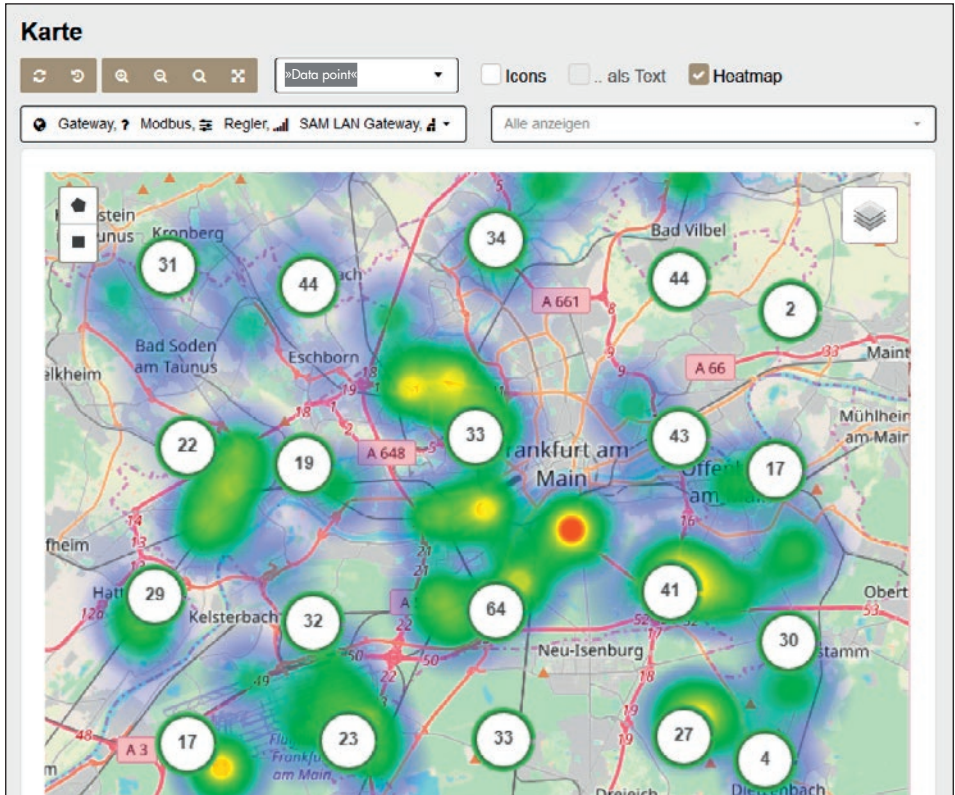




EB 6901 EN

Translation of original instructions



SAM DISTRICT ENERGY

Web interface for local heat supply and district heating networks

Note on these mounting and operating instructions

These mounting and operating instructions assist you in mounting and operating the device safely. The instructions are binding for handling SAMSON devices. The images shown in these instructions are for illustration purposes only. The actual product may vary.

- For the safe and proper use of these instructions, read them carefully and keep them for later reference.
- If you have any questions about these instructions, contact SAMSON's After-sales Service (aftersaleservice@samsongroup.com).



The mounting and operating instructions for the devices are included in the scope of delivery. The latest documentation is available on our website at www.samsongroup.com > **Service & Support** > **Downloads** > **Documentation**.

Definition of signal words

DANGER

Hazardous situations which, if not avoided, will result in death or serious injury

WARNING

Hazardous situations which, if not avoided, could result in death or serious injury

NOTICE

Property damage message or malfunction

Note

Additional information

Tip

Recommended action

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i Note

Headings marked with an asterisk (*) describe actions that can only be performed by users with certain privileges or share rights. Privileges and share rights can be found in the user profile (see section 6).

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1 Safety instructions and measures

Intended use

SAM DISTRICT ENERGY is a web-based solution for managing, controlling and optimizing heating systems in the local heat supply and district heating networks.

Reasonably foreseeable misuse

The heating system can be controlled remotely with SAM DISTRICT ENERGY. It is particularly useful to perform the configuration and parameterization of connected TROVIS 55xx Heating Controllers. As a result, it is important that the heating controller settings are not changed if they affect the operation of the heating system.

Qualifications of operating personnel

The heating controllers must be configured and set by trained and experienced personnel only. According to these operating instructions, trained personnel refers to individuals who are able to judge the work they are assigned to and recognize possible hazards due to their specialized training, their knowledge and experience as well as their knowledge of the applicable standards.

Personal protective equipment

No personal protective equipment is required.

Revisions and other modifications

Revisions or other modifications to SAM DISTRICT ENERGY are not authorized by SAMSON.

Safety features

SAM DISTRICT ENERGY can only be accessed and operated by authorized users. The following restrictions apply:

- Client-based access is only possible. This means that users only have access to their own assigned clients. Clients are usually companies or organizations that use SAM DISTRICT ENERGY to manage heating systems. This client-specific access ensures that users only can read and write data belonging to their own company or organization.
- Various user privileges can be assigned to certain users to allow them to perform various executable actions in SAM DISTRICT ENERGY.

Clients using the full version can choose between standard login and login with a two-factor authentication. Two-factor authentication serves as additional protection against phishing, pharming and other types of cyber attacks. Users can only log into SAM DISTRICT ENERGY after entering a verification code with this login option.

Safety instructions and measures

SAM DISTRICT ENERGY is hosted by a professionally managed data center in Germany (certification according to ISO 9001, ISO 27001, ISO 27017, ISO 27018, C5, PCI DSS Level 1). High security standards are achieved through infrastructural and organizational measures (e.g. access control, interruptible power supply, redundant power and network supplies). Data processing is based on the EU General Data Protection Regulation (GDPR)/ German Federal Data Protection Act (BDSG).

HTTPS connection (TLS encryption) is exclusively used for communication in SAM DISTRICT ENERGY. Only identified SAMSON gateways can be connected with SAM DISTRICT ENERGY (AES-256 data encryption). HTTPS connection is used for access to REST interfaces.

All data in SAM DISTRICT ENERGY are regularly saved. When connection problems occur, some data are saved temporarily for up to 14 days and transmitted upon reconnection.

Warning against residual hazards

The settings in SAM DISTRICT ENERGY have a direct influence on the connected heating controllers and the final control elements (e.g. pumps, control valves etc.) installed in the heating system. To avoid personal injury or property damage, plant operators and operating personnel must prevent hazards that could be caused in the final control element by the process medium, the operating pressure, the signal pressure or by moving parts by taking appropriate precautions. Plant operators and operating personnel must observe all hazard statements, warning and caution notes in the referenced documents.

Responsibilities of the operator

Operators are responsible for proper use and compliance with the safety regulations. The operator is obliged to provide these operating instructions as well as the referenced documents to the operating personnel and to instruct them in proper operation. Furthermore, operators must ensure that operating personnel or third parties are not exposed to any danger.

We recommend that operators make users of SAM DISTRICT ENERGY aware about the issue of IT security within the organization or company.

Responsibilities of operating personnel

Operating personnel must read and understand these operating instructions as well as the referenced documents and observe the specified hazard statements, warnings and caution notes. Furthermore, operating personnel must be familiar with the applicable health, safety and accident prevention regulations and comply with them.

Referenced standards, directives and regulations

None

Referenced documentation

The referenced mounting and operating instructions are available in SAM DISTRICT ENERGY under device information (see section 9.1).

1.1 Notes on possible property damage

NOTICE



Malfunction of the connected heating controller due to configuration and parameter settings that do not meet the requirements of the application.

Changes to the configuration and parameters have a direct effect on connected heating controllers as well as final control elements that they control.

- Do not give users access to devices unless they are able to appraise the effects that changes to parameters and configurations will have on devices.
- Only assign user privileges that users need to perform their work.

Risk of security breach after a data security incident.

In line with the latest standards and to ensure data security, the data saved in SAM DISTRICT ENERGY are exclusively saved in professionally managed computing centers in Germany. Additional security measures taken by users help significantly to improve the level of data security.

- Delete user accounts that are no longer used.
- Do not make the password accessible to third parties. Do not save them in a browser. Change passwords regularly.
- Log out [ ▾ >  Logout] to close SAM DISTRICT ENERGY.
- Report any data security breaches and suspicious incidents to SAMSON by clicking [Information security] at the bottom of the window.

2 General information

2.1 Concerning these operating instructions

- Headings marked with an asterisk (*) describe actions that can only be performed by users with certain privileges or share rights. Privileges and share rights can be found in the user profile (see section 6).
- SAM DISTRICT ENERGY is optimized for use with the web browsers Mozilla Firefox and Google Chrome. Some of the screenshots shown below may vary depending on the web browser you use. Functions remain unaffected in this case.
- The screenshots shown in this document are examples. Customized information or menu items are made evident (example: »customized text«).

Recurring buttons in dialog windows

Cancel	Terminate action without saving changes.
Save	Confirm entry and exit.
Next	Confirm entry and move to next action.
Back	Terminate action without saving changes.
×	Terminate action without saving changes.
▶	Next
◀	Back
↑	Sort entries
↻	Refresh reading

2.2 Features

There are two SAM DISTRICT ENERGY versions available:

- **BASIC VERSION:** version with basic functions
- **FULL VERSION:** version that includes all functions

In addition to the basic version, a client-based two-factor authentication can be activated (see section 4) and a controller backup can be performed (see section 9.12.3).

