Check the services provided by the SIM card (section 2.4.1)
- Insert the SIM card into the device (section 2.4.2)
- Connect the antenna (section 2.5)
- Do the wiring (section 2.3)
- Connect the power supply (section 2.2)

2.8 LED signals

STATUS LED	Flashing yellow	Booting is in progress
	Flashing green	Successfully connected to the GSM network
	Fast flashing green	Successfully connected to the Internet
	Permanent green with rare breaks	Successfully connected to Cloud, normal operation
	Alternate green and red	An alarm is in progress
	Flashing red	The modem is starting
	Permanent red	Firmware update is in progress
GSM LED	Permanent ON	Searching for network
	200ms ON, 200ms OFF	Data transmission
	800ms ON, 800ms OFF	Registered on the network
	Permanent OFF	Modem powered off

3. The programming software

The latest version of the programming software can be downloaded from the manufacturer's website: http://tell.hu/en/products/gprs-communicators/pager-7

(select the **Smart Module BASE** product, and then scroll down, click on the ***Downloads*** option, and choose the ***Software*** folder).

Launch the installer and follow the instructions of the Setup Wizard until the installation is completed.

3.1 User roles and access levels

The programming software supports two user roles with different access levels.

The **Admin** has access to all settings and features.

Both the **User** and the **Admin** can freely configure the active desktop, have access to the device information and camera images. The active desktop settings belong to the device, so users can have a personalized active deskop on each computer, tablet or mobile phone, with a user-defined layout. They are allowed to record and play recorded camera images, control the relay outputs, arm/disarm the partitions, and stop alarms.

The default admin password is: 1111

The default user password is: 2222

Attention! ***After the first login, make sure to change both the administrator and user passwords.***

Both passwords can be changed in the ***Module settings*** menu which is described in detail in section 4.1.1 of this manual.

3.2 Programming via USB connection

To program the device through USB follow the steps below:

- Open the programming software
- Connect the device to the computer via USB A to USB-C cable
- Select the ***USB CONNECTION*** option on the programming software's login screen
- Enter the password and then click the ***Connect*** button

Attention! ***Powering from USB is not sufficient for full functionality! However, it is enough for configuring the device!***

The GSM network connection and Internet access can only be assured if the proper power supply specified in detail in section 2.2 of this manual is connected.

3.3 Programming via Internet connection

To connect to the device remotely, mobile Internet connection is required, and the device must be able to access the TELL Cloud server. For this, if the device fails to set the access point automatically, first you need to set the access point name (APN) of the SIM card installed in the device, and the TELL server's address.

These settings are available in section 4.1.1 of this manual.

Attention! ***If the access point and/or the server address are not set, the device will not be available over the Internet!***

To access the device remotely, device's hardware ID is needed which is available in the ***Module status*** menu under the ***Module info*** tab via USB connection.

To program the device over the Internet, follow the steps below:

- Open the programming software.
- Select the ***NET CONNECTION*** option and click the ***Add new device*** button on the programming software's login screen.
- Enter a name for the device in the popup window, enter the device’s hardware ID and then click the ***Save*** button.
- Select the device you want to conncet to from the devices you have added, enter the password in the popup window, and then click the ***Login*** button.

4. Configuring the device

4.1 The active desktop and the menus

After login the customizable active desktop is displayed. For more details on editing the active desktop see section 4.4 of this manual. In the header, from left to the right you can find the drop-down menu icon, the TELL logo, the date and time, the actual GSM signal level, the supply voltage, the sign out icon and the language selector. The displayed supply voltage value is considered to be no more than indicative and cannot be compared with a value shown by a precise measuring instrument.

Clicking the TELL logo takes you back to the active desktop from any menu in the program.

The date and time are automatically synchronized from the GSM network. If you want to manually synchronize the time from your computer, you can do that in the ***Module settings*** menu.

The signal display in the header indicates the actual GSM signal level. Above 60% the GSM signal is sufficient, between 60-40% is low, and below 40% is very low. If the signal does not reach 40%, it is recommended that you try to improve the reception as specified in sections 2.5 and 2.6.

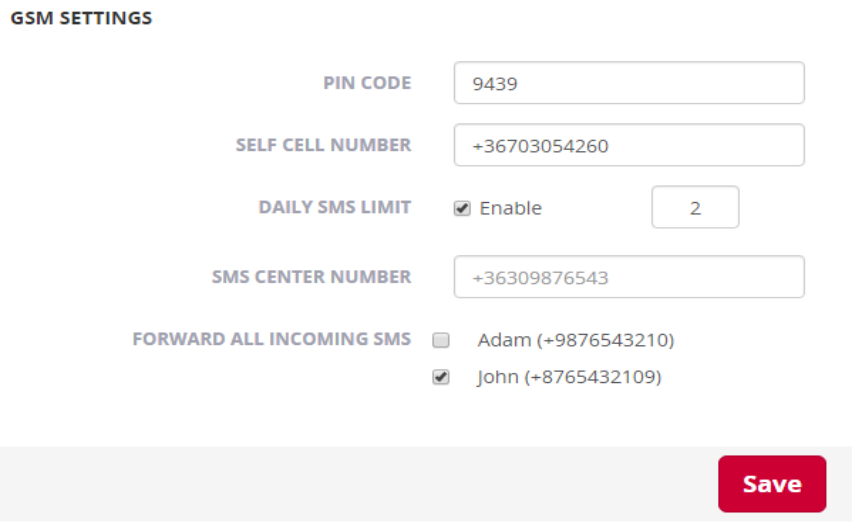
For information on the power supply please see section 2.2.

Each menu in the application has a built-in menu-specific help that can be accessed by clicking on the question mark icon next to the menu title at the top of the page. To get information on the contents of the given menu, click the question mark icon.

4.1.1 Module settings menu

If PIN code request is enabled on the SIM card, you can enter the PIN code to unlock the SIM card under the ***GSM settings*** tab. There is a built-in protection to prevent the SIM card from reaching the PUK code request after entering multiple incorrect PIN codes. The device tries each PIN code only once and as soon as the SIM card already requests PIN2 (no more PIN1 attempts left), the device stops trying and will not attempt PIN2.

In the same section, you can enter the SIM card's phone number, the daily SMS limit and the SMS center number. SIM card providers may require the SMS center number for their SMS service.



The device can also forward incoming SMS messages. To use this feature, enter the desired phone number in the ***Phone numbers*** menu, and then select the phone numbers you want incoming SMS messages to be forwarded to in the ***Module settings*** menu. For more details on setting up the phone numbers, see section 4.5.1.

The APN necessary to access the Internet can be set in the ***Access point settings*** section under the ***Connection settings*** tab. The device attempts to set the APN automatically from the provider. If this fails, you can also set the APN manually. When leaving the setting field blank, automatic APN setting will be used (restarting the device is necessary after changing the APN settings). If the device has successfully connected to the Internet (you can check this in the ***Module status*** / ***Status of the connections*** menu), setting the APN was definitely successful. You can obtain the SIM card's APN from your SIM card provider. If the given APN is not a public one, you can also set the username and password in this section. It is important that certain private APNs do not allow to use the Internet freely, but provide access only to selected IP addresses. These private APNs may block the use of features which require Internet access.

Attention! ***If the access point settings are wrong, the Internet based services of the device will not be available!***

The ***TELL Cloud settings*** section is used to configure the server access. By default, these fields are filled in with the data of manufacturer's server reserved for this purpose, which are the following:

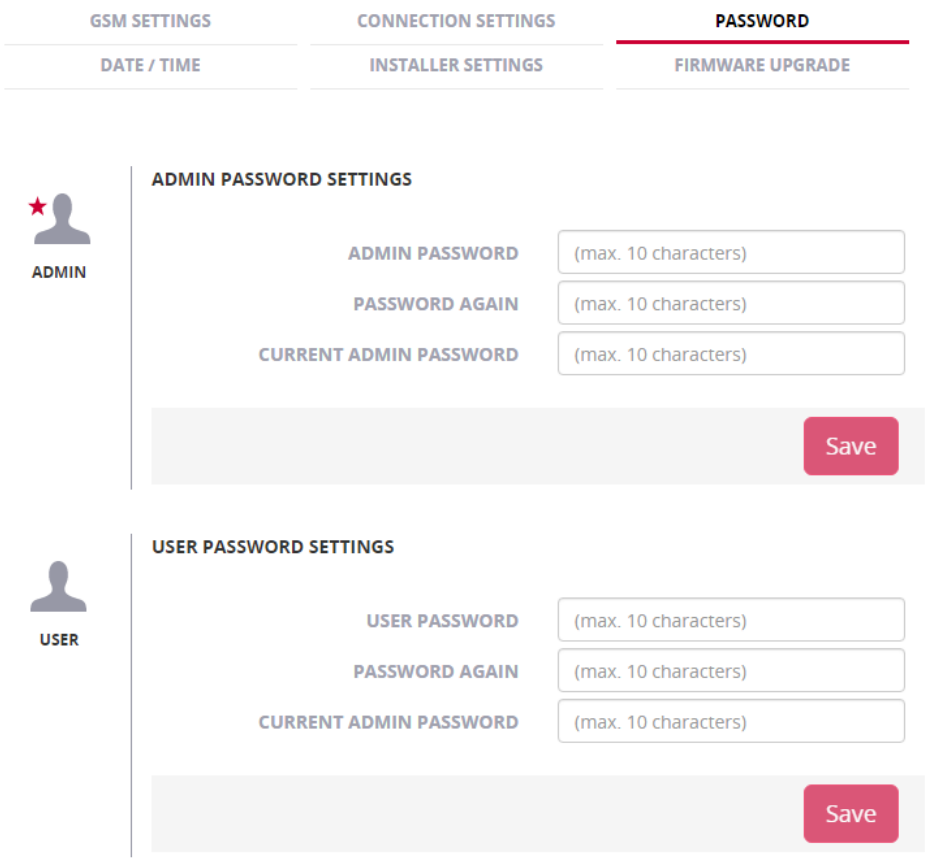
Url: pager.devicemail.net

Port: 2018

If domain name resolution doesn't work with the given service provider, you can manually resolve the domain name by clicking on the green ***Resolve*** button, or by replacing the URL with the following IP address: 54.75.242.103

Attention! ***If the server settings are wrong, certain services of the device will not be available!***

Under the ***Password*** tab, you can change the password for both access levels (admin and user). The password must be minimum 4 and maximum 10 characters long. To change any of the passwords, you need to enter the current admin password. To confirm the changes, click the ***Save*** button.



