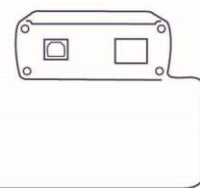


INSTALLATION MANUAL

eLAN-RS485/232



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Before you begin

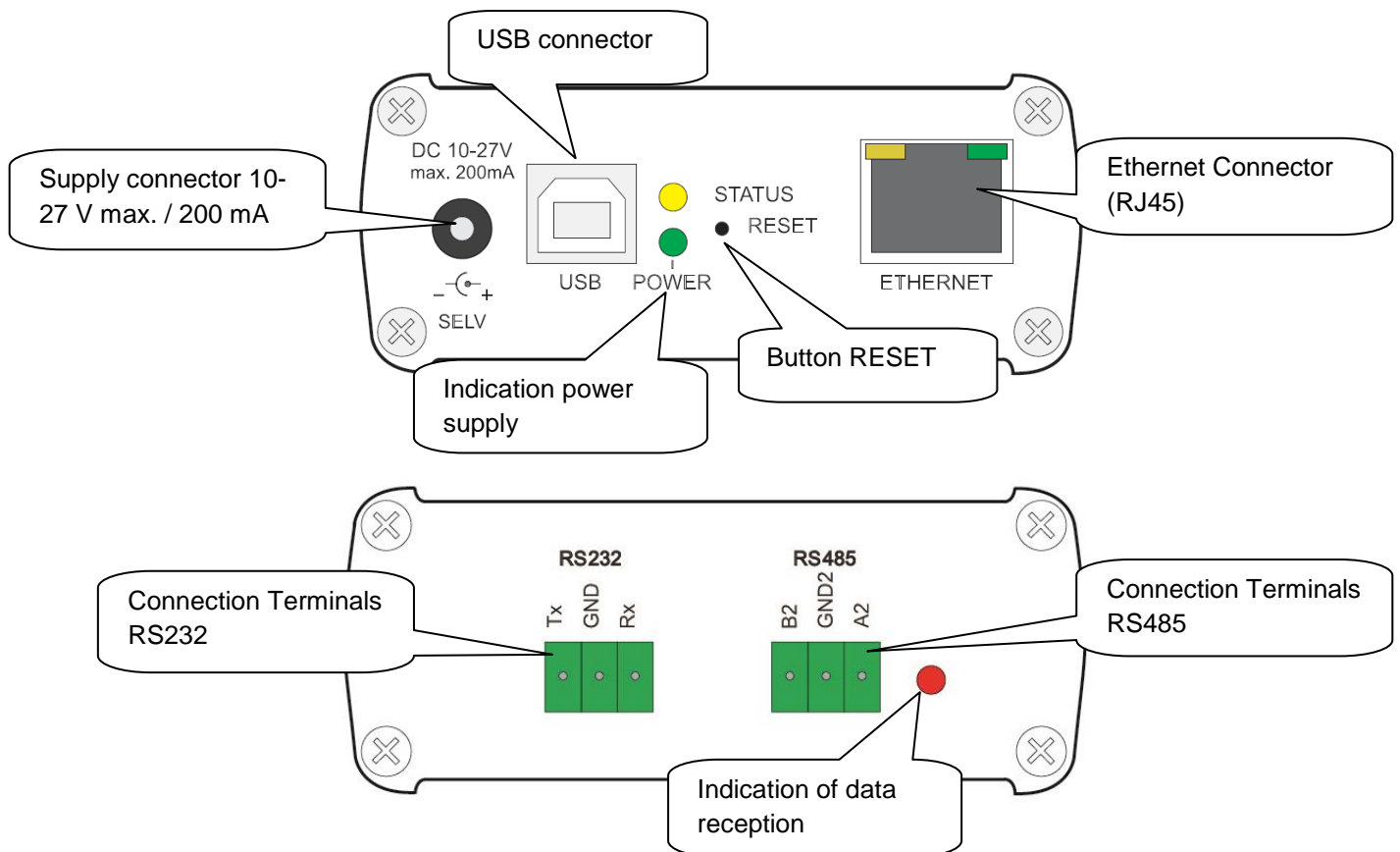
The instruction manual provides information on installing and operating the device. The instruction manual is always part of the supply. Only perform installation after becoming thoroughly familiar with this User Guide and device functions. Problem-free function of the device also depends on the way it was shipped, stored and handled. If you notice any signs of damage, deformation, malfunction or a missing part, do not install this product and return it to the point of sale. At the end of its service life, the product and its parts must be treated as electronic waste. Before starting the installation, make sure that all wires and connected parts are not under voltage. When assembling and performing maintenance, you must uphold safety regulations, standards, directives and special provisions for working with electrical equipment.

Introduction

Congratulations on your purchase of the eLAN-RS485/232 converter.