3 Creating an account

Initial account configuration depends on whether the client has opted for a standard login or login with two-factor authentication (see section 12.1).

The following applies to both login versions:

- Passwords expire every 90 days. Users must change their password to continue accessing the account.
- SAM DISTRICT ENERGY prompts users to change their password after 90 days.

Every user requires their own client-based account to use SAM DISTRICT ENERGY. In order to create an account, a new user must be authorized by an existing user of the same client (see section 9.11).

After authorization, new users receive an e-mail with a link to access SAM DISTRICT ENERGY.

→ Click on the activation link in the e-mail to open the 'Create account' window.

→ Enter your name, e-mail address and password.

Users can assign their own password. It must meet the requirements of SAM DISTRICT ENERGY concerning length and characters (see section 12.1).

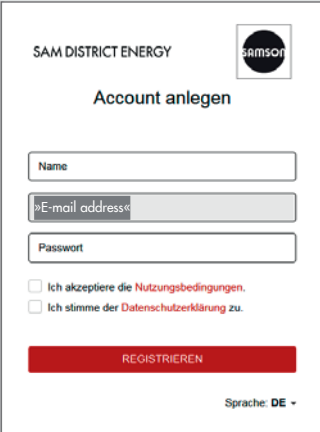
→ Read and accept the terms and conditions by checking the 'I agree with Terms & Conditions' box (☑).

Read and accept the privacy policy by checking the 'I agree with Privacy Policy' box (☑).

→ Click [REGISTER] button.

An account cannot be created unless the boxes are checked.

The login successful message appears for clients using the basic version or clients using the full version but have opted for standard login.



The screenshot shows a web form titled 'Account anlegen' for SAM DISTRICT ENERGY. At the top left is the company name 'SAM DISTRICT ENERGY' and at the top right is the 'samson' logo. Below the title are three input fields: 'Name', 'E-mail address', and 'Passwort'. Underneath these fields are two checkboxes with red text: ' Ich akzeptiere die Nutzungsbedingungen.' and ' Ich stimme der Datenschutzerklärung zu.'. At the bottom of the form is a prominent red button labeled 'REGISTRIEREN'. In the bottom right corner, it says 'Sprache: DE -'.

Window 1: Creating an account

For clients using the full version with two-factor authentication, the 'Configuration two-factor authentication' window appears (see section 12.1.1).


Configuration two factor authentication ✕

SAM DISTRICT ENERGY supports authentication via RFC 6238 TOTP (Time-Based One-Time Password).

This requires a smartphone with corresponding app. Depending on the model, different apps exist that can be used for authentication (e.g. Google Authenticator, Microsoft Authenticator, or Authy). Please install a suitable app prior to proceeding.

Scan the QR code in your app and then enter the displayed (six-digit) numerical code to activate two-factor authentication.

Make absolutely sure that no unauthorised person can scan the QR code!

 [Show personal QR code](#)

After activation, you will also need the app's numerical code to login.

4 User registration

Once your user account has been created, you can open SAM DISTRICT ENERGY.

SAM DISTRICT ENERGY can be accessed using a link specific to the client (e.g. <https://mandant.sam-digital.net>).

Login depends on whether the client has opted for a standard login or login with two-factor authentication (see section 12.1).

The following applies to both login versions:

- Users can enter an incorrect password three times in succession before they are locked out.
 - Click [Forgot Password?] to reset your password.
- ➔ Open login window (link from the e-mail sent confirming your access).

- ➔ Enter your e-mail address and password.
- ➔ To change the language, click [DE ▼] and select the required language (Deutsch/English/Français).
- ➔ Click [LOGIN] to open SAM DISTRICT ENERGY.

The last page opened in SAM DISTRICT ENERGY appears for users of the basic version or users of the full version who have opted for standard login.



Tip

Check the 'Remember me' box (☑) to save your login details after closing SAM DISTRICT ENERGY in the browser. We recommend only to use this function when you open SAM DISTRICT ENERGY on a mobile device that is password-protected.

Window 2: Login

For clients who have opted to use the full version with two-factor authentication, users receive an automatically generated code on their authenticator app after entering a password. Users must then enter this pin into the logon window of SAM DISTRICT ENERGY.

After logging on successfully, the SAM DISTRICT ENERGY start screen opens (see page 16).

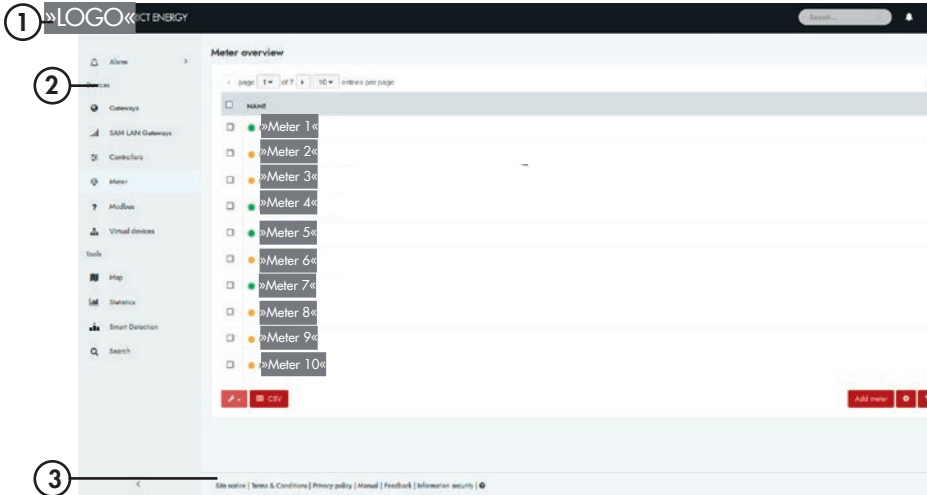
Exiting SAM DISTRICT ENERGY

→ Select [ >  Logout].

Logged-in users are automatically logged out after 15 minutes of inactivity.

User registration

Click the logo or [🏠], the meter overview appears in SAM DISTRICT ENERGY (i.e. start screen).



- ① Menu bar (see section 5.1)
Which elements appear on the menu bar depends on the mobile end device.
- ② Navigation bar (see section 5.2)
Which elements appear on the navigation bar depends on the user privileges.
- ③ Footer (see section 5.3)

5 Navigation





5.1 Menu bar

The appearance of the menu bar depends on the page resolution of the mobile device.

View on a computer or laptop (e.g. screen width \geq 768 pixels)

				
Open welcome page	Find names or labels	Go to alarms	Filter listed readings by device status	Add device profiles Manage user profiles Logout

View on mobile devices (e.g. display width \leq 320 pixels)

			
Open navigation bar	Go to the start screen	Find names or labels	Add device profiles Manage user profiles Logout

i Note

On mobile devices, 'Go to alarms' and 'Filter listed readings by device status' menu items are located in the user profile (👤 ▼).

Navigation

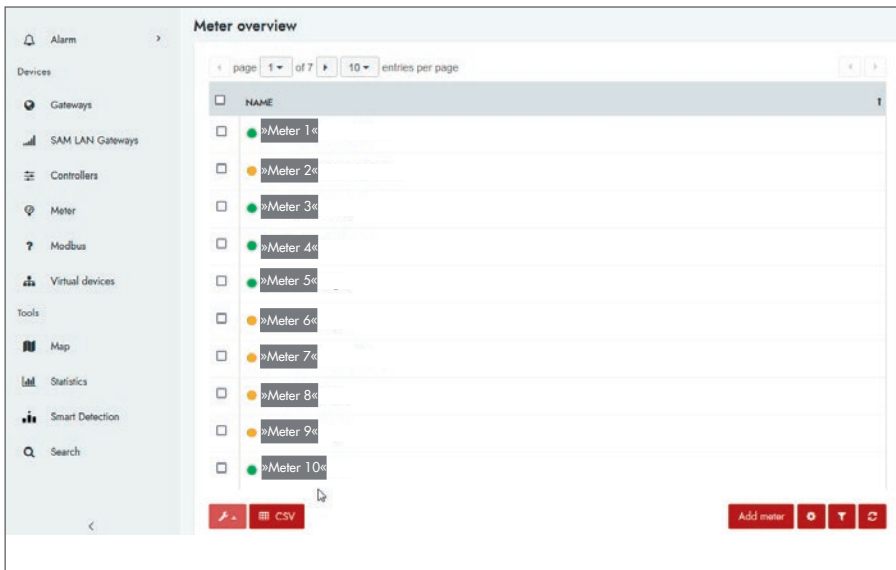
5.2 Navigation bar

The navigation bar varies in the overview and device levels.











5.2.1 Overview level












Alarms, devices and tools are shown in the overview level.

The overview level is particularly suitable for change settings of several devices in one go. All gateways, SAM LAN Gateways, controllers, meters, Modbus devices and virtual devices are shown depending on the user privileges.



