SAUTER

SAUTER EY-modulo 5
moduWeb Vision web operation

Manual
7010083003

Contents

1. Preface

1.1 What is moduWeb Vision?

moduWeb Vision is a web application that enables you to simply and intuitively monitor and operate your building management system from any PC in the network using a web browser.

The logical plant structure is displayed in the plant navigation tree. You can use this plant navigation tree to gain quick access to a particular part of the plant. The plant can be operated and represented graphically in the form of dynamic images, or as a list.

Alarms and messages can be sent by e-mail or SMS at preset times and displayed in alarm lists.

moduWeb Vision collects the log data from the connected devices, displays it in diagrams and tables, and sends it by e-mail on request.

With moduWeb Vision you can easily operate the BACnet time programs of the connected automation stations from one place.

Access to the individual plants and equipment systems can be controlled with the user management functions.

To communicate with the automation stations, moduWeb Vision uses the standard BACnet/IP protocol, which means that the automation stations from SAUTER can be assembled in a single system with those of other manufacturers.

moduWeb Vision is a pure software product that is installed and licensed on the moduWeb500 hardware when this is put into service.

moduWeb Vision is usually configured and commissioned by SAUTER or a SAUTER system partner and then handed over to the client ready to operate.

2. About this manual

2.1 Purpose and intended readership

This manual is intended for people who use moduWeb Vision to monitor and operate building management systems.

To understand the manual, a certain degree of knowledge of building management, HVAC, control and IT systems is required.

The manual should be kept in a place where it is available at all times for reference.

2.2 How the manual is structured

It is assumed that the building management system has been installed and commissioned by specialists from Sauter.
Therefore, all the important information for monitoring and operating the building management system is at the beginning of the manual. Information on configuration, commissioning and planning is at the end of the manual.

2.3 Abbreviations

Abbreviation	Term
AS	Automation station
ASHRAE	American Society of Heating, Refrigerating and Air Conditioning Engineers
BACnet	Building automation and control network
CASE	Computer-aided SAUTER engineering
COV	Change of values
CSV	Character-separated values, a data format for exchanging data with a simple structure
DCU	Direct control/indicating unit
DHCP	Dynamic host configuration protocol
DNS	Domain name server
DOI	Device object identifier
GA	Building automation
http	Hypertext transfer protocol
https	Hypertext transfer protocol secure
LAN	Local area network
MAC	Media access control address
MCR	Measurement, control and regulation
NTP	Network time protocol
SMS	Short message service
SSL	Secure sockets layer
SVO	Structured view object (BACnet)
UMS	Unified messaging service
URL	Uniform resource locator
UTC	Coordinated universal time

2.4 Symbols and terms used in this manual

⚠️   This symbol warns of hazards that may arise as a result of incorrect or careless operation of the system.

ⓘ   This symbol refers to additional information that may be helpful to the user.

From here on, the unit which is used for operating moduWeb Vision (PC, laptop, touch panel) is referred to as the PC.

2.5 Illustrations in this manual

The illustrations in this manual show the windows of the application as they appear on a PC in the Internet Explorer 8 or 9 browser. They merely serve as examples. See also section 6.1 on supported browsers.

The availability of the functions (menus) and the amount of content displayed depend on the role assigned to the user.

3.   Safety information

3.1   Notes on installation

These instructions refer to the installation of the moduWeb500 web server from the EY-modulo series of devices, as well as any other devices that are required in the building management system.

⚠   Danger due to incorrect installation
Incorrect installation can lead to injuries, fire or damage to equipment.
Observe the fitting instructions "EY-WS5000" P10006978 A.

⚠   Danger due to electric current
Devices carrying lethal voltage may be installed in the environment of the moduWeb500 web server. Work on these devices may only be carried out by qualified electricians.

The SAUTER EY-modulo devices may only be installed by qualified personnel in accordance with the following instructions.

All international, national, regional and local safety and accident prevention regulations must be observed at all times.

The products must be installed in such a way that they can be safely used and operated by laymen. When necessary, the devices must be installed in lockable cabinets or switch boxes.

The equipment must be installed in such a way that it can never under any circumstances pose a hazard to people, animals or the environment. The systems may only be put into operation after it has been ensured that the plant can be operated safely and in accordance with all relevant standards and directives.

Communication wiring must be carried out correctly and in accordance with the standards EN 50174-1, -2 and -3. Communication wires must be kept at a distance from other live wires.

The network may only be configured by trained, qualified staff in consultation with the IT department responsible, as otherwise the entire local network may be impaired.

3.2 Intended use

moduWeb Vision may only be used for the functions described in this manual.

Any improper use can cause malfunctions or damage to the building management system.

Improper operation can cause the recorded data or the entire program of moduWeb Vision to be irretrievably lost.

Unauthorised hardware and software modifications are considered to be violations of the intended use.

3.3 Disclaimer

Fr. Sauter AG accepts no liability for any damage caused by improper use of moduWeb Vision. This applies to damage to moduWeb Vision and the associated hardware and software, to building management systems and also for any consequential damage.

3.4 Standards and directives

In terms of electrical safety, the EY-modulo devices comply with the requirements of the EN 60730, EN 60950 series of equipment standards. It must be ensured that the system itself complies with the standards EN 50178, EN 50310, EN 50110, EN 50274, EN 61140, EN 61558-x etc.

ⓘ The products in the EY-modulo series are not "failsafe" or "no fail" products, which means they are not suitable for safety applications.

The device software complies with Class A according to IEC/EN 60730-1 Annex H and the products are not intended to be relied upon for functional safety. The products may not be used as an SIS (safety instrumented system).

The requirements of standards such as IEC/EN 61508, IEC/EN 61511, IEC/EN 61131-1 & -2 were not taken into account.

The products do not comply with the EU Directives
- 2004/22/EC for measuring equipment
- 92/1/EEC for measuring equipment for frozen foodstuffs

4.   Product structure

- EY-WS500F005 moduWeb500 hardware
- EY-WS505F010 moduWeb Vision Software for 800 data points,
  75 plant schematics, 25 users
- EY-WS505F020 moduWeb Vision Software for 2500 data points, 250 plant
  schematics, 100 users

moduWeb500 is not capable of operation until one of the two moduWeb Vision
software variants has been installed and licensed.
Installation and licensing of the software is usually carried out by either SAUTER or
a SAUTER system partner. Please contact them if an information page about
missing software or a missing license is displayed instead of the start page when
you open moduWeb Vision.

5.   Other applicable documents

Fitting instructions	P100006978 A
Product data sheet	PDS 96.005
Material declaration	MD96005
BACnet PICS	7010092003

6. Operation

6.1 Supported browsers

The moduWeb Vision windows are best viewed in the Microsoft Internet Explorer 9 browser. Microsoft Internet Explorer 8 and various other browsers such as Firefox, Opera and Chrome can also be used. The illustrations in this manual show the windows of the application as they appear in the Internet Explorer 8 or 9 browser. These are intended as examples only. The appearance of the windows may differ, depending on the browser you use.

ⓘ   In order to have an optimal display and page-building speed, compatibility mode should be deactivated in Internet Explorer 9.
To deactivate compatibility mode, proceed as follows:
1. Start Internet Explorer.
2. Open the moduWeb Vision website.
3. If the menu bar is not activated, you can activate it by right-clicking on the area to the right of the last tab.
4. Open "Extras", then "Settings for the Compatibility View" and deactivate the checkbox for the zone in which moduWeb Vision is located (all websites or only the intranet).

The application uses Java Script and Adobe® Flash. Java Script must be enabled in the browser and Adobe® Flash Player Version 11 or higher must be installed as an add-on.

Cookies must be enables in all browsers for the login and session process.

ⓘ   An overview of the icons used in moduWeb Vision can be found in the appendix of this manual.

6.2 Starting moduWeb Vision, logging in and out

ⓘ   It is assumed that the system is ready for operation, which means the moduWeb500 web server is running and available for connecting to a PC. Instructions on starting the moduWeb Vision server can be found in section 19.2.1.

Operation

6.2.1 Calling the application

Open a suitable web browser on your PC.

In the browser input window, enter the service with which you want to call moduWeb Vision.
- The configured IP address, e.g. 192.168.0.10
- A URL address, if moduWeb Vision is registered on the DNS server and has its own domain name, e.g.
  https://moduWebVision.dyndns.org

ⓘ In a local network, you usually call up moduWeb Vision using the IP address, because there is not normally a DNS entry assigning a URL address to the issued IP address on a DNS server available from the local network.

⚠ For reasons of security, it is advisable to log in via "https://" rather than "http://".

6.2.2 Login

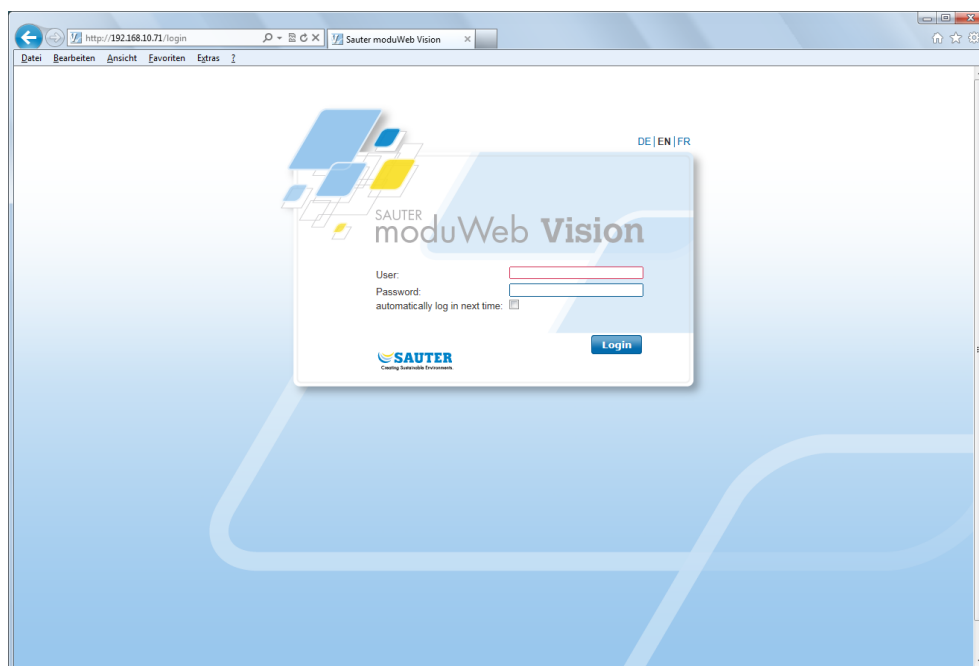Once the connection has been made, the login dialogue appears.

Fig. 1   Login dialogue

Enter your user name and password and click "Login".
The default user name and password are "admin" and "passwd".

⚠ For reasons of security, you should change your password the first time you log in. For instructions on changing your user name and password, see section 16.1.6

If you select "Automatically log in next time", your login details will be saved on the local PC (as an internet cookie) and the next time you start moduWeb Vision on this PC, you will not have to enter your user name and password. However, if you exit moduWeb Vision with "Log off" or if internet cookies are otherwise deleted, you need to log back on when you open moduWeb Vision again.

ⓘ You can log in to moduWeb Vision as a user from different PCs at the same time until you reach the maximum permitted number of simultaneous system sessions.

ⓘ You can save each view of moduWeb Vision as a bookmark in your browser. This means you can go straight to your preferred view, for example the alarm list.

ⓘ Click one of the language codes at the top of the login dialogue to select the language for moduWeb Vision. However, when you open moduWeb Vision again, the login window will again be shown in the standard language of the web browser.

6.2.3 Welcome screen

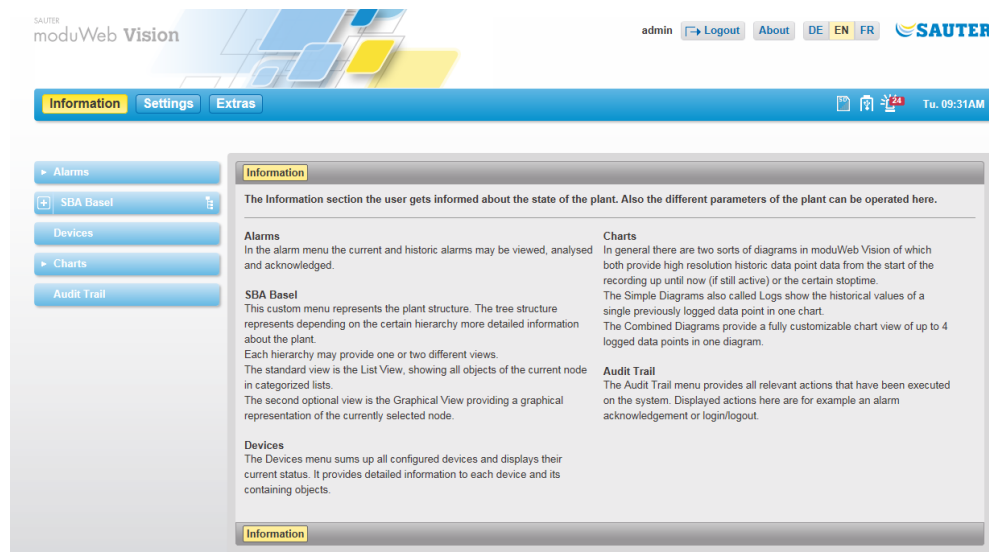Once you have successfully logged in, the welcome screen appears.

Fig. 2   Welcome screen

The welcome screen contains a brief introduction to the main "Information" menu. moduWeb Vision is now ready to use.

ⓘ The name of the current user is displayed to the left of the "Logout" button.

6.2.4 Logging out / closing moduWeb Vision

Click on "Logout" at the top of the window to log out.

The login dialogue appears again. You can close moduWeb Vision by closing the browser or the tab that it is displayed in.

6.2.5 Duration of a moduWeb session

Once you are logged in, the session continues as long as a moduWeb Vision dialogue is open in your browser. The dialogues are refreshed every 15 minutes. If you close the dialogue or the browser, or if the network is interrupted, the session will be ended after a short while and you will have to restart moduWeb Vision and log in again.

6.3 Main elements in moduWeb Vision

The following section shows the main elements of a window in the information area of the example plant "Building".
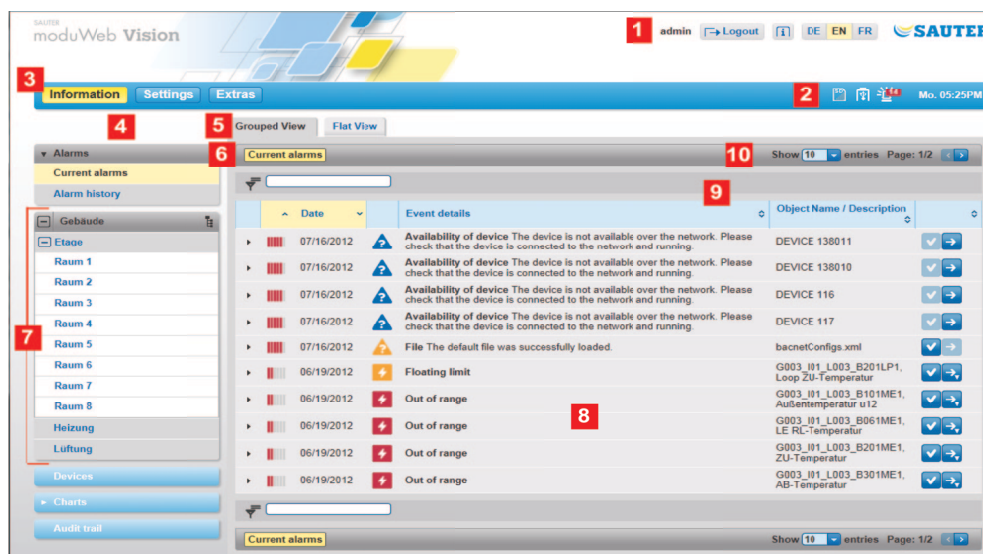

Fig. 3 Main elements in moduWeb Vision

1 Log off, i (info), language selection
2 Status indicator, e.g. alarm counter, SD card, USB stick, system time
3 Main menu
4 Menu tree
5 Tab for switching view
6 Breadcrumb navigation (trail)
7 Plant navigation tree for system overview
8 Content area
9 Filter
10 Number of data rows per page, page numbers, browse

6.4 User interface

ⓘ You can save each view of moduWeb Vision as a bookmark in your browser. This means you can go straight to your preferred view, for example the alarm list.

Menu entries, icons, labelled buttons etc., are shown in different colours:
- Elements in yellow are selected, and are applicable
- Elements in blue can be selected (are clickable)
- Elements in blue but greyed out are inactive and not clickable

ⓘ These colour conventions do not apply to status icons.

Messages from the system about the successful execution of functions are shown on a green background. Messages about missing or inappropriate entries or other error states are shown on a red background.

ⓘ Not all such messages are described in this manual.

If the mouse pointer is on an element, its meaning or function in many cases is explained by a "tooltip" in a window.

6.4.1 Logging out

You should always log out of moduWeb Vision at the end of the session. The login dialogue appears again.

6.4.2 i (Info)

Clicking the ⓘ icon causes information about moduWeb Vision to be displayed, such as firmware, serial number etc.
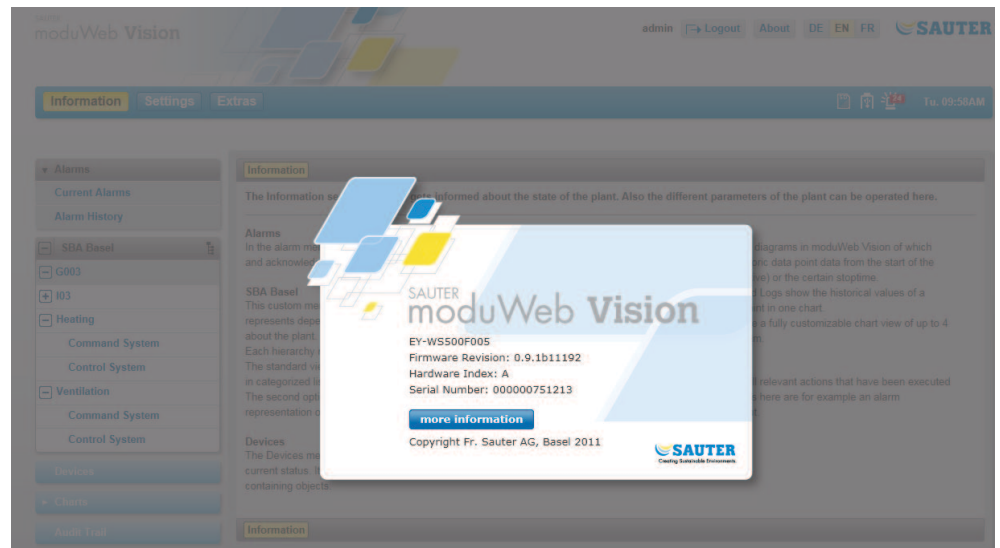

Fig. 4   i (info) window

Clicking "More Information" displays detailed device information and information about the licenses in use.

6.4.3 Languages

You can select one of the languages available here. German, English and French are installed as default. You can add other languages using the CASE Sun program.

6.4.4 Status indicator

Important system status indicators appear hear. The icons have the following meanings.

	Alarm counter with the number of current alarms (22 in the example)
	SD card present (50% full in the example)
	SD card present but full
	USB stick present
	USB stick present, backup in progress
	USB stick present, data recovery in progress
	The system times of the PC and moduWeb Vision are more than 5 minutes out of sync

Alarm pop-up

New alarms are displayed in a pop-up alarm window. Click "Snooze" to hide the window for 5 minutes, or click "OK" to close it until a new alarm occurs.

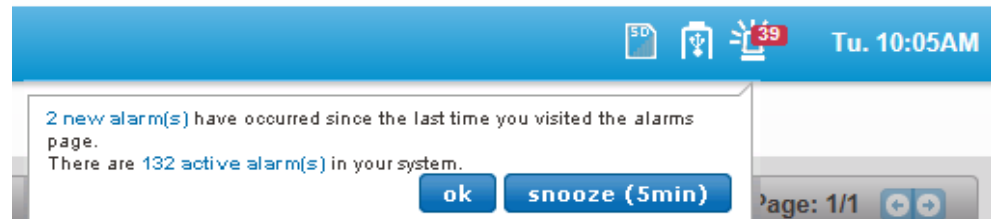

Fig. 5   Alarm pop-up

The moduWeb Vision system time and the system date with the cursor in the field are also displayed.

6.4.5   Main menu, menu tree

Click an entry in the main menu to open its menu tree. Select an entry in the menu tree to see the associated content.

6.4.6   Tabs

Use the tabs to switch between the different views.

6.4.7   Breadcrumb navigation (trail)

Breadcrumbs indicate the way through the menu structure. Click a breadcrumb to skip over various stages to the appropriate window.

6.4.8   Plant navigation tree (for plant overview)

The plant navigation tree is part of the "Plant (name of specific plant)" menu in the main "Info" menu; it shows the structure of the plant in question (visualisation structure); see section 7. You can use the plant navigation tree to find a particular part of the plant quickly.

6.4.9   Content area

The content area contains information such as system objects, alarm lists, diagrams or – if the system is appropriately configured – graphical representations of the plant.

Use the tabs if the contents cover several pages.
You can use the arrow icons at the top of the table to sort lists in ascending or descending order.

6.4.10   Filters

You can use filters to restrict the content of lists according to the criteria that you enter.

The filter acts on the entire content section, in other words all the rows and columns displayed. It also acts on icons by evaluating the tool tip texts.

6.5 Menu overview

The menus shown in this overview can be seen by users who are logged in as administrators. Some of the menus may not be visible to other categories of user. The tables below state where you can find information in this manual on each manual.

6.5.1 Main "Info" menu

You can call up information on the plant and your objects, adjust values and perform switching functions here.

Alarms
    Current alarms
    Alarm history
	Section 8

Plant (specific plant name)	Section 7
Devices	Section 9

Charts
    Combined charts
    Simple charts / logs
	Section 10

Audit trail	Section 11

After you click "Info" in the main menu, a window containing information is displayed.
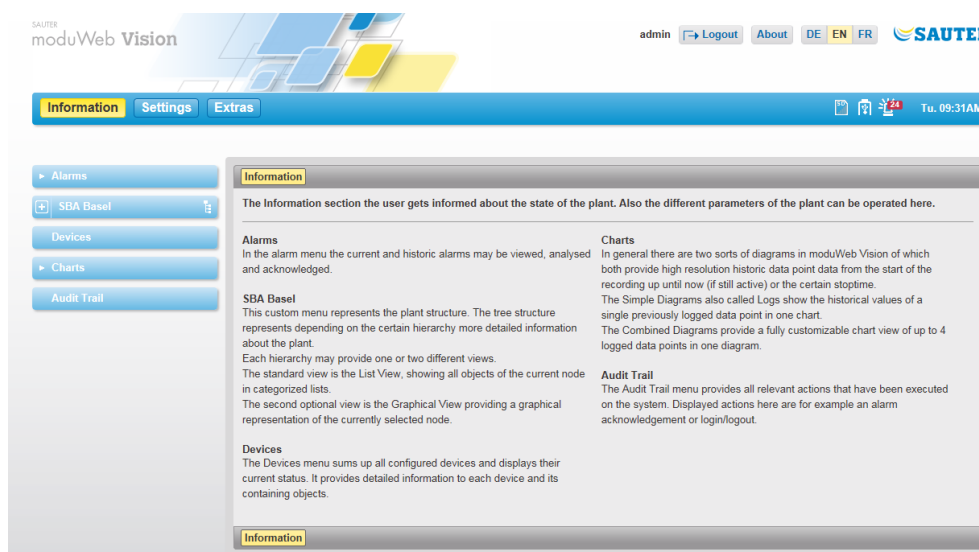

Fig. 6   Main "Info" menu, info screen

6.5.2 Main "Settings" menu

You can make various settings here: Plant configuration, user administration, schedules, diagram settings, network settings etc.

Plant view settings	

Scheduling
  Time programs
  Special-day calendar
	Section 12

Chart settings
  Combined charts
  Simple charts / Logs
	Section 13

Device registration	Section 14
Editing the plant structure	Section 15
User settings	Section 16
User administration	Section 16.1

User notification
  Alarms
    Alarm notification
    E-mail format
    SMS format
  Audit trail
	Section 16.2

General settings	Section 17

Notification settings
  E-mail server
  Alarm settings
    Notification profiles
    Standard e-mail format
    Standard SMS format
	Section 17.1

Date/time settings
  Date/time
  Time server
	Section 17.2

Network settings
  IP settings
  Proxy settings
	Section 17.3

Click "Settings" in the main menu to open a screen containing information.
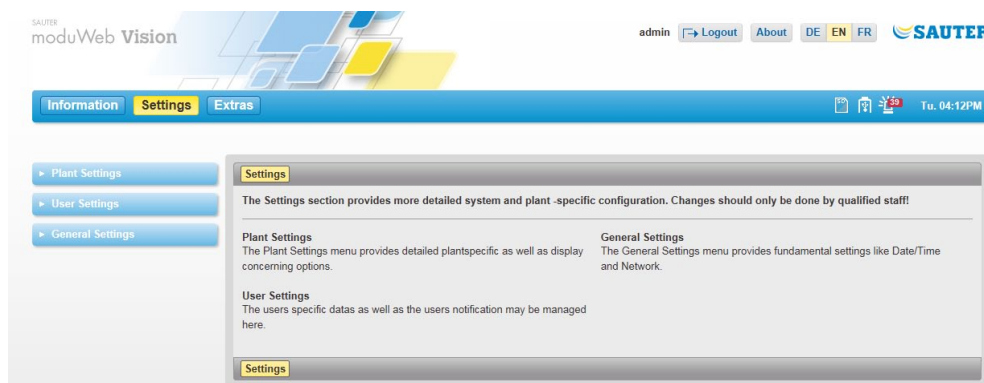

Fig. 7   Main "Settings" menu, info screen

6.5.3 Main "Extras" menu

You can carry out various system maintenance functions here, such as backups, software updates, restarting and resetting the system.

Backup/restore
    Backup
    Restore
	Section 18.1

Update	Section 18.2

Memory
    SD card
    USB device
    Internal
	Section 18.3

Restart device	Section 18.4

Reset
    Resetting the configuration
    Factory reset
	Section 18.5

Click "Extras" in the main menu to display a window containing information.
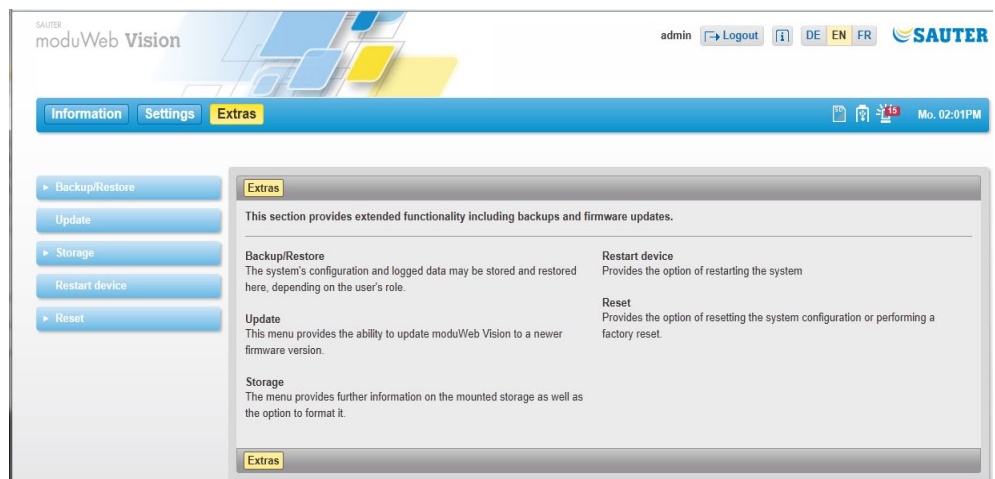

Fig. 8   Main "Extras" menu, info screen

7. Plant overview

This section describes the "Plant overview" section of the main "Info" menu. The plant overview is customer-specific and reflects the structure of each plant. You can give the plant overview any name you want. In the example used in this manual, the plant is called "Building".