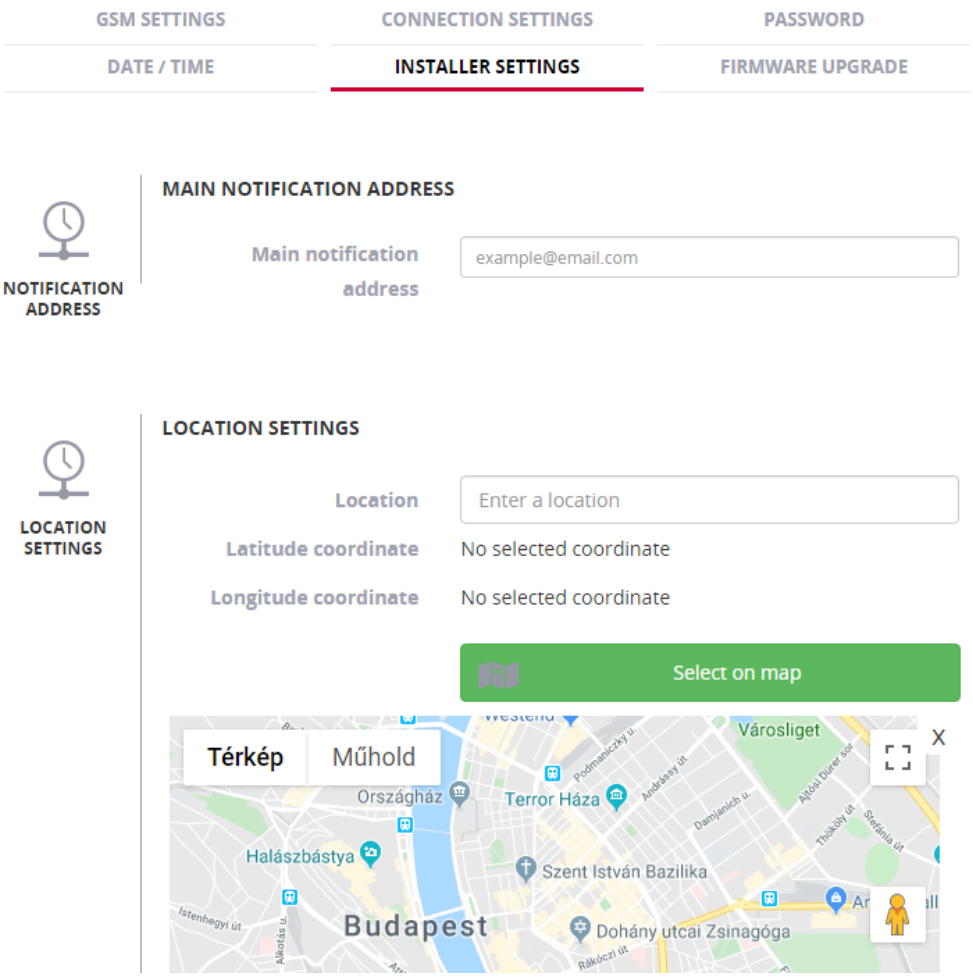
Under the ***Date/Time*** tab, in the ***NTP server URL*** field you can configure the contact details of a server that supports Network Time Protocol. If the device can successfully request the time settings through the provided URL, from that moment this server will be used to synchronize the date and time.

In the ***System time*** section, the system time can be refreshed manually.

The main notification address and the device's location can be added under the ***Installer settings*** tab. Notifications on available firmware updates will be sent to the main notification address, which is usually the installer's e-mail address If an update is available, a link that can be used to start the firmware update will be sent in the email message. The device will send an email notification confirming the successful update.

Here you can also specify the exact location of the device by selecting the loction on the map or by entering the address. The coordinates will be automatically filled in and stored on saving.

This helps the installer, so they have information on where the device is located even when they are accessing it remotely.



The device's firmware and bootloader can be updated under the ***Firmware upgrade*** tab.

TELL always releases its products with the latest firmware version. However, as our products are being continuously improved, new firmware updates may occasionally be released for the products, which may include new features along with bug fixes. Therefore, it is recommended that you always upgrade your product to the latest firmware version available. All released firmware versions are available on the TELL website, including older versions.

ATTENTION! Downgrading to an earlier version is not supported! Always upgrade your product to the latest version. Otherwise, your settings could get wiped due to differences in functionality between versions, or the product may become unusable due to unsupported components. (A newer hardware may contain new components, e.g., a new flash memory, modem, etc., which are not supported by an earlier firmware.)

To manually update the Firmware, download the latest firmware file with **.bin** extension from *https://tell.hu/en/products/gprs-communicators/pager-7*

page (select the **Smart Module BASE** product, and then scroll down, click on the ***Downloads*** option, and choose the ***Firmware*** folder – you will find the firmware there). To upload the firmware, click the ***Choose file*** and then the ***Upload*** button in the software.

If a firmware incompatible with the programming software is detected, a popup notification appears, and if you are connected via USB, an automatic firmware update is also offered.

The bootloader upgrade is done similarly to the firmware update. In the bootloader section, click the ***Choose file*** and ***Upload*** buttons to upload the bootloader file with **.bin** extension you downloaded from the product page.

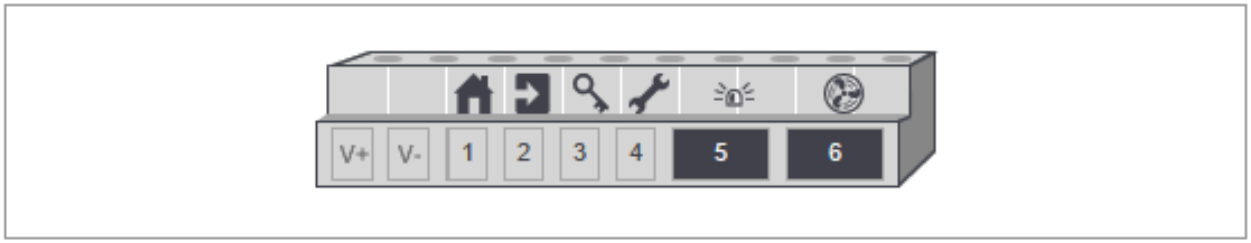
The FOTA (Firmware Over the Air) URL field is used to enter the modem firmware update file URL. The URL entered here will be sent to the device by the application and if the firmware update for the GSM modem is available on the specified URL, the device downloads it and updates the modem.

The device can be manually restarted from this page using the ***Device reboot*** button or the push-button on the device. For this, hold the push-button pressed for 2 seconds and then release it. The **STATUS** LED will start blinking red and the device will restart.

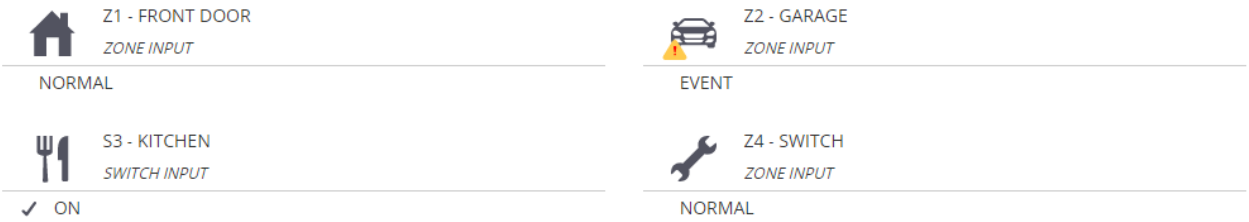
The factory settings can be restored using the ***Factory reset*** button under the ***Firmware update*** tab in the ***Modul settings*** menu, or using the push-button on the device. For this, hold the push-button pressed for 6 seconds and then release it. The STATUS LED will start blinking red and the device will restart after factory reset.

4.1.2 Module status menu

This page contains the most important information about the device. A dynamic wiring figure is located at the top of the ***Input states*** page. With the icons, this provides an overview of the wires connected to the inputs and outputs even when accessing the device remotely.



The ***Input states*** section lists the inputs with their icon, name, type and status. The status updates automatically when the state of an input changes.



The ***Input states*** section lists the relay outputs with their icon, name and state. The status updates automatically when the state of an output changes.

The ***Status of the partitions*** section shows the name and armed/disarmed status of the partitions.

The GSM signal level, the device's system date and time, and the time zone can be viewed the ***Status of the connections*** section.

At the bottom of the page, you can check whether the device is currently connected to the GSM network, the Internet, the TELL Cloud server, or if a USB connection is detected.

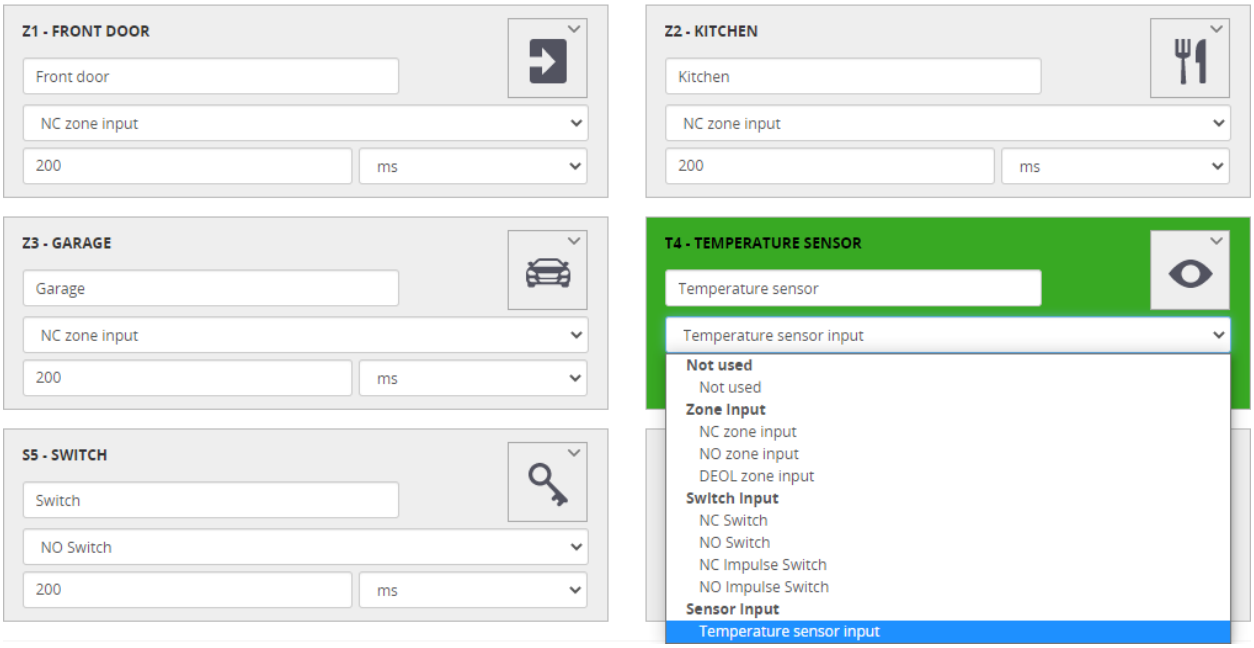
The status indicators are also dynamically changing.