Navigation bar in the overview level


	Alarm	Go to the alarm list and configure alarms (see section 7)
Devices		
	Gateways	Go to gateway overview
	SAM LAN Gateways	Go to SAM LAN Gateway overview
	Controllers	Go to controller overview
	Meters	Go to meter overview
	Virtual devices	Go to overview of virtual devices
	Modbus	Go to overview of Modbus devices
Tools		
	Map	Load map (see section 10.1)
	Statistics	Load statistics (see section 10.2)
	Search	Find devices (see section 10.4)

Executable actions	
	Sort entries
 ▲ menu, followed by	
 Share	Share selected devices ¹⁾ with users (see section 9.11)
 Labels	Label selected devices ¹⁾ (see section 9.1.2)
 Alarm	Configure alarms for selected devices ¹⁾ (see section 7.2)
 Select values	Configure values for selected devices (see section 9.12)
 Write values	Write device data to selected devices ¹⁾ (see section 9.5)
 Delete	Delete selected devices ¹⁾ (see section 8.3)
 CSV	Write data to a CSV file (see section 5.2.1.1)
Register device	Register new devices (see section 8.1)
Add device	Adding new devices (see section 8.1)
Create virtual device	Create new virtual devices (see section 8.2)
	Customize device overview (see section 5.2.1.2)
	Refresh reading

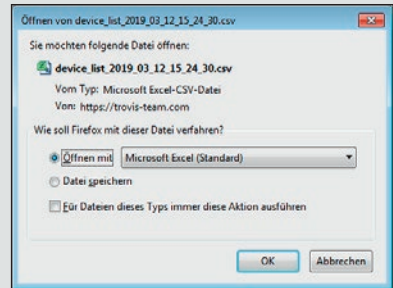
¹⁾ Selecting devices:

- Select devices by checking the box () next to them.
Check the box next to NAME to select all devices.

5.2.1.1 Writing data to a CSV file

- Select devices from which information is to be written to a CSV file ().
If a device is not selected, all the displayed information will be written to a CSV file.
- Click [ CSV] to start writing the data.

- Select an option from the window (☉):
 - 'Open with' to open the CSV file
 - 'Save data' to save data to a CSV file (target directory: Downloads folder).
 - Click [OK] to continue.
- Click [Cancel] to close the window without performing any of the options.



Window 3: Saving a CSV file (Microsoft Windows window)

5.2.1.2 Customizing the device overview

- Click [⚙️] to open the 'Configure table' window.

- Select device properties/data points from the [Available] column to add them to the table.
- Select device properties/data points from the [Table] column to remove them from the table.
- Click [Save] to confirm the table configuration.



Window 4: Table configuration

5.2.1.3 Opening the device level

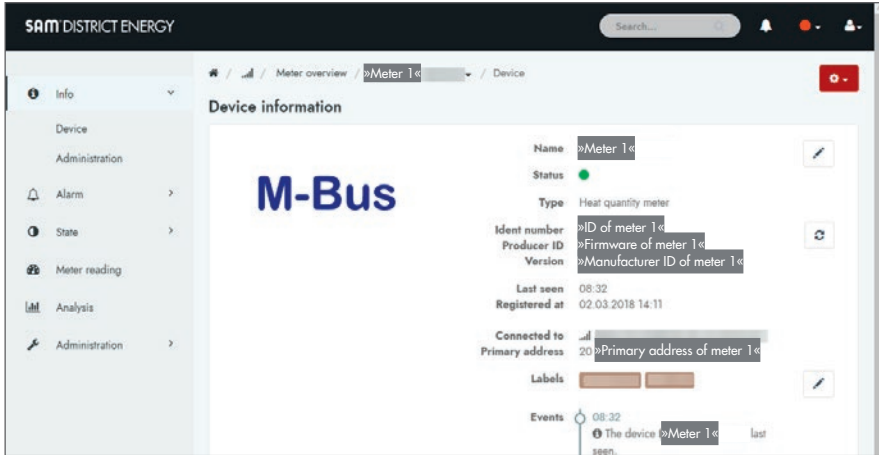
Device level (see section 5.2.2)

- Click device name.








Navigation









5.2.2 Device level

Key information on a device are listed in the device level (Device information), e.g. name, status, type, device ID information including firmware, hardware and events.



Navigation bar in the device level



	Note	Go to device information (see section 9.1)
	Alarm	Configure alarms and read errors (see section 7)
	State	Go to device data and events (see section 9.4 to section 9.8)
	Operation	Operate the controller (see section 9.8)
	Meter reading	Read out meter reading (see section 9.9)
	Analysis	Analyzing devices (see section 9.10)
	Administration	Manage device (see section 9.2)

Executable actions		
 ▾ menu, followed by		
	Restart the device	Restart the device
	Show on map	Show on map
	Deactivate device	Deactivate device
	Lock device	Lock device
		Start download
		Edit entry (see section 9.1.1)
		Refresh reading (see section 5.2.2.1)

5.2.2.1 Refreshing reading*

The device information displayed contains various information. This information can be refreshed.

Refreshing device information in the device level

- Open [ Info > Device] menu.
- Click [].

5.3 Footer

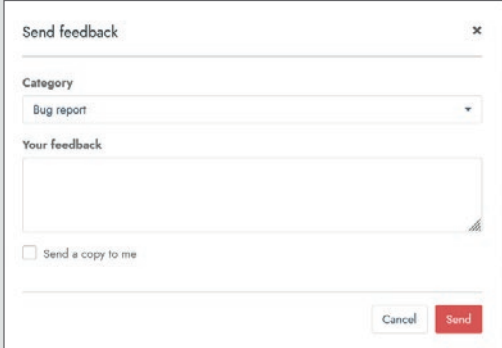
[Site notice](#) | [Terms & Conditions](#) | [Privacy policy](#) | [Manual](#) | [Feedback](#) | [Information security](#)

Important information on SAM DISTRICT ENERGY can be accessed from the footer:

- Disclaimer
- Terms and Conditions
- Privacy Policy
- Manual (this document in PDF format)
PDF reader software must be installed on your computer to open the manual.
- Feedback
The 'Send feedback' window is opened.

- Select 'Bug report', 'Feature request' or 'Hint' from the Category drop-down list.
- Enter your message in [Your feedback] input field.
- Check the [Send a copy to me] () box if you want to receive an e-mail copy containing your feedback.
- Send your feedback to SAMSON ([Send] button).

Click [Cancel] or [x] to close the window without performing any of the options.



Window 5: Sending feedback

-  Opening online help for an open window.

6 Permissions

In SAM DISTRICT ENERGY various privileges can be assigned to administrators or users can be assigned privileges to certain devices.

Administrators have privileges in at least one of the following categories:

- **Invoices:** Privileges (✔) to read invoices
- **Presentation:** Privileges (✔) to change colors in SAM DISTRICT ENERGY
- **User:** Privileges (✔) to manage users
- **Devices:** Privileges to read (👁 read), add (✔ add) devices or write access to all devices (✔) that the company/organization manages in the web portal

i Note

Administrators with device privileges have privileges for all devices. Refer to section 9.11 for the assignment of privileges for individual devices.

Show administrator overview

→ Open [👤 > Profile > 👤 > Administrators].

NAME	INVOICES	USER	DEVICES
»Administrator 1«	-	✔	✔
»Administrator 2«	✔	✔	✔
»Administrator 3«	-	✔	✔
»Administrator 4«	-	-	add
»Administrator 5 logged on«	✔	✔	✔
»Administrator 6«	-	-	add

Executable actions

Delete	Delete selected users
+	Manage administrators (see section 11.4.1)
↻	Refresh reading (see section 5.2.2.1)

7 Alarms

SAM DISTRICT ENERGY has a customizable alarm management. Alarms are configured for individual devices based on definable conditions (e.g. 'flow temperature VF1 > 40 °C') (see section 7.2).

No special user privileges are required to use the alarm function.

7.1 Reading alarms

Reading alarms from the menu bar

→ Click [🔔] to read alarms.

The alarms of all the devices released for the user are listed.



Go to alarm notifications in the overview and device level

→ Open [🔔 Alarm > Notifications].

- The alarms of all the devices released for the user are listed when the alarm notifications are opened in the overview level.
- The alarms of the selected devices are listed when the alarm notifications are opened in the device level.

By default, alarm occurrences are grouped by time periods into alarms over the past 24 hours and alarms older than 24 hours. This group setting can be changed. It is possible to group by:

- Alarm name
- Error/conditions
- Device
- Priority
- Period
- No grouping

It is possible to filter alarms sorted according to 'Confirmation' and 'Alarm state':

- Confirmation (Confirmed/Unconfirmed)
- Alarm state (Alarm ongoing/Alarm resolved)

Alarm occurrences

Group by: Time range | Confirmation: No selection | Alarm state: No selection

Since 24 hours

page 16 of 16 | 10 entries per page

<input type="checkbox"/>	ALARM	DEVICE	CONDITIONS	TIME	RESOLVED	PRIORITY	
<input type="checkbox"/>	Gerät nicht erreichbar	Bau 1/46/Pförmner - Heizung	Device status - at least one: Device unreachable	17.07.2021 08:12	17.07.2021 08:45	Medium	
<input type="checkbox"/>	Gerät nicht erreichbar	Gegenströmer Anlage Bau 51	Device status - at least one: Device unreachable	17.07.2021 08:12	17.07.2021 09:19	Medium	
<input type="checkbox"/>	Gerät nicht erreichbar	Heizung Bau 5	Device status - at least one: Device unreachable	17.07.2021 08:12	17.07.2021 09:24	Medium	
<input type="checkbox"/>	Gerät nicht erreichbar	Bau 77/78 - Kaltwasserzähler	Device status - at least one: Device unreachable	16.07.2021 14:01	anceled	Medium	

Confirm

Executable actions

	Refresh reading
	Confirm individual alarms
Confirm	Confirm selected alarms (<input checked="" type="checkbox"/>) of a group

7.2 Configuring alarms

Rules can be configured to trigger an alarm for selected devices.