Click on the name of the plant in the menu tree in the main "Info" menu.
You can go to the part of the plant that you want by clicking on the entries in the plant navigation tree.

You can choose between two display options:
• List view
• Graphical view (if available)

7.1 List view

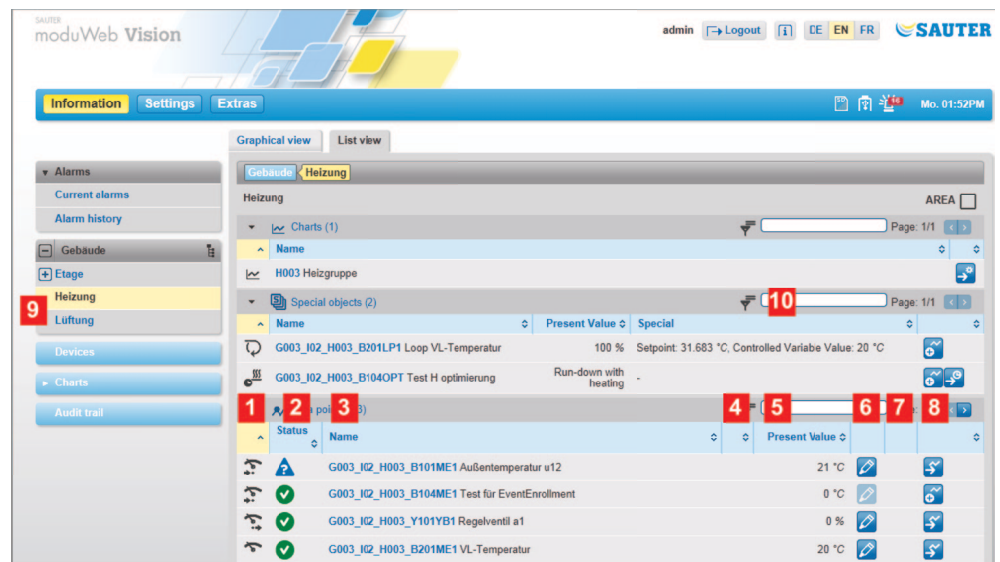Fig. 9   Plant overview, list view

1   Object type icon
2   Object status icon
3   Object name and description
4   Control type icon (manual, schedule)
5   Actual value indicator
6   Icon for editing options
7   Icons for switching options
8   Icon for display options
9   Plant structure with nodes
10   Filters

The list view shows all the BACnet objects (also known as data points) of the selected node. These can be the following BACnet objects:

- Inputs
- Outputs
- Values
- Schedules
- Control circuits
- Heating and cooling optimisation modules

The icons in column 1 indicate the **object type**.
Examples of object type icons:

- 🌀 Analogue input
- ¹/⁰ Binary input

Click an icon to open the data point details window.

The icon in column 2 "Status" indicates the **object status**.

Category		
Normal	✓	The object is in the normal state, which means a value is within the defined range or the status corresponds to that which is automatically specified.
Normal, not acknowledged	✓	The object has returned to the normal state and an alarm or error is no longer present. However, the end of the alarm has not yet been acknowledged. After it has been acknowledged, the status indicator changes to the "normal" icon.
Alarm	⚡	An alarm is present, for example because a threshold value has been exceeded.
	⚡	An alarm is no longer present but still has to be acknowledged.
	⚡	An alarm is present but has been acknowledged.
Error	⚠	An error is present when a value can not be reliably displayed, for example due to a sensor interruption or short circuit.
	⚠	An error is no longer present but has not yet been acknowledged.
	⚠	An error is present but has been acknowledged.
Out of operation	⚡	The object has been put out of operation.
Override	⚠	A local operating unit has priority over the object. The displayed value/status is not the same as the actual value/status.
Device unavailable	✳	A device is unavailable, for example because it is switched off or not detected in the network.

The same icons are also used in the alarm list; see section 7.1.3 "Alarm status".

(i)

Column 3 "Name" contains the name of the object. This corresponds to the "Description" property of the associated BACnet object.
Click on the name to open the data point details window.
Because "Description" is an optional property in the BACnet standards, the mandatory field "Object name" is used as an alternative. Normally, the BACnet object name is a specific abbreviation for the building which is understood by both the plant planners and operators.

(i)

The icons in column 4 indicate the control priority.
A prioritisation mechanism ensures that no conflicts occur between switchable objects when they receive commands from different instances. For example, a pump may be automatically switched on and off by a schedule and is currently switched off. The user can then attempt to switch the pump on and thus override the automatic control. Conversely, a protection mechanism for the pump may in turn override the manual command from the user.

Column 5 "Present value" shows the current value of the BACnet object in engineering units.

In column 6, the 🖊 icon indicates whether an object is writeable or switchable. If the data point is not writeable or switchable, the icon is greyed out.
If the data point is writeable, you can click on the icon to open a window where you can change the value, for example a temperature setpoint.
If the data point is switchable, you can click on the icon to open a window where you can carry out the switching operation, for example switching a pump on or off.

If, in addition to the 🖊 icon in column 7, there is also an 🖐 icon, this indicates that there is an active manual command or manual entry by the user. Click this icon to return to automatic mode.

In column 8, icons such as 📈 or 🕑 indicate that data logs or schedules are available for this object. Click one of these symbols to view this information. If you click an 📈 icon, you can create a data log for this object.
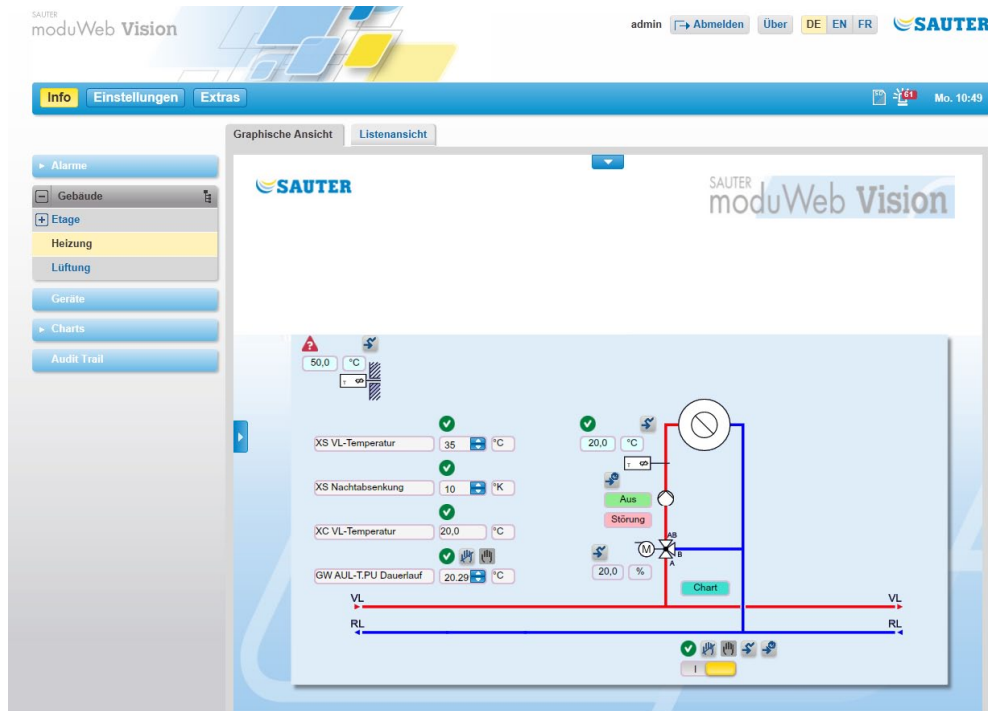
7.2   Graphical view

Fig. 10   Plant overview, graphical view

The graphical view shows the plant schematically with its BACnet objects.

The data visible in the graphical view corresponds to the information in the list view.

The icons there have the same meaning and – if they are active – the same functions as in the list view.
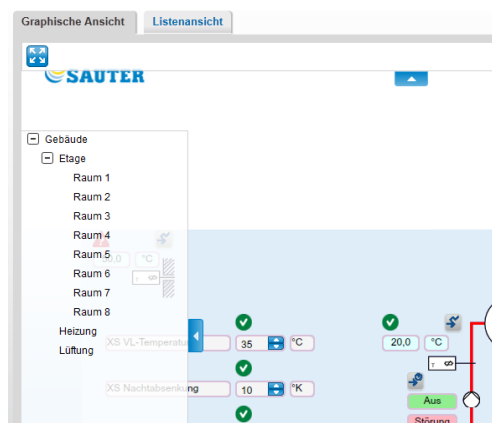
Fig. 11   Plant overview, graphical view

You can use the arrow buttons at the top to activate the icon for switching to the full screen view ⬈ or use the arrow buttons on the left to reveal or hide the plant structure.

8. Alarms

This section describes the "Alarms" area in the main "Info" menu.

Click "Alarms" in the menu tree in the main "Info" menu.

moduWeb Vision has two separate lists:
- Current alarms All active alarms and errors in the system **or** inactive alarms and errors that still have to be acknowledged.
- Alarm history: Alarms and errors that are not active **and** do not have to be acknowledged.

Both lists can be displayed in a "flat" view or a "grouped" view.

ⓘ   Both alarm and error messages are listed. The term "alarm" is used for both in the following section.

The displayed messages not only include messages from BACnet (for example errors such as sensor interruptions, values outside the permissible range or failure to contact configured devices), but also internal system messages from moduWeb Vision (such as memory running out on the SD card, faulty configuration files and incorrectly configured server settings).

8.1 Definition of terms

The following section defines some important terms connected to alarm messages.

8.1.1 Alarm/error messages

A distinction is made between alarm messages and error messages.
- An alarm message is triggered, for example, when a value is outside the set maximum or minimum limit. This is a defined state and it can be assumed that the displayed valued are correct.
- An error message is triggered when the system enters an unexpected state, for example when there is a sensor interruption, a short circuit or a faulty configuration file. In this case, the displayed values for data points may be faulty.

8.1.2 Alarm priority

The priority (importance) of alarms is indicated by the following icons:

	Risk of serious or fatal injury
	Material damage
	Monitoring
	Problem
	Miscellaneous, high priority
	Miscellaneous, low priority

ⓘ These priorities are based on the defined message priority classification suggested in the BACnet standard.

8.1.3 Alarm status

The current status of alarms is indicated by the following icons:

Category	Status		
	Active	Inactive, unacknowledged	Active, acknowledged
Alarm			
Error			

8.1.4 Changes of status

Changes of status are indicated by the following icons:

Category	Change of status			
	From normal to abnormal, alarm or error active		From abnormal to normal, alarm or error inactive	
	Acknowledgement required	Acknowledged	Acknowledgement required	
Alarm				
Error				

The [icon] and [icon] icons only appear with alarms that require acknowledgement.

8.1.5 Acknowledgement

The most recent change of status must be acknowledged if the settings for that require it. The reason for this is to make sure that a suitably authorised person notices the alarm and clicks the ☑ icon to indicate that they have seen it. This procedure ensures that alarm handling is reliable and traceable, and is also logged in the audit trail.

8.1.6 Notification

Optionally, selected user groups can be notified of alarms by e-mail and SMS. The alarm priorities are assigned to the various user profiles under "Notification settings" in the main "Settings" menu; see section 15.4 "Notification settings".

8.1.7 Timestamp

Each alarm is given a timestamp. If the alarm is from the current day, the time of the alarm is displayed. If it is from another day, only the date is displayed.
You can move your mouse over the timestamp to see a box with the date and time.

ⓘ The timestamp is generated by the automation station when the event occurs.

8.1.8 Alarm history

All alarms that are no longer active are saved in the alarm history or moved there manually.
A maximum of 500 alarms can be stored, after which the oldest entries are overwritten with the new ones.

8.1.9 Grouped view

In the grouped view, all changes of status of a BACnet object for an alarm group are shown together. This means the current status of an alarm can be seen in a line.

In the grouped view, all changes of status of a BACnet object for an alarm

Click "Current alarms" in the menu tree in the main "Info" menu.
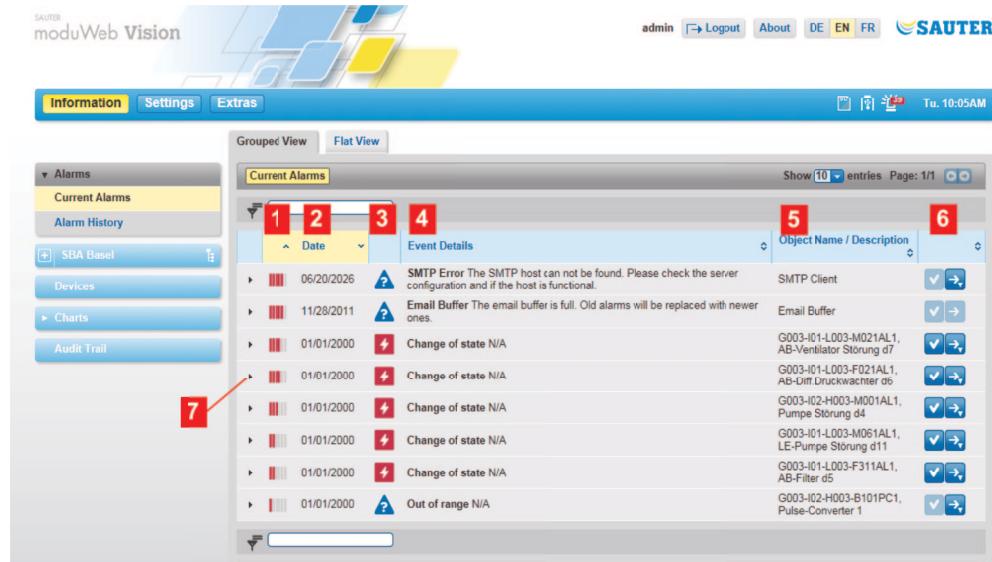
Fig. 12   Alarm list, grouped view

1	Alarm priority icon
2	Time stamp
3	Alarm status icon
4	Description of the event
5	Object name and description
6	Icon for acknowledgement or intervention options
7	"Expand" icon

The icon in column 1 indicates the control priority.

Column 2 "Date" contains the timestamp for the last change of status for the alarm.

The icon in column 3 indicates the alarm status.

Column 4 "Date" contains the timestamp for the last change of status of the alarm.

Column 5 "Name /description" contains the source of the alarm.

In column 6, the ☑ icon indicates that a change of status must be acknowledged. If no acknowledgement is possible or required, the icon is greyed out.
You can click on the ➡ icon to go to a window where you can carry out actions related to the alarm. If the option is not available, the symbol is greyed out.

You can expand any alarm to view all its changes of status by clicking on the "Expand" icon ▶ at the start of the line.
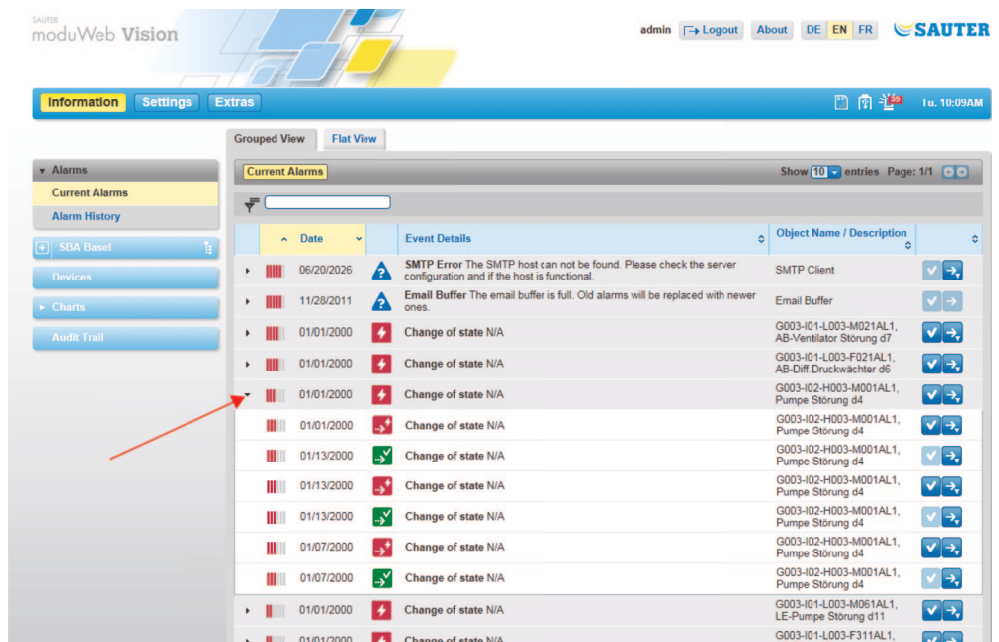
Fig. 13   Alarm list, expanded grouped view

All changes of status and therefore the history of the alarm are displayed.

8.1.10   Flat view

The flat view shows the same content as the grouped view. However, the individual changes of state are not grouped, but all shown in chronological order.

This gives you a better overview of the alarm occurrences over time. Because it is easier to see when each alarm was triggered, it is also easier to see how alarms from the various data points are related.
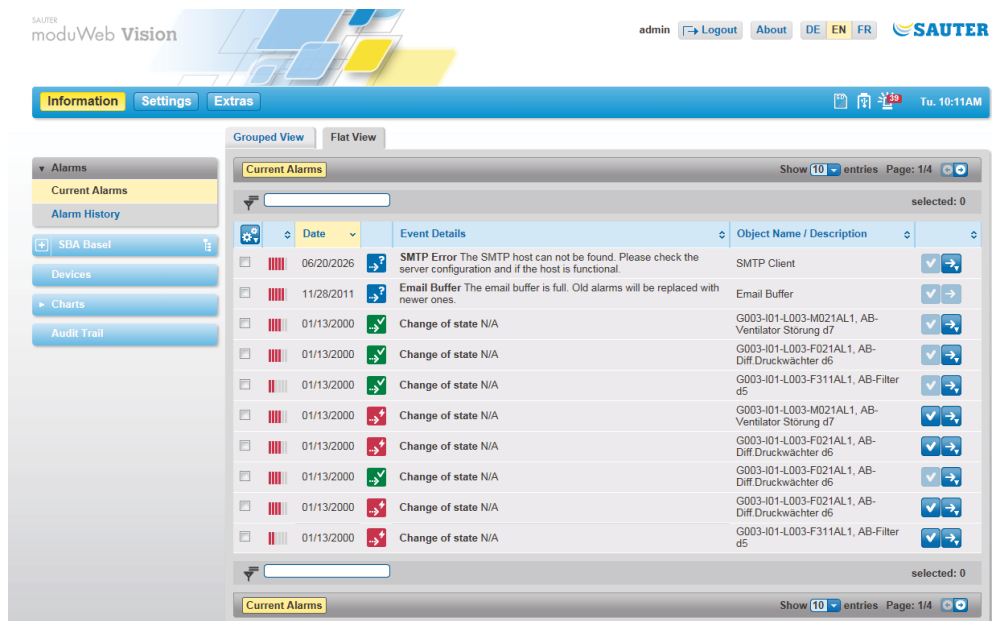
Fig. 14   Alarm list, flat view

In the flat view, you can select several alarms and confirm them all together or move them to the alarm history.

For this, select the checkboxes at the beginning of the lines containing the alarms and carry out the required action using the ⚙ icon. Possible actions are:
- Confirm
- Move to historical alarms

ⓘ Instead of selecting alarms manually, you can use the ⚙ icon to select or deselect several alarms. Possible actions are:
- All
- None
- All on this page
- Deselect all from this page

ⓘ In certain circumstances there may be alarms in the active list that are no longer required or relevant (dead alarms). You can use this action to move them to the alarm history list, even though they do not meet the appropriate criteria. This may only be done with the utmost caution by authorised users and should not normally be necessary.

9. Devices

This section describes the "Devices" area in the main "Info" menu.

All devices and objects registered in moduWeb can be displayed in a list. You can view details on every device and object and also edit some of them.

9.1 Device and object list

Click "Devices" in the menu tree in the main "Info" menu.

Fig. 15   Devices, device list

1   Device type icon
2   Device status icon
3   BACnet device name and description
4   Device ID (BACnet DOI)
5   Icon for switching to the object list

A list of the registered devices is displayed.

The icon in column 1 represents the type of device. Click on the icon to go to the object list for this device.

ⓘ   For Sauter devices, the icon resembles the device. For non-Sauter devices or devices whose type information is faulty or cannot be read for any other reason, the icon is a question mark.
           If you click an icon, a list view appears with all the objects in that device.

The icon in column 2 shows the current status of the device; see section 6 "Plant overview".

ⓘ   Column 3 "Name" contains the name of the device. This corresponds to the "Description" property of the associated BACnet object.
           Because "Description" is an optional property in the BACnet standards, the mandatory field "Object name" is also used. Normally, the BACnet object name is a specific abbreviation for the building which is understood by both the plant planners and operators.

Column 4 "Device ID" shows the identification of the device.

You can use the icon in column 5 to switch to the object view of the device.

Click on the "Object list" tab.
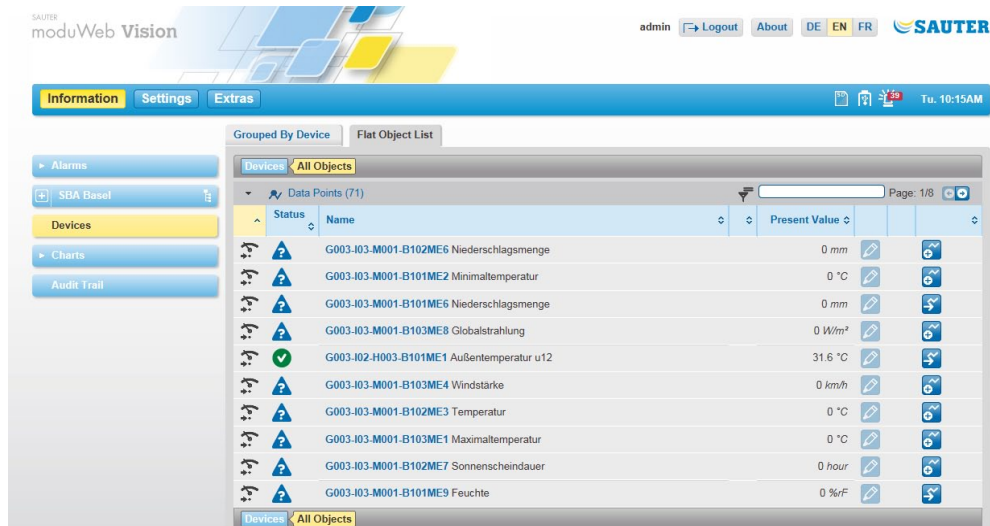
Fig. 16   Device, object list

A list of all the registered objects is displayed.

The structure of the list basically corresponds to the description in section 6 "Plant overview".

9.2   Device details

Click an object name in the device list (see Fig. 15).
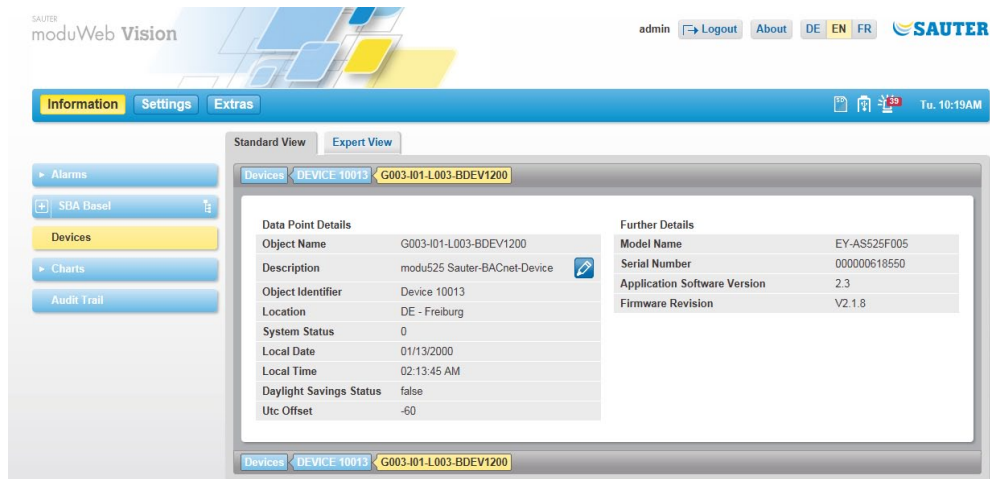
Fig. 17   Devices, standard view

The standard view shows all BACnet device objects.
The ✏ icon indicates that an entry can be changed.

Click on the "Expert view" tab to open a window containing details.
The same icon for editing is available there.

9.3 Object details

Click on the name of an object in the list (see Fig. 16).
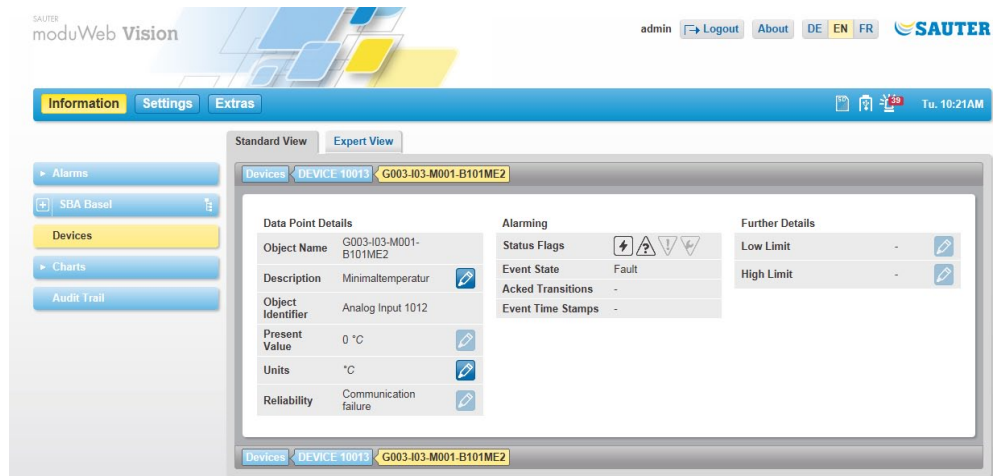
Fig. 18   Objects, standard view

The most important details of an object are displayed in the standard view. The ✎ icon indicates that an entry can be changed. If an entry cannot be changed, the icon is greyed out.