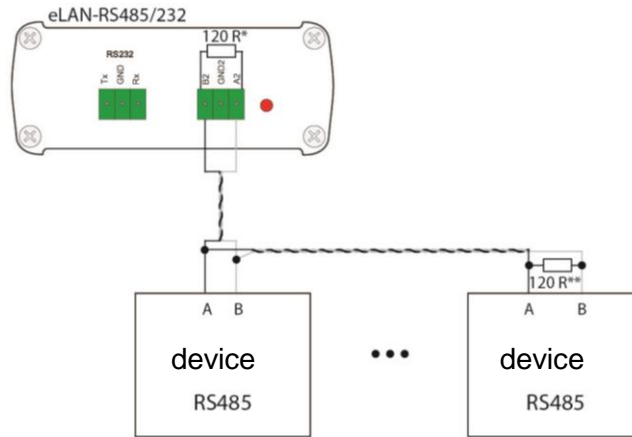
- The eLAN-RS485/232 (eLAN-RS) allows you to control from your smart phone, tablet, or by using the Connection air conditioner and their handheld devices.
- The eLAN-RS485/232 is connected to the home network (router) via the LAN network cable and communicates with a smartphone.
- Intuitive application environment offers centralized control from one place.
- If you do not have a fixed IP address, the converter will automatically get it from the DHCP server.
- Power converter with 10-27 V DC adapter (included) or PoE 24V DC power supply (router).
- You need a Connection Server (to communicate with the application) to install.
- Set up via web interface.

Device description



Connection

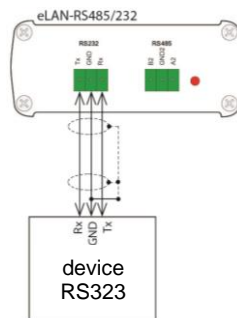
RS485 bus connection



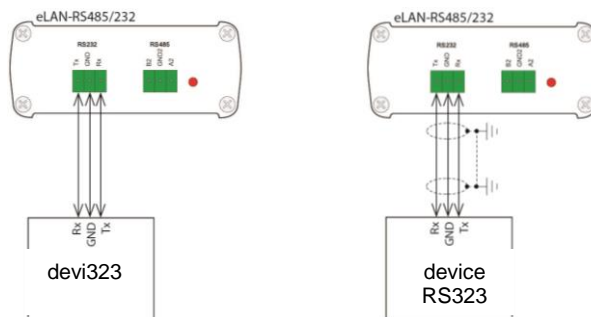
* 120R - Integrated in eLAN-RS485 / 232

** Plug in if the 120R is not integrated in the connected device

Bus connection RS232

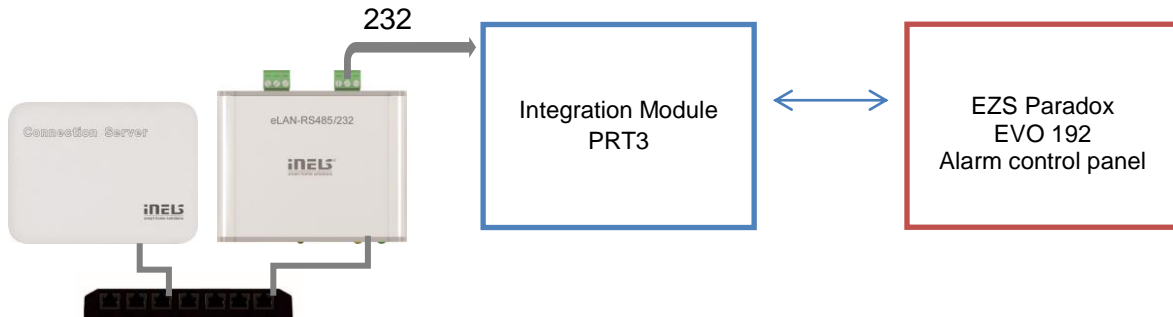


Recommended connection:

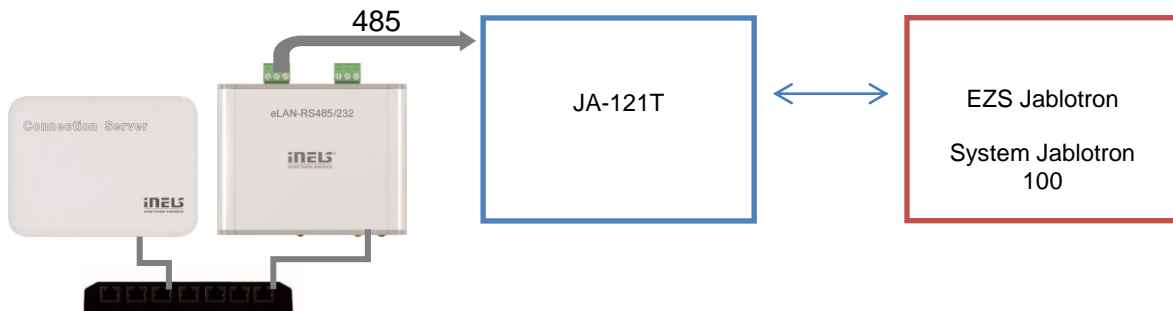


Connection examples

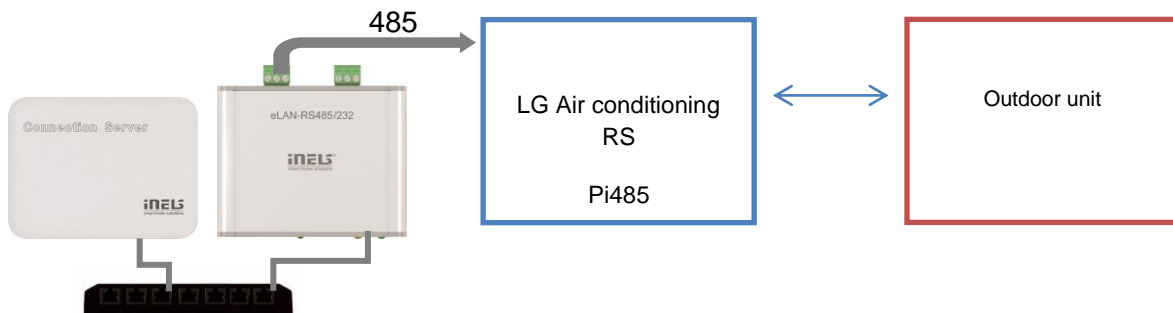
1. Wiring Example using protocol 232:



2. Wiring Example using protocol 485:



3. Wiring Example using protocol 485:



Note: Only one protocol type can be used from the converter, Protocols 232 and 485 do not work concurrently.

List of usable ports:

Port	Protocol	Description
8080	TCP	Connection Server - access to web-interface
8081	TCP	Connection Server - access to update server web-interface
9000	TCP	Connection Server - access to web-interface of LMS Audio zone and Audio player GUI
9001	TCP	Connection Server - access to daemon supervisor web-interface overview (daemon maintenace and logging)
8090	TCP	iMM Client - access to web-interface client part
61695	TCP	LARA - access to web-interface / remote control for third-party devices and applications
62000	TCP	LARA - access to port related to DLNA server. It is based on UPnP to stream audio content.
80	TCP	eLANRS485-232 - access to web-interface
8000	TCP	iHC applications - access to encrypted communication between applications and Connection Server / iMM server
9999	UDP	iHC applications - access to communication between applications and central unit CU3
61682	UDP	iHC applications - access to communication between applications and central unit CU2
9999	UDP	iHC applications - access to communication between applications and RFPM-2M
80	TCP	eLAN RF - access to web-interface
8001	TCP	iHC applications - access to unencrypted communication between applications and Connection Server / iMM server

More detailed description of the port use:

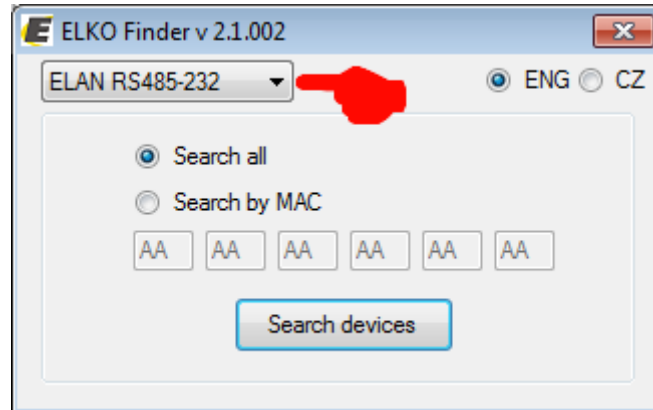
https://en.wikipedia.org/wiki/List_of_TCP_and_UDP_port_numbers

Installing, setting IP address

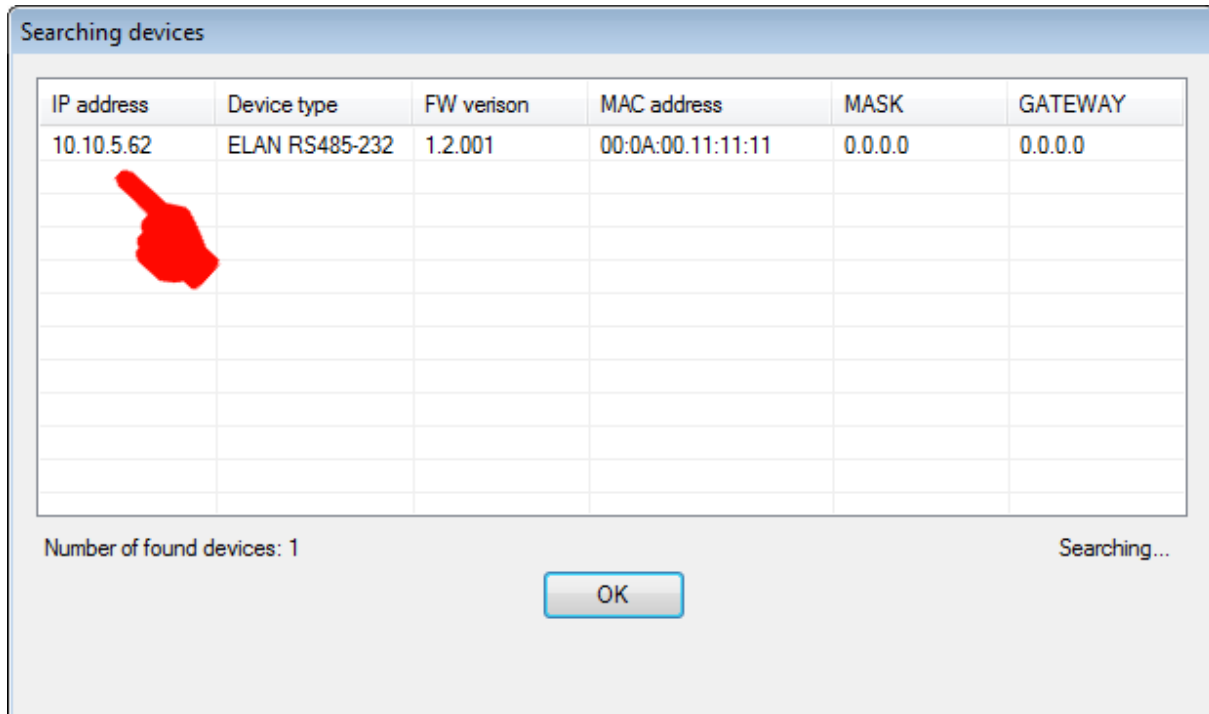
Use an Ethernet cable to connect it to your local network. Your local network (router) will allocate the eLAN-RS IP address. By default, automatic IP address retrieval (DHCP) is set on eLAN-RS.