Configuring alarms in the overview level [Devices > ...]

- Select devices () for which the alarms are to be configured.
- Click [] and [Alarm] to open 'Configure alarm' window.

Alarms

- Deselect individual devices (☐) as required.

The screenshot shows the 'Configure alarm' window with three steps: 1. Device selection (highlighted), 2. Conditions, and 3. Alarm. Below the steps, there is a note: 'The device selection is dynamic, i.e. the number of selected devices may change. If you select individual devices, the device group always consists of these devices. In this case the filter settings are not saved.' Below the note, it says 'Search results (2)'. There is a table with two columns: 'NAME' and 'LABELS'. The table contains two rows, each with a checked checkbox, a device name 'Device 1' and 'Device 2', and a set of labels 'Kunde A', 'residenzen', and 'SAMSON AG'. At the bottom right, there are buttons for 'Cancel', '< Back', 'Next >', and 'Save'.

Window 6: Configure alarm – Device selection

- Select and define [Value], [Comparison] and [Reference value].
- Click [☒] to delete condition.
- Click [⊕] to create additional condition.
- Click [Next >] to define alarm.

The screenshot shows the 'Configure alarm' window with three steps: 1. Device selection, 2. Conditions (highlighted), and 3. Alarm. Below the steps, there is a section titled 'DEVICE STATUS - AT LEAST ONE'. Under this section, there are three fields: 'Value' with a dropdown menu set to 'Device status', 'Comparison' with a dropdown menu set to 'one of', and 'Reference value' with a dropdown menu set to 'No selection'. There is a trash icon to the right of the 'Reference value' field. At the bottom left, there is a plus sign icon. At the bottom right, there are buttons for 'Cancel', '< Back', 'Next >', and 'Save'.

Window 7: Configure alarm – Conditions

- Enter name and determine priority.
- Check 'The alarm is activated' box (☑) to activate it.
- If required, set a delay before alarm is sent in [Alarming after ...].

Configure alarm

1. Device selection 2. Conditions 3. Alarm

Description

Priority
Medium

The alarm is activated.

Alarming after ...
immediately

Send email when error state is resolved.

Notify me

Notification via email to
 Notification via SMS
Please configure a telephone number in your profile settings.

Notify mailbox
No selection

Cancel < Back Next > Save

Window 8: Configure alarm – Alarm

Alarms


- Check 'Send email when error state is resolved' box (☑) if you want to be notified of both incoming and resolved alarms.
- Check 'Notification via email to ...' box (☑) if you want to be notified by e-mail. Notification can be sent to other e-mail addresses in addition to the user's e-mail address. The e-mail list must be set up beforehand (see section 11.4.4).
- Check 'Notification via SMS' box (☑) if you want to be notified by text message. In this case, a mobile number must be entered into your profile settings (see section 11.1).

! NOTICE

*Additional charges possible as a result of notification by text messaging.
Mobile access service providers charge for text messages sent as notification.*

- Click [Save] to confirm the alarm configuration.







Configuring alarms in the device level

- Open [ Alarm > Configuration] menu.
Already configured alarms are listed.
- Click [Add alarm] to open 'Configure alarm' window.
- Continue as described in Window 7 and Window 8.

8 Devices

Devices must be registered in the portal in order for them to be shown in SAM DISTRICT ENERGY. To proceed, execute one of the actions listed in Table 1 depending on the type of device.

Table 1: Integrating devices into SAM DISTRICT ENERGY

	Register device	Add device	Create virtual device
 Gateways	•	–	–
 SAM LAN Gateways	•	–	–
 Controllers	–	•	–
 Meters	–	•	–
 Virtual devices	–	–	•
 Modbus	–	•	–

Connect devices with their own MAC address (e.g. gateways) **directly** to SAM DISTRICT ENERGY. Devices without their own MAC address are connected to these devices to connect them **indirectly** to SAM DISTRICT ENERGY.


Directly connected devices must be registered within 48 hours after they have been connected to SAM DISTRICT ENERGY. If these devices are not registered within this time limit, a voltage reset must be performed on these devices before they are registered again.

8.1 Adding and registering devices*

Gateways, controllers, meters and Modbus devices can be added and registered.

If no devices have been added or registered to a device category yet, these devices can only be added and registered on the menu bar.

Adding and registering devices on the menu bar

- ➔ Click [ > + Add device] to open the 'Add device' window.
- ➔ Continue as described in Window 35:
Device groups.

Adding and registering devices in the overview level [Devices > ...]

→ Click [Register gateway], [Register SAM LAN Gateway], [Add controller], [Add meter] or [Register Modbus device] to open the 'Add device' window.

→ Open [DIRECTLY CONNECTED] menu when the device being added has its own MAC address and communicates directly with SAM DISTRICT ENERGY.

→ Enter the device ID of the device you want to register.

→ Click [Next >] to confirm.

→ Edit the device name and click [ADD] to confirm.

The screenshot shows the 'Add device' window with two steps: '1. Device type' and '2. Configuration'. The 'DIRECTLY CONNECTED' menu is selected. Below the menu, there is a warning: 'Devices that are connected to portal must be registered within 48 hours. Should your device be switched on for a longer time already, please restart the device.' A label 'Please enter your device ID (MAC address):' is followed by a text input field containing '00:EO:99: XX:XX:XX'. A note states 'You can find the device ID on a label on your device.' An image of a device label with the MAC address '00:EO:99:00:00:00' is shown. At the bottom, there are 'Cancel' and 'Next >' buttons.

→ Open [INDIRECTLY CONNECTED] menu when the device being added is connected to a device that communicates directly with SAM DISTRICT ENERGY.

→ Select the connected device.

→ Select the device type (Modbus device, controller or meter).

→ Click [Next >] to confirm.

→ Enter the device name and station address or M-Bus primary address of the device.

→ Click [ADD] to confirm.


The screenshot shows the 'Add device' window with two steps: '1. Device type' and '2. Configuration'. The 'INDIRECTLY CONNECTED' menu is selected. Below the menu, there is a warning: 'Indirectly connected devices (e.g. controller or meter) do not communicate directly with the portal - they are connected to another device.' A label 'Please select the connected device:' is followed by a dropdown menu showing 'Gateway 00:EO:99:FF:A7:B5 - Druckluft'. Below that, a label 'Please select the device type:' is followed by four radio button options: 'Generic Modbus device' (selected), 'Heat quantity meter', 'Heating controller (55xx)', and 'SAMSON actuator'. At the bottom, there are 'Cancel' and 'Next >' buttons.

Window 9: Add device

8.2 Creating virtual devices*

A virtual device is a group of several devices which summarizes (calculates) selected data points. The virtual device only exists in SAM DISTRICT ENERGY.


Before virtual devices can be integrated into SAM DISTRICT ENERGY, they must first be created in the 'Virtual device overview'.

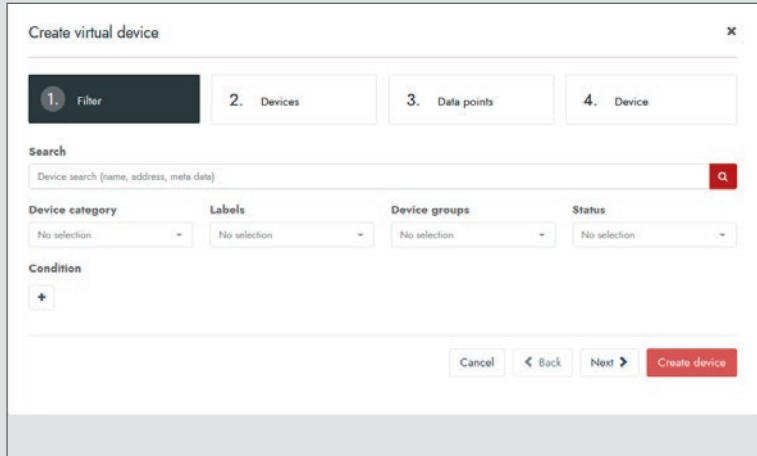
If virtual devices have not yet been created, you can only create virtual devices in the [Tools >  Statistics] menu.

Creating virtual devices on the overview level [Devices > Virtual devices]

- Click [Create virtual device] to open 'Create virtual device' window.
- Continue as described in Window 10:
Create virtual device.

Creating virtual devices in the [Tools > Statistics] menu

- Click [] to open 'Create virtual device' window.
- Continue as described in Window 10:
Create virtual device.



Window 10:
Create virtual device

Devices

→ Set filter for the device group.

Possible filter criteria include:

- Plain-text search by device name, labels or device groups
- Device category (gateways, SAM LAN Gateways, controllers, meters, Modbus devices)
- Labels (user-defined labels listed)
- Device groups (user-defined device groups listed)
- Status (operational, not reachable, with errors, inactive)
- Conditions (customizable entries):

Conditions include:

Current flow set point (total)	<=	Fixed value	80 °C
[Device property/data point]	[Operator]	[Source]	[Value]

→ Click [+] to add condition.