The icons such as ⚡, ⚠, ➡ etc., for the object status, the status transitions and event timestamps have the same meaning as the corresponding icons in the alarm lists; for the description, see section 8.1.3 and 8.1.4. Inapplicable icons are greyed out.

Click on the "Expert view" tab to open a window containing all the details. The same icons for editing and display are available there.

10.   Charts

This section describes the "Charts" area in the main "Info" menu.

Charts are the diagrams of data point logs. There is a distinction between the following:
• Simple charts ("Simple charts / logs" menu)
• Combined charts ("Combined charts" menu)

Simple charts graphically display a logged data point without the user having to make any other settings.

Combined charts can show up to four simple data points at the same time. You can also make additional settings for combined charts; see section 12 "Chart settings".

The charts can be compressed to a different number of measuring points depending on the time resolution.

10.1   Simple charts / logs

An overview of all the data point logs in the system can be found here.

Click "Charts" and then "Simple charts / logs" in the menu tree in the main "Info" menu.
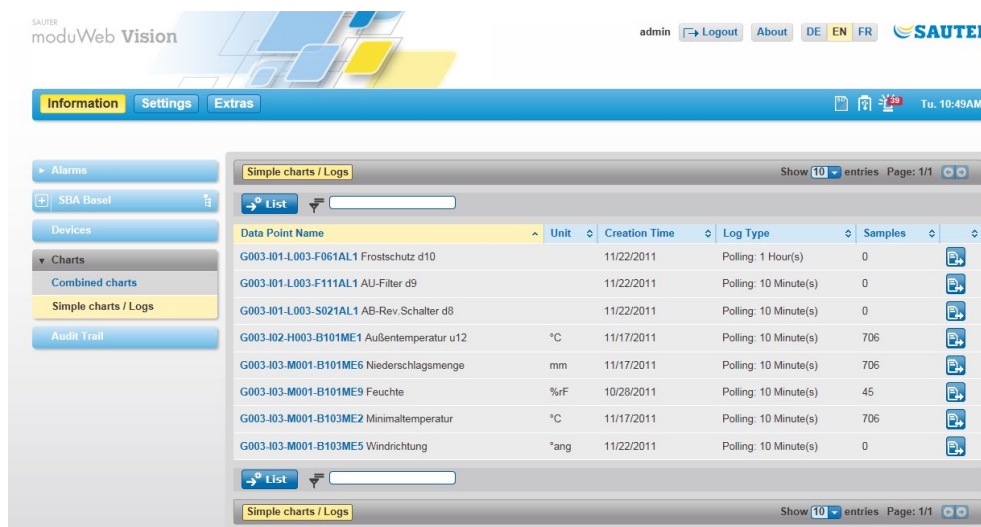
Fig. 19   Simple charts / logs, overview

Here you can see information on the logged data point such as the units, data point name, creation time (start of logging), log type and number of values recorded so far.

Data export
Using the ▣ icon, you can export the values of this log as a file in CSV format. You can select the period of time and the resolution in a pop-up window. This table of values can be displayed in a CSV-capable program (such as Microsoft Excel).

Click on "List" to switch to the settings view; see section 13 "Chart settings".

Click on the name of a data point to open the corresponding chart.

Fig. 20   Simple charts / logs, chart

1	View selector icons
2	Data point name
3	Chart
4	Timeline
5	Timeline zoom icon
6	Export icon
7	Print icon

View selector icons

You can select the zoom level of the chart using the icons at the top. Click one of the symbols to change the section displayed.

	Switch to full screen. The icon appears when you click [▼].
	Quit full screen mode.

You can use the other icons to change the zoom level of the chart. Click one of the symbols to change the section displayed.

	Use the icons for "1 hour", "24 hours (1 day)", "7 days (1 week)" or "30 days (1 month)" to zoom in and out around the middle point until the displayed time range is as you want it.
	View all values in the log.
	You can use the "zoom in" and "zoom out" icons to increase and reduce the zoom level.
	You can also zoom in and out using the icons for "last hour", "last 24 hours", "last 7 days" and "last 30 days".

In the chart (3), you can use the timeline (4) to zoom in and out and change the displayed section.
• You can use your mouse pointer to select an area of the chart to enlarge. To do this, hold down the left mouse button and move the mouse to the left or right.
• An area on the timeline is displayed in a lighter colour than the rest. This lighter area corresponds to the part of the chart that will be displayed. You can change the area using the to the left and right of it.
• You can move the lighter, active part of the timeline with your mouse pointer, which changes the part of the chart to be displayed.

You can use the two icons (5) to change the zoom level of the timeline.
• When you zoom in or out, the active section of the timeline is also changed. You can use these two icons to keep this section to the size that you want.

If you move your mouse over the chart, the current date and the value for this point are displayed.

Data export

Using the 6 ![icon] icon, you can export the values of this log as a file in CSV format. You can select the period of time and the resolution in a pop-up window. This table of values can be displayed in a CSV-capable program (such as Microsoft Excel).

Print

Using the 7 ![icon] icon, you can print the displayed chart in a print-optimised format (without menu bars etc.).

10.2 Combined charts

An overview of all the combined charts in the system can be found here.

Click "Charts" and then "Combined charts" in the menu tree in the main "Info" menu.
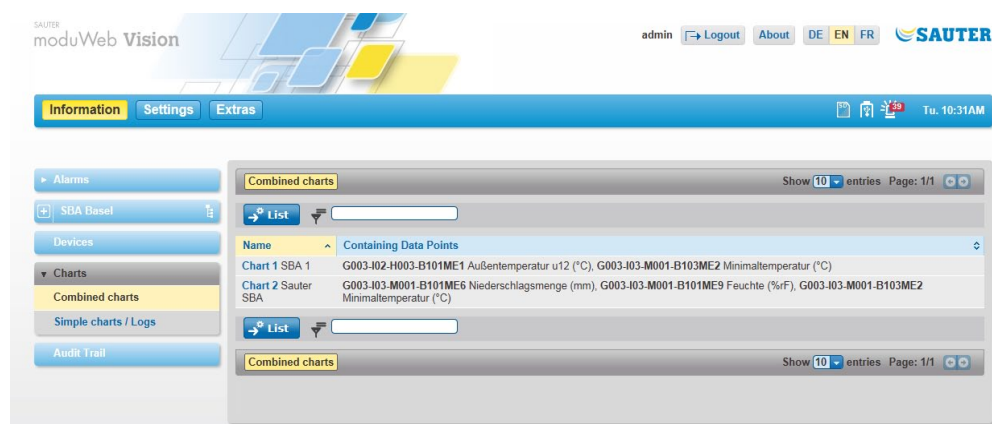
Fig. 21   Combined charts, overview

Here you can find information on the recorded charts such as the diagram name and the data point logs it contains.

Click on "List" to switch to the settings view; see section 12 "Chart settings".

In the settings, you can select whether several data points are to be shown in one chart or whether the data points should be displayed in separate charts.

The appearance of combined charts is basically the same as that of simple charts (see section 10.1), except that they show several data points simultaneously. Each data point is shown in a different colour.

Above the chart, there is an overview of the displayed data points and the colours used for them.

Before you export data with the ![icon] icon, you can use the field to the left of this icon to select the data point from which the values are to be exported.

To open a chart, click its name.

Fig. 22   Combined charts, chart

Fig. 23   Combined charts, several separate charts

11. Audit trail

This section describes the "Audit Trail" area in the main "Info" menu.

The audit trail logs system user activity, such as login, changes to the current value of a data point and so on.

Click "Audit trail" in the menu tree in the main "Info" menu.
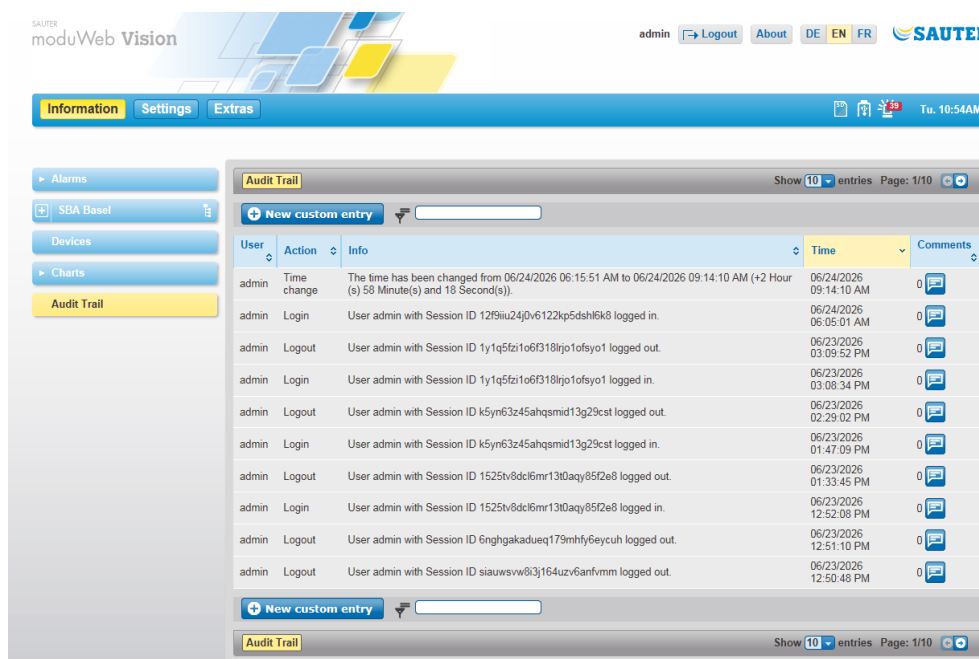
Fig. 24   Audit trail

The "User" column contains the name of the user who carried out the action.

The "Action" column contains a brief description of that action.

The "Info" column contains detailed information on the action.

The "Time" column contains the timestamp for the action.

The "Comments" column shows the number of comments submitted for the action. Click on the 🗨 icon to see a pop-up window containing the comments. You can also enter a comment in this window and click "Add" to save it.

Click "New user entry" to open a pop-up window where you can make a new entry and save it by clicking on "Add".

ⓘ   Audit trail logs can be automatically sent to users; see section 16.2.2.

Data export
Using the 🗐 icon, you can export the audit trail as a file in CSV format. This file can be displayed in a CSV-capable program (such as Microsoft Excel).

12. Scheduling

This section describes the "Scheduling" area under "Plant view settings" in the main "Settings" menu.

In this menu you can view and edit all the schedules stored on the BACnet devices registered in moduWeb Vision.

12.1 Schedules

The switching points for each day are defined in schedules. The switching points on normal days from Monday to Sunday are defined in the weekly schedule, while the switching points for non-standard periods are defined in the exception schedule.

Schedules can be applied to multiple data points of the same type. Data points can be added to or removed from a schedule.

Data from one schedule can be imported to another of the same type.

In the main "Settings" menu, click "Plant settings", then "Scheduling" and "Time programs" in the menu tree.
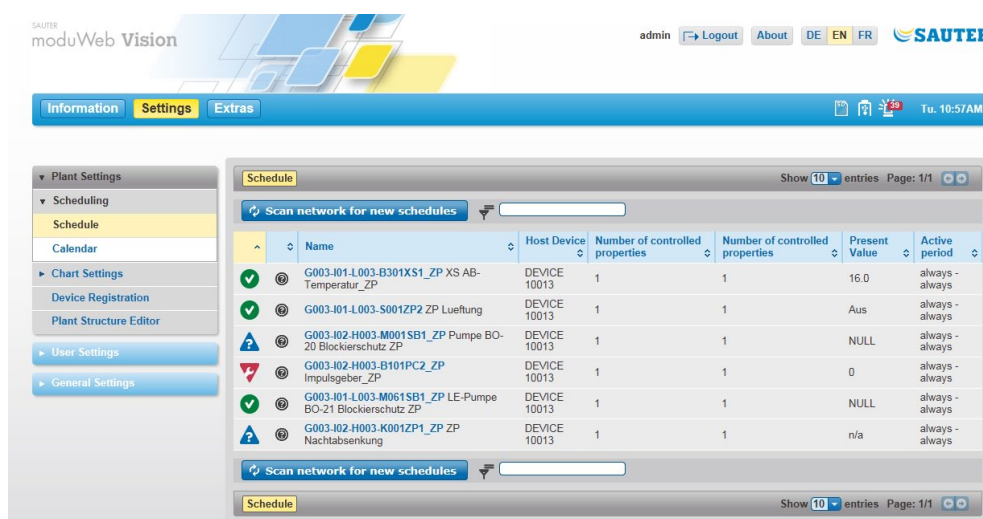
The list contains status icons in the first column (for the meaning of the icons, see section 8), followed by the schedule name, the host, the number of controlled devices and data points, the current value and the active period.

12.1.1 Switching programs and exception schedule

Click on the name of a schedule to view and edit it. A window containing details of the schedule opens and the "Switching programs" tab is active.

ⓘ   In this window, you can also display the tabs "General" (see section 12.1.2), Data points (see section 12.1.3) and "Export" (see section 12.1.4).
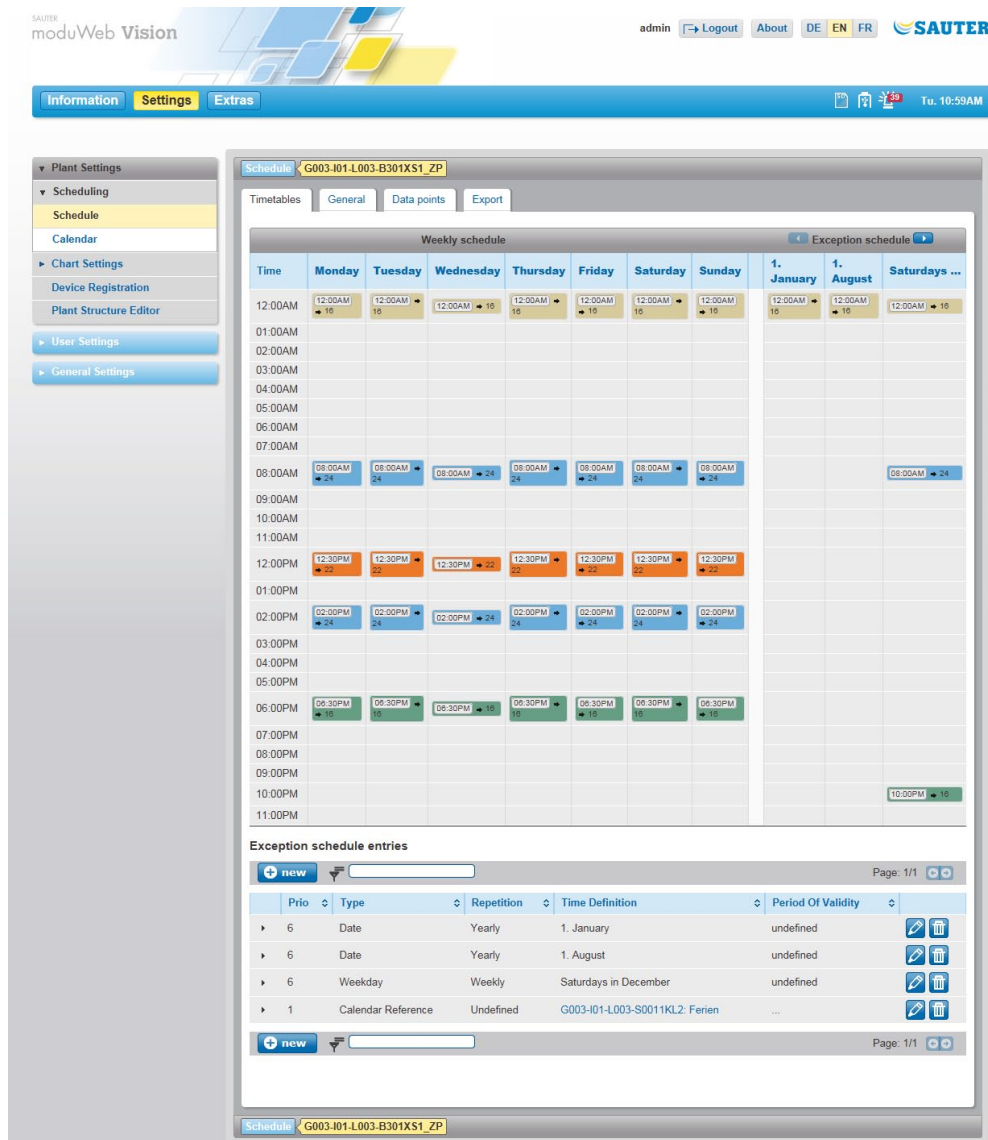
Fig. 25   Time programs, switching programs

The information area consists of three sections:
*   The "Weekly schedule" section in the top left is for defining switching points for every day of the week.
*   The "Exception schedule" section in the top right is for defining switching points for exception periods.
*   The "Exception schedule entries" section at the bottom is for creating exception periods.

Switching points already defined in the weekly and exception schedules are displayed.

ℹ A default value specified in the BACnet device object is sent every day at midnight (00:00 hours). This switching point cannot be deleted.

Switching points are not automatically copied from one day of the week to the other in a schedule. If a day of the week ends with a set value (i.e. not the default), it must be set again at the start of the next day (time 00h00m00s).

12.1.1.1 Switching programs

Creating a new switching point
Click on the appropriate position in the weekly schedule to create a new switching point. A pop-up window appears at the cursor position. The switching point is predefined under "Time" with a day of the week and the time of day.
Regardless of this, you can select any day of the week from a list, and then the hours, minutes and seconds from each list.

ⓘ The first element in each list is an asterisk "*" (wild card) for recurrent switching times. A switching point which has an arrow by the day of the week, for example, is added on every day of the week.

Then set the value or switching status in the input field or selection list to define the schedule at the specified switching time. The options for "Value" depend on the type of data point and are the same for all objects in a schedule.

ⓘ If multiple data points are controlled by a schedule, the names of the switch positions are used for binary or multistate data points.

If you activate the "Delete previous command (ZERO)" checkbox, the command is deleted, but the time entry remains.

Finally, click "Add" to create the new switching point.

ⓘ If you want to create a switching point for all working days, you can first apply it to all days of the week using the asterisk function and then manually delete the switching points at the weekend that you do not need.

Editing a switching point
To edit a switching point, click it and change the entries in the pop-up window. At the end, click "Save" to apply the changes.

Duplicating a switching point
You can duplicate a switching point by clicking on it and changing the entries in the pop-up window. Finally, click "New" to create the duplicate switching point.

Deleting a switching point
To delete an existing switching point, click it and then click "Delete" in the pop-up window.

12.1.1.2 Exception schedule

You can use an exception schedule for non-standard periods such as public holidays, company holidays or extended opening hours.

You can create or edit entries in the exception schedule at the bottom of the "Week schedule" page (see Fig. 26).

ⓘ Only the individual exception periods, rather than switching times and values, are defined here. This is done afterwards on the right side of the window in the same way as for the weekly schedule.

To create a new exception period, go to "Exception schedule entries" and click "New".

A pop-up window appears, in which you first have to select the priority.

ⓘ The priority is based on the priority property of the schedule object in BACnet. This property is defined and described in the BACnet standard. There are 16 priority levels, of which 1 is the highest. Some priority levels are reserved for certain functionalities in the BACnet standard and may not be used. The automation station is regulated with priority 16. Priority 8 is intended for manual operation (for example modu840). A schedule can be set to the same priority level or a lower one (for example write priority 9).

Next, select the type of exception period from the list. The following are available:
- Calendar reference (exception based on a special calender, see section 12.2 "Calendar")
- Date (exception period for one particular day)
- Period (exception for a period of time)
- Day of the week (regularly recurring exceptions)

Depending on the selected type, you must now set the repetition cycle, the time definition and the period of validity.

Finally, click "Save".

You can then define the switching times and values in the right part of the "Exception schedule" window.

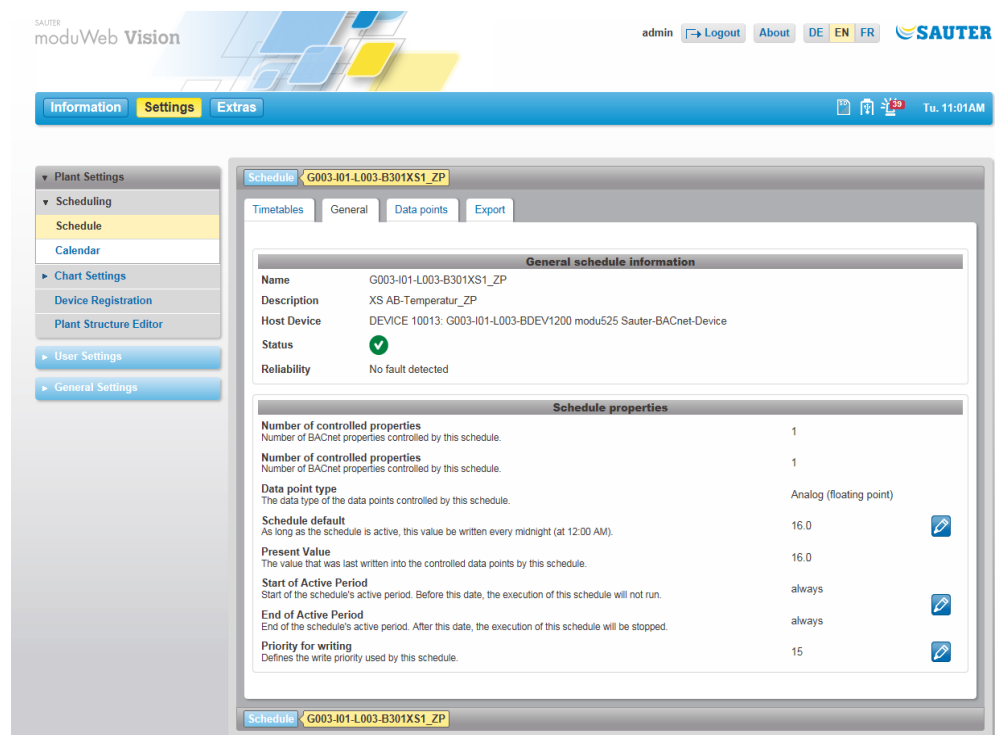### 12.1.2 General information

Click on the "General" tab.

Fig. 26   Schedules, general

General information on the current schedule is shown here.

Values marked with the ✏ icon can be edited.

12.1.3   Adding and deleting data points

Schedules can be applied to multiple data points at the same time. The data points to be controlled by a schedule must all be of the same type. You can add data points or remove them from a schedule in this window.
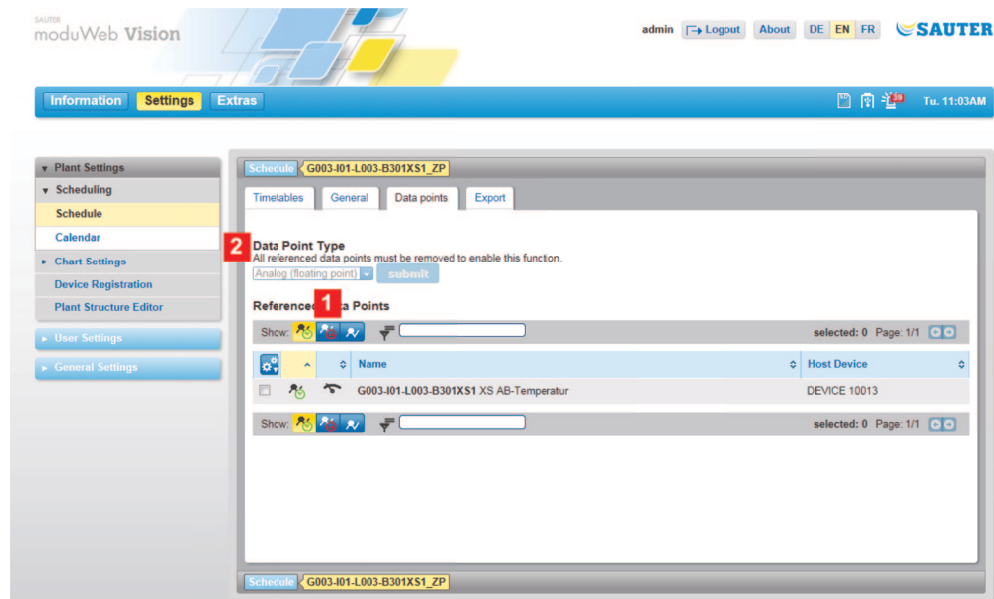
Click on the "Data points" tab.

Fig. 27   Schedules, data points

You can use the icons (1) to choose which data points are displayed.

	Only data points that are in the schedule
	Only data points that are not in the schedule
	All data points

Data point type

You can select the data point type using the drop-down menu (2).

Because a schedule can only contain data points of the same type, the choice is not offered if the schedule already contains a data point. If you want to change the type of data point, you must first delete the data points that are already in the schedule.

Select the checkboxes at the beginning of the lines containing the data points.

ⓘ   Instead of selecting them manually, you can use the 🔧 icon and the options "All", "All on page", "None" or "None on page" to select or deselect all the data points at once

Use the 🔧 icon to select "Add to schedule" or "Delete from schedule".

12.1.4   Exporting schedules

Data from one schedule can be imported to another of the same type. You can also choose which properties are exported.

Click on the "Export" tab.

Fig. 28   Schedules, export

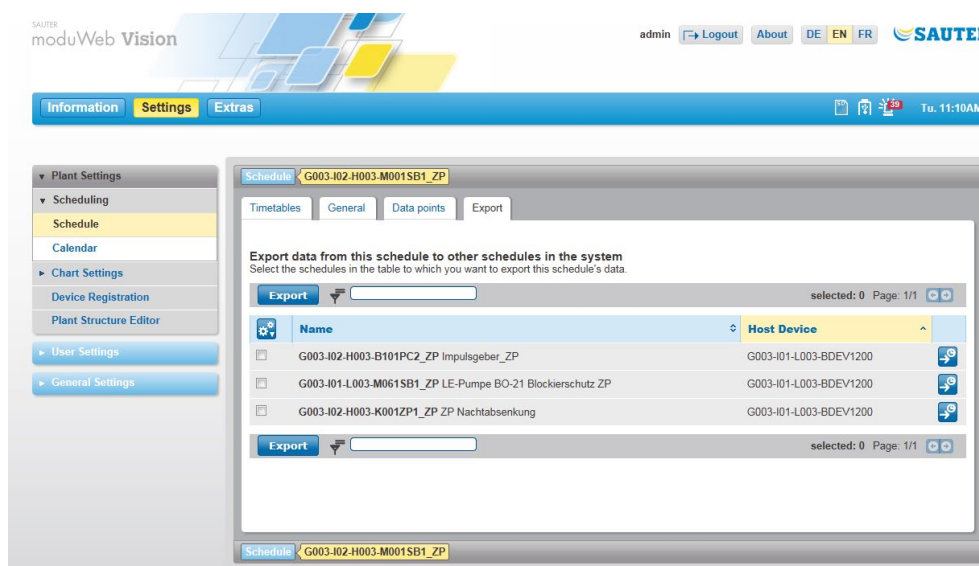The list shows the schedules to which data from the current schedule can be exported. The data that is already in them will be overwritten.

Select the checkboxes at the beginning of the lines containing the data points.