The ***Module info*** section shows the device name, the device type and the hardware ID necessary for remote access, and information on the firmware version, the SIM card, the version of the programming software, and the GSM network are also available in this section. You can also find a QR code here that contains the hardware ID, which is used to facilitate the registration of mobile devices.

4.2 Inputs/Outputs menu

Inputs, relay outputs, zones, and partitions can be configured in the ***Inputs/Outputs*** menu.

Under the ***Input settings*** tab, the dynamic wiring figure is located at the top showing the icons set in the ***Input settings*** section.



Input settings:

Enter a name for the input, then select the type and an icon. Right after an icon is selected, it also appears at the given input on the wiring figure above the settings.

The input type can be zone, switch, impulse switch or temperature sensor. For zone, switch, and impulse switch types, you can choose from normally open (NO) or normally closed (NC) options. If an input is not used, select the ***Not used*** option from the ***Type*** drop-down menu.

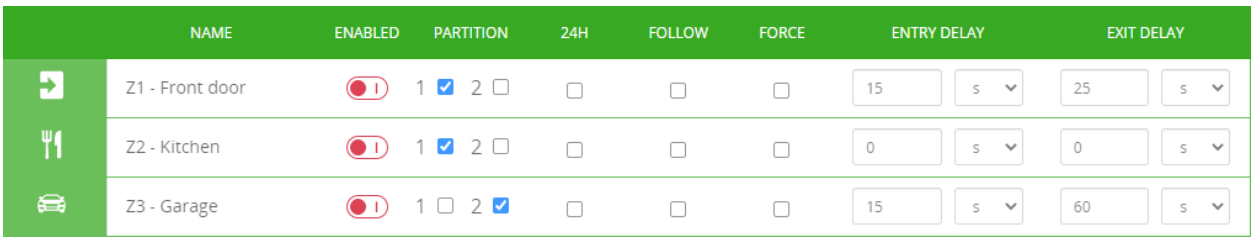
Attention! Do not leave unused inputs in NO or NC status as it may result in false signals. However, if an unused input still remains NC, it is mandatory to short the given input for a proper operation.

Each input has a prell delay setting used to filter and eliminate disturbances on the input. The device considers as events only triggers that are longer than the time specified here and the event-actions are executed in this case only.

Zone settings:

Inputs defined as zones can be customized and assigned to partitions (a group of zones) in the ***Input settings*** section. To use a zone, you must enable it first. A disabled zone will not generate any events, so the signals coming from a zone can be blocked by disabling the zone. For example, in case of a zone failure, false signals coming from the zone can be eliminated by disabling the zone.

Attention! Zones need to be enabled to allow incoming triggers to generate events and actions!



In the same secion you can assign zones to partitions, as well as configure ***Entry*** and ***Exit delays***, ***24h***, ***Follow***, and ***Force*** properties.

A ***24h zone*** will always be armed, independently of arming or disarming the partitions.

The violation of a ***follow zone*** will not generate a zone event if it is preceded by the violation of a zone with an entry delay within the same partition.

A ***force zone*** will allow arming the partitions it is assigned to even when the zone is violated, while a normal (non-force) zone will block arming.

The ***entry and exit delay*** determine the period during which a zone violation does not generate an alarm. This might be needed during the arming (entry delay) and disarming (exit delay) of the system.

Changes can be saved using the ***Save*** button at the bottom of the page. To cancel the changes made since the last save, click the ***Reset*** button.

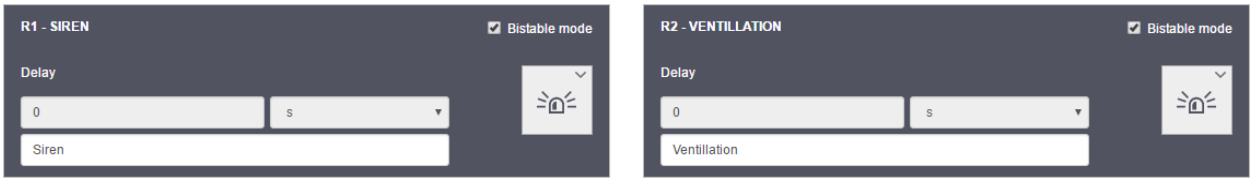
Output settings:

You can customize the outputs ubder the ***Output settings*** tab. The device has two relay outputs. A relay output can be bistable or monostable.

An output configured as bistable has two stable states: activated and deactivated. The status of a bistable output is stable, meaning that it will not change until it receives a new control command. Therefore, the delay cannot be set for a bistable relay.

If bistable mode is disabled, the output will be monostable. In this mode the relay will be stable only in deactivated state. A monostable output becomes activated upon control and remains activated for the time set in the ***Delay*** field, then it reverts to idle state automatically.

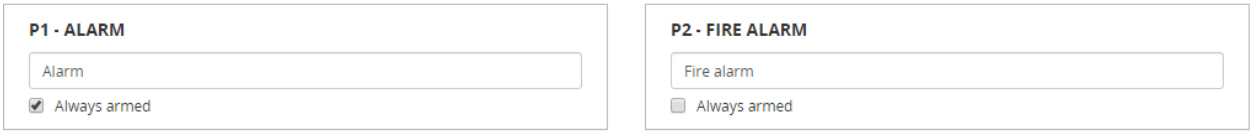
The output's name and icon are also customizable. Right after an icon is selected, it also appears on the dynamic wiring figure above the settings.



Changes can be saved using the ***Save*** button at the bottom of the page. To cancel the changes made since the last save, click the ***Reset*** button.

Partition settings:

You can name the partitions and configure whether the partitions should be always armed under the ***Partition settings*** tab. This can be done by enabling the ***Always armed*** options.



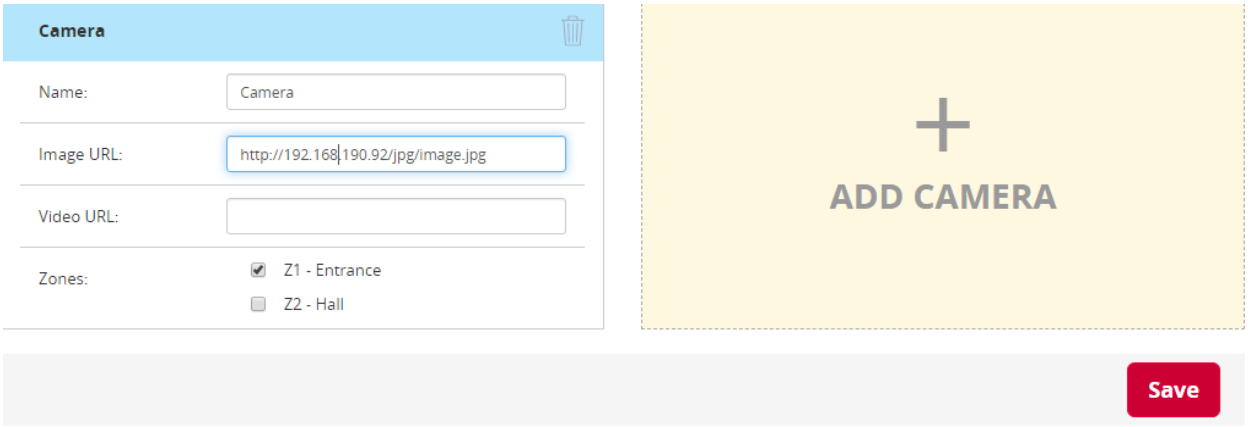
4.3 Cameras

One of the special functions of the device is that it is able to manage IP cameras via ONVIF protocol, and can assign the cameras to zones. In case of an alarm in the given zone, the images of all the cameras previously associated with the given zone become available in the desktop application by a single click from the alarm popup window. The zone violation can even be recorded in the desktop application, and a play-back option is also available for later.

4.3.1 Camera settings menu

A new camera can be added by clicking the ***Add camera*** button. A camera name and the ONVIF image URLs of the camera need to be entered. You can provide the still picture (http) and/or the live picture (rtsp - video stream) URL which are used for different functions as follows:

- The still picture URL is used by both the desktop and the mobile app to display the picture of the camera on the ***Camera picture*** tile placed on the active desktop, which is refreshed automatically by a few seconds. The desktop application also uses still picture URL for recording in the ***View cameras*** menu.
- The live picture URL is used by the desktop application for live view in the ***View cameras*** menu. The mobile app uses live picture URL for live view by tapping the ***Camera stream*** tile that can be placed separately on the active desktop.



The cameras added can be groupped by assigning them to zones. A single camera might belong to multiple zones, and multiple cameras can be assigned to one zone. To save the modifications, click the ***Save*** button.

The device can store the settings of up to 16 IP cameras. Deleting added cameras is possible by clicking the dustbin icon.

4.3.1.1 IP Camera detector application

To extract the ONVIF URL from your IP camera, you can use our ***IP Camera detector*** application developed for this purpose, which you can download from the following web page https://tell.hu/en/products/gprs-communicators/pager-7 (select the ***Smart Module BASE*** product and then scroll down, click on the ***Downloads*** option, and choose the ***Software*** folder).

4.3.2 View cameras menu

This menu enables you to view and record pictures of cameras added in the ***Camera settings*** menu. You can filter the cameras based on zones. If you click the ***Select all*** button, you add all cameras to the filtering conditions, while the ***Select none*** button clears the zone selection.

Since assigning a camera to a zone is not mandatory, unassigned cameras are only displayed if the ***Cameras without zone*** filter option is selected.

You can start and stop recording by clicking the ***Record / Stop*** button in the window of the given camera, or by clicking the ***Record all / Stop all*** button in the top right corner of the page. In the first case, only the pictures of the given camera will be recorded/stopped, while in the latter case all camera pictures will be recorded/stopped.

You can play previously recorded pictures by clicking the ***Playback*** button in the top left corner of the page. Doing so, the software navigates to the ***Play records*** page.