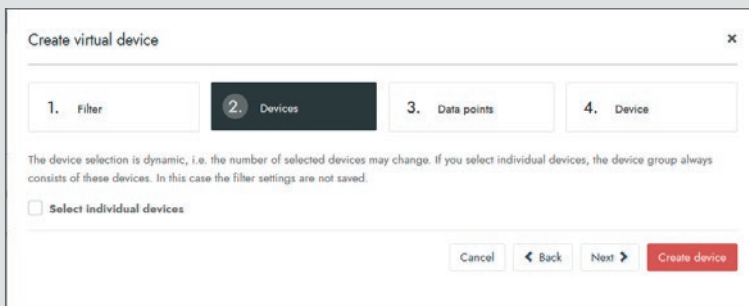
→ Define device property/data point, operator, source and value.

→ If several conditions are to apply, add additional condition.

Click [-] to delete conditions.

→ Click [Next >] to confirm filter criteria.

The reading changes to '2. Devices'.



Create virtual device

1. Filter 2. Devices 3. Data points 4. Device

The device selection is dynamic, i.e. the number of selected devices may change. If you select individual devices, the device group always consists of these devices. In this case the filter settings are not saved.

Select individual devices

Cancel < Back Next > Create device

→ Select devices for the device group.

All filtered devices can be added to the device group. The virtual device changes automatically when the filter criteria for devices applies or no longer applies.

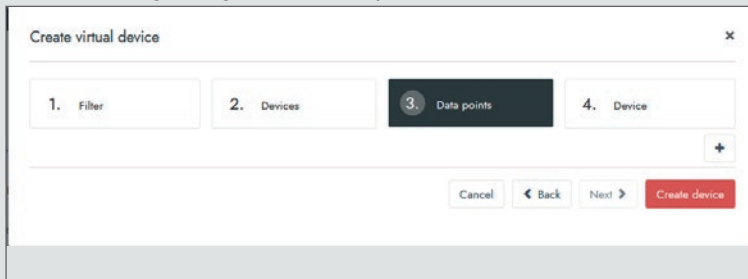
You can select individual devices for the group if you want the same devices always to be added to the device group:

→ Check the 'Select individual devices' box (☑).

→ Select devices for the device group.

→ Click [Next >] to confirm the device group.

The reading changes to '3. Data points'.



→ Click [+] to add a data point.

→ Select the data point from the left drop-down list.

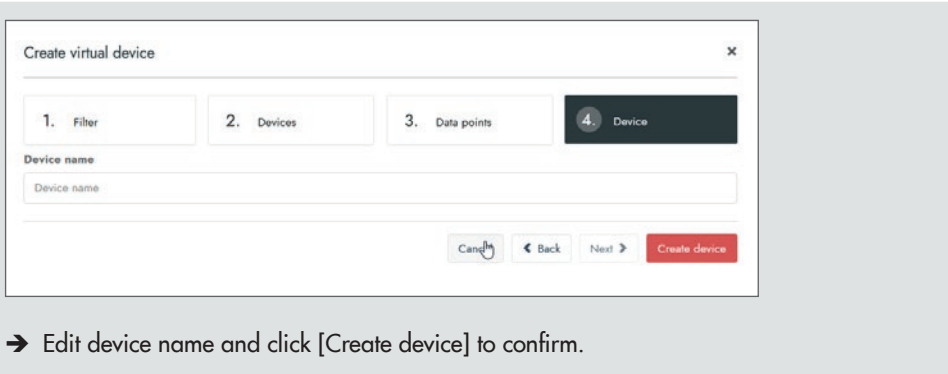
→ Select analysis function (sum, average, minimum or maximum) from the second drop-down list.

Click [☒] to delete data points.

→ Click [Next >] to confirm data points.

The reading changes to '4. Device'.

Devices

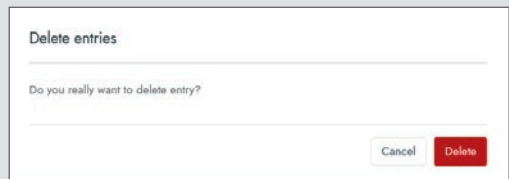


8.3 Deleting devices*

Devices and any devices connected to them can be deleted from SAM DISTRICT ENERGY. To add them again to SAM DISTRICT ENERGY after they have been deleted, they must be renamed on registering or adding them.

Deleting device entries in the overview level [Devices > ...]

- Select devices (☑) whose entries you want to delete.
- Click [] and [Delete] to open the 'Delete entries' window.
- Click [Delete] to confirm the deletion of entries.









9 Device settings

9.1 Device information

9.1.1 Changing device settings*

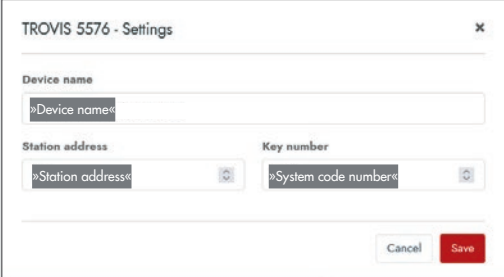
The device settings are assigned when you register, add or create a device in SAM DISTRICT ENERGY. They can be changed later in the device level.

Table 2: *Device settings in SAM DISTRICT ENERGY*

	Device settings
 Gateways	Device name
 SAM LAN Gateways	Device name
 Controllers	Device name, station address, code number
 Meters	Device name
 Virtual devices	Device name
 Modbus	Device name, station address

Changing the device settings in the device level

- Open [Info > Device] menu.
- Click [Name >] to open the 'Settings' window.
- Change the settings (device name, station address and/or code number).
- Click [Save] to confirm.



Window 12: Settings

9.1.2 Labeling devices*

Devices can be categorized with labels. Labels describe devices based on keywords. They help when searching for a device with the text search function. They can also be used as a filter criterion.

- Public labels are visible to all users.
- Private labels are only visible to the user who created them.

Managing labels in the overview level [Devices > ...]

- Select the devices you want to label (☑).
- Use [🔧 ▲] and [📌 Labels] to open the 'Manage labels' window.
- Continue as described in Window 13: Manage labels.

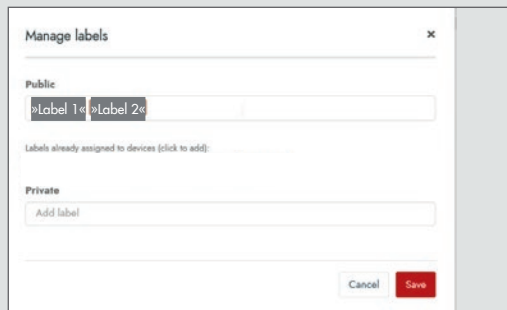
Managing labels in the device level

- Open [📌 Info > Device] menu.
- Click [Labels > 📌] to open the 'Manage labels' window.

- Enter labels (public or private) in the [Add label] field.

Labels already assigned to a device are listed before the [Add label] field.

- If you want to create further labels, press Enter key to confirm the entry.
- After all entries have been added, click [Save] to confirm labels.





Window 13: Manage labels

9.2 Managing devices*

Information, such as an address or contact person, can be added for device management purposes.


Managing devices in the device level

- Open [ Info > Administration] menu.
- Click [] to open the 'Administration' window with text boxes for address, contact person and more information.
- Fill in text boxes.

The further information (e.g. maintenance information, records etc.) are displayed as follows (see Window 16):

Story	Basement
[Name]	[Value]

Single or multiple lines can be selected from the [New entry] list.

Click [] to delete fields.

- Click [Save] to confirm entry.

Device settings

The 'Address' form window contains the following fields:

- Street: Street
- Number: Number
- ZIP: ZIP
- City: City
- Country: Country
- Longitude: 8,734245
- Latitude: 50,117109

Buttons: Cancel, Save

Window 14:
Address

The 'Contact person' form window contains the following fields:

- Name: Name
- Telephonenumber: Telephonenumber
- E-Mail: E-Mail

Buttons: Cancel, Save

Window 15:
Contact person

The 'More information' form window contains the following fields:

- Name: Name
- Value: Value

Buttons: New entry, Cancel, Save

Window 16:
Further information

9.3 Reading and configuring device-specific alarms

See section 7.

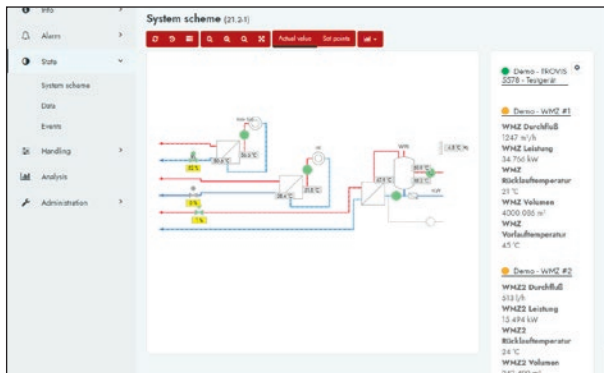
9.4 Opening the system scheme*

System schemes can be viewed when devices have an integrated or stored system scheme or devices are connected to other devices with an integrated or stored system scheme.