ⓘ   Instead of selecting them manually, you can use the 🔧 icon and the options "All", "All on page", "None" or "None on page" to select or deselect all the schedules at once

After making a selection, click "Export". Or select this function using the ⚙ icon.

You can select the properties to be exported in the pop-up window that then appears. The following options are available:
- Week schedule
- Exception schedule (without calendar references)
- Active period
- Default value for schedule
- Write priority

Select the properties that you want and click "Export" to export them.

12.2 Special-day calendar

Similar exception periods such as public holidays, company holidays and extended opening hours are defined in a special-day calendar. The special-day calendar can then be used as a reference for an exception period in an exceptions schedule.

In the main "Settings" menu, click "Plant settings", then "Scheduling" and "Special-day calendar".
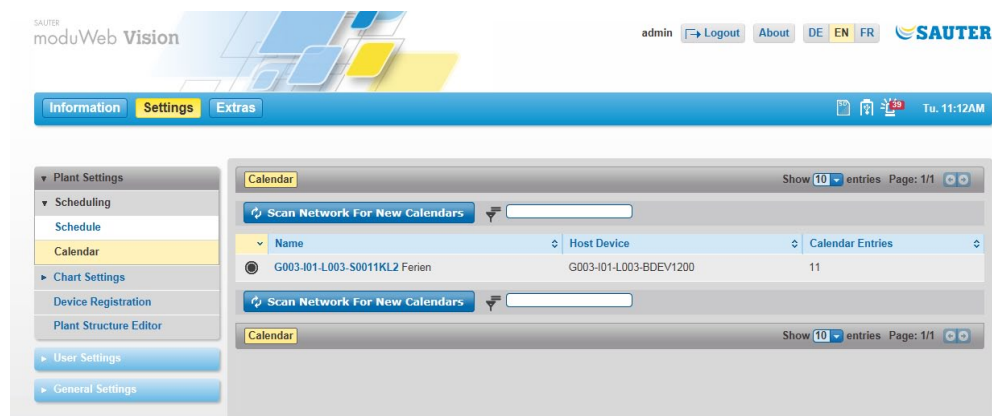
Fig. 29   Special-day calendar, overview

The list contains a status icon in the first column, followed by the columns with the name of the special-day calendar, the host and the number of calendar entries.

12.2.1 Calendar view

Click on the name of a special-day calendar to view and edit it. A window containing details of the calendar opens, and the "Calendar view" tab is active.

In this window you can also see the "Agenda view" (see 12.2.2) and "Export" (see 12.2.3).
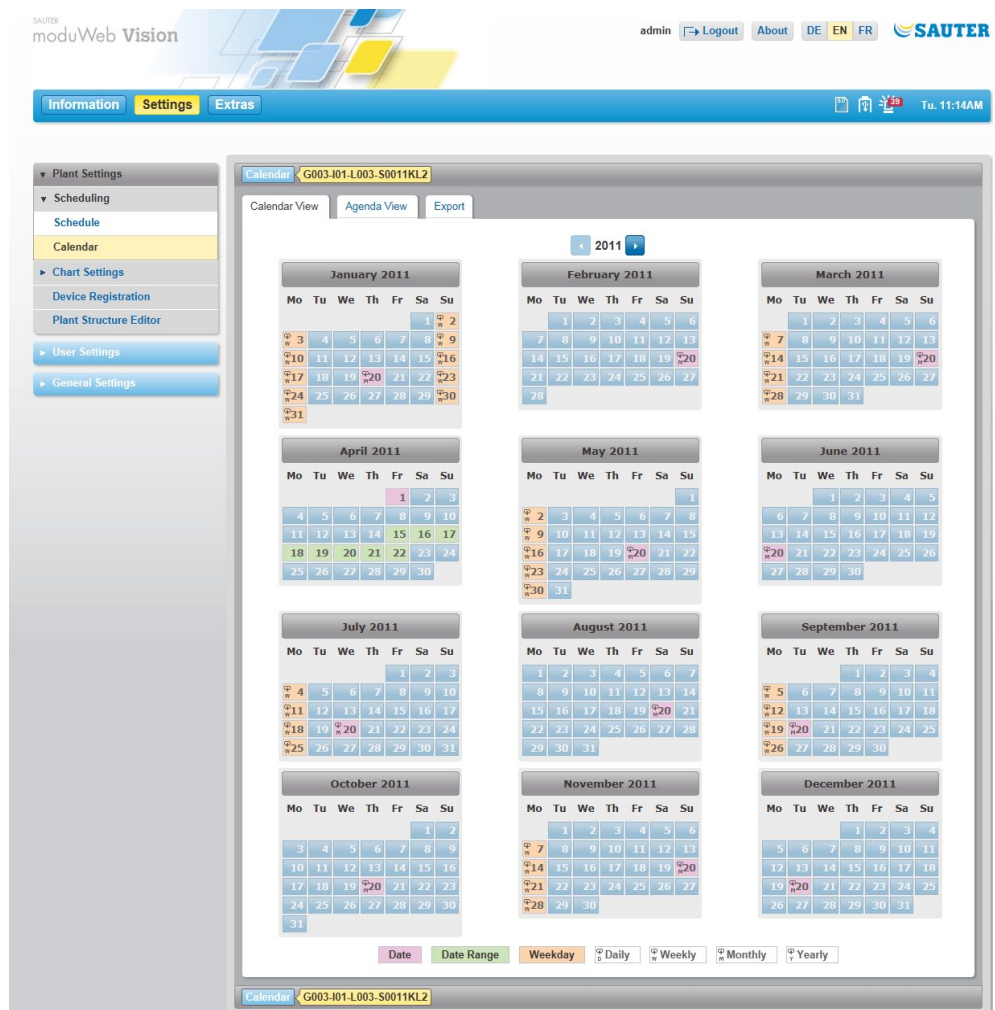
Fig. 30   Special-day calendar, calendar view

The current year's calendar is displayed, with any defined entries in it highlighted. The colour denotes the type of calendar entry and icons indicate the repetition.

Creating a new calendar entry
Click a date in the calendar to create a new calendar entry. A pop-up window appears at the cursor position. The calendar entry is predefined according to the cursor position. Regardless of this, you can create a calendar entry for any date.

First select the type of calendar entry from the "Type" list. The following options are available:
• Date
• Date range
• Weekday

Then specify the repetition, time definition and period of validity. The options for these items differ according to the type of calendar entry.

Finally, click "Add" to create the new calendar entry.
Editing a calendar entry

To edit a calendar entry, click it and change the specifications in the pop-up window. At the end, click "Save" to apply the changes.

Deleting a calendar entry
To delete an existing calendar entry, click it and then click "Delete" in the pop-up window.

ⓘ You can also edit or delete calendar entries in the "Agenda view" tab as described below.

12.2.2 Agenda view
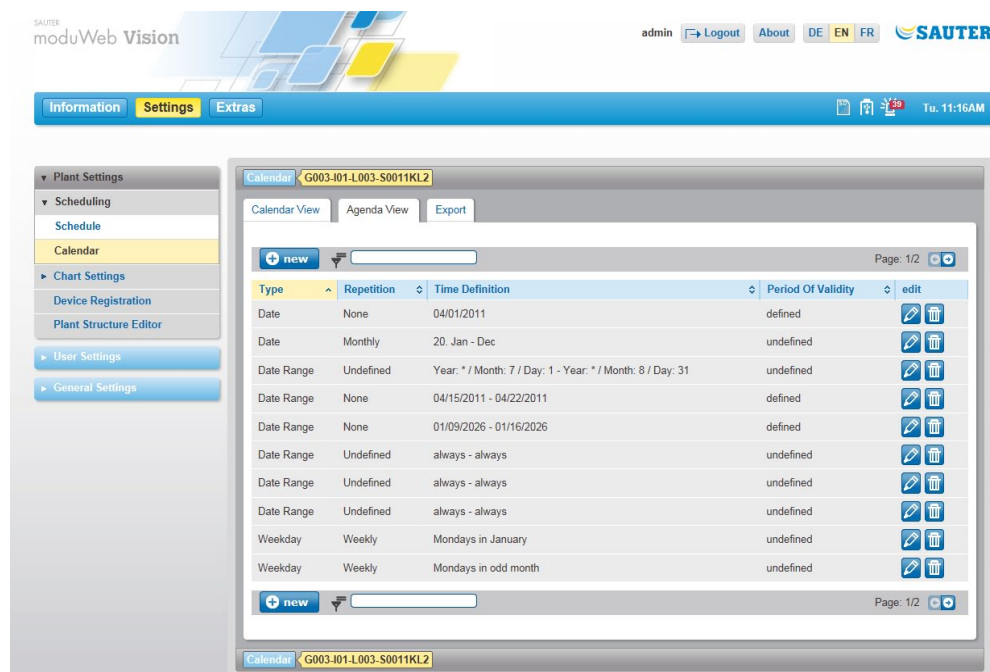
Click on the "Agenda view" tab.

Fig. 31 Calendar, agenda view

The entries in the calendar are shown in an agenda view here.

You can edit the entries after clicking on the 🖉 icon.

Click on the 🗑 icon to delete entries from the calendar.

12.2.3 Exporting calendar entries

Calendar entries can be exported to other calendars in the system. You can also choose which entries are exported.

Click on the "Export" tab.
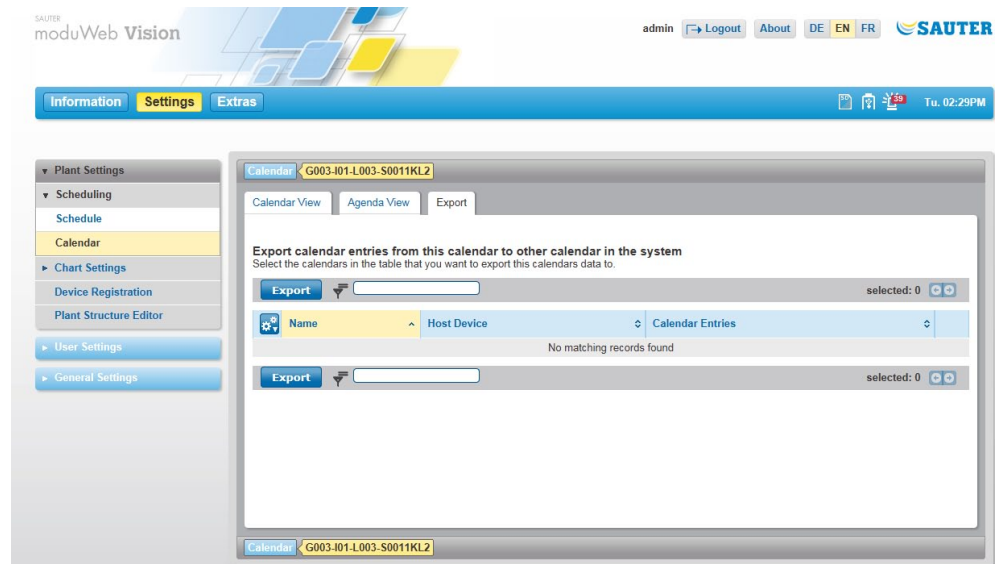
Fig. 32   Calendar, export

The list shows the calendars to which entries from the current calendar can be exported. The entries that are already in them will be overwritten.

Select the checkboxes at the beginning of the lines containing the required calendars.

ⓘ   Instead of selecting them manually, you can use the 🔧 icon and the options "All", "All on page", "None" or "None on page" to select or deselect all the calendars at once

After making a selection, click "Export". Or select this function using the 🔧 icon.

Select the entries that you want, confirm the warning regarding overwriting and click "Export" to export them.

13. Chart settings

This section describes the "Chart settings" area under "Plant view settings" in the main "Settings" menu.

The "Chart settings" menu is where you configure the data point logs that are displayed under "Charts" in the main "Info" menu (see section 10 "Charts").

There is a distinction between the following:
- Simple charts ("Simple charts / Logs" menu)
- Combined charts ("Combined charts" menu)

Simple charts graphically display a logged data point without the user having to make any other settings.

Combined charts can show up to four simple data points in a single diagram at the same time. This makes the charts clearer to read and easier to compare.

ⓘ If no SD card is installed, no data points will be recorded and no log data will be available to be displayed in the charts.

13.1 Simple charts / Logs

In the main "Settings" menu, click "Plant settings", then "Chart settings" and "Simple charts / Logs".
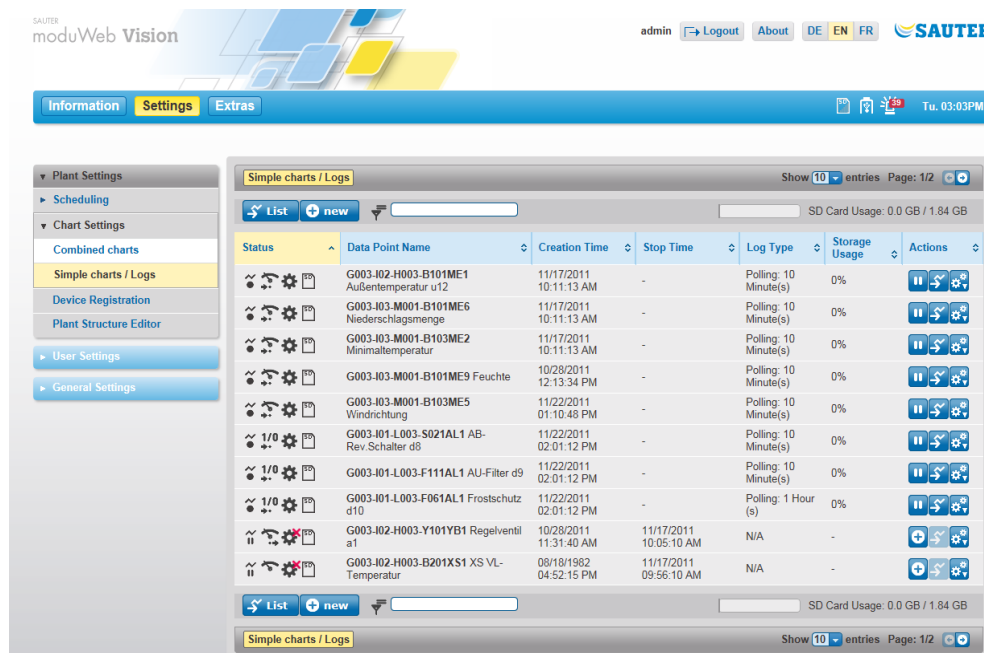

Fig. 33 Simple charts / Logs, overview

An overview of all the data point logs in the system is displayed here. Logs with faulty log configurations are also displayed, as are those whose data point is no longer in the system.

Information on the logged data point is displayed, such as the current status, data point name, creation time (start of logging), stop time (for logs that are no longer recorded), log type and memory utilisation.
You can carry out various actions with the icons in the last column.

In the "Status" column, the ⊙ and ⊓ icons indicate whether the data log is active or paused. The ▣ᔆᴰ icon indicates that a data log exists on the SD card. The meaning of other icons is explained in section 7.1.

Using "List" to the left above and below the table, you can switch to the list, from which the charts can be viewed.

Using the ➶ icon in the last column of an entry, you can switch to the view of the corresponding chart; see section 10.

ⓘ   To the upper right of the list you can see information such as the total memory required by the logs and how much memory is available on the SD card.

Creating a new chart / data point log
Click "New". The "Logging type" window appears.

In this window you must choose a logging type from the list:
- Polling – the station is queried at regular intervals ("Refresh rate") whether it has a new value for this data point
- COV (change of values) – a value is logged when it changes

If you select polling, you must also specify the refresh rate.

Then click "Next". The "Select data points" window appears.

A list of all the data points in the system appears. You must select the required data points. To do this, select the checkboxes at the start of the line.

ⓘ   Instead of selecting them manually, you can use the ⚙ icon and the options "All", "All on page", "None" or "None on page" to select or deselect all the data points at once.

Then click "Next". A summary of all the settings that have been made appears.

Click "Save" to create a new chart or log for each of the selected data points.

Change data point
You can use this action to change the data point. Click on the ⚙ icon in the appropriate line and select "Change data point". Select the new data point in the window that appears and then clock "Save" to execute the action.

ⓘ   When you change the data point, the logs of the previous data point are not deleted, but instead continued with information from the new data point. You might need to do this, for example, when you want to continue logging a data point although it has been moved from one device to another.

ⓘ   You can also add a new data point to the system. To do this, go to the "Device registration" (see sections 14) or "Plant structure editor" menu (see sections 15).

Change logging type
You can use this action to change the logging type. Click on the ⚙ icon in the appropriate line and select "Change logging type". Select the new logging type and refresh rate in the pop-up window and click "Save" to execute the action.

Reset log
This action permanently deletes the previous log of the data point. However, the log configuration is not lost, and it recommences immediately.
Click on the ⚙ icon in the appropriate line and select "Change logging type". The action is executed after you answer a security query.

Delete simple chart / data point log
This action deletes the log of the data point as well as the log configuration. Click on the ⚙ icon in the appropriate line and select "Delete". The action is executed after you answer a security query.

Pause/resume action
You can pause the logging of a data point by clicking on the ⏸ icon in the appropriate line.
The symbol changes to ⏺.
Click on the ⏺ icon to resume the logging.

CSV export
The action exports the values of the log. Click on the ⚙ icon in the appropriate line and select "CSV export". You can select the period of time and the resolution in a pop-up window.

Create new configuration for data point log
If there is no digram configuration for a data point, you can create a new one by clicking on the ⊕ icon. A pop-up window appears, in which you can select the new logging type and refresh rate. Click "Create" to execute the action.

13.2 Combined charts

In the main "Settings" menu, click on "Plant settings", then "Chart settings" and "Combined charts".
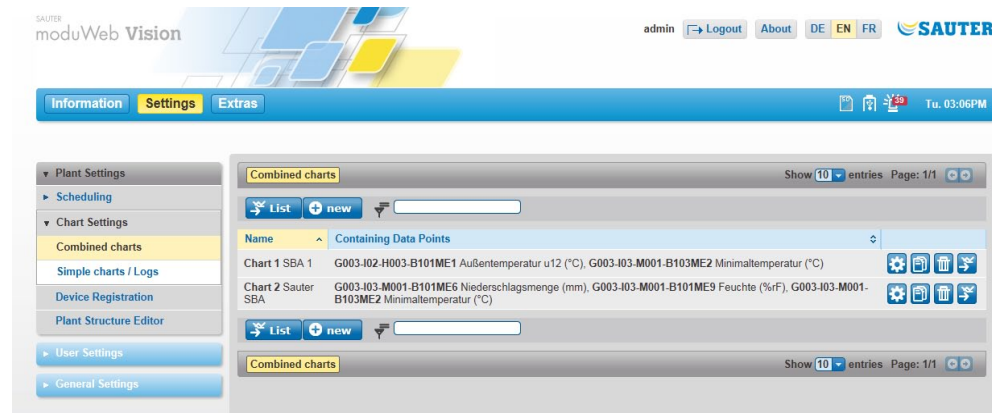
Fig. 34   Combined charts, overview

An overview of all the combined charts in the system can be found here. You can find information on the recorded charts such as the diagram name and the data point logs it contains.
You can carry out various actions with the icons in the last column.

Using "List" to the left above and below the table, you can switch to the list, from which the charts can be viewed.

Using the 🗲 icon in the last column of an entry, you can switch to the view of the corresponding chart; see section 10.

Create new combined chart
Click on "New". The window for creating new combined charts appears.
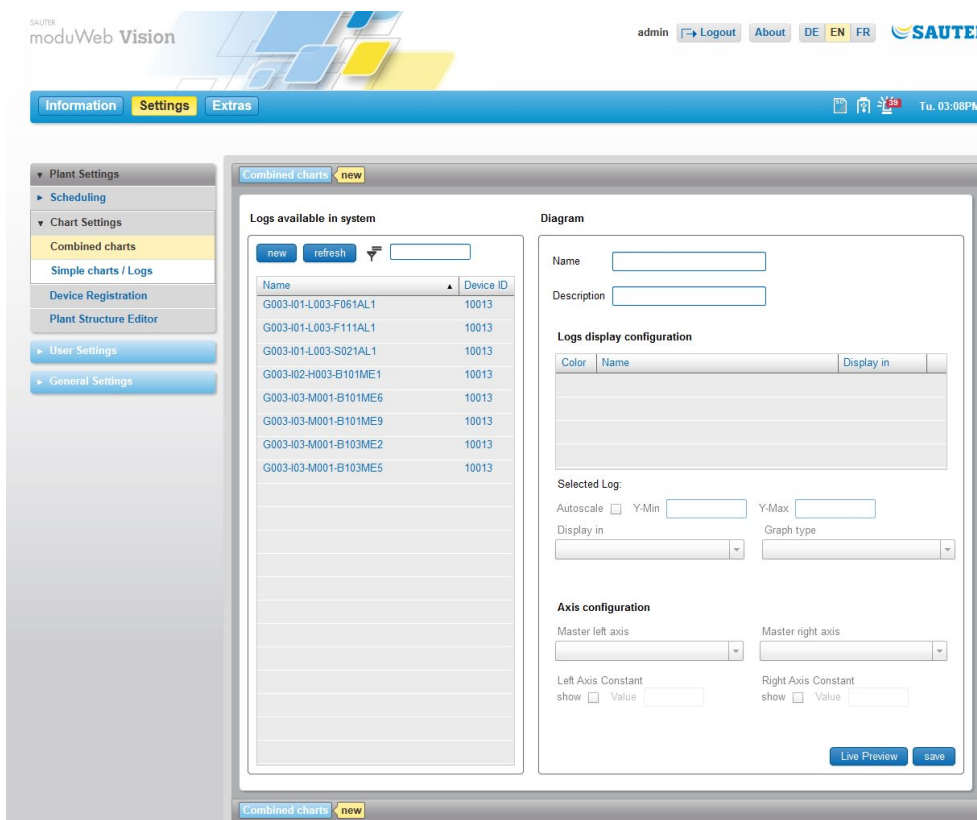
Fig. 35   Combined charts, creation

The window consists of two parts:
• The left part "Logs available in the system" lists all the existing charts and logs in the system (see previous section).
• The right part "Diagram" is where you configure the combined chart.

Click on "New" in the "Logs available in the system" section to create new simple charts directly. The procedure is described in the previous section.

Click on "Refresh" in the "Logs available in the system" section to update the list of simple charts and logs in the system. This function is useful, for example, when a new chart is created in a separate window.

First, enter a name and a description for the new combined chart in the "Diagram" section.

Then drag and drop the required logs from the "Logs available in the system" section to the "Diagram" section.

ⓘ   The logs are automatically assigned a colour with which they are displayed in the chart. You can change the colour by clicking on the colour field.

ⓘ   You can delete a log from the list by clicking on the 🗑 icon.

Every log in the list can be given the following attributes. The attributes are assigned to the highlighted data point, which is also shown in "Selected log".
- If "Autoscale" is enabled, the value range of the Y-axis is automatically determined according to the currently visible area. "Y-Min" and "Y-Max" are disabled.
- You can set the Y-axis range manually using "Y-Min" and "Y-Max". "Y-Min" and "Y-Max" are only enabled when "Autoscale" is disabled.
  If this range is set too high, for example, the log will simply appear as a straight line. If the value of "Y-Max" is less than the minimum value, the log will not appear at all.
- "Display in" allows you to choose where the log will be displayed in the chart. The following options are available:
    - With "Main diagram left" the log is shown on the left Y-axis of the main diagram.
    - With "Main diagram right axis" the log is shown on the right Y-axis of the main diagram.
    - With "Separate diagram", the log is shown in a separate diagram below the main diagram.
    - If you enter a value under "Left axis constant" or "Right access constant", this value is shown by a line in the chart in order to make visible a setpoint or limit value, for example.
- "Graph type" allows you to choose whether the individual values of the log are connected in a direct line or in steps.
  By default, analogue data points are shown as lines, while binary and multistate data points are shown as steps.

Under "Axis configuration" you can choose which logs are used as "masters" for the right and left axis of the chart. If a master has been set for an axis, its value range is used as a reference for all others on the axis. If a combined chart only contains one log, this is automatically set to the left axis.

You can click on "Live preview" to see the resulting combined chart with this configuration.

Click on "Save" to create the new combined chart.

Edit combined chart
Click on the icon to edit a combined chart. The same window appears as when you create a new chart, but the settings of the configuration to be edited are already loaded. Make the changes and click on "Save" to apply them.

Duplicate combined chart
This function allows you to use existing combined charts as templates for new ones without having to make the settings again. Click on the icon in the appropriate line.

Before execution, pay attention to the confirmation prompt, then either carry out duplication or cancel the process.

Delete combined chart

This action deletes a combined chart. Click on the 🗑 icon in the appropriate line.

When you delete a combined chart, the simple charts and log data displayed in it are not deleted.

Before execution, pay attention to the confirmation prompt, then either carry out deletion or cancel the process.

14.   Device registration

This section describes the "Device registration" area under "Plant view settings" in the main "Settings" menu.

All devices that you want to display and operate in moduWeb Vision must be registered. Only registered devices are monitored and have alarms, for example, displayed for them.

Devices are usually registered when the plant is commissioned by SAUTER specialists. The loading process can take a few minutes. The function described below can be used to register additional devices or delete devices for moduWeb Vision when the system is already in operation.

⚠

Improper changes to the device registration can result in parts of the plant no longer being properly monitored or being incapable of operation.

In the main "Settings" menu, click "Plant settings", then "Plant settings" and "Device registration".
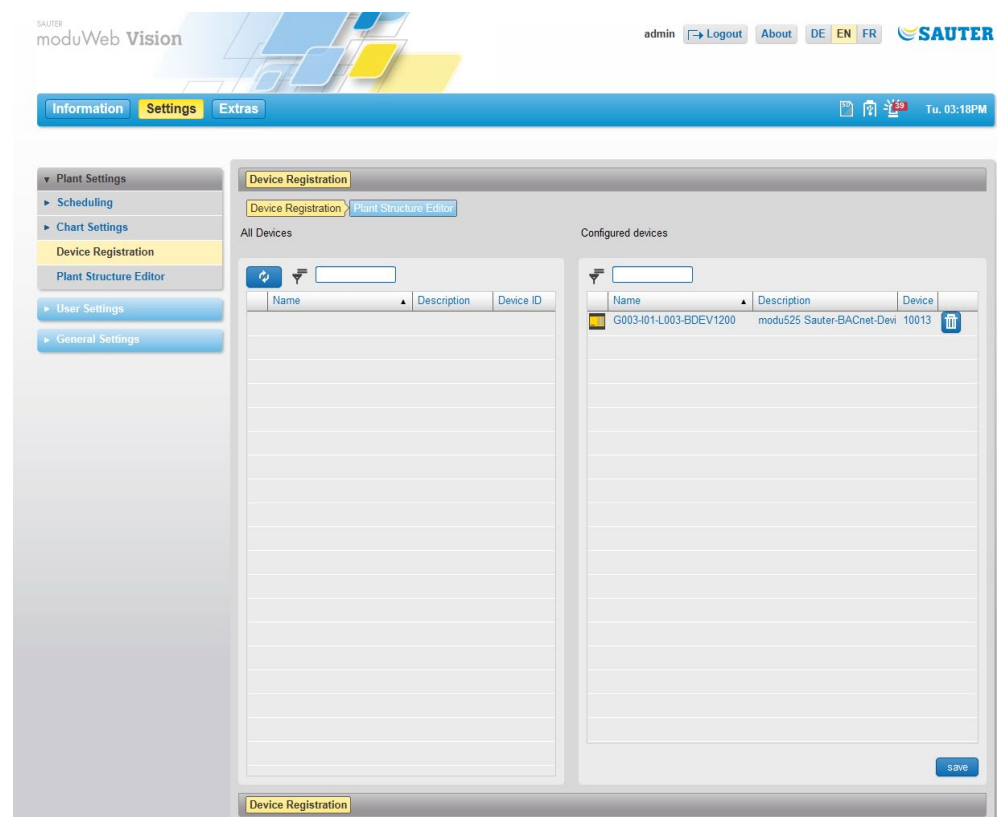
Fig. 36   Device registration

The content area is divided into two sections:
- The "All devices" list on the left shows all devices that have been found in the network and communicate via the BACnet/IP protocol.
- The "Configured devices" list on the right shows the devices that are registered in moduWeb Vision.