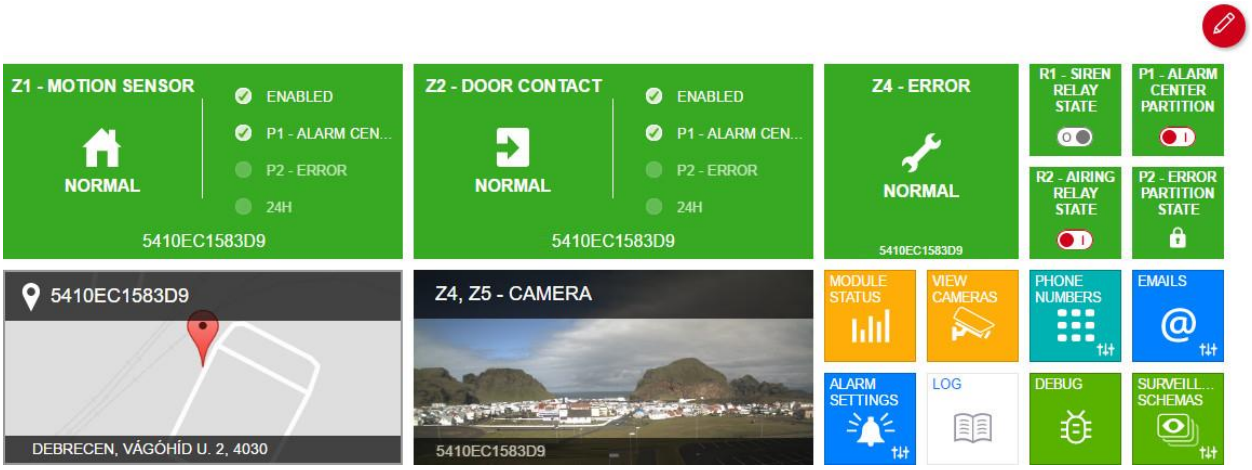
4.3.3 Play records page

It is possible to filter captured images based on date. To play a recording, select the date first, and then click the ***Play*** button. You can return to the ***View cameras*** page by clicking the ***View cameras*** button in the top left corner.

4.4 Configuring the active desktop

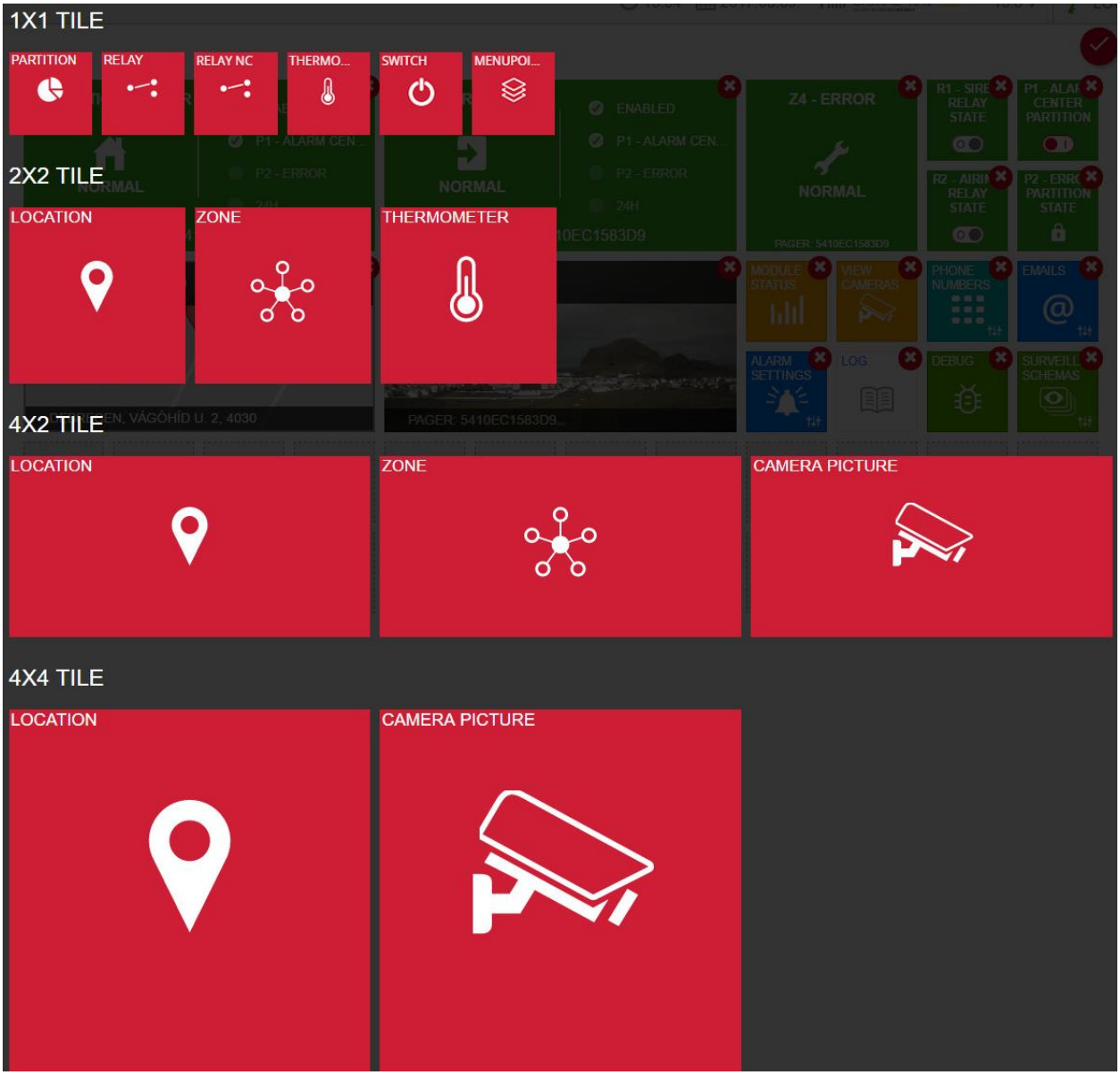
The active desktop can be reached anytime by clicking the ***TELL*** icon in the header or selecting the ***Dashboard*** menu item. The entire surface is active, meaning that events and status changes are displayed in real-time on the compiled desktop.

Some of the widgets placed on the active desktop are interactive, e.g., it is possible to control the relay outputs from widgets, or arm/disarm partitions.



4.4.1 Adding widgets

You can customize the desktop using the red edit button in the top right corner. By clicking on any empty square on the active desktop, the widget selector opens, and the top left corner of the chosen tile/widget will be placed in the previously chosen square. In the widget selector menu, you can choose from multiple widgets in four different sizes. The size of the widget indicates how many squares it will take on the active desktop.



Adding tiles and widgets to the active desktop:

1x1 tiles:

- **Partition:** The partition you want to add as a widget can be selected after choosing the partition tile. The partition widget is interactive – it can arm and disarm the partition by a click, and always indicates the actual status of the partition. For an ***Always armed*** partition a padlock  icon will be displayed on the widget instead of a switch, and the system will not allow disarming the given partition.
- **Relay:** The relay output you want to add as a widget can be selected after choosing the relay tile. The relay widget is interactive – it can close and open the relay by a click, and always indicates the actual status of the relay output.
  The ***Relay NC*** widget works inversely compared to the ***Relay*** widget (indicates an active status when the output is idle).
- **Thermometer:** The temperature sensor you want to add as a widget can be selected after choosing the thermometer tile.
- **Switch:** The switch input you want to add as a widget can be selected after choosing the switch tile. The switch widget indicates the actual status of the selected switch input.
- **Menu:** After choosing the menu tile, you can select a frequently used menu to add directly to the active desktop. The menu tile works as a shortcut to the selected menu.

2x2 tiles:

- **Location:** The location tile shows the device location on a map, based on the location set in the ***Module settings / Installer settings*** menu.
- **Zone:** The zone you want to add as a widget can be selected after choosing the zone tile. The events occurring on the selected zone will be displayed on the widget as well.
- **Thermometer:** The temperature sensor you want to add as a widget can be selected after choosing the thermometer tile.

4x2 tiles:

- **Location:** The location tile shows the device location on a map, based on the location set in the ***Module settings / Installer settings*** menu.
- **Zone:** The zone you want to add as a widget can be selected after choosing the zone tile. The events occurring on the selected zone will be displayed on the left side of the widget, while on the right side the most important settings of the zone are shown.
- **Camera picture:** After choosing the camera picture tile, the camera you want to add as a widget can be selected from cameras already added in the ***Camera settings*** menu.

4x4 tiles:

- **Location:** The location tile shows the device location on a map, based on the location set in the ***Module settings / Installer settings*** menu.
- **Camera picture:** After choosing the camera picture tile, the camera you want to add as a widget can be selected from cameras already added in the ***Camera settings*** menu.

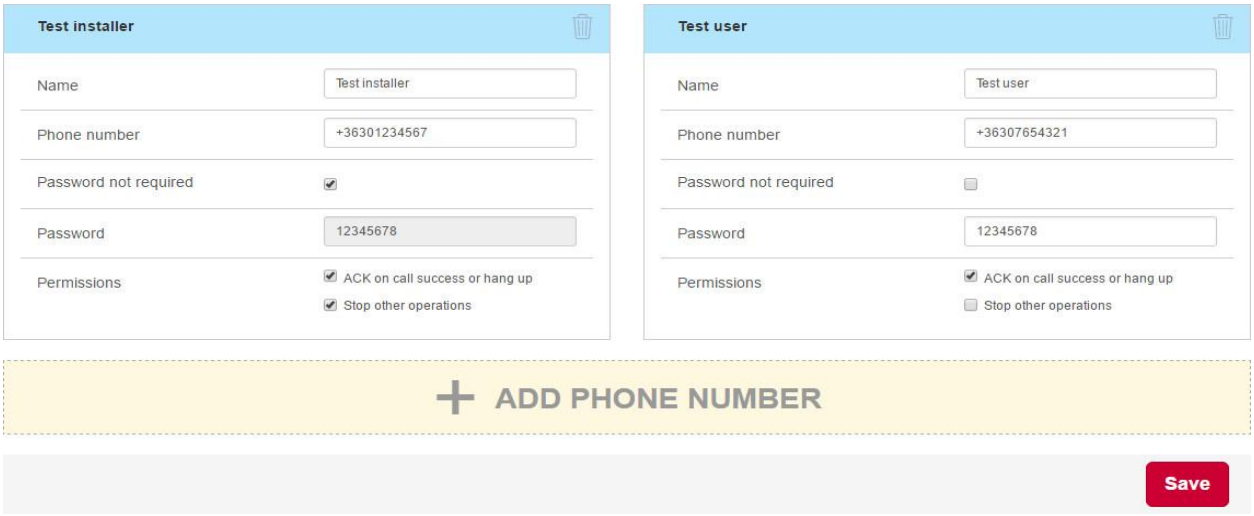
4.5 Notification settings

The device can send notifications in several ways on occurring events. It can play voice messages via calls, send SMS, email, and Push messages. These notifications channels can be configured in the following menus:

4.5.1 Phone numbers menu

You can choose from phone numbers added in the ***Phone numbers*** menu when you want to assign SMS sending or phone call actions to events in ***Event Settings*** menu. It is also possible to control the device via call using DTMF commands – the device accepts DTMF commands only from phone numbers added in the ***Phone numbers*** menu.