Opening the system scheme in the device level

→ Open [State > System scheme].

→ Click on the system scheme you require when several system schemes are shown.



Click pumps and valves to override them (transfer manual values). Activate automatic mode to return to the state controlled by the controller.

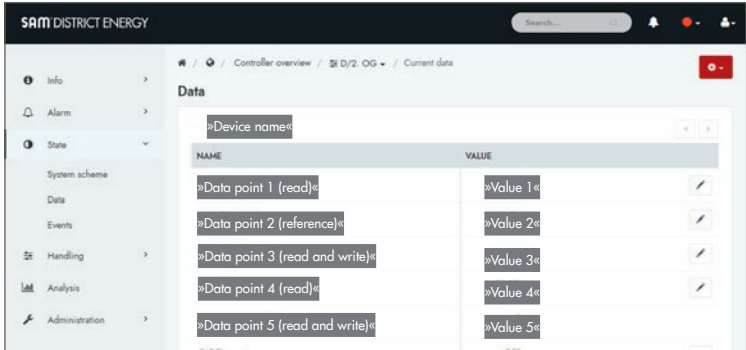
Executable actions

	Read data
	Auto-Refresh: Continuous readout of values. The values do not need to be refreshed manually.
	Show or hide legends.
	Open/close fullscreen.
Actual values	Show values currently measured at sensors in the system scheme
Set points	Show adjusted set points in the system scheme




9.5 Reading device values*

Reading device values in the device level

→ Open [State > Data].



Executable actions

	Read data
	Writing values (see section 9.6)
	Using a reference (see section 9.6, Window 18)

9.6 Writing device values*




Values can be written to gateways, controllers and meters.

The following applies to writing values:

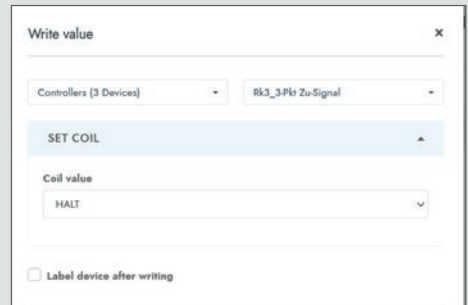
- After opening the menu item from the overview level, single coils for several devices can be written in one go. Writing to devices is not logged.
- After opening the menu item from the device level, single coils and values for single devices can be written.
- After opening the menu item from the map view, single coils and values for single devices can be written.

Writing values in the overview level [Devices > ...]

→ Select devices () whose values you want to write.

→ Click [ ] and [ Write value] to open the 'Write value' window.

- Select data point from the right drop-down list.
- Set value.
- To label devices, check 'Label device after writing' box (☑).
- Click [Write] to confirm writing process.



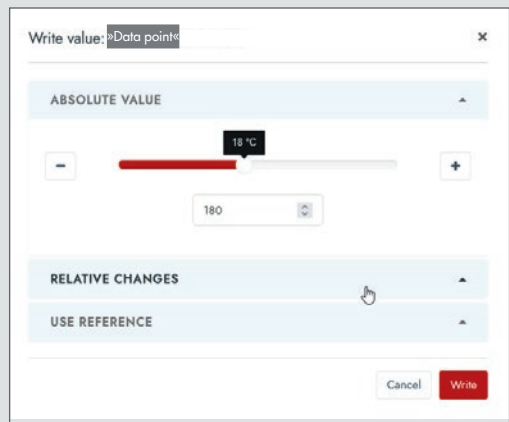
Window 17: Write values (coils)

Writing values in the device level

- Open [● State > Data].
- Click [✎] to open the 'Write value' window.

Changing the absolute value:

- Use [+] and [-] to set the value or enter the value.
- Click [Save] to confirm the value.



Device settings

Relative change:

- Use [+] and [-] to set the percent or enter the percent value.
- Click [Save] to confirm the value.

The screenshot shows a dialog box titled 'Write value: »Data points«'. It has a close button (X) in the top right corner. Below the title bar, there are three main sections: 'ABSOLUTE VALUE' with a downward arrow, 'RELATIVE CHANGES' with an upward arrow, and 'USE REFERENCE' with a downward arrow. In the 'RELATIVE CHANGES' section, there is a numeric input field containing '0', flanked by minus and plus buttons, and a percentage symbol button. At the bottom right, there are 'Cancel' and 'Write' buttons.

Use reference:

- Select the reference in the left box and the source in the right box.
- Click [Save] to confirm the reference.

Click [End reference use] to interrupt the transfer of the reference.

The screenshot shows a dialog box titled 'Fremdwert beziehen: »Data points«'. It has a close button (X) in the top right corner. Below the title bar, there are two dropdown menus: the first is labeled '»Data points«' and the second is labeled '»Device (source of reference)«'. Below these is the text 'Änderungen des ausgewählten Wertes werden alle 60 Sekunden übertragen.' At the bottom, there are three buttons: 'Fremdwertbezug beenden', 'Abbrechen', and 'Speichern'.

Window 18: Write values

Write values from the map view

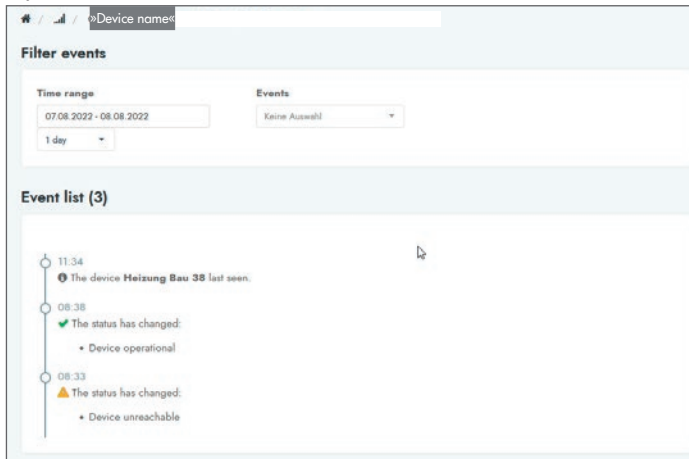
- Click place marker and select connected device.
- Continue as described in Window 18: Write values.

9.7 Reading device events*

The events in gateways, RF gateways, controllers and meters can be read out. Events include 'The status has changed' and 'Device unreachable'.

Readout of the device events in the device level

→ Open [📶 State > Events].



→ Configure filter (time range, event).

The time range is entered in days or by specifying a start and end date.

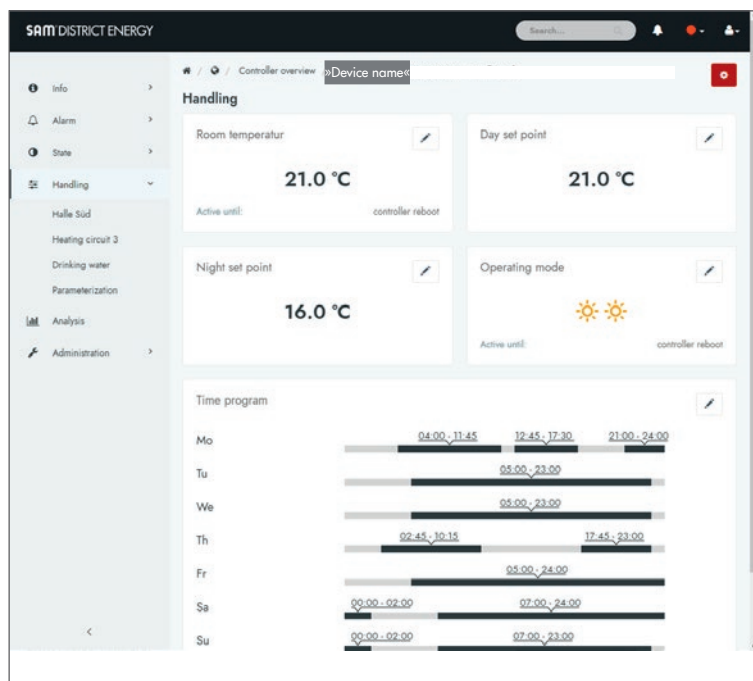
Events that can be filtered include Alarm triggered, Alarm acknowledged, Device status OK, Device registry, Last seen, Device status, Device exchange. Several filter criteria can be set at the same time.

i Note



The last events for a device are listed in the device information ([📶 Info > Device] menu). Click [Complete log] for a list of all events.

9.8 Operating controllers

The 'Handling' menu is only available for controllers. Depending on the system scheme stored in the controller, operation menus are available for each heating circuit. The heating circuits are named [Heating circuit 1], [Heating circuit 2], [Heating circuit 3] and [DHW] by default.



Executable actions

	Renaming a heating circuit (see section 9.8.1)
	Operating the controller (see Window 20: Operating mode, Window 21: Schedule and Window 19: Temperature set point)

Operation of the controller in the device level

- ➔ Open [☰ Handling] to access the heating circuit. The heating circuits are named [Heating circuit 1], [Heating circuit 2], [Heating circuit 3] and [DHW] by default.
- ➔ Click [✎] to edit a parameter.