ⓘ When this window is loaded, the system automatically scans the network for BACnet devices and displays them under "All devices". You can also start the scan manually by clicking the [↻] icon.
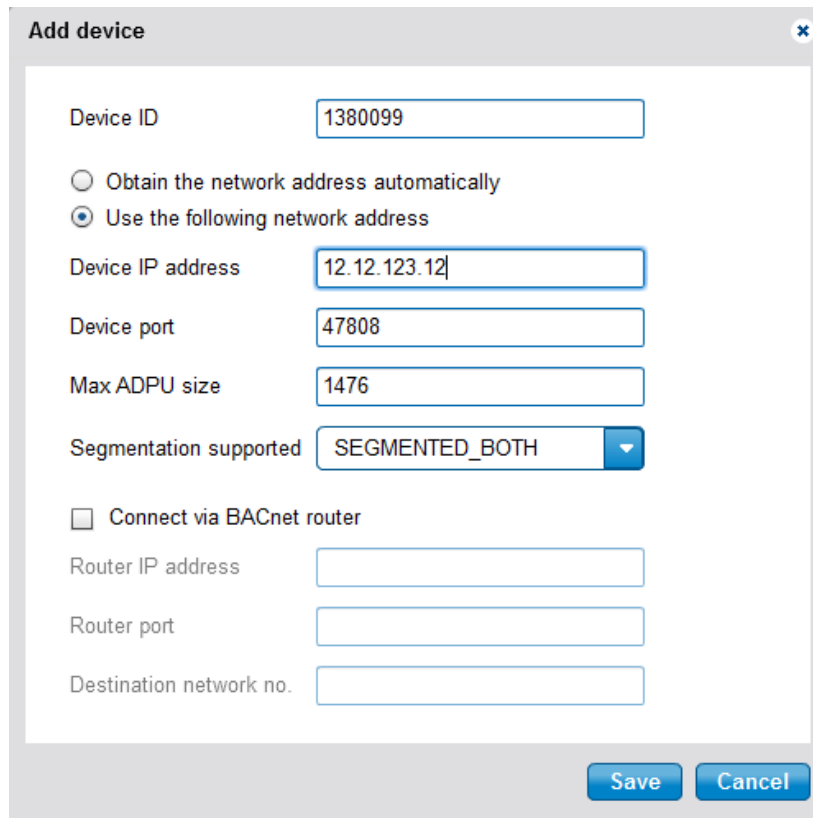
The lists show the device type, the device name, a description and the unique DOI (device object identifier) in the network.

ⓘ The device type is indicated by an icon. For Sauter devices, the icon resembles the device. For non-Sauter devices or devices whose type information is faulty or cannot be read for any other reason, the icon is a question mark.

Register devices
To register a device, drag it from the list on the left and drop it onto the list on the right.

If a device is to be registered which is located in another network and thus not automatically detected and displayed in the list on the left, you can click the [⊕] icon to open the "Add device" window in order to register a device.

Fig. 37   Add device

Activate "Use the following network address" and enter the IP address and port of the device. The values "Max ADUP size" and "Segmentation Support" are usually automatically detected.

If the connection is to be established via a BACnet router, activate "Connect via BACnet router" and enter its addressing data.

Click "Save" to add the device to the registered devices.

If you enter only the device ID and "Obtain network address automatically" is activated, this dialogue has the same function as registration using drag-and-drop.

To delete the registration of a device, click the 🗑 icon. The device is deleted from the list of registered devices and moved to the list on the left.

To complete the registration, click "Save". If you leave the "Device registration" page without saving, registrations or deletions that have been made are discarded. The browser displays a corresponding warning message.

15. Plant structure editor

This section describes the "Edit plant structure" area under "Plant view settings" in the main "Settings" menu.

This function is for administering the moduWeb Vision visualisation structure. Various objects can be integrated in a structural configuration and thus visualised. This visualisation appears as a "plant navigation tree" in the menu tree. See also section 6.3 and section 7 in this regard.

The visualisation structure is usually set up when SAUTER specialists put the system into service. The function described below can be used for editing the visualisation structure when the system is in operation.

In the main "Settings" menu, click on "Plant settings", then "Plant settings" and "Plant structure editor".
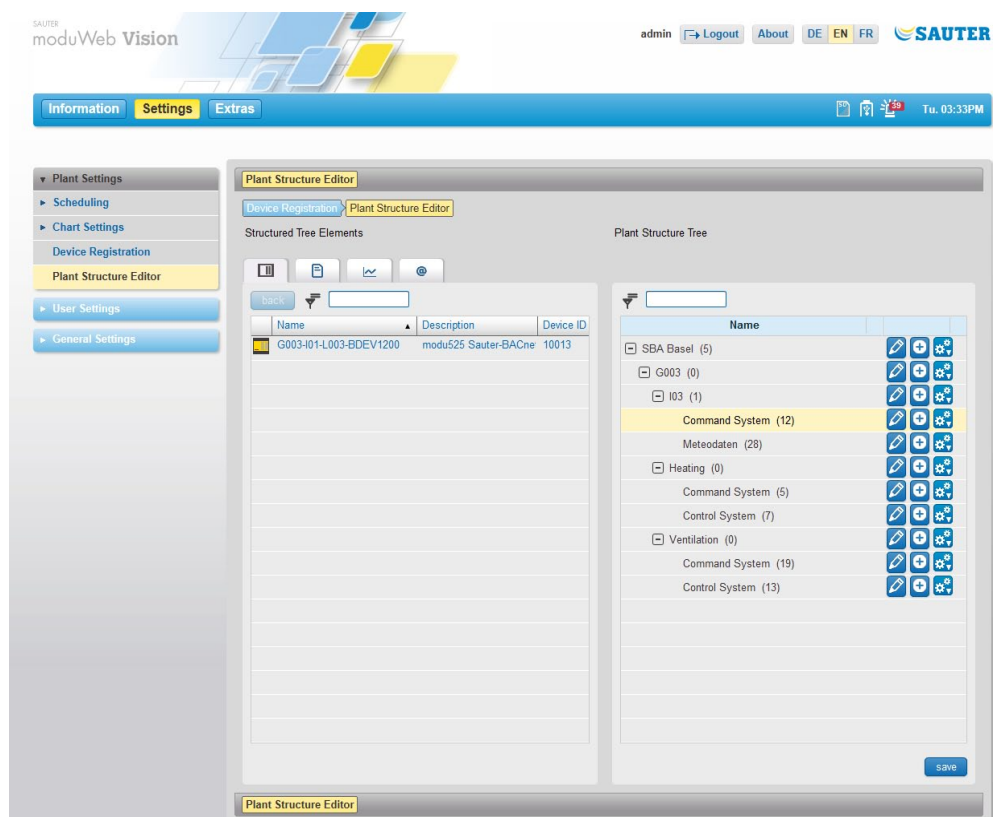
Fig. 38   Plant structure editor, device overview

The content area is divided into two parts:
*   The "Elements of the navigation tree" list on the left lists the objects in modu-Web Vision that can be included in the visualisation structure. Various types of object can be included and are described in more detail below.

- The "Plant navigation tree" list on the right contains the moduWeb Vision visualisation structure. The structure is tree-shaped (like the folder structure of a computer) and can be edited; see section 15.2.

You can use drag-and-drop to assign objects from the "Elements of the navigation tree" list on the left to the nodes of the plant navigation tree in the list on the left, making them visible in the plant overview. In this regard, pay attention to the section that follows, 15.2.

15.1 Object types

The term "objects" not only refers to BACnet objects (such as analogue inputs and outputs) that are included in moduWeb Vision via a registered device, but also to non-BACnet objects. This means objects that do not come from the "BACnet world" but can still be structured and visualised with moduWeb Vision.

Click on the tab of the left part of the screen to switch between the various object types. The following object types are possible:

▯	Registered devices
🗎	Documents
〰	Combined charts
@	Web links

BACnet objects of registered devices
These are objects located on a device that is registered in moduWeb. If you click on a device in the device overview (Fig. 36), the BACnet objects located in this device are displayed.
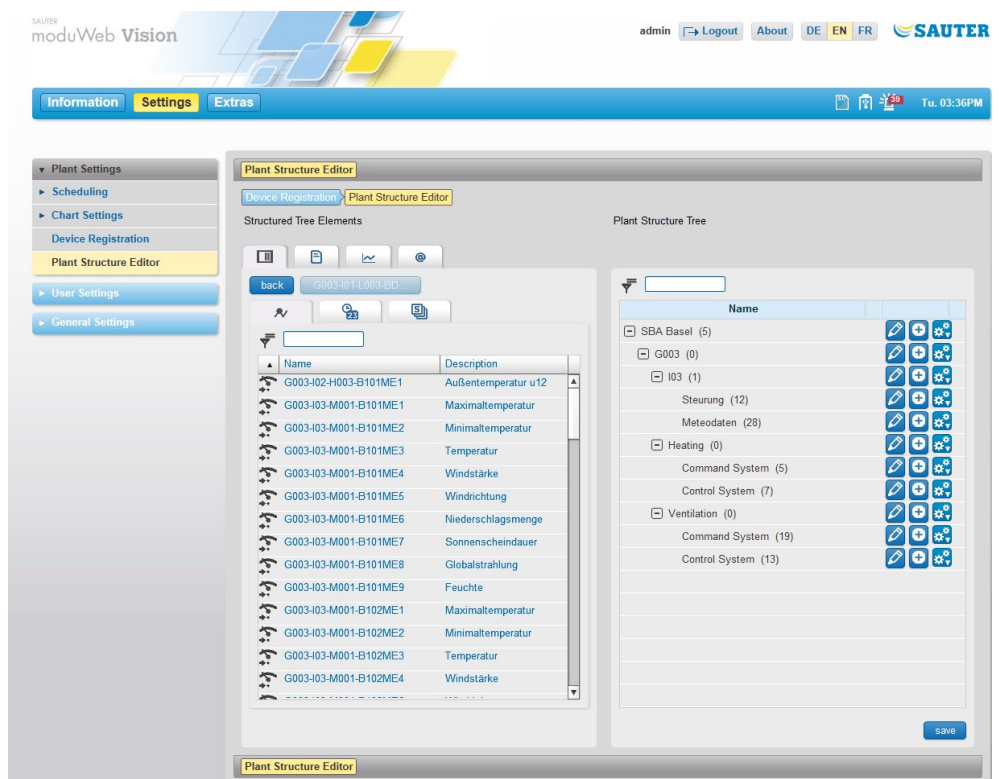
Fig. 39   Plant structure editor, BACnet objects

These are objects located on a device that is registered in moduWeb. If you click on a device, the BACnet objects located in this device are displayed. The current device names are shown above the list. Click on "Back" to return to the device overview.

The objects of a device are divided into three categories. Click on the tab of the left part of the screen to switch between the various object types. The following categories are possible:

	Data points Shows all data points (AI, AO, AV, BI, BO, BV, MI, MO, MV) of the selected device.
	Special-day calendar and time programs Shows all schedules and calendar objects of the selected device.
	Special objects Shows all special objects (Loop, OptH?, OptC?) of the selected device.

Documents
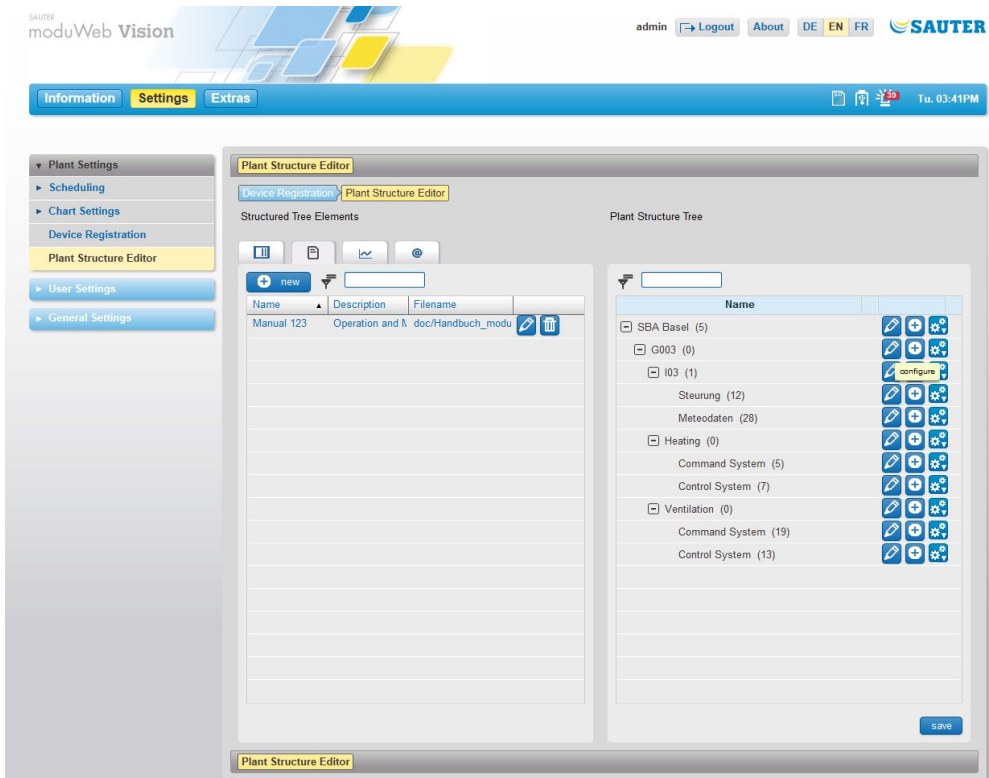
Fig. 40   Plant structure editor, document object type

Documents providing useful information, such as plant descriptions, schemas, data sheets, instructions etc., can be stored in moduWeb Vision. Such documents can be displayed in the plant overview.

A document object consists of a name, a description and a link to a document file in the memory of moduWeb Vision.

The document objects are displayed in the list.

Click on "New" to add new documents. Enter a name and a description in the pop-up window and select the file to upload. Finally, click on "Save".

You can use the ✏ icon to edit the names and descriptions of existing documents.

Click on the 🗑 icon to delete documents from the system.

Charts
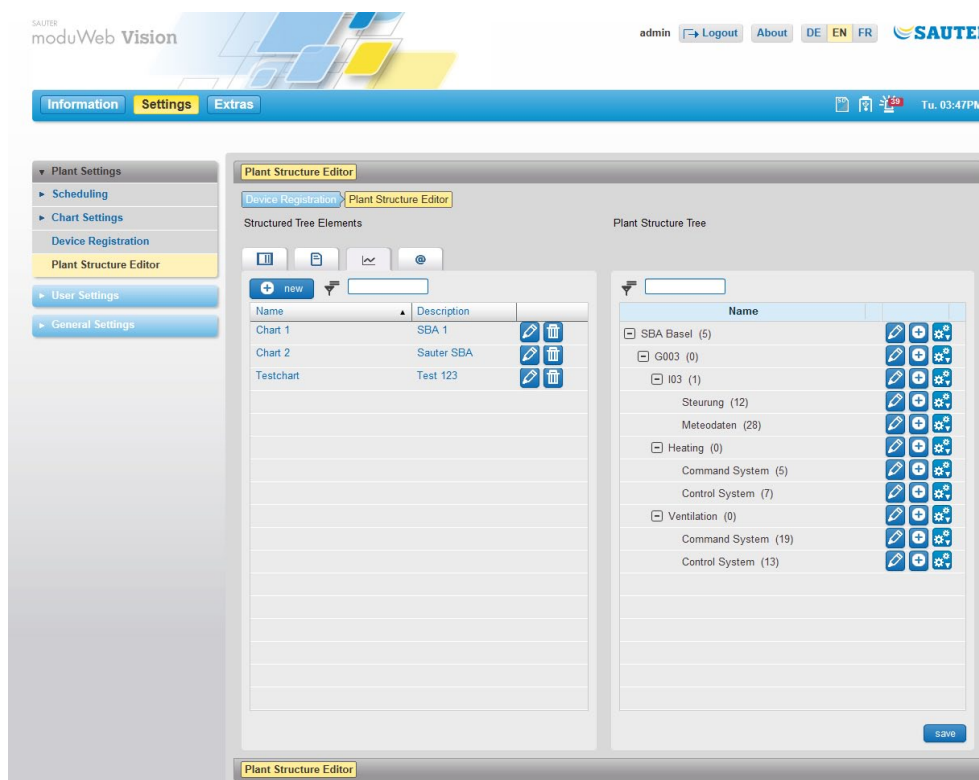
Fig. 41   Plant structure editor, chart object type

These are objects which represent a combined chart.

Click on "New" to create new combined charts. A window for creating new combined charts appears, (see section 13.2.). Make the settings and then click on "Save".

You can use the ✏ icon to edit an existing combined chart. Make the changes in the window that appears and then click on "Save".

Click on the 🗑 icon to delete combined charts from the system.

ⓘ   Combined charts are normally created and edited in the "Chart settings" menu of the main "Settings" menu (see section 13.2).

Web links
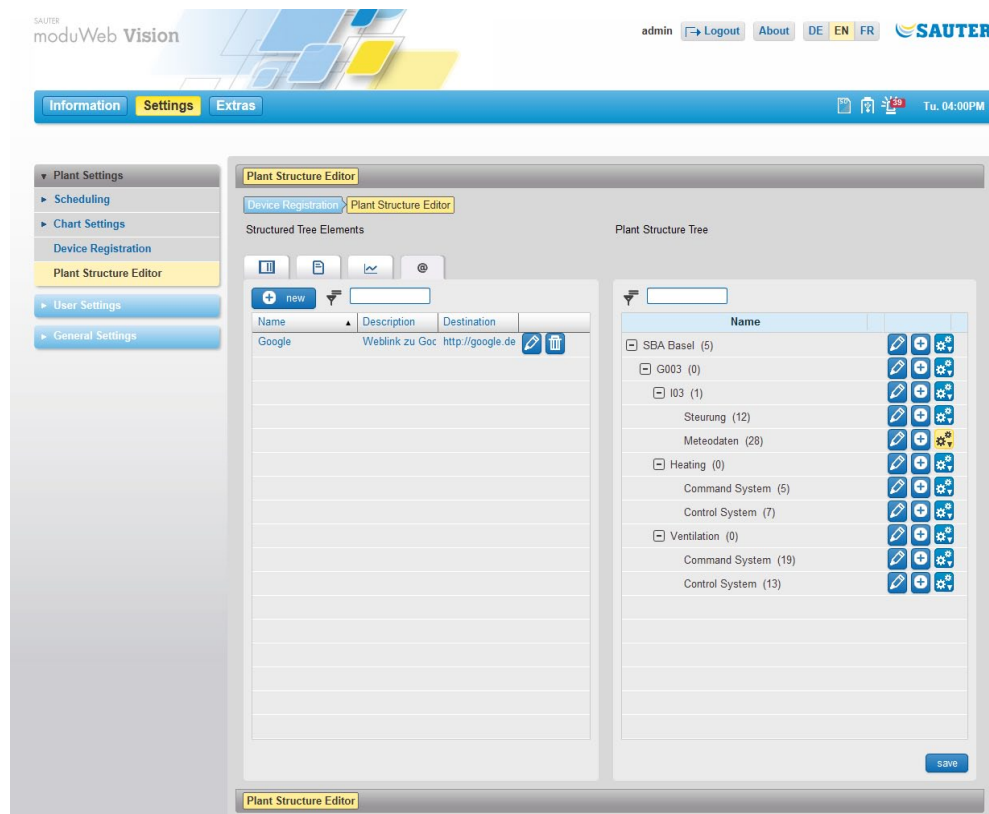
Fig. 42   Plant structure editor, web link object type

Useful links to websites such as webcams, service contacts, shift plans and weather information can be assigned to a node.

These objects contain a link to a site via an internet address (e.g. www.sauter-controls.com).

Click on "New" to add new documents. Enter a name, a description and an address in the pop-up window. Finally, click on "Save".

Click on the ✎ icon to edit existing web links.

Click on the 🗑 icon to delete web links from the system.

15.2 Visualisation structure

The right side of the content area (see Fig. 39) contains the visualisation structure. The structure has the form of a tree, like the folder structure of a computer.

The top node is mandatory. It can be edited and renamed, but not deleted. Other nodes can be added to this one.

ⓘ There is no limit to the number of hierarchical levels, and every node can be linked to any number of sub-nodes.

ⓘ The number in brackets beside the name of each node indicates how many objects (BACnet objects, document objects, chart objects, web link objects) there are in this node.

To the right of the column there are icons which you can use to configure the nodes.

ⓘ Changes to the structure are not applied until you click on "Save". This means you can reverse any changes made by mistake by exiting the window without clicking on "Save".

Adding nodes

You can add a new node to any node using the ⊕ icon. The added node is given a default name. This consists of the name of the node it was added under, plus the current number of nodes in the structure. The name can be changed.

Deleting nodes

To delete a node, click on the ⚙ icon and select "Delete" from the list of options that appears. The node is deleted, along with all the objects and configurations it contains.

Moving nodes

You can move a node elsewhere in the structure by cutting and pasting it.
To do this, click on the ⚙ icon of the node to be moved and select "Cut" from the list of options that appears. The node is removed and stored in a buffer. You can then add it to another node.
To do this, click on the ⚙ icon of the node you want to paste it into and then select "Paste" from the list of options. The node you cut out, along with all its settings and the objects it contains, is added below the selected node.

Copying nodes

You can copy a node and paste it anywhere in the structure.

To do this, click on the ⚙ icon of the node to be copied and select "Copy" from the list of options that appears. The node is stored in a buffer. You can then add it to another node.

To do this, click on the ⚙ icon of the node you want to paste it into and then select "Paste" from the list of options.

The copied node, along with all its settings and the objects it contains, is added below the selected node.

Assign objects to nodes

Use drag-and-drop to drag an object or several selected objects from the list on the left to a node in the plant navigation tree in the list on the right.

Editing nodes

Each node consists of a series of attributes (name, description) as well as the BACnet and non-BACnet objects it contains.

Click on the ✎ icon to open the properties window.
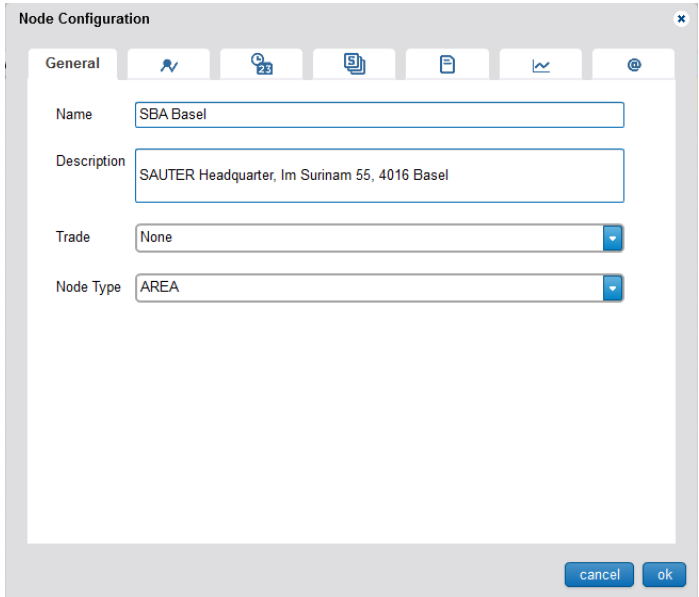
Fig. 43   Plant structure editor, BACnet objects

The "General" tab of the window shows the attributes of the node. You can edit these.

The other tabs list the various objects assigned to the node. The various object types are described in section 15.1.

Objects with a 🗑 icon can be deleted.

ⓘ   You must click "OK to confirm any changes before they are saved.

16. User settings

This section describes the "User settings" area in the main "Settings" menu.

16.1 User management

16.1.1 Roles (user groups)

moduWeb Vision distinguished the four following preconfigured roles (user groups):
- Administrator
- Specialist
- User
- Guest

The roles are assigned different rights to access the functions and information in moduWeb Vision. The availability of menus and the ability to edit parameters and values differ according to the role. The role is assigned by the administrator when the user is created.

The users themselves cannot change their roles or authorisations.

Users who are registered as administrators still have the option of individually allowing or prohibiting access to individual equipment systems and nodes when creating and editing users. Prohibited equipment systems and nodes are not visible to the user.

At least one user must be created as an administrator. If only one administrator has been created, it cannot be deleted. For security reasons, it is advisable to change the preset user name "admin" and default password "passwd".

The following table shows an example of how individual authorisations can be assigned to roles:

Authorisation	Guest	User	Specialist	Administrator
Login / logout	•	•	•	•
Observe	•	•	•	•
Change setpoints		•	•	•

The assignments are predefined in the system.

16.1.2   Creating a new user

A user who is registered as an administrator can create new users.

In the main "Settings" menu, click "User settings", then "User management" in the menu tree (available only if you are logged in as administrator).
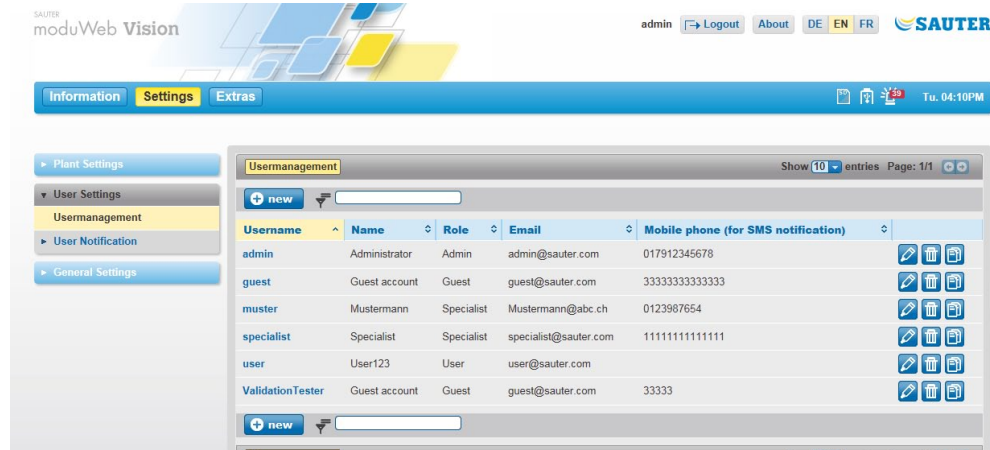
Fig. 44   User management, overview (only visible to "Admin" role)

A list of all the existing users appears.