The device supports up to 8 phone numbers.



Password not required: If this option is enabled, calls from the given phone number will be automatically authorized for control via DTMF commands without a password.

Password: The password configured in this field will be required in incoming calls for control via DTMF commands, if the ***Password not required*** option is disabled.

ACK on call success or hang up: If this option is enabled, notification calls to the given phone number will be considered acknowledged automatically upon accepting or rejecting the call.

Stop other operations: If this option is enabled, when a notification call is made by the device to the given phone number, the called party can stop further actions that would normally be executed after the call, using a DTMF command. E.g., if an event is set to make calls to multiple phone numbers, this option enables the user receiving the first call to cancel the actions of the given event, so no calls will be made to the further phone numbers.

Details on the applicable DTMF commands and control via calls are available in chapter 5.1.

4.5.2 Text templates menu

The texts used for e-mail, SMS and Push message notifications can be configured in this menu. These text templates can be used when configuring SMS, Push and e-mail actions in the ***Event settings*** menu.

An e-mail text can be added by providing the subject and the body of the e-mail. For SMS and Push notifications, only the text is required.

You can add up to 16 e-mail text templates, 16 Push text templates, and 12 SMS text templates.

4.5.3 Emails menu

To add a new e-mail address, the e-mail address and the belonging name are required. You can choose from the e-mail addresses added in the ***Emails*** menu when you want to assign e-mail sending actions to events in ***Event Settings*** menu.

The device supports up to 8 e-mail addresses.

4.5.4 Sounds menu

When you want to assign a phone call action to an event in the ***Event settings*** menu, you can choose from the audio files uploaded in the ***Sounds*** menu, thus the selected audio file will be played in the call.

Attention! ***Audio files can be uploaded via USB connection only!***

You can upload up to 8 audio files to the device. There are 3 predefined notification tones in the application, which you can upload and use if needed. To browse a new audio file from your computer, choose the ***New file*** option in the ***Select sound*** drop-down menu. You can also add an individual name to each audio file. Audio files can be uploaded to the device using the ***Upload*** button. You can listen to audio files after uploading by clicking the green ***Play*** buttons.

Attention! The audio files to be uploaded must meet the requirements below:

- 8Khz, Mono,16 Bit PCM
- maximum length 8 seconds
- wav format

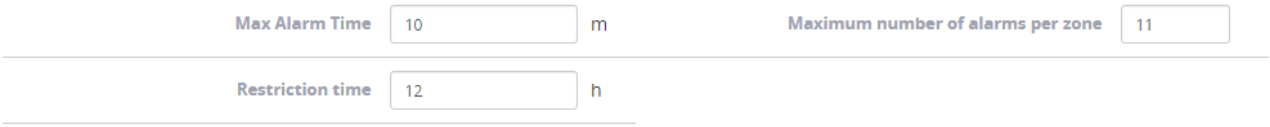
You can save changes by clicking the ***Save*** button at the bottom of the table. You can listen to the predefined notification tones by clicking the green ***Play*** buttons at the bottom of the page.

4.5.5 Push notifications menu

Registereg mobile devices (maximum 8 devices) that are using the mobile app are listed in this menu, which have already logged in onto the device after registration. This menu enables you to edit the name of the listed mobile devices or remove a device from the list. You can choose from the devices listed in the ***Push notifications*** menu when you want to assign Push message sending actions to events in ***Event Settings*** menu.

4.6 Alarm settings menu

You can find the settings of the alarm event in this menu, which can be assigned as an action to events in the ***Event settings*** menu.



The ***Max alarm time*** defines the duration the device remains in the alarm state after an alarm event occurs. The device automatically returns from the alarm state to its default state after the specified time has passed. You can assign different actions to changes in the alarm status.

A limit can also be configured for the number of alarm events generated by a zone violation. The number of alarms can be configured with the ***Maximum number of alarms per zone*** setting, while the duration is defined by the ***Restriction time*** setting. The duration can be set in hours.

Changes can be saved by clicking the ***Save*** button at the bottom of the page.

4.7 Reporting to remote monitoring station

The device can report customizable Contact ID event codes upon occurring events to one or more remote monitoring servers/receivers. Event codes can be assigned to events in the ***Event settings*** menu.

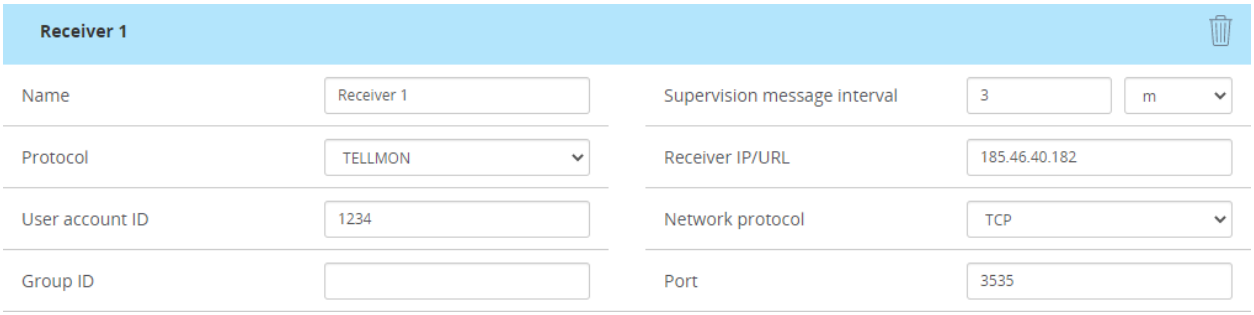
For reporting to remote monitoring servers/receivers, the servers must be added first and organized into schemes.

4.7.1 Surveillance settings menu

The device supports two types of remote monitoring protocols:

- **TELLMon** (custom TELL protocol for the **TELLMon** receiver and the **MVP.next** server);
- **SIA** (**SIA DC-09** protocol for other receivers that support this protocol. Not recommended for servers and receivers developed by TELL!).

When adding a new remote monitoring server/receiver, the name can be freely chosen, however, further data necessary for configuration is provided by the remote monitoring station.



➢ **Parameters required for both the TELLMon and the SIA protocol:**

Supervision message interval:

This setting specifies the interval at which the device sends supervision messages (status reports) to the remote monitoring server/receiver. The entered value must be chosen as expected by the remote monitoring server/receiver.

Receiver IP/URL:

The IP address or URL of the remote monitoring server/receiver is required in this section.

Protocol:

It is determined by the remote monitoring station which protocol their server/receiver uses (TELLMon or SIA DC-09).

Network protocol:

It is still determined by the remote monitoring station, whether they receive messages via TCP or UDP protocol.

Port:

The communication port of the remote monitoring server/receiver.

➢ **Parameters required for the TELLMon protocol only:**

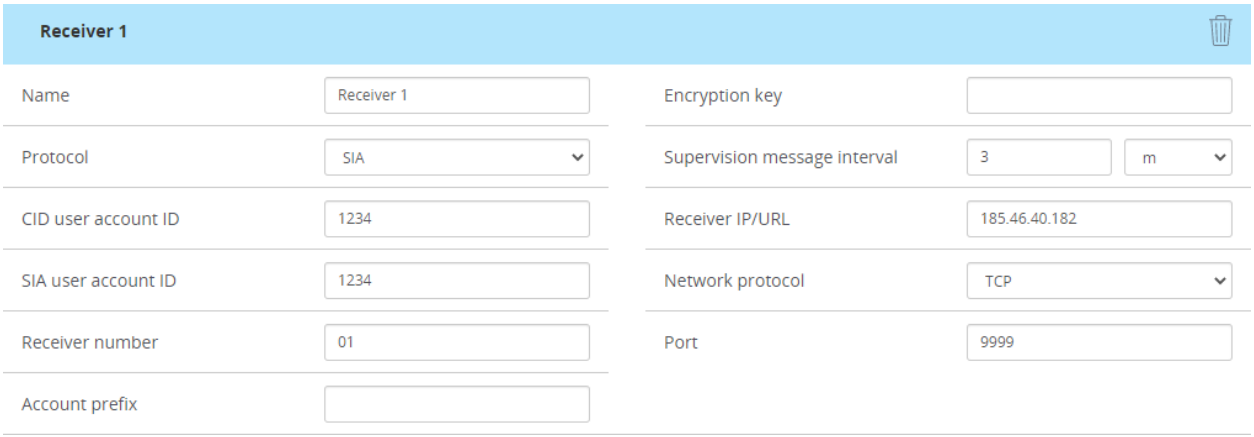
User account ID:

A four-character-long identifier used by the remote monitoring station to identify customers. It must consist of numbers and A, B, C, D, E and F hexadecimal characters.

Group ID:

If required by the remote monitoring station, a secondary identifier needs to be configured for customer identification. The length of this identifier is 3 hexadecimal characters.

➢ **Parameters required for the SIA protocol only:**



CID user account ID:

A four-character-long identifier used by the remote monitoring station to identify customers. It must consist of numbers and A, B, C, D, E and F hexadecimal characters.

SIA user account ID:

A secondary identifier to identify SIA IP messages. The minimum length of this identifier is 3, the maximum is 16 hexadecimal characters.

Receiver number:

This is an optional identifier used by the remote monitoring station to identify their receiver. The maximum length of the receiver number is 6 hexadecimal characters.

Account prefix:

If required by the remote monitoring station, a prefix for the user account ID must also be set. The maximum length of the receiver number is 6 hexadecimal characters.

Encryption key:

If the remote monitoring server/receiver uses encrypted communication, the required key must be set in this field. The length of the key can be 16, 32 or 64 characters.