You can find the IP address using the ELKO Finder, where you type in **ELAN RS485-232**

Please download the latest version of ELKO Finder: <https://www.elkoep.com/converter-elan-rs485232-en>



After clicking Search devices, the program searches for all RS converters on your network.



Logging to the web interface

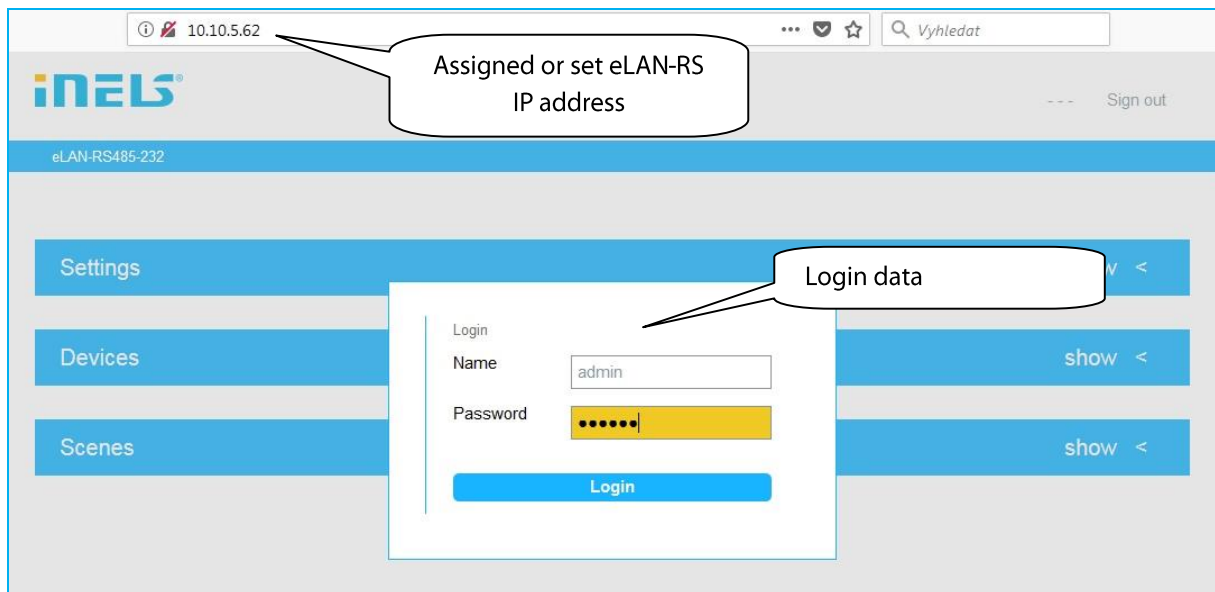
Start a web browser.

In the Internet browser, type the **IP address** of your eLAN-RS to the Address bar.

Once the specified IP address is confirmed, the web server login page is loaded.

The factory settings for signing in as administrator are:

Name: admin
Password: elkoep



Login options:

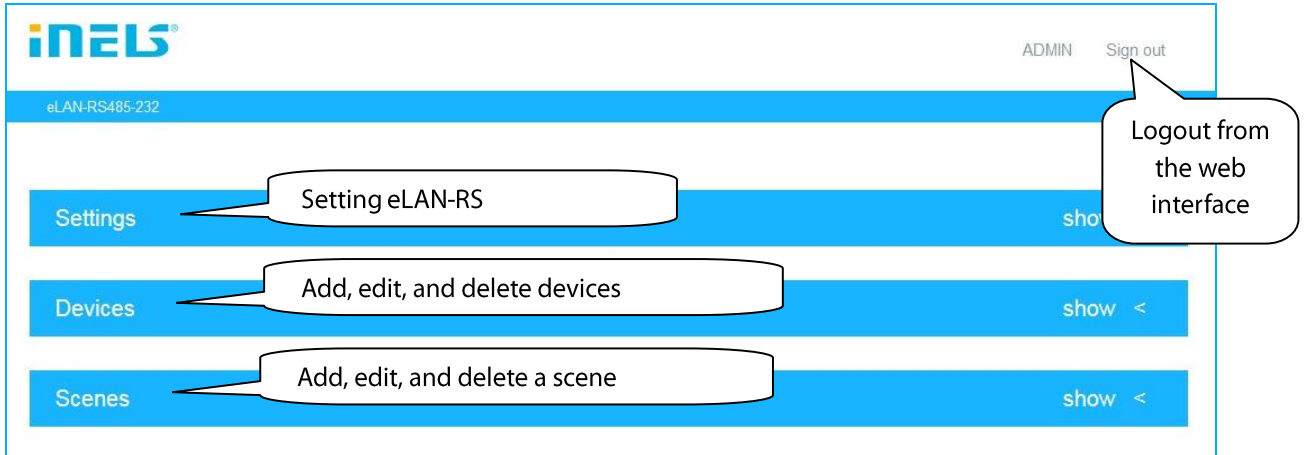
- It is possible to log into the eLAN-RF-Wi-003 web interface either as the **administrator** (admin) with full access to controls and settings, or as the **user** (user), for whom only the panel itself is displayed.
- The user thus only has the option of controlling the device (the factory setting of the password for logging in as admin and user is: elkoep).
- Both users log into the same dialog field (Login, Password), but each uses his/her own name and password.
- Confirm the log in by pressing: **Login**.