Click on "New". The input dialogue for user data appears.
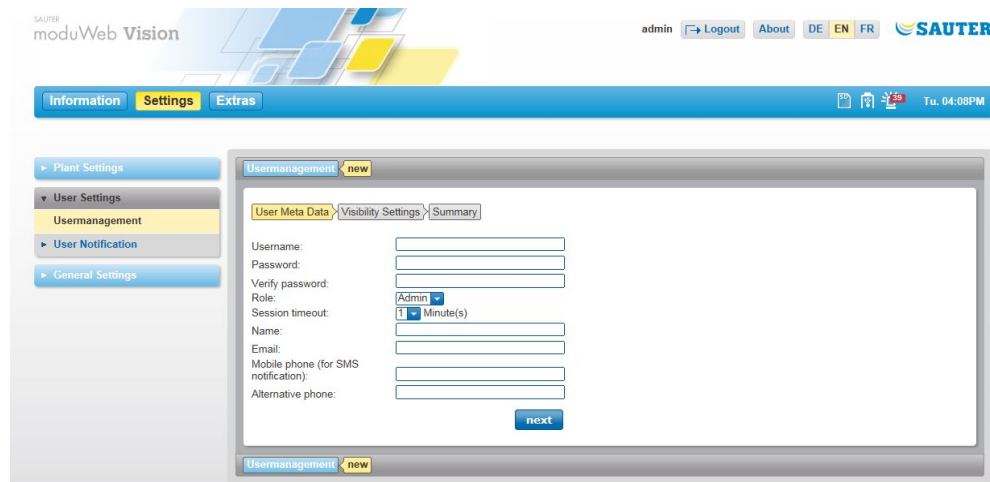
Fig. 45   User management, input dialogue for user data

The fields in the input dialogue have the following functions:

User name
The name of the user for authentication in the login screen. This item can only be changed by users with administrator rights when creating a new user.
Mandatory field, at least 4 and up to 16 characters long. All alphanumerical characters and a number of special characters (! $ = / \ ? +
- _ ( ) [ ] { } < > #) are allowed. The characters are visible in plain text. They are not case-sensitive.

Password

The password for logging into moduWeb Vision must have at least 6 and no more than 16 characters. It is used for authentication when logging in. Together with the user name, the access rights are specified by the administrator. Mandatory field, at least 6 characters long.

All alphanumerical characters and a number of special characters (! $ = / \ ? + - _ ( ) [ ] { } < > #) are permitted, but not quotation marks. The characters are not visible while they are being entered. They are case-sensitive. The password may not be the same as the user name.

Verify password

In diesem Pflichtfeld muss das Passwort zur Bestätigung nochmals eingegeben werden. Das System überprüft bei der Eingabe, ob die Bestätigung mit dem vorher eingebenen Passwort identisch ist.

Role

The predefined roles are available here (administrator, specialist, user, guest). This choice is only available to users with administrator rights.

Mandatory field, at least 4 and up to 40 characters long.

Name

The full name of the user is entered here. This might be different from the name entered under "User". The full name is a mandatory field.

E-mail

The address entered here is used for e-mail notifications to the user.

In order for a notification to take place, the settings must be made as described in sections 16.2 and 17.1.

Mobile phone (for SMS notification)

The mobile phone number entered here is used to send SMS notifications to the user.

In order to make an SMS notification, an e-mail must be sent to an appropriate internet SMS gateway, which then forwards the e-mail to the mobile number in the form of an SMS.

Alternative phone

An alternative telephone number for contacting the user can be entered here.

The "User name", "Password" and "Name" fields are mandatory. Then click on "Next". The window for the visibility settings appears:
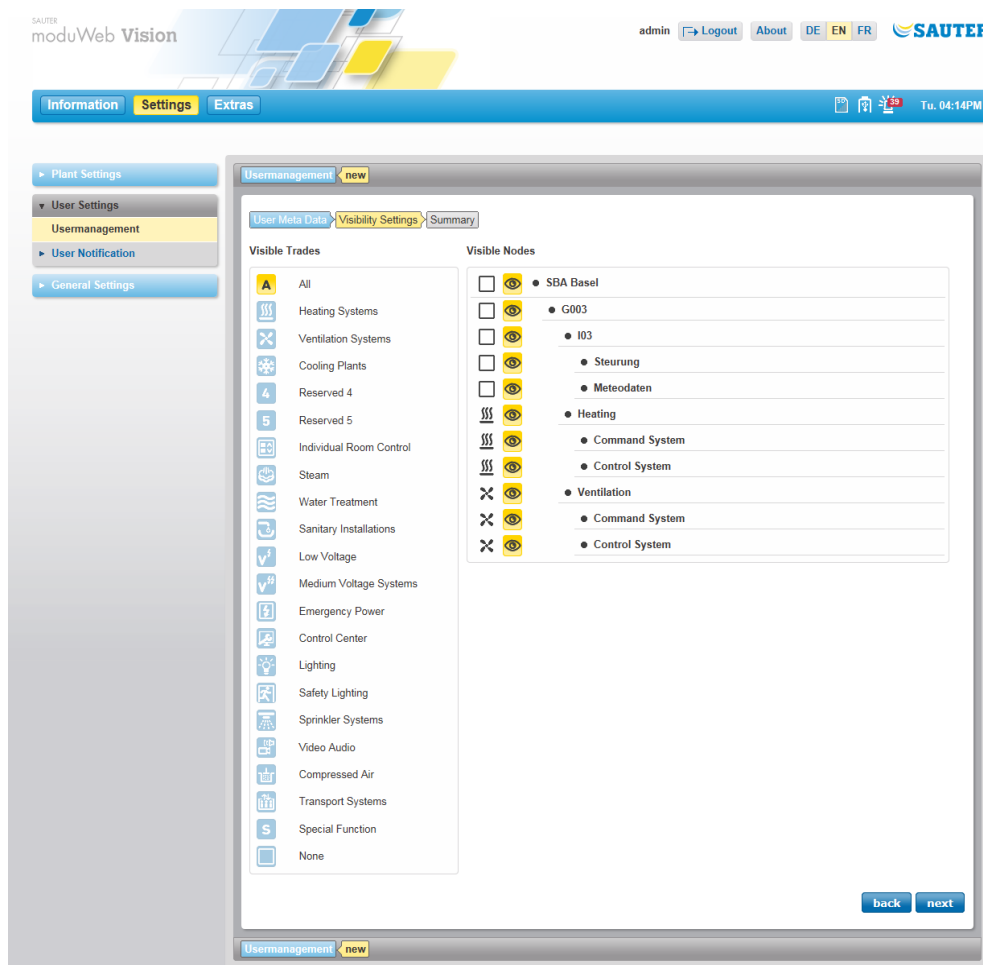
Fig. 46   User management, Visibility settings

Here you can define which equipment systems and nodes are visible to the new user.

First highlight the equipment systems that the user should see in the "Visible systems" column on the left. The right column "Visible nodes" changes accordingly by disabling the visibility icons of nodes with equipment systems that are marked as invisible on the left.

Other nodes are also made invisible in the column on the right. This is because of the hierarchy of the tree structure: if a node is invisible, then so are all its sub-nodes.

Then click on "Next". A summary of the settings made for the new user appears.
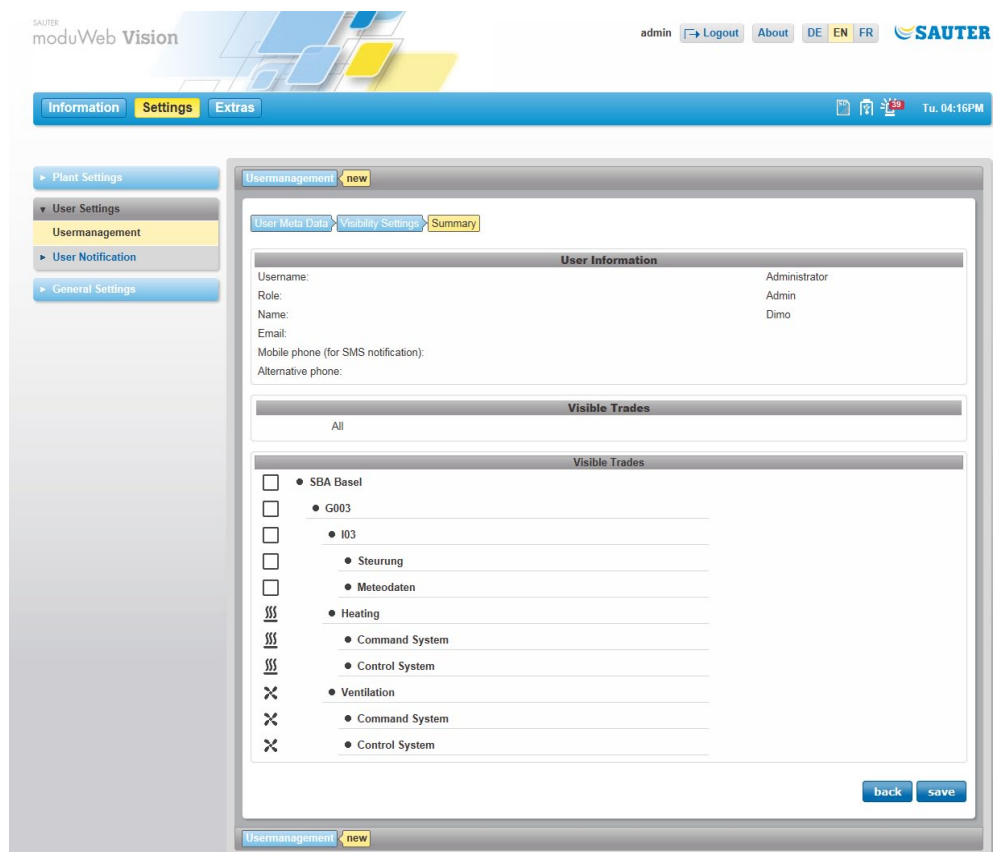
Fig. 47   User management, new user summary

Click on "Save". The action is executed after you respond to a confirmation prompt.

The entries are saved and the new user appears in the user management summary window.

16.1.3 Editing users

A user who is registered as an administrator can edit existing users.

Click on the user name in the user management summary window. The details of that user appear.
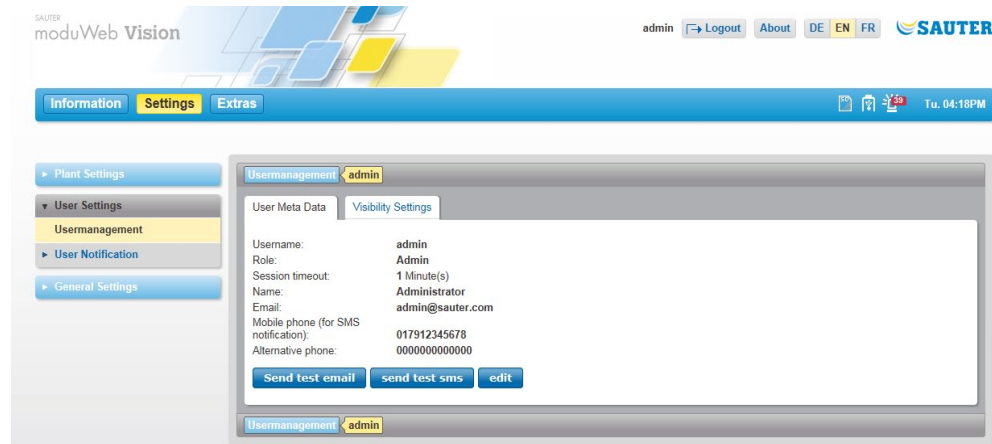
Fig. 48   User management, individual user data

🛈   You can use the "Send test e-mail" and "Send test SMS" functions to send a test e-mail or SMS (text message) to the user's e-mail address or mobile phone number in order to test the function. Before sending, you need to respond to a confirmation prompt.

Click on "Edit". The input dialogue for user data appears.

🛈   You can also view this window by clicking on the 🖉 icon of the appropriate line in the user management summary window.
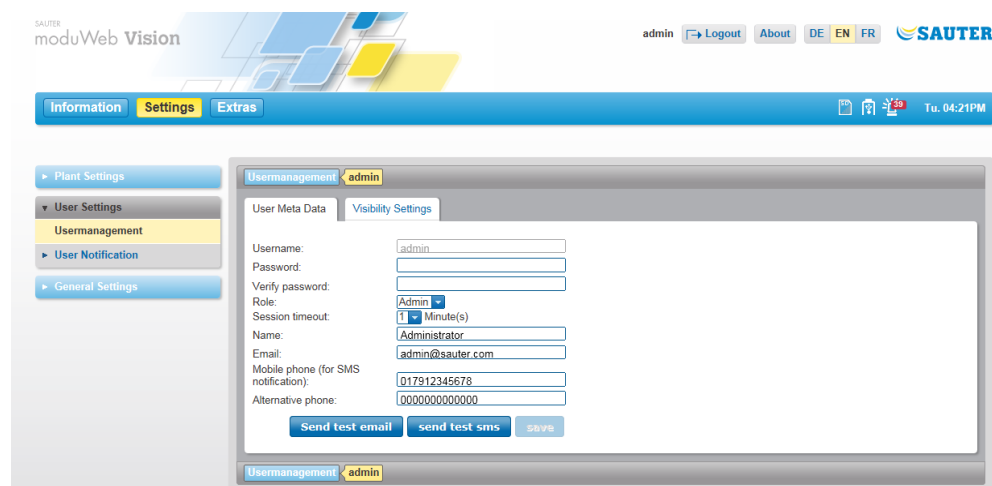
Fig. 49   User management, input dialogue for user data

This is the same as the input mask for creating a new user. You can change all the data except the user name.

This window is the same as the input mask for creating a new user. You can change all the data except the user name.

You can use the Visibility settings tab to switch to the Visibility settings view. The specialist systems and nodes visible to the user are displayed there in an overview. In order to change the visibility settings, you need to click "Edit" on the bottom right. Then you can select specialist systems and nodes that you want to be visible.

In order to save the changes, click "Save" on the bottom right of the respective window.

ⓘ   "Save" is active only when changes have been made and the mouse pointer is no longer in an input field.

16.1.4   Duplicating users

A user who is registered as an administrator can duplicate existing users.

To do this, click on the 🗐 symbol in the corresponding line in the user management summary window.

The input dialogues that appear when you duplicate a user are the same as those that appear when you create a new user.
All data except for the password is copied from the selected existing user. The copied entries can be changed.

The previous username that was copied must be changed.

The rest of the process is the same as for creating a new user.

16.1.5   Deleting users

A user who is registered as an administrator can delete existing users.

To do this, click on the 🗑 symbol in the corresponding line in the user management summary window.

After you respond to a confirmation prompt, the user is deleted.

16.1.6   Changing your own details/password

Instead of the "User management" menu, users who are not registered as administrators (specialists, users or guests) see the "My profile" menu, where they can view their own details.

Most of the user data and the password can be changed by clicking on "Edit". The user name, the role and the visibility settings cannot be changed.

ⓘ   You can use the "Send test e-mail" and "Send test SMS" functions to send a test e-mail or SMS to the user's e-mail address or mobile phone number, to check the function. Before sending, you need to respond to a confirmation prompt.

16.2 User notification

moduWeb Vision can notify users of alarms that occur. You can choose the conditions and method (e-mail and/or SMS) for notifying a user of alarms.

ⓘ SMS notifications are sent by e-mail via an SMS gateway. The SMS gateway forwards the content of the e-mail in the form of an SMS to the user's mobile phone number that was entered in the user management.

To configure alarm notifications, you must first make settings in the "General settings, notification settings" menu of the main "Settings" menu; see section 17.1 "Notification settings":
- Configure the mail server
- Define notification profiles, recipient groups and the type of alarms that are reported to them
- Define the standard e-mail format and content
- Define the standard SMS format and content

ⓘ The process for converting e-mails to SMS via an SMS gateway may differ, depending on the telecommunications provider. You may need to contact the provider.

After this, you can make the settings for specific users described below. The condition is that the users have already been created and the plant has been defined.
- Alarm notification,
  assignment of notification profile to a user
- E-mail format,
  optional setting when the standard e-mail format cannot be used for the user
- SMS format,
  optional setting when the standard SMS format cannot be used for the user
- System logs

16.2.1 Alarmierung

16.2.1.1 Alarm notification

Administrators can configure notification for themselves and other users here. Users who are not administrators (specialists, users or guests) can view and edit only their own settings.

Log on as administrator, then go to the main "Settings" menu and click "User settings", "User notification", "Alarming" and "Alarm notification" in the menu tree.

ⓘ Non-administrators must go to the main "Settings" menu and then click on "User settings". "My notifications", "Alarming" and "Alarm notification".
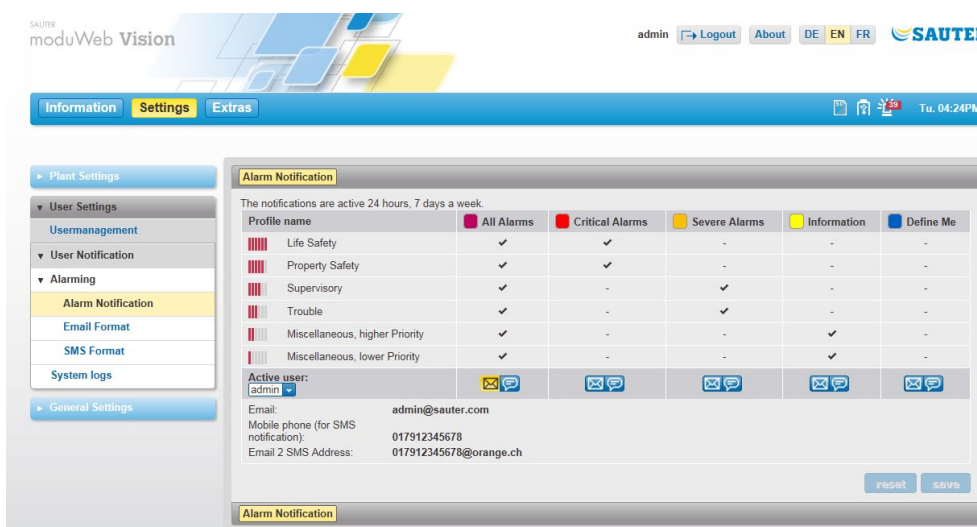
Fig. 50   Alarm notification

The notification profiles defined in the general settings under "Notification settings", "Alarm settings", "Notification profile" are displayed.

For "Active user", select the user whose alarm notification you want to configure (this is only possible for users registered as administrators).

Highlight "E-mail" or "SMS" below each profile to define whether the selected active user is notified of alarms in the profile vie e-mail or SMS.

ⓘ   The individual data, e-mail address and mobile phone number shown in the lower section are for information only. They can be changed in the user management.

Finally, click on "Save".

16.2.1.2   E-mail format

Administrators can configure the content of alarm e-mails for any user here. Administrators can configure the content of alarm e-mails for any user here. Users who are not administrators (specialists, users or guests) can view and edit only their own settings.

Log on as administrator, then go to the main "Settings" menu and click "User settings", "User notification", "Alarming" and "E-mail format" in the menu tree.

ⓘ   Non-administrators must go to the main "Settings" menu and then click "User settings". "My notifications", "Alarming" and "E-mail format".

Fig. 51   E-mail format

For "Active user", select the user who these settings will apply to (this is only possible for users registered as administrators).

Use the two buttons below to make the following basic setting:

"Use default message format" means that no further configuration is possible and the template configured in "Default e-mail format" is used. In this case, the other fields in the window cannot be edited.

"Use user-specific message format" means that a specific configuration in the message structure is used. In this case, the other fields in the window can be edited.
• For "E-mail language", select the language in which the placeholder variables are displayed.
• For "E-mail subject, enter the text for subject line and for "E-mail content", enter the content.
You do this using a combination text that you enter and placeholders (the blue terms below "Placeholder variables"). The placeholders stand for the various dynamic parameters of an alarm, for example, and are replaced with the actual content of the variable when the e-mail is sent. You can add placeholders to the subject or content by clicking on the blue parameter text at the current cursor position.

Click on "Preview" to see an example of the configuration.

Finally, click on "Save".

16.2.1.3   SMS format

Administrators can configure the content of SMS (text message) alarm notifications for any user here. Users who are not administrators (specialists, users or guests) can view and edit only their own settings.

Log on as an administrator, then go to the main "Settings" menu and click "User settings", "User notification", "Alarming" and "SMS format" in the menu tree. Non-administrators must go to the main "Settings" menu and then click on "User settings". "My notifications", "Alarming" and "SMS format".


Fig. 52   SMS format

For "Active user", select the user who these settings will apply to (this is only possible for users registered as administrators).

Use the two buttons below to make the following basic setting:

"Use default message format" means that no further configuration is possible and the template configured in "Default SMS format" is used. In this case, the other fields in the window cannot be edited.

"Use user-specific message format" means that a specific configuration in the message structure is used. In this case, the other fields in the window can be edited.

- For "Language", select the language in which the placeholder variable are displayed.

• For "Subject, enter the text for subject line and for "Content", enter the content. You do this using a combination text that you enter and placeholders (the blue terms below "Placeholder variables"). The placeholders stand for the various dynamic parameters of an alarm, for example, and are replaced with the actual content of the variable when the e-mail is sent. You can add placeholders to the subject or content by clicking on the blue parameter text at the current cursor position.

Click on "Preview" to see an example of the configuration.

Finally, click on "Save".

16.2.2   Audit Trail

Administrators can configure the sending of audit trail logs for any user here. Users who are not administrators (specialists, users or guests) can view and edit only their own settings.

Log on as administrator, then go to the main "Settings" menu and click "User settings", "User notification" and "Audit Trail" in the menu tree.

ⓘ   Non-administrators must go to the main "Settings" menu and then click on "User settings", "My notifications" and "Audit Trail" in the menu tree.
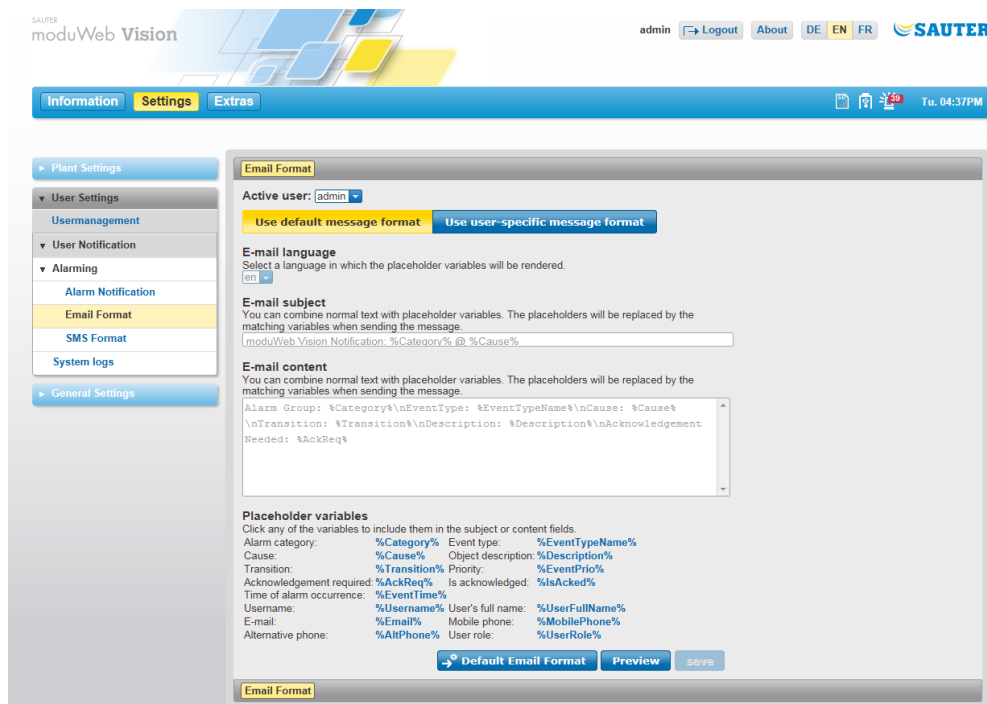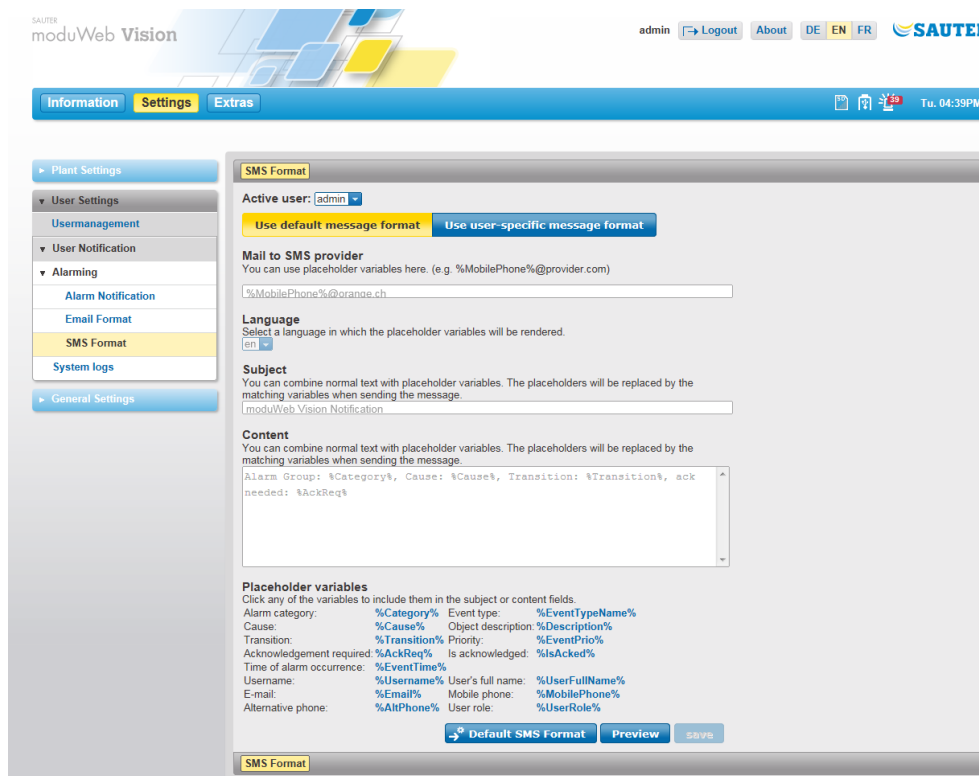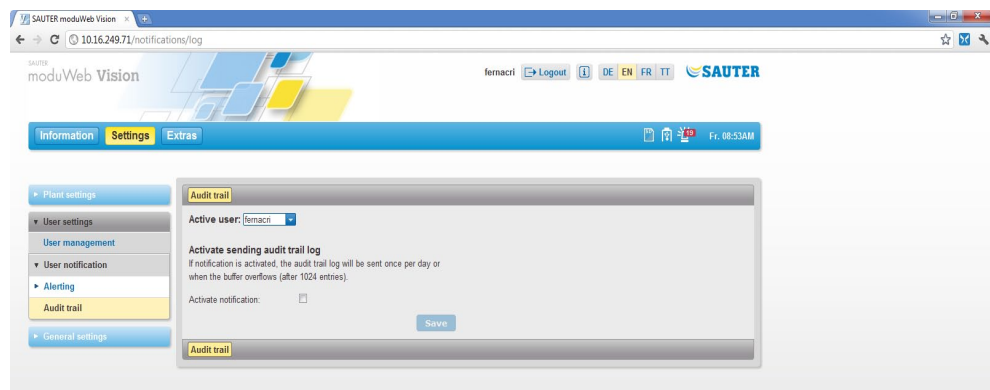

Fig. 53   Audit trail

For "Active user", select the user who these settings will apply to (this is only possible for users registered as administrators).