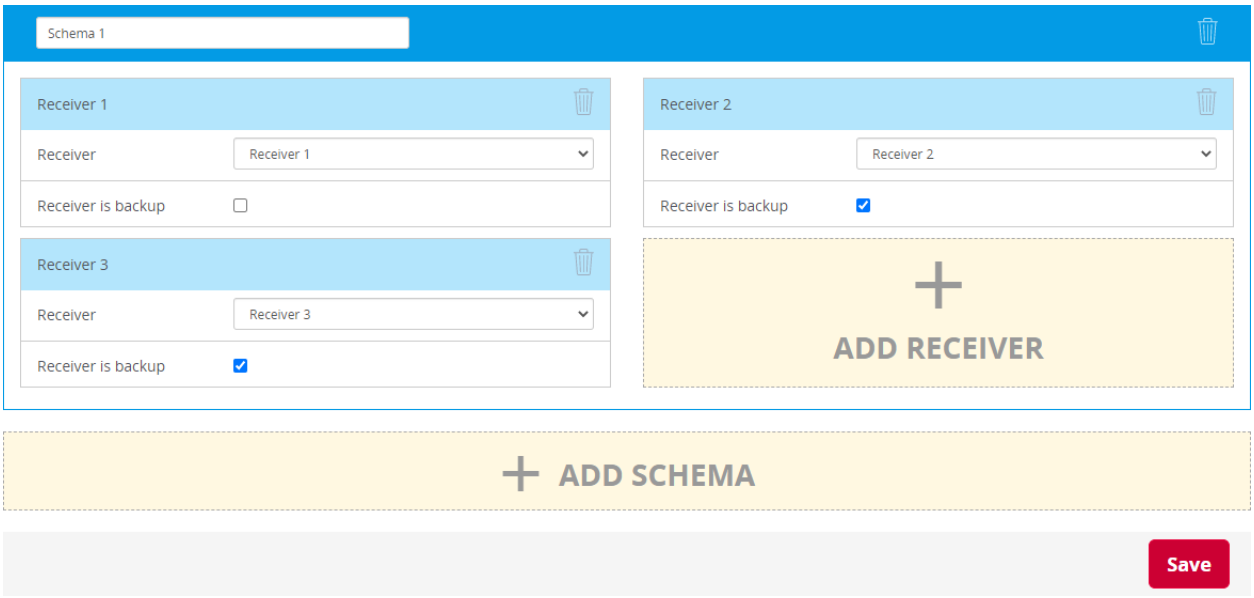
Changes can be saved by clicking the ***Save*** button at the bottom of the page.

4.7.2 Surveillance schemas menu

The remote monitoring servers/receivers added in the ***Surveillance settings*** menu must be organized in schemas to enable the device to execute a ***Report to mon. station*** action set in the ***Event settings*** menu, and send a Contact ID message. A maximum of 6 schemas can be created this way.

You can add a maximum of 6 servers/receivers to one schema. The added servers/receivers are considered as primary by default. You can set a server/receiver as backup by enabling the ***Receiver is backup*** option.

When a server schema is used for reporting, the device attempts to transmit the Contact ID event code set for the ***Report to mon. station*** action to all primary servers/receivers. If none of the primary servers/receivers can be reached, the device goes for the backup ones but at this stage it stops after the very first successful report, and will not attempt to reach any further backup servers/receivers.

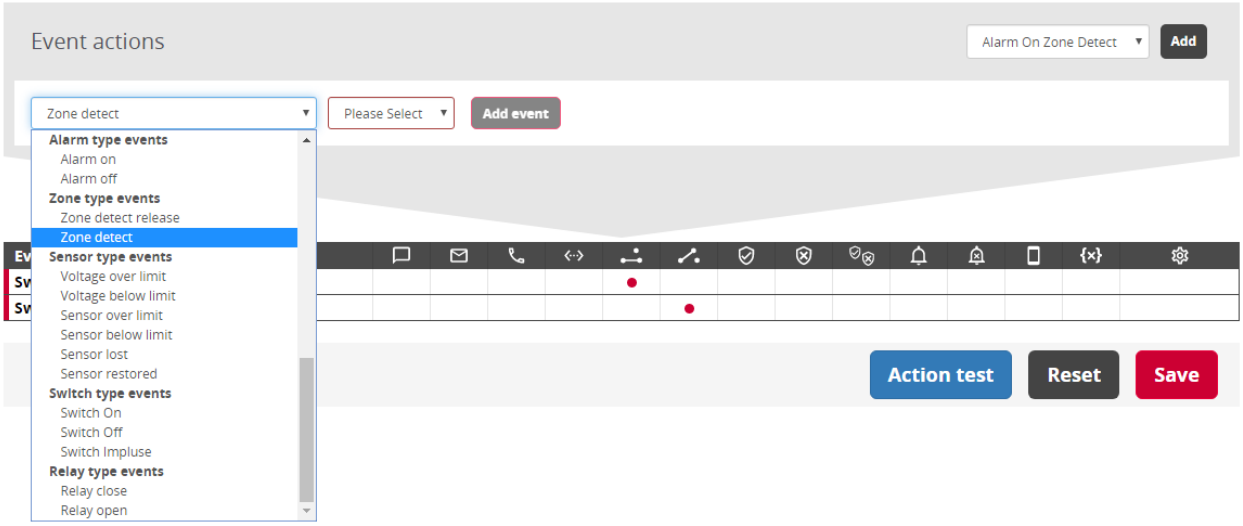


If you contracted with two or more remote monitoring companies, it is worth to configure separate remote monitoring server schemas for each with their own backup servers, thus ensuring a higer security for reception of reports.

4.8 Event settings menu

This is the menu where you can add the events you want to use and assign the required actions to events. The event selector also contains events that have further parameters (e.g., it is necessary to select inputs or outputs, or provide voltage, temperature, or time values, etc.). The parameters of these events can be configured after selecting the event.

4.8.1 Events



The events are classified into the following event categories:

System type events:

- **Device on:** Actions assigned to this event will be executed when the device turns on.
- **GSM connect:** Actions assigned to this event will be executed when the device successfully connects to the GSM network. The corresponding restore pair for this event is the ***GSM disconnect*** event.
- **GSM disconnect:** Actions assigned to this event will be executed upon a GSM connection loss. The corresponding restore pair for this event is the ***GSM connect*** event.
- **Cloud connect:** Actions assigned to this event will be executed when the device successfully connects to the TELL cloud server. The corresponding restore pair for this event is the ***Cloud disconnect*** event.
- **Cloud disconnect:** Actions assigned to this event will be executed upon a cloud connection loss. The corresponding restore pair for this event is the ***Cloud connect*** event.

- **Internet connect:** Actions assigned to this event will be executed when the device successfully connects to the internet. The corresponding restore pair for this event is the ***Internet disconnect*** event.
- **Internet disconnect:** Actions assigned to this event will be executed upon an Internet connection loss. The corresponding restore pair for this event is the ***Internet connect*** event.
- **USB connect:** Actions assigned to this event will be executed upon connecting the device to USB. The corresponding restore pair for this event is the ***USB disconnect*** event.
- **USB disconnect:** Actions assigned to this event will be executed upon disconnecting the device from USB. The corresponding restore pair for this event is the ***USB connect*** event.
- **Action test:** Actions assigned to this event will be executed upon clicking the ***Action test*** button in the ***Event settings*** menu. This is a useful tool to test various actions.
- **Operation mode changed:** The device can execute actions depending on the status of its power feed. When adding the event, it can be selected whether the device should execute the actions assigned to this event when powered from USB or a normal power supply (12-30V DC).
- **DTMF command:** Actions assigned to this event will be executed upon any incoming DTMF command. The list of applicable DTMF commands is available in chapter 5.1 of this manual.
- **SMS command:** Actions assigned to this event will be executed upon any incoming SMS command. The list of applicable SMS commands is available in chapter 5.2 of this manual.
- **Incoming call from unknown number:** Actions assigned to this event will be executed upon an incoming call from an unknown number. All phone numbers which are not added in the ***Phone numbers*** menu are considered unknown numbers (including private numbers with no caller ID).
- **Incoming call from trusted number:** Actions assigned to this event will be executed upon an incoming call from the selected user phone number. All phone numbers added in the ***Phone numbers*** menu are considered trusted numbers.
- **Config segment modified:** Actions assigned to this event will be executed upon a change in the device settings.
- **Scheduled action:** Actions assigned to this event will be executed at the specified time of day, and then each day at the same time. The time (hours:minutes) can be specified when adding the event.
- **Time changed:** Actions assigned to this event will be executed upon a system time change.
- **Repeating action:** Actions assigned to this event will be executed repeatedly by the frequency specified when adding the event. The frequency can be specified in minutes, hours, or days. The event is not scheduled for a specific time, but recurs at intervals calculated from the time it was added.

- **Password change:** Actions assigned to this event will be executed upon changing the admin or the user password.
- **SIM card removed:** Actions assigned to this event will be executed upon removing the the SIM card installed in the device.
- **SIM card ready:** Actions assigned to this event will be executed upon inserting a SIM card into the device.
- **Modem firmware upgrade success:** Actions assigned to this event will be executed when the firmware update of the device's internal modem completes successfully.
- **Modem firmware upgrade failed:** Actions assigned to this event will be executed if the firmware update of the device's internal modem fails.

Partition type events:

- **Partition arm:** Actions assigned to this event will be executed upon arming the selected partition. The partition can be selected when adding the event. The corresponding restore pair for this event is the ***Partition disarm*** event.
- **Partition disarm:** Actions assigned to this event will be executed upon disarming the selected partition. The partition can be selected when adding the event. The corresponding restore pair for this event is the ***Partition arm*** event.

Alarm type events:

- **Alarm on:** Actions assigned to this event will be executed when the system enters the alarm state. The corresponding restore pair for this event is the ***Alarm off*** event.
- **Alarm off:** Actions assigned to this event will be executed when the system exits the alarm state. The corresponding restore pair for this event is the ***Alarm on*** event.

Zone type events:

- **Zone detect:** Actions assigned to this event will be executed upon violation of the selected zone. The zone can be selected when adding the event. Violating the zone will only trigger the event if the partition associated with the zone is armed, or if the zone is configured as a 24-hour zone (see option ***24H***). The corresponding restore pair for this event is the ***Zone detect restore*** event.
- **Zone detect restore:** Actions assigned to this event will be executed once the selected zone returns to a normal state following a violation. The zone can be selected when adding the event. The corresponding restore pair for this event is the ***Zone detect*** event.