Note: to RESET the eLAN-RS press the (> 10s) button on the front panel of the transmitter for a long time. The IP address and login data will return to the factory settings, automatic IP address retrieval (DHCP) is set.

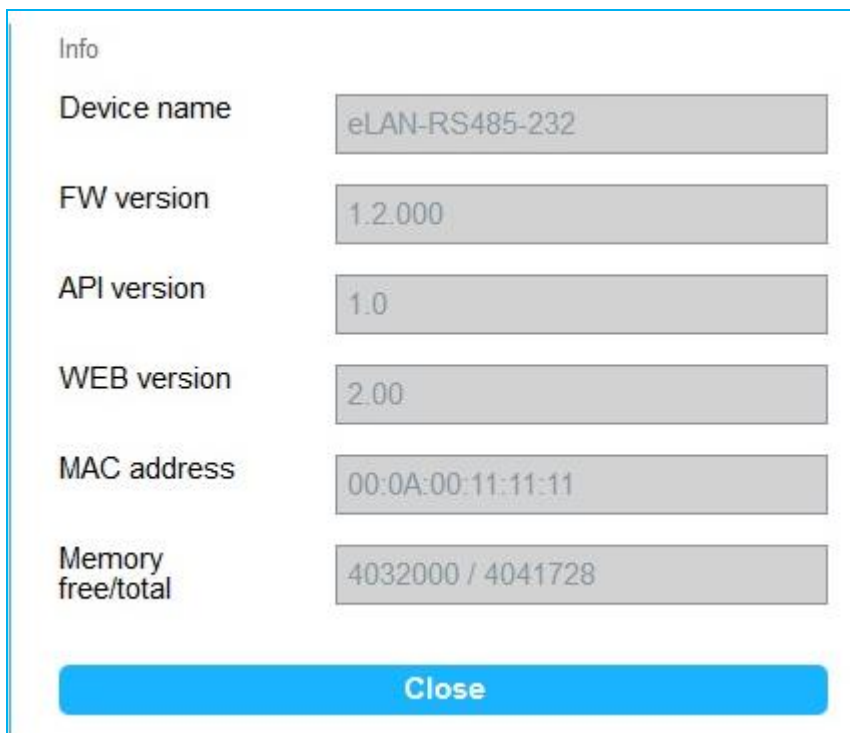
The default login password for both admin and user is: elkoep.

Settings

When you log in, you will see a window in the browser where you will see a tab for setting up, adding devices, and adding a scene.



Click on the name eLAN-RS485/232 to display the **eLAN-RS485/232** converter information dialog box.



Settings - description of functions

- **Accounts** allows you to change your login credentials for your admin or user account. Click on Edit account to display the data entry dialog.

The screenshot shows the 'Accounts' settings page with two rows: 'User' and 'Admin'. Each row has an 'Edit account' button. Callouts indicate that clicking 'Edit account' for the 'User' row leads to a dialog to 'Change the login for User account', and clicking it for the 'Admin' row leads to a dialog to 'Change login credentials for Admin'.

The 'Admin account' dialog box contains the following fields and buttons:

- Admin account
- Name:
- Password:
- Password (Confirm):
- Buttons: Save, Cancel

- **Load & Save settings**

Load - restore the backup settings that you have previously saved to your PC (the file has a .bin extension).

Save - backup of current eLAN-RS settings including network settings.

The screenshot shows the 'Load & Save settings' page with two rows: 'Load' and 'Save'. Each row has a corresponding button: 'Load settings' and 'Save settings'. Callouts indicate that clicking 'Load settings' leads to 'Restore backup settings' and clicking 'Save settings' leads to 'Backup your current settings'.

Network settings: allows you to configure network settings, change network settings.

Network settings

IP	10.10.5.62
Mask	255.255.255.0
Gateway	10.10.5.254

Change network settings

Network settings

IP settings

DHCP client Static IP

Option to retrieve IP address from DHCP server (default)

Static IP address

IP address	10.10.5.62	IP address eLAN-RS485/232
Mask	255.255.255.0	Your Network Mask
Gateway	10.10.5.254	Default Network Gateway

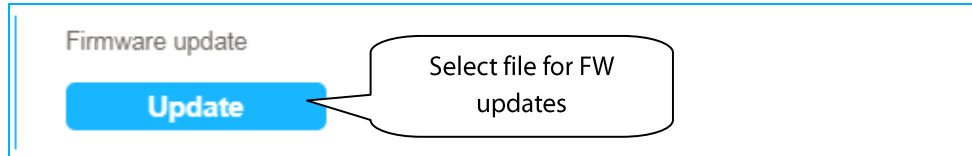
Save Button

Note: After changing the IP address (static address setting), you need to use the new IP address to log in to eLAN-RS. If the connection is not working after entering the new IP address, you must reconfigure the connected device (PC) to the same subnet.