You can use the "Activate notification" checkbox to enable the sending of log entries.

ⓘ   They are sent every day, or when there are more than 1024 entries, whichever is first.

Finally, click on "Save".

17. General settings

This section describes the "General settings" area in the main "Settings" menu.

17.1 Notification settings

These settings are a precondition for setting up user notifications, for example about alarms, see section 16.2.

17.1.1 Mail server

Before notifications can be sent via e-mail and SMS, the mail server must be configured. Please log in with adminstrator privileges to configure the mail server

In the main "Settings" menu, click on "General settings", then "Notification settings" and "Server settings".
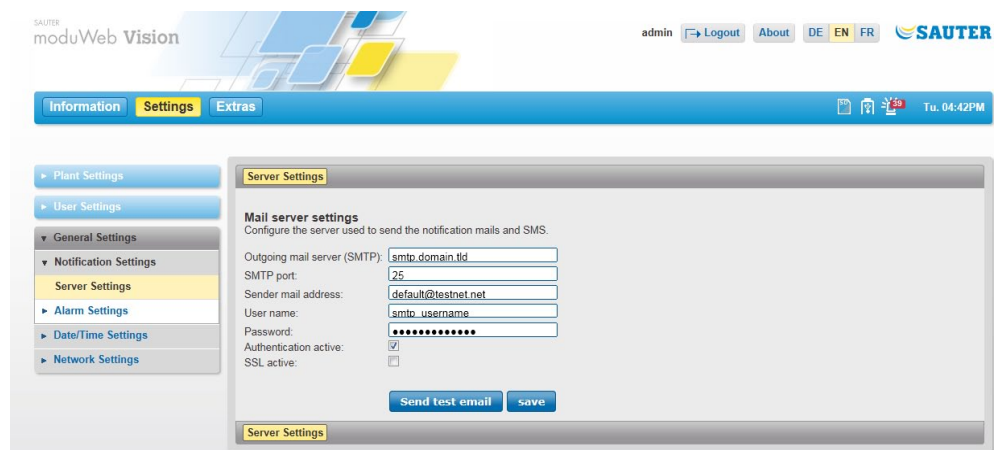
Fig. 54   Mail server

Fill in the dialogue according to the conditions in your network.

Finally, click on "Save".

ⓘ   You can click on "Send test e-mail" to send a test the e-mail to the user's address. Before sending, you need to respond to a confirmation prompt.

17.1.2   Notification profiles

Users who are registered as administrators can create up to five different notification profiles in moduWeb Vision and give them any name they want.

In the main "Settings" menu, click on "General settings", then "Notification settings", "Alarm settings" and "Notification profiles".
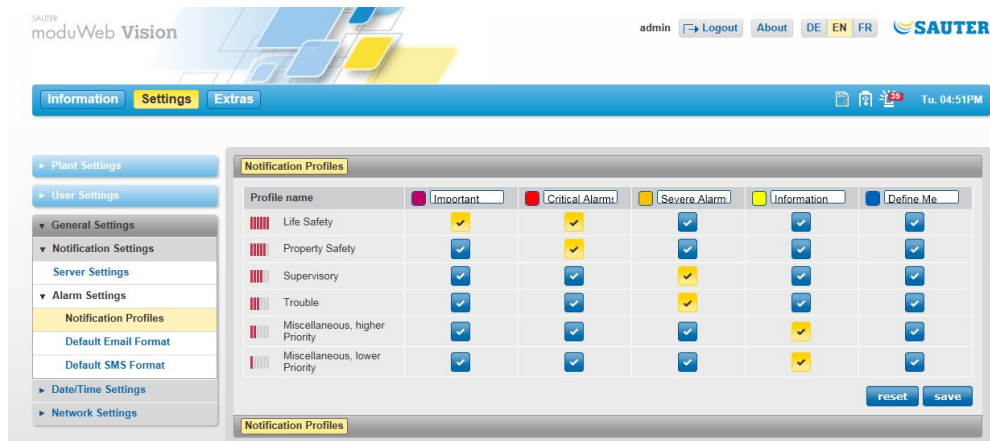
Fig. 55   Notification profiles

The five user profiles are shown in the top line of the table and are the same for all users. Within the profile, you can distinguish alarm notification s according to the six alarm priorities (see section 8.1.2).

ⓘ   Example: In the above window, only alarms with the "Life safety" (yellow symbole) priority are reported in the "Important" profile.

Change the names of the notification profiles if necessary.

For each profile, activate the checkboxes for the alarm priorities to be reported.

Finally, click on "Save".

17.1.3 Default e-mail format

Users who are registered as administrators can configure the standard format for e-mails here.

In the main "Settings" menu, click on "General settings", then "Notification settings", "Alarm settings" and "Default e-mail format".
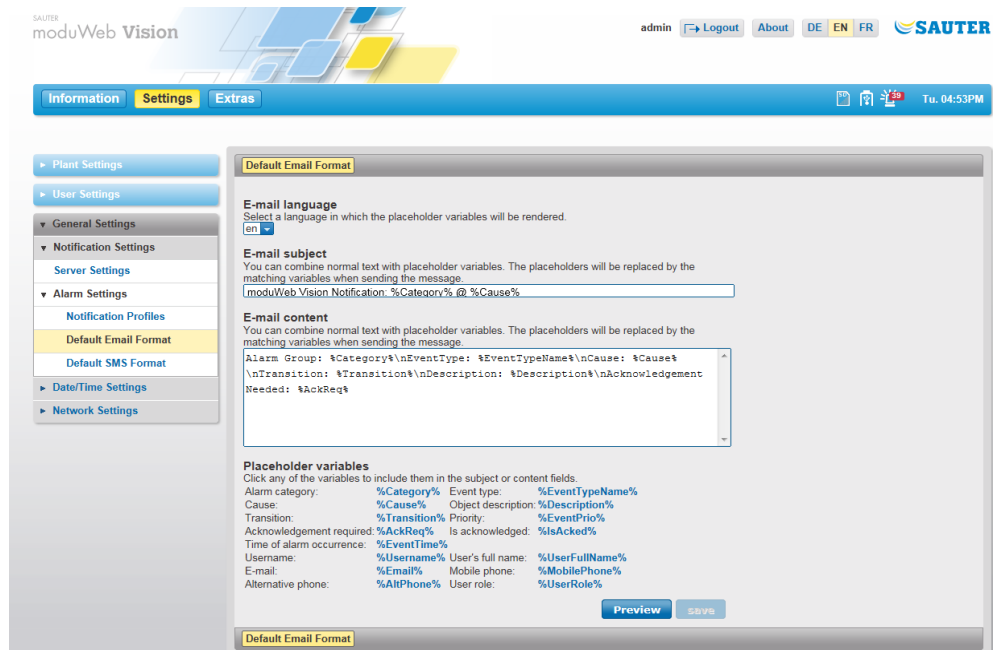
Fig. 56   Default e-mail format

For "E-mail language", select the language which is used when the placeholder variables are replaced.
For "E-mail subject, enter the text for subject line and for "E-mail content", enter the content.
You do this using a combination text that you enter and placeholders (the blue terms below "Placeholder variables"). The placeholders stand for the various dynamic parameters of an alarm, for example, and are replaced with the actual content of the variable when the e-mail is sent. You can add placeholders to the subject or content by clicking on the blue parameter text at the current cursor position.

Click on "Preview" to see an example of the configuration.

Finally, click on "Save".

17.1.4 Default SMS format

Users who are registered as administrators can configure the standard SMS format here.

In the main "Settings" menu, click on "General settings", then "Notification settings", "Alarm settings" and "Default SMS format".
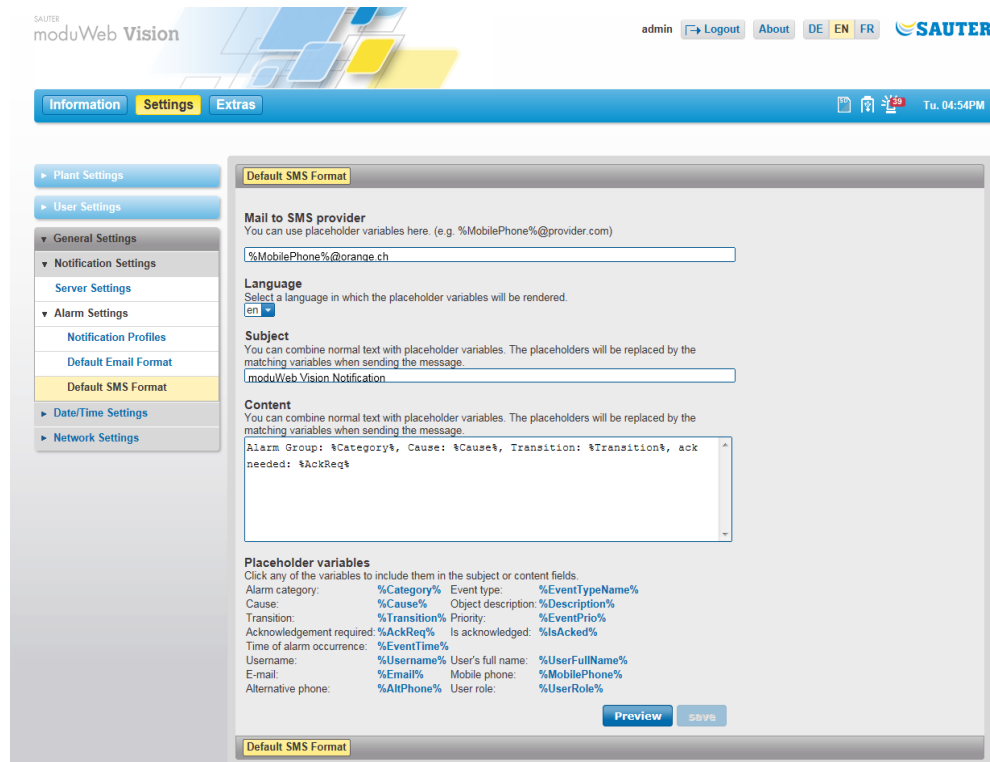
Fig. 57   Default SMS format

ⓘ   SMS notifications are sent by e-mail via an SMS gateway. The SMS gateway forwards the content of the e-mail in the form of an SMS to the user's mobile phone number that was entered in the user management.

ⓘ   The process for converting e-mails to SMS via an SMS gateway may differ, depending on the telecommunications provider. You may need to contact the provider.

The e-mail address of the SMS gateway is entered next to "e-mail to SMS provider".

For "Language", select the language which is used when the placeholder variables are replaced.

For "Subject, enter the text for subject line and for "Content", enter the content of the SMS.
You do this using a combination text that you enter and placeholders (the blue terms below "Placeholder variables"). The placeholders stand for the various dynamic parameters of an alarm, for example, and are replaced with the actual content of the variable when the SMS is sent. You can add placeholders to the

subject or content by clicking on the blue parameter text at the current cursor position.

Click on "Preview" to see an example of the configuration.

Finally, click on "Save".

17.2 Date/time settings

Im Menü Datum/Uhrzeit-Einstellungen werden festgelegt:
- Date and time
- Time server

The date and time settings menus are only available to users who are logged in as administrators.

17.2.1 Date/time

The moduWeb Vision system time can be set using three different sources.

In the main "Settings" menu, click on "General settings", then "Date/time settings" and "Date/time".
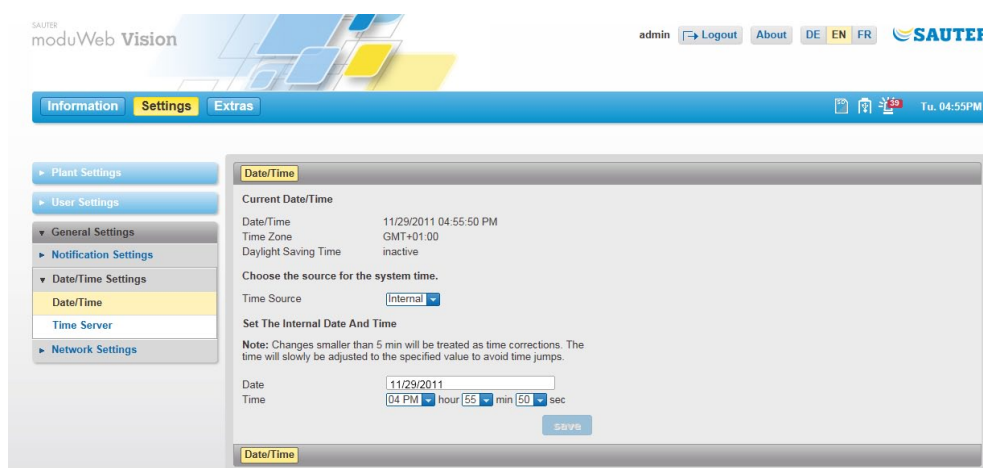
Fig. 58   Date/time, "internal" selected as system time source

Select the source for the moduWeb Vision system time:
- Internal
  Set the time and date manually.
- NTP
  moduWeb Vision regularly synchronises with the NTP servers defined here. This is the best option when an NTP server is available and moduWeb Vision is the only management system in use.
  Enter the required NTP settings in the fields.
- BACnet
  The time is taken from the BACnet synchronisation messages. This is the best option when BACnet synchronisation is available and synchronised with a reliable source.

Finally, click on "Save". Nach Bestätigung einer Sicherheitsabfrage wird die Aktion ausgeführt.

It is very important that the time is the same throughout the system. Make sure all the device have the same time source.

ⓘ   Changes of less than 5 minutes are regarded as corrections. In this case, the time is adjusted gradually to prevent large jumps in time.

ⓘ   If there is an exclamation mark by the time in the status indicator, the moduWeb Vision system time and that of the PC are more than 5 minutes out of sync.

17.2.2 Time server

moduWeb Vision can regularly send the system time to the registered devices. You can make various settings for this here.

In the main "Settings" menu, click on "General settings", then "Date/time settings" and "Time server".
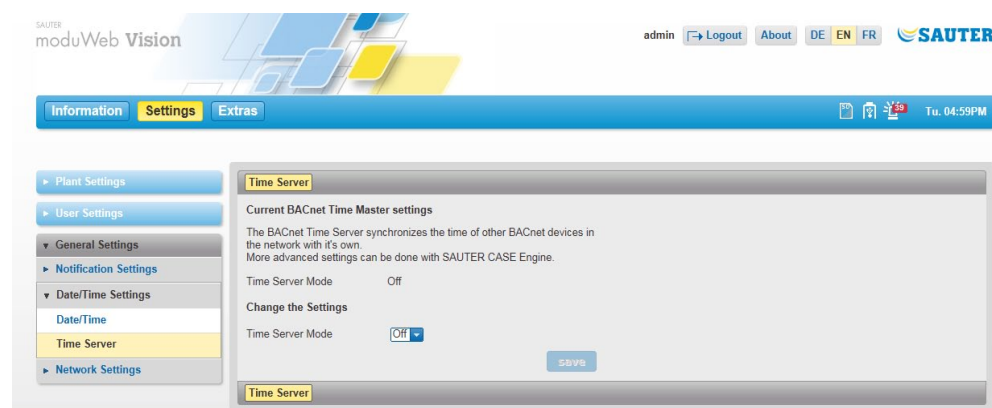
Fig. 59   Time server

Choose how the system time is sent to the registered devices.
- Off
  The moduWeb Vision system time is not sent to the registered devices.
- Local time
  moduWeb Vision send the local time to the registered devices.
- UTC time

moduWeb Vision send the UTC time (coordinated universal time) to the registered devices. The recipients calculate the local time with the UTC deviation for their time zone.

If you select local time or UTC time, you can select the synchronisation interval. If the "Advanced synchronisation" checkbox is selected, you can also specify the time of synchronisation.

To complete the process, click "Save".

17.3 Network settings

The following is set in the network settings menu:
- IP settings
- Proxy settings

The network settings menus are only available to users who are logged in as administrators.

17.3.1 IP settings

In the main "Settings" menu, click on "General settings", then "Network settings" and "IP settings".
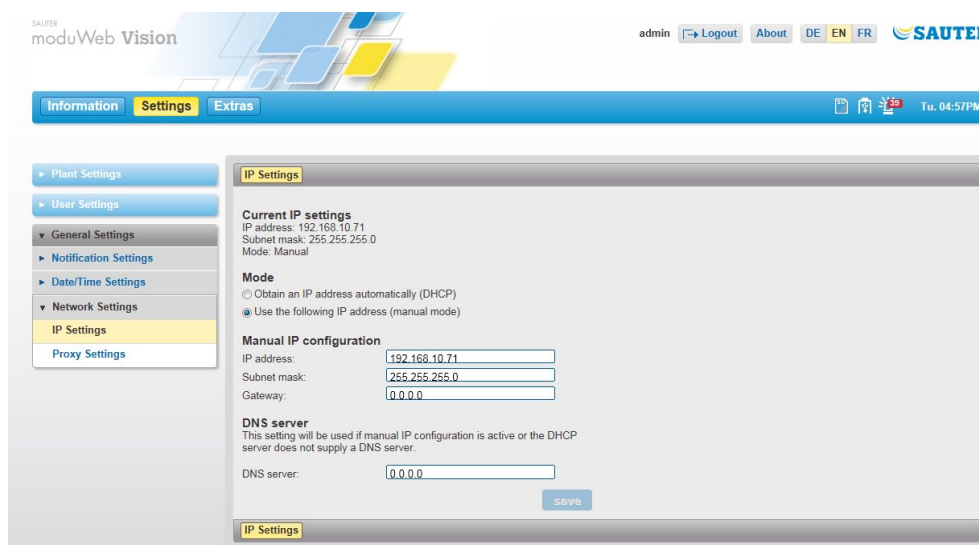
Fig. 60   IP settings

⚠️

The IP addresses of BACnet devices should not be changed without first consulting the system engineer or network administrator. It must be ensured that the settings are correct.

Under "Mode", select whether the IP address is sourced automatically (DCHP) or whether you want to use manual IP entry.

If you select manual IP entry, the relevant value must be entered.

You may also have to enter the DNS server address.

Finally, click on "Save". The action is executed after you respond to a confirmation prompt.

17.3.2 Proxy settings

In the main "Settings" menu, click on "General settings", then "Network settings" and "Proxy settings".
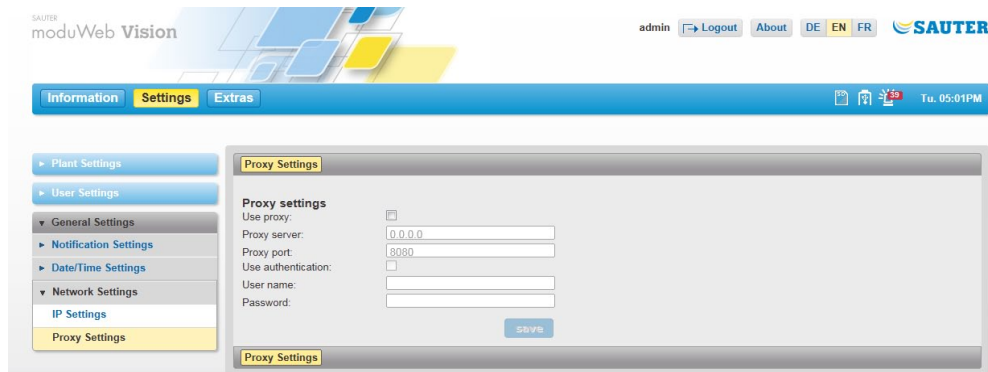
Fig. 61   Proxy settings

Select whether a proxy is to be used (activate the "Use proxy" checkbox).

If required, enter the appropriate values.

Finally, click on "Save".

ⓘ   You must consult the network administrator to ensure the settings are correct.

18. Extras

The main Extras menu contains the following functions.
- "Backup/restore": Back up and restore the system configuration
- "Update": Update the moduWeb Vision firmware
- "Storage": Type and status of the storage media: SD card for saving historical data, USB device for backing up data and internal memory
- "Restart device": Restart moduWeb Vision
- "Reset": Reset the system configuration and load the original configuration

18.1 Backup/restore

You can save the system configuration here and restore it if necessary.

18.1.1 Backup

The data can be backed up on a connected USB device or downloaded via HTTP. The backup on the USB memory contains both the system configuration and the historical data. Since the data volume of the historical data can be very large, no historical data is transferred during HTTP backup.

ⓘ   If a USB device is connected, this is indicated by the 🔧 icon in the status display.

ⓘ   The USB interface of moduWeb Vision supplies the connected USB device with up to 250 mA. That is usually sufficient for USB memory sticks. USB hard drives usually require an additional power supply (external power supply unit or USB hub with additional power supply).

Backup on USB device
In the main "Extras" menu, click on "Backup/restore" and then "Backup". The action is executed after you respond to a confirmation prompt.
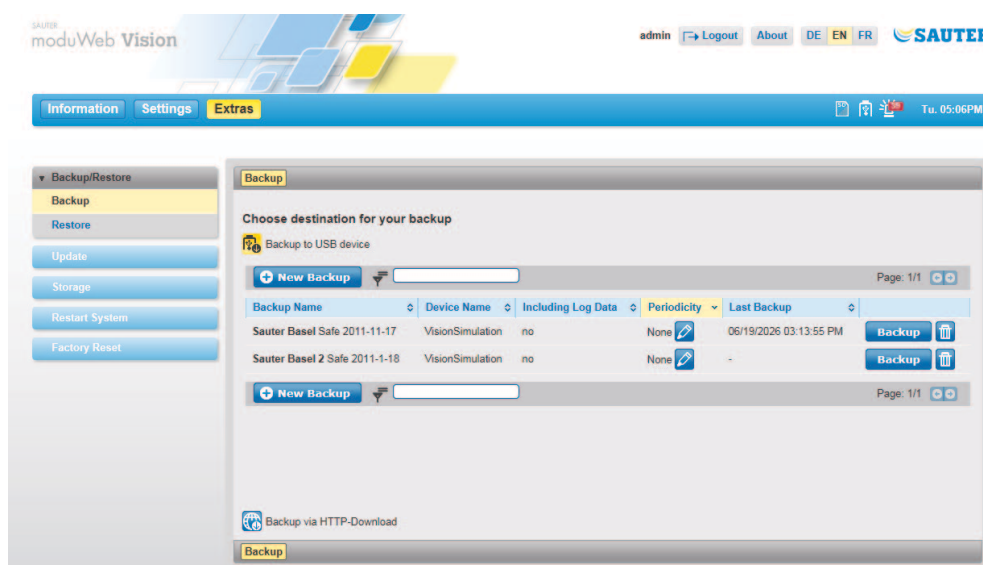
Fig. 62   Backup, USB device selected as destination

Click on the "Backup to USB device" icon to select the backup destination (this is only possible when a USB device is connected).

Click on "New backup" to create a new backup. Enter a name and a description in the pop-up window. If you want regular backups (periodicity), select "Daily", "Weekly" or "Monthly". If you select "Including log data", the log data is also backed up.

ⓘ   If you have selected a periodicity, the USB device must at least be connected at the time when the backup is carried out.

Finally, click on "Save". The backup job is created.

The list shows all existing backups. The columns show the name and description of each backup, the device names and whether the log data is included in the backup. The selected periodicity is also shown; you can change it by clicking on the 🖉 icon. The second-last column shows the date of the last backup.
You can click on "Backup" in the last column to update the backup.

You can click "Backup" in the last column to carry out the backup immediately.

Click on the 🗑 icon to delete the backup.

Backup via HTTP download
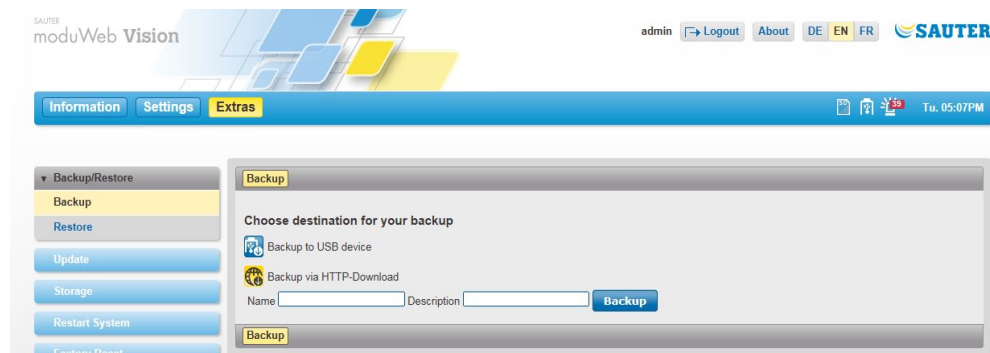
Fig. 63   Backup, HTTP selected as destination

Click on the "Backup via HTTP download" icon to select the backup destination.

Enter a name and a description and then click on "Save".

In the pop-up window of the operating system that then appears, select "Save" or "Save as" (in order to determine the save location for the download).

18.1.2 Restore

The data can be restored from a connected USB device or uploaded via HTTP.

ⓘ A backup can be restored only on the same software variant with which it was created. This means that it is not possible to restore a backup created with the (small) variant EY-WS505F010 to the (large) variant EY-WS505F020 or vice versa. However, backup files created with moduWeb Vision 1.0 (EY-WS500F005) can be restored with both software variants of version 1.2 (EY-WS505F010 and EY-WS505F020). In version 1.2, however, the backup files are from version 1.0.

Restore from USB device
In the main "Extras" menu, click on "Backup/restore" and then "Restore".
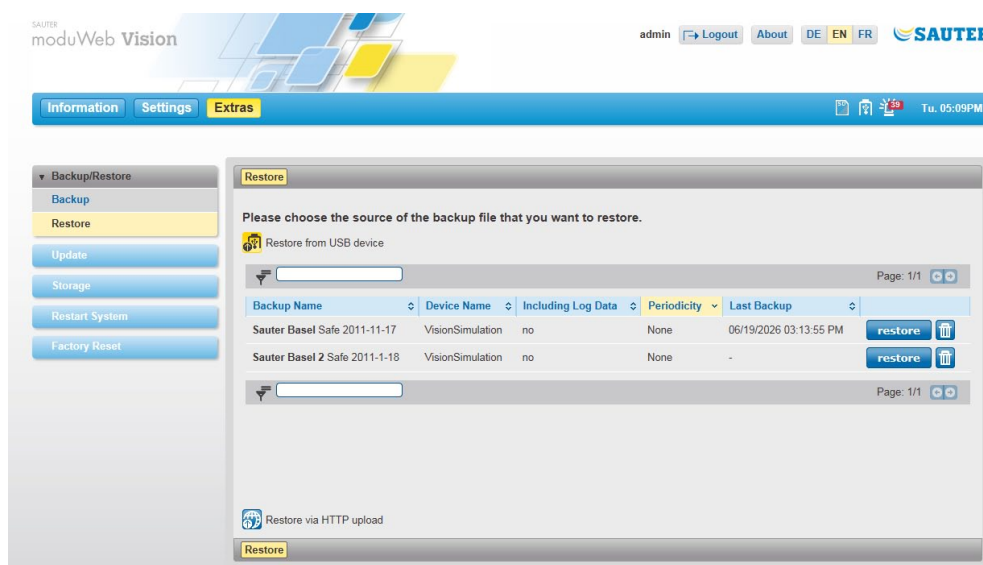
Fig. 64   Restore, USB device selected as source

Click on the "Restore from USB device" icon to select the retrieval source (this is only possible when a USB device is connected).