Sensor type events:

- **Voltage over limit:** Actions assigned to this event will be executed when the supply voltage rises above the specified threshold. The threshold can be specified when adding the event. The corresponding restore pair for this event is the ***Voltage below limit*** event.
- **Voltage below limit:** Actions assigned to this event will be executed when the supply voltage falls below the specified threshold. The threshold can be specified when adding the event. The corresponding restore pair for this event is the ***Voltage over limit*** event.

- **Sensor over limit:** Actions assigned to this event will be executed when the temperature reported by the selected temperature sensor rises above the specified threshold. The temperature sensor and the threshold can be specified when adding the event. The corresponding restore pair for this event is the ***Sensor below limit*** event.
- **Sensor below limit:** Actions assigned to this event will be executed when the temperature reported by the selected temperature sensor falls below the specified threshold. The temperature sensor and the threshold can be specified when adding the event. The corresponding restore pair for this event is the ***Sensor over limit*** event.
- **Sensor lost:** Actions assigned to this event will be executed upon the loss of data transmission from the selected temperature sensor. The temperature sensor can be selected when adding the event. The corresponding restore pair for this event is the ***Sensor restored*** event.
- **Sensor restored:** Actions assigned to this event will be executed upon the restoration of data transmission from the selected temperature sensor. The temperature sensor can be selected when adding the event. The corresponding restore pair for this event is the ***Sensor lost*** event.

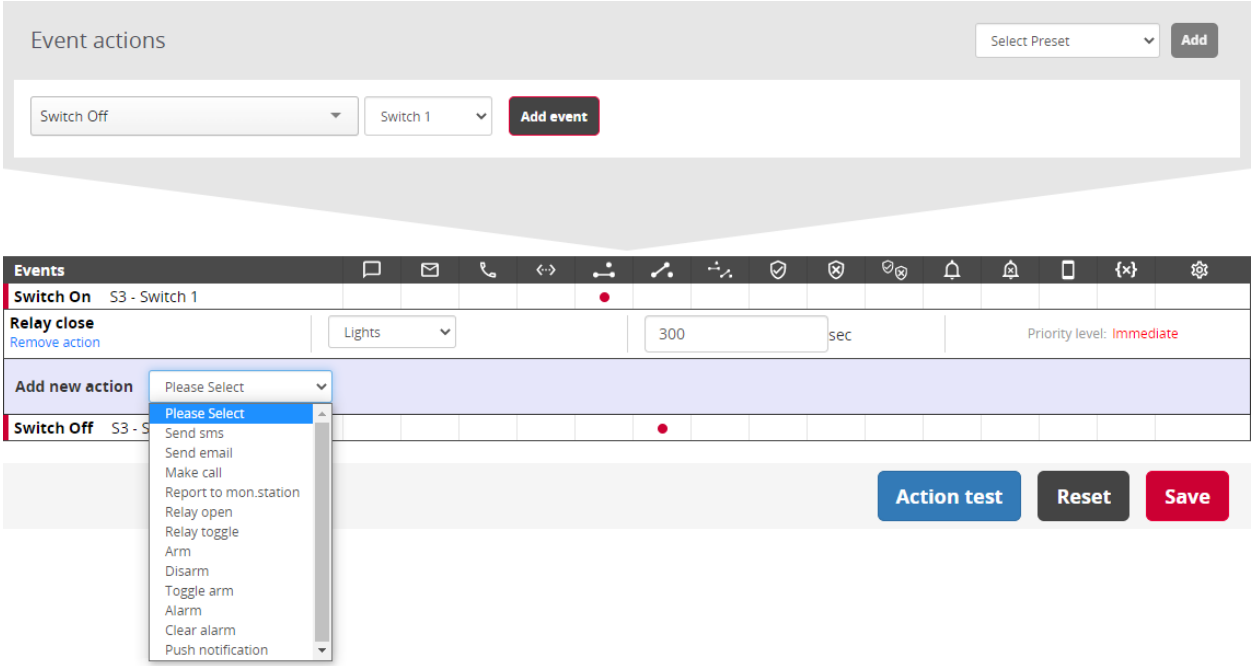
Switch type events:

- **Switch On:** Actions assigned to this event will be executed upon activating an input configured as switch input. The input can be selected when adding the event. The corresponding restore pair for this event is the ***Switch off*** event.
- **Switch Off:** Actions assigned to this event will be executed upon deactivating an input configured as switch input. The input can be selected when adding the event. The corresponding restore pair for this event is the ***Switch on*** event.
- **Switch Impulse:** Actions assigned to this event will be executed when an input configured as an impulse switch receives a pulse signal. The input can be selected when adding the event.

Relay type events:

- **Relay close:** Actions assigned to this event will be executed upon activating the selected relay output. The output can be selected when adding the event. The corresponding restore pair for this event is the ***Relay open*** event.
- **Relay open:** Actions assigned to this event will be executed upon deactivating the selected relay output. The output can be selected when adding the event. The corresponding restore pair for this event is the ***Relay close*** event.

4.8.2 Actions



You can assign any number of the following actions to the events listed in chapter 4.8. The system supports up to 100 event-action pairs:

Applicable actions:

Send SMS:

The device can send a message selected from the messages added in the ***Text templates*** menu to any phone number added in the ***Phone numbers*** menu via SMS. You can also add a new text or a phone number by clicking the button used for this purpose when configuring the action. Phone numbers and texts added this way will be saved automatically and will be available later in the ***Phone numbers*** and ***Text templates*** menus.

Send email:

The device can send a message selected from the messages added in the ***Text templates*** menu to any e-mail address added in the ***Emails*** menu via e-mail. You can also add a new text or an e-mail address by clicking the button used for this purpose when configuring the action. E-mail addresses and texts added this way will be saved automatically and will be available later in the ***Emails*** and ***Text templates*** menus.

Make call:

The device can make calls to any of the numbers added in the ***Phone numbers*** menu and play an audio file selected from the audio files uploaded in the ***Sounds*** menu. You can also add a new phone number by clicking the button used for this purpose when configuring the action. Phone numbers added this way will be saved automatically and will be available later in the ***Phone numbers*** menu.

Attention! Audio files must be uploaded in the ***Sounds*** menu prior to configuring the event and the action.

Report to mon. station:

The device can send Contact ID-based messages to any of the schemes configured in the ***Surveillance schemas*** menu, which organize remote monitoring servers and receivers. If you leave the Contact ID field blank, the device will use the default event code assigned to the given event. You can override this by entering the desired 4-digit Contact ID event code, where the first digit must be 1 for a new event or 3 for a restoration. You can use the magnifier  button to filter events by name or code to find the appropriate event code.

Relay close:

This action activates the selected relay output. The output or outputs to be controlled can be selected when adding the action. The corresponding opposite action is ***Relay open***.

Relay open:

This action deactivates the selected relay output. The output or outputs to be controlled can be selected when adding the action. The corresponding opposite action is ***Relay close***.

Relay toggle:

This action changes the state of the selected relay output to the opposite (activates the output if it was deactivated or deactivates it if it was activated). The output or outputs to be controlled can be selected when adding the action.

Arm:

This action arms the selected partition. The patition or patitions to be armed can be selected when adding the action. The corresponding opposite action is ***Disarm***.

Disarm:

This action disarms the selected partition. The patition or patitions to be disarmed can be selected when adding the action. The corresponding opposite action is ***Arm***.

Toggle arm:

This action changes the state of the selected partition to the opposite (arms the partition if it was disarmed or disarms it if it was armed). The patition or patitions to be armed or disarmed can be selected when adding the action.

Alarm:

This action starts an alarm (places the system into an alarm state). The corresponding opposite action is ***Clear alarm***.

Clear alarm:

This action stops the alarm (cancels the alarm state). The corresponding opposite action is ***Alarm***.

Push notification:

This action sends the message selected from the messages added in the ***Text templates*** menu to the mobile device selected from the devices registered in the ***Push notifications*** menu via Push message. You can also add a new text by clicking the button used for this purpose when configuring the action.

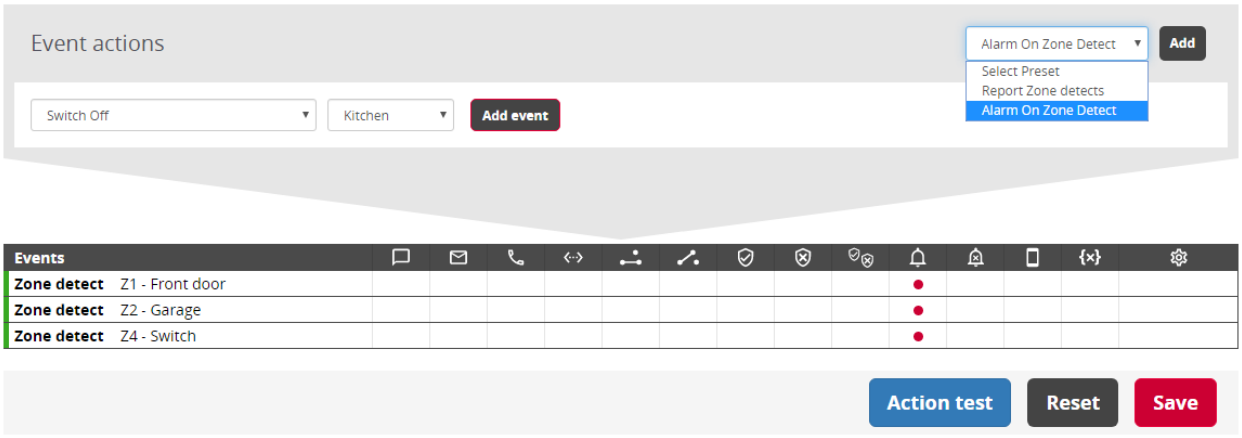
- **Action priority:**

You can assign multiple actions to one event, which will be executed in an order based on priority level. The order of actions with the same priority can be changed after adding and saving the actions. The actions with an ***Immediate*** priority will be executed out of turn, while actions with a ***High*** or ***Low*** priority will be queued and executed according to their priority.

High priority actions are generally ones that require a network connection but can be executed quickly, while time-consuming actions have a low priority (e.g., phone calls).

4.8.3 Presets

The predefined event-action templates help with adding frequently used events and actions, for instance the ***Report zone detects*** and ***Alarm on zone detect*** presets.