- Continue as described in:
 - Window 19: Temperature set point for room temperature (set point for a time period regardless of the times-of-use), day set point (set point during the time-of-use) and night set point (set point outside the time-of-use)
 - Window 20: Operating mode
 - Window 21: Schedule

→ Use **[+]** and **[-]** to set the temperature.

→ Room temperature:

→ Click **[🔧]** to activate the room temperature set point.

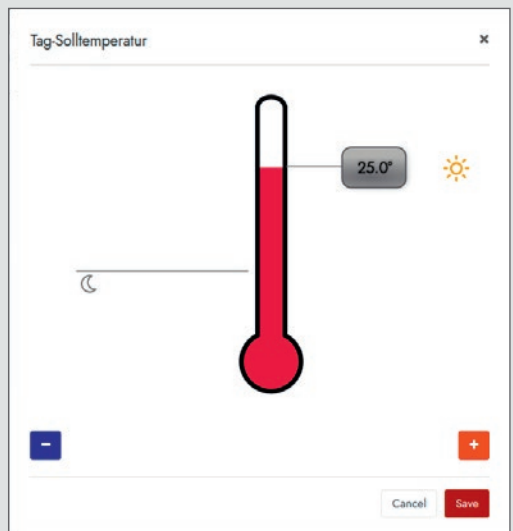


→ Set the time and date.

→ Click **[Save]** to activate the automatic mode.

→ If required, click **[🔄]** if you want the automatic mode to be first activated after the next restart.

→ Click **[Save]** to confirm temperature set point settings.



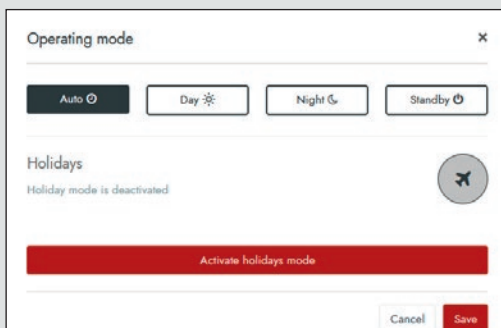
Window 19: Temperature set point

Device settings

- Select the target operating mode.
- If required, activate the holidays mode.

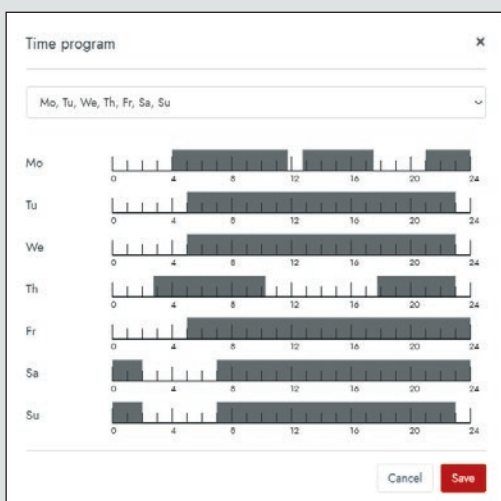
The holidays mode is deactivated by default after the controller is restarted. If you want it to be deactivated at another date, click [✎] to open the schedule.

- Set the time and date.
- Click [Save] to deactivate the holiday mode.
- Click [Save] to confirm operating mode settings.



Window 20: Operating mode

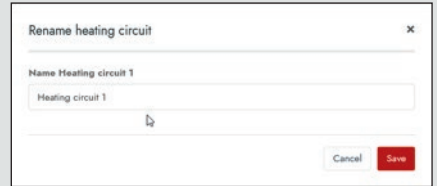
- Set the time period when you want the schedule to run.
Active times are marked red in the timeline.
- Click the time in the timeline to activate or change it.
 - If required, click [Ⓜ] to delete an active time.
- Click [Save] to confirm the schedule.



Window 21: Schedule

9.8.1 Renaming a heating circuit

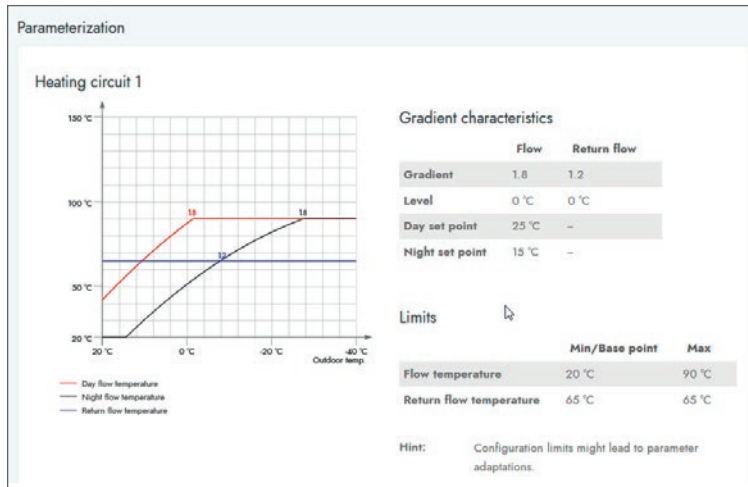
- Open [☰ Handling] to access the heating circuit. The heating circuits are named [Heating circuit 1], [Heating circuit 2], [Heating circuit 3] and [DHW] by default.
- Click [⚙️] to open the 'Rename heating circuit'.
- Enter the new name in the [Name] box.
- Click [Save] to confirm the new name.



Window 22: Renaming a heating circuit

9.8.2 Parameterization of heating circuits*

The 'Parameterization' menu is only available for controllers. Depending on the system scheme in the controller, SAM DISTRICT ENERGY enables you to access the gradient characteristics and the temperature limits for flow and return flow.



Device settings

Executable actions



Heating circuit parameterization (see Window 24)

Heating circuit parameterization in the device level

- Open the [☰ Handling > Parameterization] menu for parameterization of the heating circuit.
 - Click [✎] to open the 'Parameterization characteristics' window for each heating circuit.
 - Select the type of characteristic from the drop-down list:
 - Fixed set point control (see Window 23)
 - Four-point characteristic (see Window 24)
 - Gradient characteristic (see Window 25)
 - Set parameters and limits:
 - ▲ increases the value
 - ▼ reduces the value

For the four-point characteristics and gradient characteristics, setting options exist for both the flow and return flow.
 - Click [Save] to confirm the parameter and limit settings.
- Click [Cancel] to close the window without performing any of the options.

Characteristic parametrization: Halle Süd

Characteristic type: Fixed set point control

The activation/deactivation of the fixed setpoint control is transferred to all heating circuits of the controller.