All the existing backups are shown in a list. The list is the same as the one described in section 18.1.1.

Click on "Restore" by the backup that you want. The action is executed after you respond to a confirmation prompt.

A window appears when the data has been successfully restored. After restoring the data, you must start moduWeb Vision again by clicking on "Restart". Restoring and restarting may take a few minutes.

Restore via HTTP upload
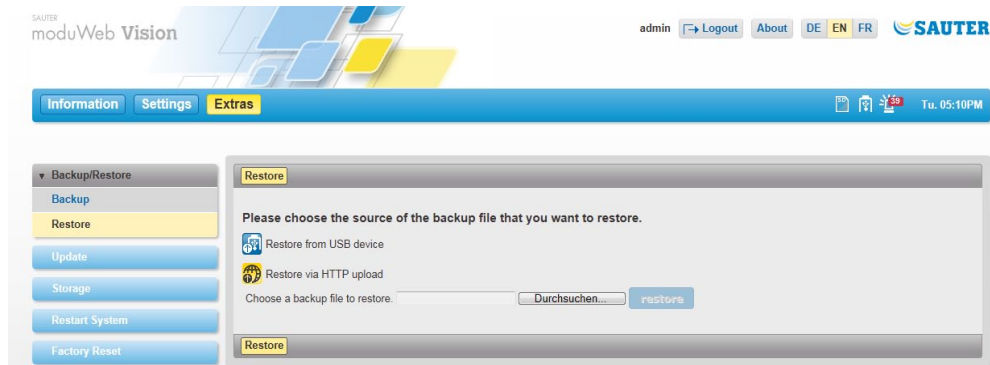
Fig. 65   Restore, HTTP selected as source

Click on the "Restore via HTTP download" icon to select the retrieval source.

If you click on "Browse" a window appears. In this window, select the path of the folder where the backup file is saved. Select the required backup file and click on "Open". The file is selected.

ⓘ   Backup files have the extension ".bkv".

Click on "Restore". The recovery is started.

A window appears when the data has been successfully restored. After restoring the data, you must start moduWeb Vision again by clicking on "Restart". Restoring and restarting may take a few minutes.

18.2   Update

You can use this menu to update the firmware.

Never use this function without first consulting SAUTER support or SAUTER service staff. Your SAUTER system partner will advise you on the benefits of updating the firmware.

Click on "Update" in the menu tree in the main "Extras" menu.
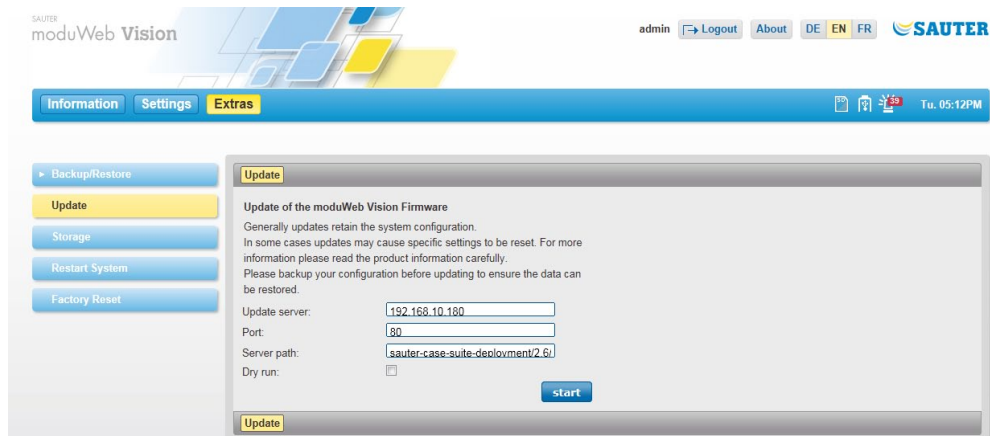
Fig. 66   Update

⚠ Normally, the system configuration is unaffected by an update. However, updates occasionally cause some settings to be reset. In order to prevent any loss of data, always make a backup before carrying out an update (see section 18.1).

ⓘ The functions of moduWeb Vision are restricted during an update. For example, the user interface is unavailable except for the "Update" window, and no alarms can be received or notifications sent.

In order to carry out an update, you must enter where it is stored on the web server. This requires the following information:
- "Update server": the IP address or host name of the web server
- "Port": the port via which the web server is contacted
- "Server path": the path to the update files on the server

If "Dry run" is selected, the system merely tests whether an update server is available and an update can be carried out.
When you click "Start", a check is carried out for the version to which the update will be made. After you respond to a confirmation prompt, the action is carried out and the process then ends.

If "Dry run" is not selected, you can click on "Start" to begin the update. The action is executed after you respond to a confirmation prompt.

During the update, the system displays which packages are currently being updated.

⚠ Do not close moduWeb Vision during the update, as this can lead to serious errors.

Once the update is complete, you must click on "Restart" to start moduWeb Vision again.

18.3 Storage

This menu contains information on the existing data storage and its status.

18.3.1 SD-Karte

You can only record log data from moduWeb Vision if an (optional) SD card is internal.

⚠ The SD card may only be inserted by trained personnel.

In the main "Extras" menu, click "Storage" and then "SD card".
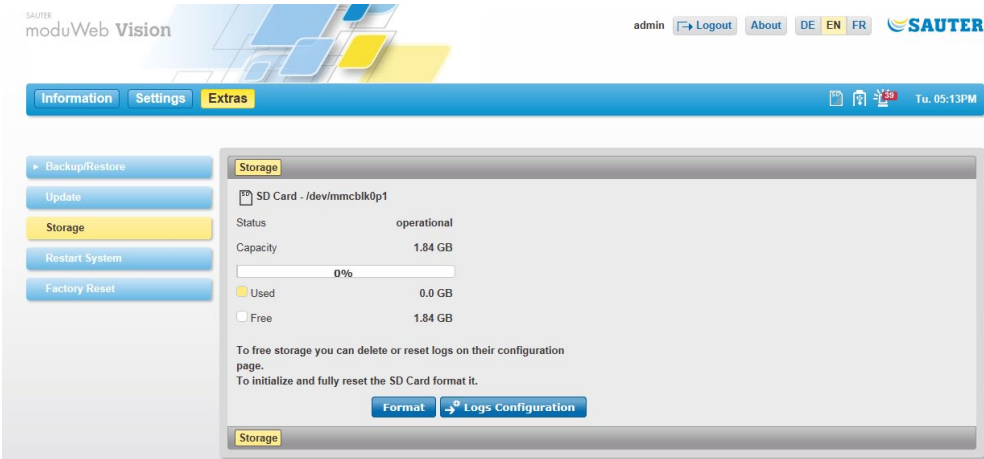
Fig. 67   SD card

Capacity
The capacity of the inserted SD card is displayed, along with the amounts of occupied and available memory.

Formatting the SD card
When you format the SD card, it is completely wiped and re-initialised. All the data on it is lost.

Start formatting with "Format". The action is executed after you respond to a confirmation prompt. This may take several minutes.

ⓘ   A new SD card must still be formatted even if it has already been formatted outside moduWeb Vision.

Releasing memory space
To release memory space on the SD card, you must reset or delete log data.

Click on "Logs configuration" to go to the "Simple charts / logs" menu in the main "Settings" menu (see section 13.1).
Here, you can reset selected
• logs (all recorded data is deleted, but the configuration remains and logging begins again immediately) or
• delete them (to configuration and all recorded data are lost).

18.3.2 USB device

For data backup, a USB device must be connected to moduWeb Vision.

In the main "Extras" menu, click "Storage" and then "USB device" in the menu tree.
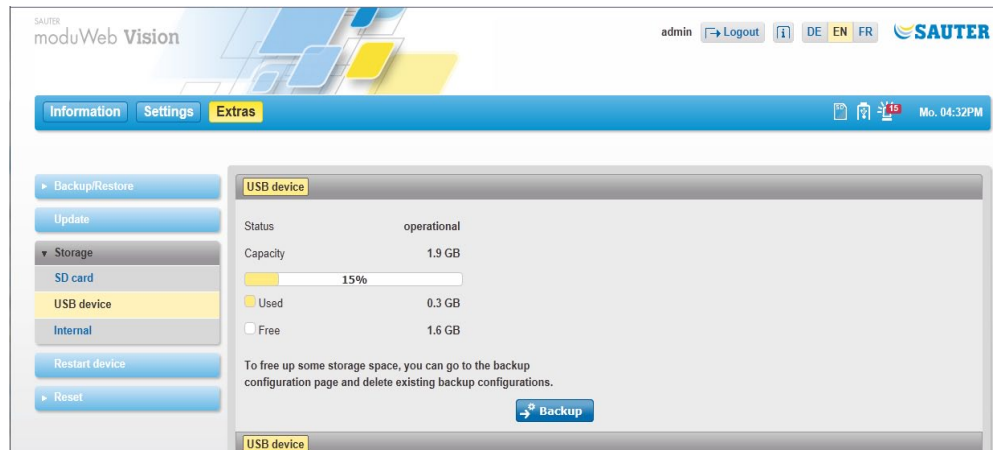
Fig. 68   USB device

Capacity
The capacity of the connected USB device is displayed, along with the amounts of occupied and available memory.

Free up memory
To free up memory on the USB device, data backups that were already saved to the device can be deleted.

Click "Backup" to switch to the "Backup/restore / Backup" menu in the main "Extras" menu; see section 18.1.1.
Here you can delete data backups that exist on the device.

ⓘ   Other data saved to the device cannot be deleted using this method. To do this, it may be necessary to connect the USB device to a PC.

18.3.3 Internal

The configuration data of the system is saved in the internal memory of moduWeb Vision. This also includes documents saved in the plant structure, for example.

In the main "Extras" menu, click "Storage" and then "Internal".
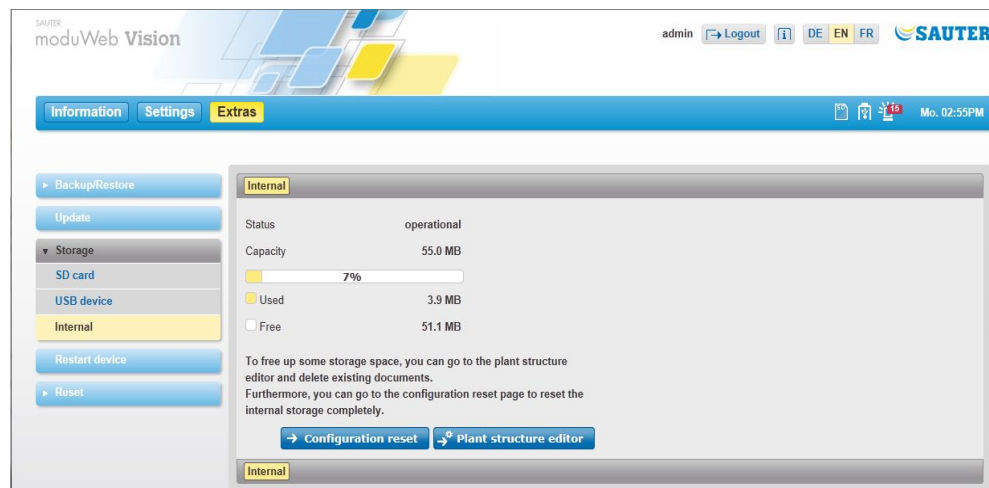
Fig. 69   Internal

Capacity

The capacity of the internal memory is displayed, along with the amounts of occupied and available memory.

Free up memory

The following options exist for freeing up memory:

Click "Reset configuration" to switch to the "Reset / Reset configuration" menu in the main "Extras" menu; see section 18.5.1.
Resetting the configuration causes practically the entire internal memory to be freed up.

⚠ **NOTE**

moduWeb Vision is no longer operational after this process. If you want to re-use the data, you must save it and restore it again later; see section 18.1. Observe the confirmation prompt.

Click "Edit plant structure" to switch to the "Plant view settings / Edit plant structure" menu in the main "Settings" menu; see section 15. You can delete documents that are no longer required in order to free up memory.

18.4 Restart device

You can use this menu to restart moduWeb Vision.
moduWeb Vision is closed. You should only do this when there are serious malfunctions that affect the system stability, because normal moduWeb Vision operation is interrupted for several minutes.

Please note:
• Data logging is paused during the restart
• Alarm reception is inactive during the restart
• E-mail notification is inactive during the restart
• All currently active alarms are temporarily moved to the historical list. Alarms that are still active after the restart are again listed in the current alarm list
• All configured devices and data points are reinitialised over the network after the restart

Click "Restart device" in the menu tree in the main "Extras" menu.
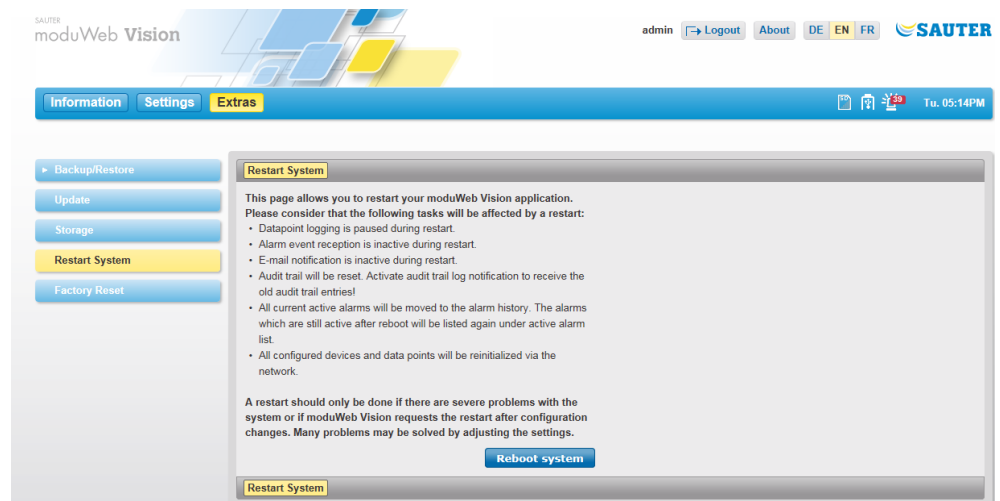
Fig. 70   Restart device

The system is restarted when you click "Restart device" and respond to a confirmation prompt.

18.5 Reset

18.5.1 Reset the configuration

You can use this menu to delete the system configuration.

Please note:
During this process, all user data is deleted, including:
• All user accounts except for the standard administrator
• The registered devices and the project structure
• All alarms
• The configuration of the data logging
The following data remains:
• The network settings
• The BACnet device ID
• The data recorded on an existing SD card

Backup data before the reset.

Click "Reset / Reset configuration" in the main "Extras" menu in the menu tree

Fig. 71   Reset the configuration

⚠️   **NOTE**
moduWeb Vision is no longer operational after this process. If you want to re-use the data, you must save it and restore it again later; see section 18.1. Observe the confirmation prompt.

If you click "Reset configuration" and respond to a subsequent confirmation prompt, the configuration data is deleted.

18.5.2 Factory reset

This menu resets moduWeb Vision to the condition ex works. All operating, configuration and engineering data is then lost. If any firmware upgrades are installed, they are not reset and the system retains the latest installed version of the firmware.

Please note:
During this process, the following data is deleted and the following settings are changed:
- All user accounts are removed (except for the standard user Admin)
- The configured devices and the plant structure tree are removed
- All alarms are deleted
- The entire logging and chart configuration is removed
- DHCP is activated in the network settings
- The BACnet device ID is set to 1
- The fourth language is deleted if it is installed

⚠️ **NOTE**
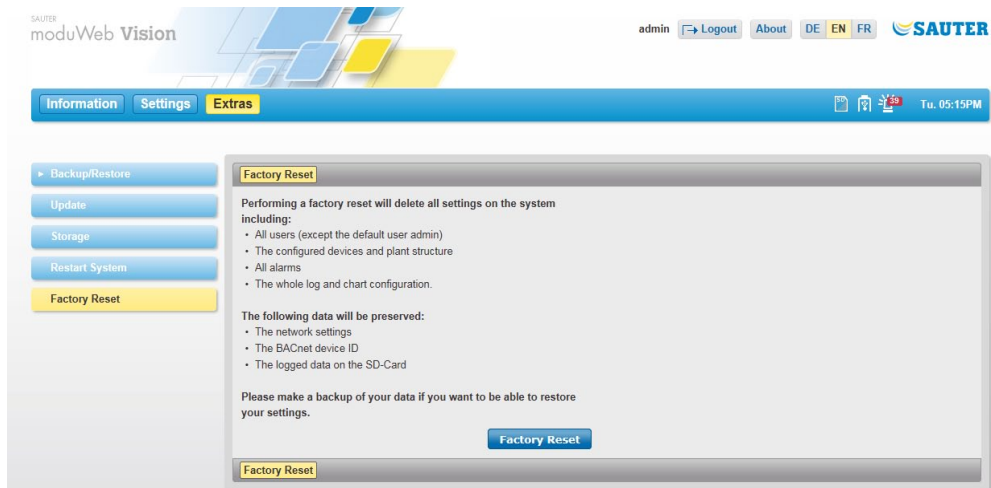moduWeb Vision is no longer operational after this process. If you want to re-use the data, you must save it and restore it again later; see section 18.1. Observe the confirmation prompt.

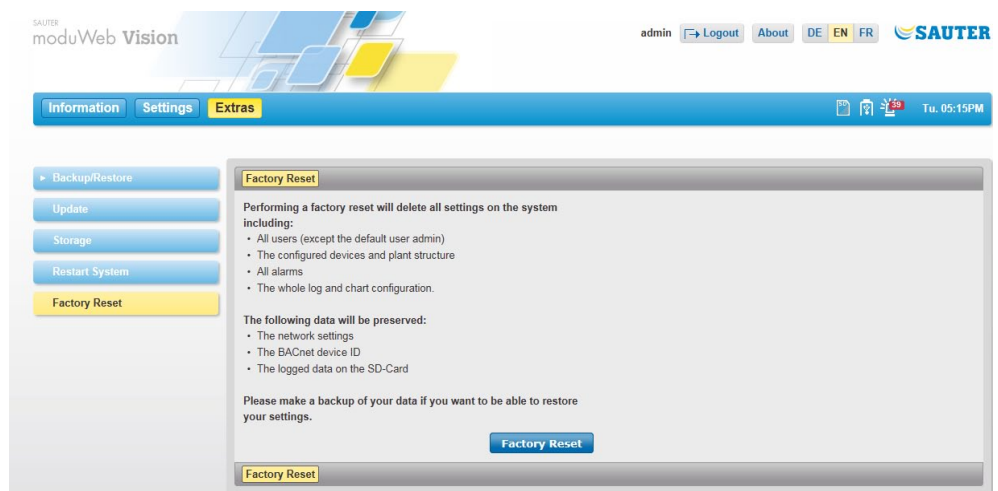Click "Factory reset" in the menu tree in the main "Extras" menu.

Fig. 72   Factory reset

When you click "Factory reset" and respond to a confirmation prompt, the system is restored to its original state.

19. Configuration and start-up

19.1 Connection

In accordance with the product data sheet "moduWeb500: web server for BACnet network moduWeb Vision" PDS 96.005 and fitting instructions "WS500" P10006978 A.

19.2 Programming and parameterisation

moduWeb Vision is usually parameterised and configured by SAUTER or an authorised system partner using CASE Suite.

moduWeb500 is supplied without software. The device will not work until the moduWeb Vision software (EY-WS505F010 or EYWS505F020) is installed. The software is installed during initial installation with CASE Sun.

During the planning phase, the plant structure, the navigation, the dynamic images and the diagrams are created.

19.2.1 Starting the moduWeb500 web server

After a restart, moduWeb Vision is initialised. moduWeb Vision reports all the data points alarms and notifications for the BACnet devices. This process can take several minutes. moduWeb Vision can only operate correctly once the initialisation has been completed.

1. Turn the switch on the moduWeb500 to ON.
   The "STATUS" LED lights up orange.
2. Wait 2 minutes until the system loads and the "STATUS" LED lights up green.

The system is ready.

Loading may take longer, depending on the capacity of the SD card.

If someone logs into moduWeb Vision from a PC before loading is completed, the browser displays a waiting screen.

ⓘ   User who are logged in as administrators can also use the restart function in moduWeb; section 18.4.

Configuration and start-up

19.2.2 LED indicators

Three LEDs on the moduWeb500 indicate its various operating states.
The following table explains the function of each LED.

LED	Status	Description
STATUS	Constant orange light	moduWeb500 in startup mode
	Constant green light	moduWeb500 in operation
	Flashing green	Identification via CASE Sun "Blink"
	Flashing red	moduWeb500 in configuration, restart / download mode
	Rapid flashing red	No license exists or internal error
Left Ethernet LED	Constant orange light	Network connection present
	Off (no display)	Network connection interrupted
Right Ethernet LED	Pulsating green	Ethernet (data transmission active)

19.2.3 Reset button

You can use a button to reset the moduWeb500. The button is attached in such a away that is cannot be pressed inadvertently. The button has two functions:

1. Press the button for less than 5 seconds: warm start.
   The application is closed and restarted without interrupting the power supply.
2. Press the button for longer than 5 seconds: cold start.
   The power supply to the main CPU is switched off and on again.

19.2.4 Watchdog

A watchdog signal which monitors internal processes can be captured from the moduWeb500.

As a practical application, the signal can be connected directly to a digital or universal input of an automation station and monitored using software.

19.2.5 Switching off and disconnecting the moduWeb500 web server from the mains

If you want to disconnect the modWeb500 from the mains, use the following procedure so as to avoid data loss or other disruptions to the system.

1. Save all the changes made in moduWeb Vision.
2. Log out
3. Turn the switch on the moduWeb500 to OFF.
   The indicator lamp flashes red.
4. Wait until the indicator lamp goes out.

You can now disconnect the moduWeb500 from the mains.

20. Appendix

20.1 FAQ

20.1.1 Engineering and start-up

- **May I use the power supply connector for a redundant power source?**

  No.
  Using both power inlets at the same time may damage the EY-WS500F005.

- **My USB disk is not detected**

  Reason:
  The USB connection on moduWeb Vision supplies only 250 mA. Most USB disks without an external power supply unit require more current.
  Solution:
  - Use a USB pen drive as the storage medium (recommended) or
  - Connect the USB drive to an external power supply unit or
  - Provide the USB drive with an additional power supply via USB hub (powered USB hub)

- **Can't send mails with product-smtp.**

  Update to Firware revision 1.1.2 or newer.
  Or uncheck the checkbox "SSL active" in the mail server settings.

- **After a CE-download no changes take effect**

  Cause:
  The download failed due to several causes:

  For big configuration downloads you need to adapt the Backup Failure Timeout Setting in Case Engine. You have to possibilities to do that:
  - adapt the property in the devices' properties by using the BACnetbrowser
  - Download only the BACnet Config by checking during the download only this field. After that you can do a download with both checked.

  A good value for big configurations here is 900 (value is coded in seconds).
  See also FAQ "CE-Dwonload fails".

- **CE-download fails**

    Reason: The download time varies with the size of your project. On big project this may cause a timeout error.

    Resolution: If necessary, you can increase the value of the property "Backup Failure Timeout" in the device object of moduWeb Vision.

    Three steps are necessary:

    1. Please Check first if Daylight saving time is activated in the Case Engine project. Otherwise the Config file won't be read.
    2. In CASE Engine, change this value in the device properties of the moduWeb Vision and make a download of the BACnet properties only.
    3. Make a complete download with CASE engine

    To speed up, instead of maing the first download, you may change the propert directly with a BACnet browser

20.1.2   Log data and charts

- **moduWeb Vision: In the combined charts there are missing values**

    A chart combination of data points with a large data volume and a small data volume in one combined chart may lead to different presentation of the chart each time the interval is loaded again, due to optimization algorithm.

    This behaviour has been fixed with Firmmware Version 1.1.2

- **Can I read out the SD card with a PC?**

    No.
    The SD card is an internal component of moduWeb Vision and should not be removed.
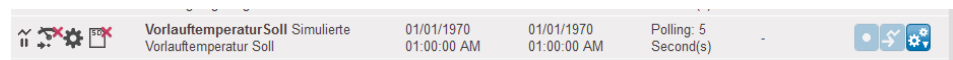   Removing the SD card during operation may cause data loss.
    Also:
    In order to preserve the SD card from premature wear, moduWeb Vision uses a file system specifically designed for continuosly writing to flash memory.
    This file system is not readable with a PC.

- **In the Log Settings list there are Corrupt entries!**

    If you have corrupt entries in the LogSettings list then this is a problem in the CASE Vision configuration. In Case Vision there is right now no check if the dp's which are defined as logs are also in the SVO.

But in moduWeb Vision this is absolutely necessary. so please go back to your CASE Vision project and check if the logs datapoints are also included in the SVO (Navigations).

- **White content after selection of Charts/Logs view**

The problem may be caused by caching behavior of the browser.
1. Please empty the cache in the settings window of your browser
2. Important is also to clean the Plugin-Datas.
3. The best possibility to clean cache for Flash in all Browsers is to go to the ontrol Panel of Windows, selecting the Flash Player Settings Manager and deleting under the Tabs Advanced all "Browsing Data and Settings"

20.1.3 Web interface, page structure

- **What works and what doesn't without a Flash Player?**

Everything works except:
  - the images
  - the charts
  - the SVO configurator (needed only for project engineering)
Therefore it is possible, among others, to navigate through the SVO tree, operate in the list view, view and acknowldege alarms and edit schedules and calendars.

- **Schedule data is not up to date**

Situation:
Assume a network with at least one moduWeb and a moduWeb Vision.
While working with moduWeb Vision, a change is made in the schedule through a direct login into a moduWeb Station. The change is not displayed in the moduWeb Vision Station.

Workaround:
There is no synchronisation mechanism foreseen for this situation. Therefore, it's necessary to manually refresh the page in the browser.
In the case of IE9, press F5 to refresh, or even CTRL+F5 to erase the cache and refresh the page.

- **Loading a list view takes a long time and causes a script warning**

Reason: in the internet explorer the execution of scripts is slower than on most other browsers. On long lists this may cause loading times of more than one minute, making the IE warn about the long execution time.

Workarounds:
You can accept the warning and wait until the page is loaded (click continue).
You may consider using a faster web browser like Chrome or Firefox
You may consider restructuring your projecct in order to avoid long lists.

- **Acknowledging alarms takes a long time and runs into a script error**

  Reason: in the internet explorer the execution of scripts is slower than on most other browsers.

  When acknowledging more than 100 alarms at the same time, the execution may take more than one minute, making the IE warn about the long execution time.

  Workarounds:
  - You can accept the warning and wait until all alarms are acknowledged.
  - Acknowledge less alarms by selecting for example "all on page".
  - You may consider using a faster web browser like Chrome or Firefox.