- **Firmware update** enables firmware update (FW) in eLAN-RS485/232.

To update FW eLAN-RS:

1. Download the latest version of FW for eLAN-RS from the Web site.
 2. Click the **Update** button to select the downloaded file (the FW update file must always contain the * bin extension).
- Pressing the **OK** button, this automatically starts the FW update in your eLAN-RS.

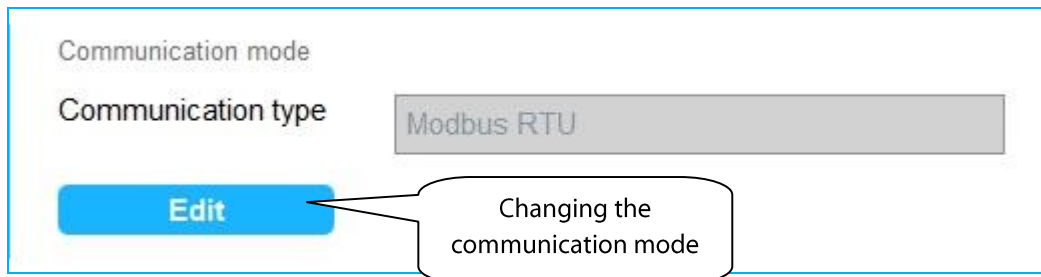


Note: do not turn off device or use the Reset button when updating the firmware. The eLAN-RS restarts after updating. After the firmware update, all settings will remain preserved. This means that the set IP, login data, visualization panel will remain the same as with the SW version prior to the update.

- **Communication mode** allows you to set the communication mode.

You can set these types of communication modes:

TCP-RS485/232 Bridge, Modbus RTU, Nilan, Air Pohoda, Jablotron, LG PI485, Paradox, Daikin, Mitsubishi, Cairox, Aseko, Misol MeteoStation



Converter specification for selected TCP-RS485 / 232 Bridge communication mode:

- Only one client can be connected to a TCP port at a time.
- Bridge listens on TCP port 53.
- The recommended maximum message size is 2kB (otherwise data on the serial line may be lost).
- Recommended maximum size of message sent to TCP is 1kB.
- Received data from the serial line are sent to TCP when the send buffer is full (1kB) or in case of 10ms idle time on the serial line.

Set Interface - it is necessary to select the interface to communicate with the device (RS485 or RS232).

When selecting the communication mode, Baudrate, Length data bits, Stop bit and Parity are automatically set according to the default specification of the device.

We recommend comparing the initial settings in the device's manual to verify that the parameters are set correctly. In case there were any changes on the device side, it is necessary to edit them manually in the Communication mode folder in eLAN.

Communication mode

Interface: RS485

Mode: TCP - RS485/232 Bridge

Baudrate: (empty)

Length data bits: (empty)

Stop bit: (empty)

Parity: (empty)

Buttons: Save, Cancel

Callouts:

- Communication interface settings
- Set communication mode
- Baud Rate Serial Communication Setting
- Setting Data bit serial communication
- Setting Stop bit serial communication
- Setting Parity Serial Communications
- Save Button

Jablotron setup example:

Jablotron setup example:

Communication mode

Interface: RS485

Mode: Jablotron

Baudrate: 9600

Length data bits: 8bit

Stop bit: 1

Parity: no

Buttons: Save, Cancel

Add device (Jablotron - Jablotron)

Label: Jablotron

Buttons: Save, Cancel

Note: Any device name can be selected.

Paradox settings example:

Communication mode

Interface

Mode

Baudrate

Length data bits

Stop bit

Parity

Paradox creation example:

Add device (Paradox - Paradox)

Label

Control panel

- EVO48
- EVO96
- EVO192**
- DGP-848
- DGP-NE96

Note: Any device name can be selected. Currently, the EVO48, EVO96, EVO192, DGP-848, DGP-NE96 control panels are supported.

To check if the eLAN is communicating with the device, click DEVICE states to read the device data.

Example of reading data from Jablotron:

Device states

SECTION STATE

section_1	<input type="text" value="OFF"/>
section_2	<input type="text" value="OFF"/>
section_3	<input type="text" value="OFF"/>
section_4	<input type="text" value="OFF"/>
section_5	<input type="text" value="OFF"/>
section_6	<input type="text" value="OFF"/>
section_7	<input type="text" value="OFF"/>
section_8	<input type="text" value="OFF"/>
section_9	<input type="text" value=""/>

After loading, 4 sections will appear:

SECTION STATE	Status of individual sections. The maximum number of sections is 15. OFF (section deactivated) BLOCKED (section blocked) SERVICE (section under maintenance) READY (section is normal) ARMED_PART (section partially secure) ARMED (section is secured)
PG STATE	States of individual PG outputs. The maximum number of PG outputs is 32. OFF - PG output is inactive ON - PG output is active
PRF STATE	States of individual detectors. The maximum number of detectors is 192 (the number depends on the installation) true - the detector is active false - the detector is inactive
SYSTEM FLAGS	List of active flags in the section. OK (no flag active) INTERNAL_WARNING (internal siren active) EXTERNAL_WARNING (external siren active) FIRE_ALARM (fire alarm) INTRUDER_ALARM (intruder alarm) PANIC_ALARM (panic alarm) ENTRY (entrance delay) 6 - Exit delay

If Jablotron is used to determine the section or detector number, use the appropriate SW.