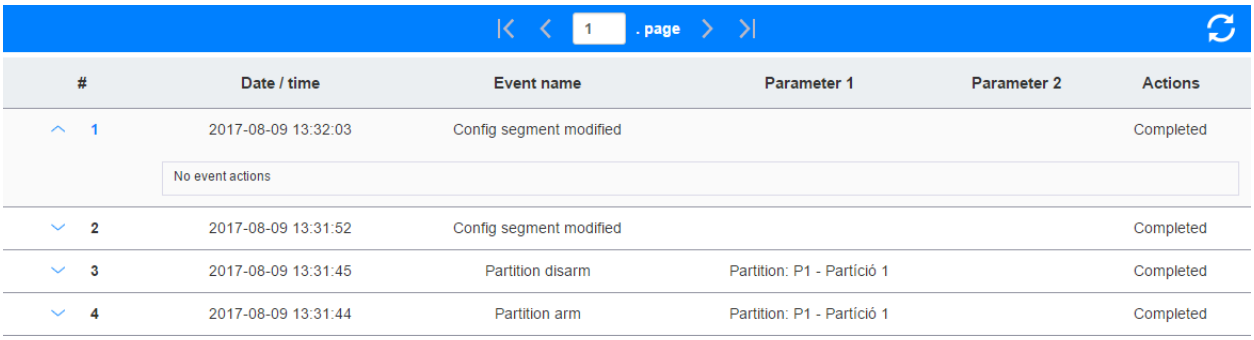


4.9 Event logs, configuration, and debug

4.9.1 Event logs menu

The events that occurred on the device are displayed in a tabular form. The device can store up to 1000 events. When the number of events exceed 1000, the oldest events are overwritten. The logs contain information on the time when the event occurred, the event name, its two parameters, and the execution status of the actions. The event parameters indicate for example input or output identifiers, sensor data, or information on the device status.

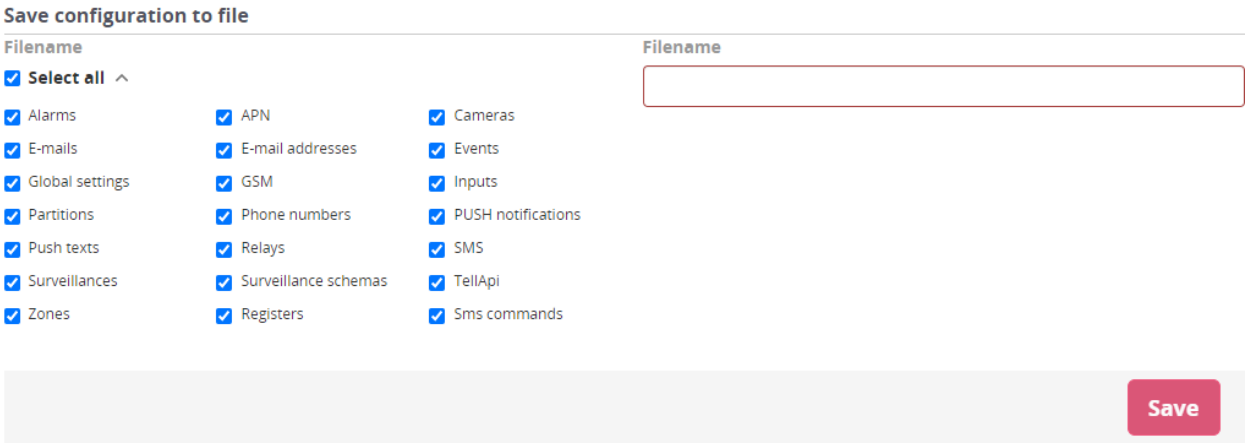
The arrows in the header of the table are used to switch pages or jump to the beginning or the end of the logs. By typing in the number of the required page into the field between the arrows, you can jump directly to the given page. You can refresh the list by clicking the refresh button in the top right corner of the table.



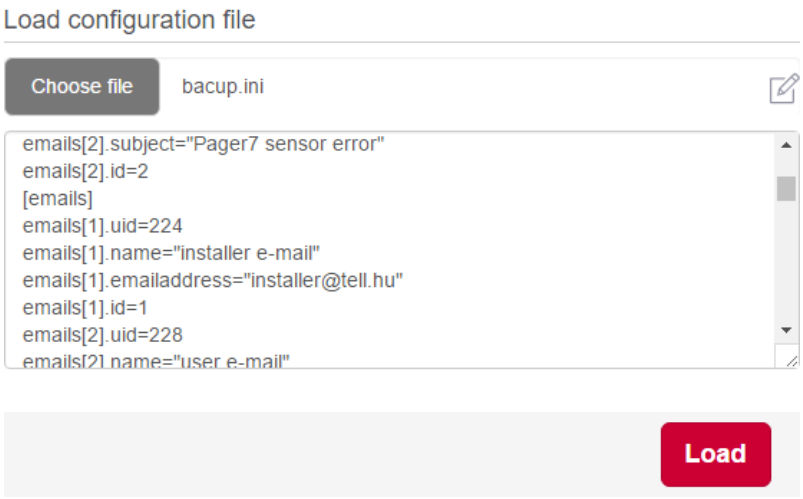
#	Date / time	Event name	Parameter 1	Parameter 2	Actions
1	2017-08-09 13:32:03	Config segment modified			Completed
	No event actions				
2	2017-08-09 13:31:52	Config segment modified			Completed
3	2017-08-09 13:31:45	Partition disarm	Partition: P1 - Partíció 1		Completed
4	2017-08-09 13:31:44	Partition arm	Partition: P1 - Partíció 1		Completed

The actions assigned to an event can be viewed by clicking the blue downward-pointing arrow located next to the row number.

4.9.2 Configuration menu



There are various options to save your configuration. Each configuration section will be saved by default, however, clicking the downward-pointing arrow next to the ***Select all*** option you can customize the configuration sections to be saved. After entering a filename, you can save the configuration by clicking the ***Save*** button.



An already existing configuration can also be loaded from file. For this, click the ***Choose file*** button, browse the configuration file from your computer, then click the ***Load*** button. If needed, it is possible to edit the chosen configuration before loading by clicking the ***Edit*** button.

Attention! ***This function requires competence and high expertise!***

4.9.3 Debug information menu

The ***Debug information*** menu is used to view debug logs containing the time, category, and parameters of debug information. This menu is useful for troubleshooting and receiving information on the operation of the device. You can filter the data using the filer options located above the logs table. You can export the logs in CSV format by clicking the ***Export debug information*** button.

5. Alternative control options

You can also control the device remotely without an Internet connection or the application, using DTMF commands via phone call or via SMS. Querying a specific part of the device's status, acknowledging outgoing notification calls, and canceling further actions after a notification call are also possible using DTMF commands.

Attention! ***These functions are only available if the SIM card installed in the device can make and receive calls.***

5.1 DTMF commands

DTMF commands applicable in calls made to the device:

*9PWD#	Providing the password required for authentication. "**PWD**" must be replaced with the password configured for the given calling number in the ***Phone numbers*** menu.
*0P#	Disarming a partition. "**P**" must be replaced with the number of the partition you want to disarm (e.g., *01#).
*1P#	Arming a partition. "**P**" must be replaced with the number of the partition you want to arm (e.g., *12#).
*2P#	Querying the status of a partition. "**P**" must be replaced with the number of the desired partition (e.g., *21#).
*3RS#	Setting the state of a relay output. "**R**" must be replaced with the number of the relay output you want to control, while "**S**" must be replaced with **1** if you want to activate, or with **0** if you want to deactivate the output (e.g. *321#).
*3R#	Querying the status of a relay output. "**R**" must be replaced with the number of the desired relay output. (e.g., *31#).

DTMF commands applicable in calls made by the device:

*	Acknowledging notification calls.
#	Canceling further actions. If you stop further actions using this command, the device will not call the further phone numbers configured for the same event.

The device gives feedback in a call on successful execution of commands and responds to status queries the same way. Three short beeps after sending a command means "successfully executed", while for a status query it means "status: activated". A long beep after sending a command means "failed to execute", while for a status query it means "status: deactivated".

Note: Depending on call conditions and sound quality, DTMF transmission via GSM calls (on a 2G network) might be uncertain, while via VoLTE calls on 4G it works stably.

5.2 SMS commands

Applicable SMS commands:

*PWD=jelszó#	Providing the password required for authentication. “**PWD**” must be replaced with the password configured in the ***Phone numbers*** menu for the phone number sending the command.
*HWID#	Hardware ID query. Returns the hardware ID of the service.
*APN=NAME,[USER],[PASSWORD]#	Configuring the access point name (APN). “**NAME**” must be replaced with access point name, while “**USER**” and “**PASSWORD**” must be replaced with the username and password belonging to the given APN (e.g.: *APN=internet,[guest],[net123]#). The username and password are only required if required by the mobile service provider.
*PX=0#	Disarming a partition. “**X**” must be replaced with the number of the partition you want to disarm (e.g., *P1=0#).
*PX=1#	Arming a partition. “**X**” must be replaced with the number of the partition you want to arm (e.g., *P2=1#).
*RX=Y#	Setting the state of a relay output in bistabile mode. “**X**” must be replaced with the number of the relay output you want to control, while “**Y**” must be replaced with **1** if you want to activate, or with **0** if you want to deactivate the output (e.g., *R1=1#).
*RX=1Z#	Setting the state of a relay output in monostabile mode. “**X**” must be replaced with the number of the relay output you want to control, while “**Z**” must be replaced with the duration and unit of time for which you want to activate the output. The unit of time can be seconds (**s**), minutes (**m**) or hours (**h**). If the unit of time is not specified, the default will be considered which is seconds (e.g., *R1=130#).
*STATUS#	Status report query. Returns status information in a reply SMS like in the example below: STATUS: U=12.21; S=-72dBm (56%); P1: 1; P2: 0; Z1: 1; Z2: 1; T3: 25; I4: N/A; R1: 1; R2: 0; TIME (UTC): 2017-01-01 12:00:00; **U** is the voltage, **S** is the signal, **P1**-**P2** are partitions, **Z1**-**Z2** are zone-type inputs, **T3** is a temperature sensor input, **I4** is an undefined input, **R1**-**R2** indicates the status of the outputs, and **TIME** is the device system time.
*REBOOT#	This command restarts the device.
*XXX, CRQ#	Reply SMS query on the execution of a command. “**XXX**” must be replaced with the command on which you want to receive feedback (e.g., *R1=1, CRQ#).

It is also possible to send multiple commands in a single SMS. The commands must be typed one after the other without space in between. The ***** and **#** characters are the separators.

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