Example of reading data from Paradox:

Device states

Area 1 status

Area 1 flag

Area 2 status

Area 2 flag

Area 3 status

Area 3 flag

Area 4 status

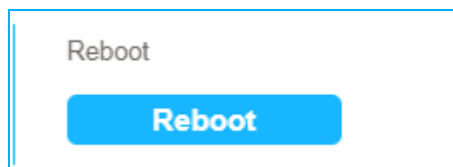
Area 4 flag

After loading, 4 sections will appear:

AREA X STATUS	Section status X. DISARMED ARMED FORCE ARMED STAY ARMED INSTANT ARMED
AREA X FLAG	S List of active flags in section X. OK (no flag active) STROBE IN ALARM IN PROGRAMMING NOT READY TROUBLE ZONE IN MEMORY
ZONE X STATUS	Detector status X. CLOSED OPEN TAMPERED FIRE LOOP TROUBLE
ZONE X FLAG	List of active flags in detector X. OK (no flag active) LOW BATTERY SUPERVISION LOST FIRE ALARM IN ALARM

When using Paradox, read the section number from the control panel.

- **Reboot** to restart the device eLAN-RS485/232.



- **Date & Time** allows you to set the date and time.

Here the IP address of the NTP server is set by default, which determines for the eLAN the precise time via the Internet. If your eLAN-RS is not connected to internet network, then time is always set to 12:00 AM

You can also set the time zone in which the eLAN is located.

Daylight Saving Time will activate daylight saving time settings.

The current day is set manually with button **Set manual time**.

During power failure, time information is erased from eLAN memory.

The image shows two screenshots of the 'Date & Time' configuration interface. The top screenshot shows the 'Date & Time' section with 'Date' set to '26.6.2018' and 'Time' set to '8:14'. A callout bubble points to the 'Edit' button with the text 'Change date and time'. The bottom screenshot shows the 'Date and time' section with 'NTP IP address' set to '195.113.144.201', 'Time zone' set to 'UTC + 01:00', 'Daylight Saving Time' set to '(+1h daylight saving time)', and 'Automatic time' set to 'Off'. A callout bubble points to the 'Set manual time' button with the text 'Button for manual setting of time and'. At the bottom, there are 'Save' and 'Cancel' buttons, with a callout bubble pointing to the 'Save' button with the text 'Save Button'. Other callout bubbles point to the 'NTP IP address' field ('IP address'), the 'Time zone' dropdown ('Selection of time zone'), and the 'Daylight Saving Time' checkbox ('Activating daylight savings time').

Devices - device management

Click the **Devices** tab to see a list of created devices.

You can add, edit, delete, manage actions associated with the device, and view device status.

Devices

Nilan

List of created devices

Device status with control capability (if the necessary actions are created)

Add

Edit

Delete

Actions

States

- **Add** - add devices.

Selected communication mode defines maximal amount of connectable devices.

Modbus RTU	5
Modbus ASCII	5
Nilan	5
Air Pohoda	1
Jablotron	1

LG PI485	10
Paradox	1
Daikin	10
Mitsubishi	10
Cairox	10

Add device (MODBUS RTU - other)

Label: Device

Address (hex): 1E

Save Button

Save

Cancel

Add device (MODBUS RTU - Nilan)

Label: Nilan

Address (hex): 1E

Device name

Device Address

Save

Cancel

Add device (LG PI485 - LG PI485)

Label: LG

Group: 1

Unit: 1

Group selection

Unit selection

Save

Cancel

<p>Add device (AiR pohoda - air pohoda)</p> <p>Label <input type="text" value="Pohoda"/></p> <p><input type="button" value="Save"/> <input type="button" value="Cancel"/></p>	<p>Add device (Jablotron - Jablotron)</p> <p>Label <input type="text" value="Jablotron"/></p> <p><input type="button" value="Save"/> <input type="button" value="Cancel"/></p>
---	--

Add device (Paradox - Paradox)

Label

Control panel

Select the type of control

- **Edit** allows you to edit previously created device.
- **Delete** allows you to delete a previously created device.

- **Actions** - allows actions to be managed for devices that support adding, editing, or deleting actions. Devices that enable this feature include Modbus RTU and Nilan communication devices.

Edit Device actions

- Name - any name describing the function.
- Type - **null**, **bool** - true-false for write and read,
int - for writing and reading a numerical value,
Number - read only numeric values in 100x format.
- Register - the address of the registry to be written to the device (specified in the device manual).
- Function code - the code determines what write or read is and in which register (holding, input ...), specifies the MODBUS protocol.

The screenshot shows the 'Device actions' configuration interface. On the left is a scrollable list of actions: 'on', 'mode', 'set temperature', 'set program', 'speed fan', 'T1', 'T2', 'T3', 'T4', 'T5', 'T6', 'T7', 'T8', 'T9', 'T10', 'T11', 'T12', 'T13', 'T14', 'T15'. A callout points to this list: 'List of actions created'. A callout points to the 'on' action: 'Edit the selected action from the action list'. The right side shows the configuration for the selected action: 'Action name' (on), 'Type Name' (int), 'Valid ranges for action type int' (Min, Max, Step input fields), 'Registry number' (3e9), and 'Function code' (16). At the bottom are buttons: 'Apply', 'Delete' (with callout 'Delete action from action list'), 'Add as new' (with callout 'Add action to action list'), 'Save' (with callout 'Save action list to device'), and 'Cancel'.

- **States** u allows you to view a status list from your device.

You will see a list of items for setting device value, device overlay, or just read-only items.

The screenshot shows a 'Device states' interface with the following elements and callouts:

- List of statuses from the device:** A callout points to the list of state names: on, mode, set temperature, set program, speed fan, reset alarm, alarm status, RH, and state.
- Option to set custom values:** A callout points to the 'false' dropdown menu for the 'on' state.
- Button for storing value or controlling the device:** A callout points to the blue 'Set' button next to the 'mode' state.
- Reading data without options or control:** A callout points to the '136' value in the 'alarm status' field.
- Reload data:** A callout points to the blue 'Reload' button at the bottom.

State Name	Value / Control
on	false
mode	1
set temperature	21
set program	0
speed fan	3
reset alarm	0
alarm status	136
RH	0
state	

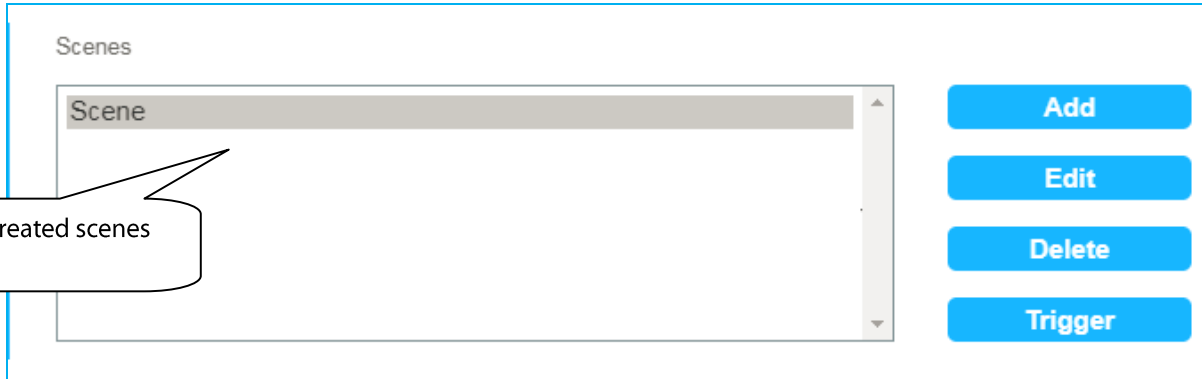
Scenes - managing scenes

Scenes are used to control multiple predefined settings.

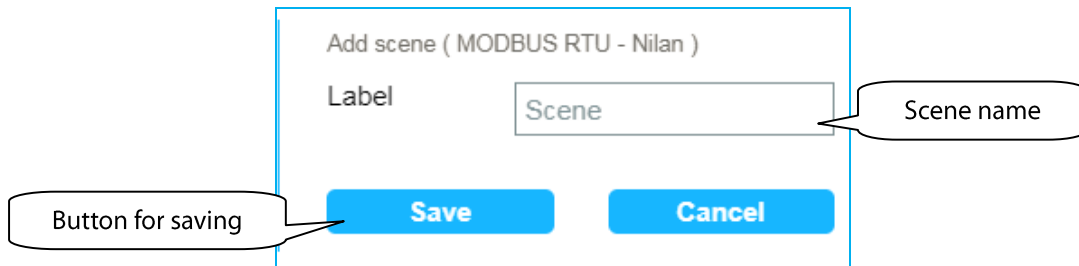
Example: when the air conditioner is switched on, the temperature is set to 20°C and the fan power is set to medium speed.

Click the Scenes tab to see a list of created scenes.

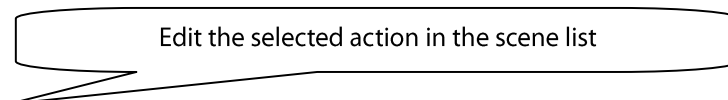
You can add, edit, delete, and run scenes.



- **Add** – add scene.



- **Edit** allows editing of scenes.



The screenshot shows the 'Scene actions' configuration window. On the left, a list of actions is shown: 'Nilan: on = true' and 'Nilan: set temperature = 20'. A callout 'Scene action list' points to this list. Below the list is a 'Save' button, with a callout 'Button to save the scene action list to the device'. On the right, there are four input fields: 'Label' (Scene), 'Device' (Nilan), 'Action' (on), and 'Value' (true). Callouts identify these as 'Scene name', 'Device Selection', 'Select action', and 'Set value' respectively. Below these fields are three buttons: 'Apply', 'Delete', and 'Add as new'. Callouts explain 'Delete Action from Scene Action List' for the 'Delete' button and 'Add an action to a scene action list' for the 'Add as new' button. At the bottom are 'Save' and 'Cancel' buttons.

- **Delete** – delete scene
- **Trigger** starts the scene.

Device control

- Mobile phone help application
- Click Devices to see a list of items from a device that can be controlled.

Starting up scenes

- Click the Trigger button in the Scenes section.