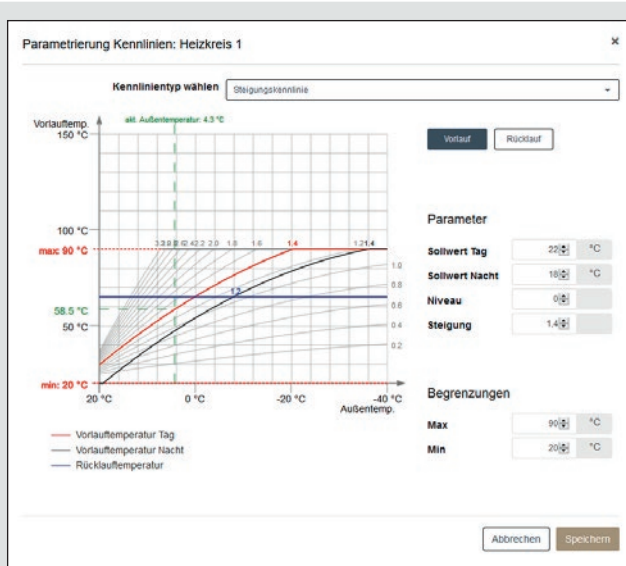
Day set point: 50 °C

Night set point: 30 °C

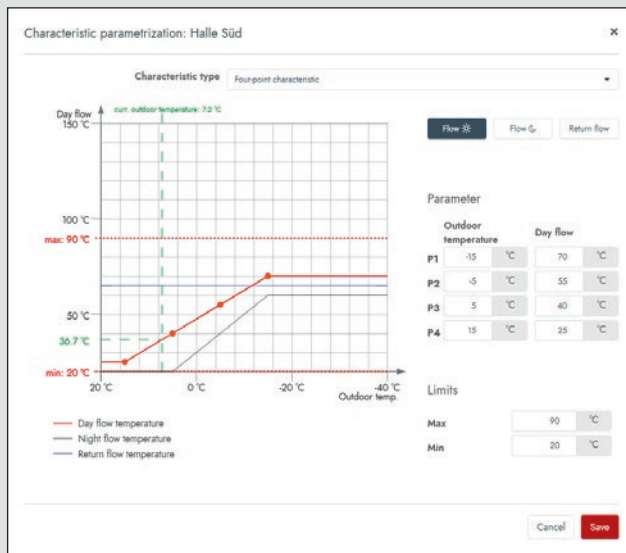
Cancel Save

Window 23: Parameterization for fixed set point control

Window 24: Parameterization for gradient characteristics



Window 25: Parameterization for four-point characteristics

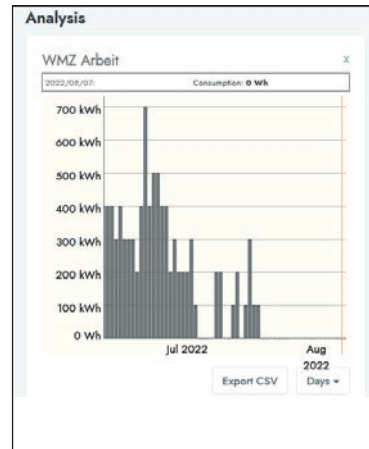


9.9 Showing meter reading*

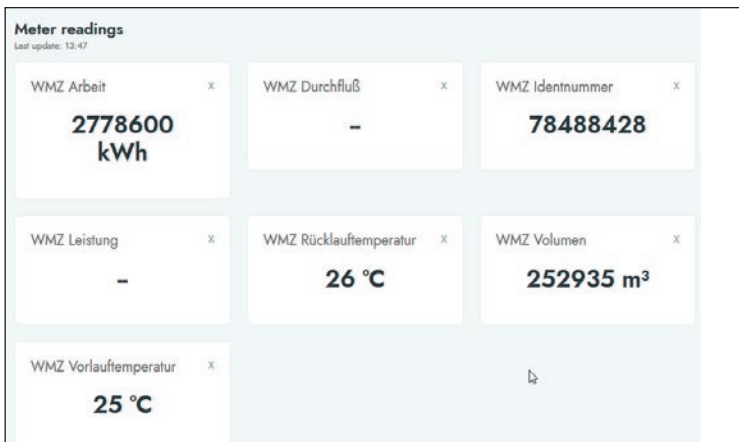
An analysis of the consumption is displayed in addition to the current meter values.

Readout of the metering reading in the device level

- Open [🔌 Meter reading] menu.
- Click [+] to add values.
- Click [🔄] to read data.
- If required, adapt consumption analysis:
 - Change the time line of the graph in drop-down list (Hours, Days, Weeks, Months).
 - Click [Export CSV] to save the graph data to a CSV file (see Window 3).
Select 'Open with' in the window to open the CSV file or 'Save data' to save data to a CSV file (target directory: Downloads folder).



The meter data are shown below the consumption analysis:



Click [x] to remove the reading from the overview.

9.10 Analyzing devices*

The device analysis shows a graph of selected data points over time.















Opening the device analysis in the device level

- Open [Analysis] menu.
- Enter start and end of the analysis in [Time range].
 - Select time unit (Free, 15 Minutes etc.) from the drop-down list (7 Days ▾).
 - Use [←] and [→] or click on the graph to set the time period.

i Note

- If multiple graphs with varying vertical axes are shown in the device analysis, you can click [←] and [→] to switch between the different graphs with their specific vertical axis. The graph you have selected appears in bold with its own specific vertical axis.
- The displayed range can be changed with the slider below the horizontal axis.

Device settings

Executable actions	
	Reset zoom to default.
	Refresh: Refresh reading.
	Auto-Refresh: Continuous readout of data. The data do not need to be refreshed manually.
	Open/close fullscreen.
	Save graph to a PNG file (see Window 26: Export as image)
	Save graph data to a CSV file (see Window 3: Saving a CSV file (Microsoft Windows window))
	Configure graph appearance (see Window 27: Configuring visualization and Window 28: Configuring visualization (extended mode))
	Go to the event view. Icons in the graph:  (user-defined alarms),  (malfunctions),  (failures)
	Adapt zoom function.

9.10.1 Saving the graph to a PNG file

→ Click  to open the 'Export as image' window.

→ Change the graph name as required.

→ Click [Export] to save the graph.

Click [Cancel] to close the window without performing any of the options.

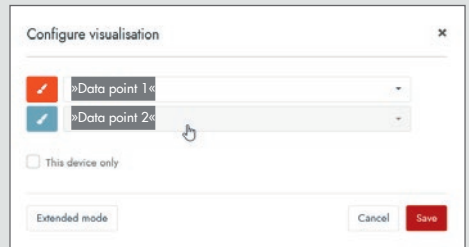


Window 26: Export as image

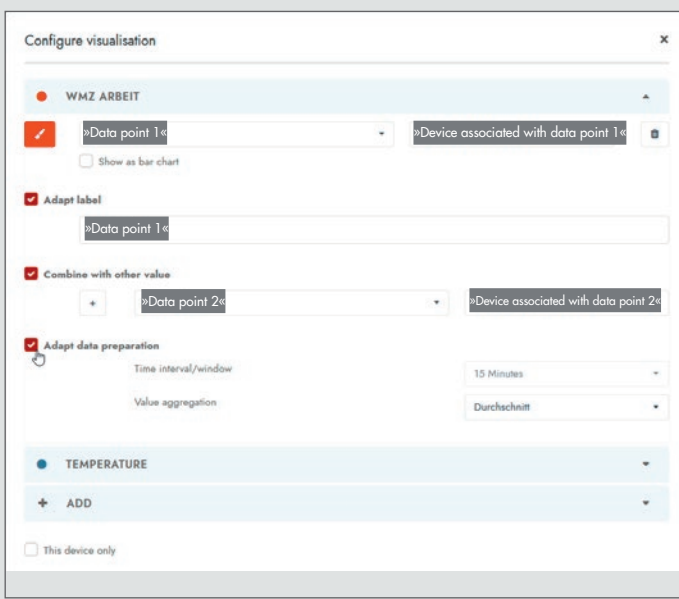
9.10.2 Configuring the graph visualization

→ Click  to open the 'Configure visualization' window.

- Select [🎨] to change the color used to represent a data point in the graph.
- Select a data point from the drop-down list.
- Check 'This device only' box (☑) if you do not want the settings to be used for all devices.
- Select [Extended mode] if you want to perform other changes to the graph or if you want the graph to appear as a bar chart (see Window 28: Configuring visualization (extended mode)).
- Click [Save] to confirm the new graph design.



Window 27: Configuring visualization



Window 28: Configuring visualization (extended mode)

Device settings

Displaying data point in a bar chart:

→ Check 'Show as bar chart' box .

Change the data point name as required:

→ Check 'Adapt label' box .

→ Change the data point name as required.

Combining the data point with another data point:

→ Check 'Combine with other value' box .

→ Select the formula for the combining the data points, the second data point (b) and the device associated with the second data point.

Possible formulas for combination include:

- Sum $(a + b)$
- Difference $(a - b)$
- Average $((a + b) / 2)$
- Delta $|a - b|$

Adapting data preparation:

→ Check 'Adapt data preparation' box .

→ Select the time interval and value aggregation.

Possible value aggregations include:

- Average
- Minimum
- Maximum
- Maximum/Difference

i Note

Click [Add] to show further data points (also from other devices) in the same graph.

9.11 Adding users and sharing devices*

Users without device privileges are unable to fully access devices. They must obtain individual access privileges for a device using the 'Share' command.

Sharing devices in the overview level [Devices > ...]

- Select the devices you want to share (☑).
- Click [🔧 ▲] and [Share] to open the 'Add user' window.

- Set device permissions (see section 11.4)
 - Click [Everything], [Expert], [Standard] or [None] to select specific presets.
- Click [Save] to confirm device permissions for the added user.

Permissions	Everything	Expert	Standard	None
Info	✓			
System scheme	✓			
Data	✓			
Events	✓			
Heating circuit 1	✓			
Heating circuit 2	✓			
Parameterization	✓			
Analysis	✓			
User	✓			
Configuration	✓			
Devices	✓			

Window 29: Adding user

Sharing devices in the device level

- Open [🔧 Administration > User] menu.

Device settings



Executable actions

Delete	Reset zoom to default.
Transfer permissions	Transfer all device permissions (see Window 30)
+	Transfer with adapted device permissions (see Window 29)
↻	Refresh: Refresh reading.

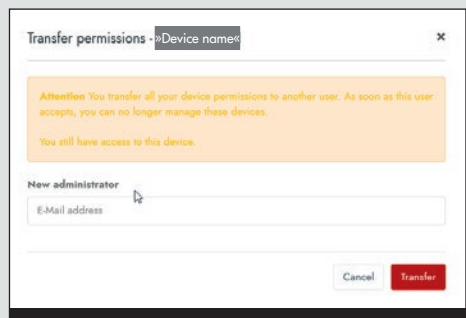
- Transferring all device permissions

Note

- Click to view the permissions of the registered user.
- After transferring all permissions to a user, it is not possible to withdraw or restrict them anymore for this user.

- ➔ Click [Transfer permissions] to open the 'Transfer permissions' window.

- ➔ Enter the e-mail address of the new user.
- ➔ Click [Share] to share the device.



Window 30: Transfer permissions

- Transfer with adapted device permissions
 - Click [+] to open the 'Add user' window.
 - Continue as described in Window 29: Adding user.

9.12 Configuring values

Value configuration					
<input type="checkbox"/>	NAME	TYPE	NUMBER	LENGTH	UPDATE
<input type="checkbox"/>	Empfangsstärke	MBR	137	1	1 (every minute)
<input type="checkbox"/>	Fehlerstatus	MBR	150	1	1 (every minute)
<input type="checkbox"/>	GSM Netzcode	MBR	446	1	1 (every minute)

Executable actions	
▾ menu, followed by	
Settings	Changing device settings (see 9.1.1)
Controller backups	Controllers only (see section 9.12.3)
Firmware configuration	Gateways only (see section 9.12.4)
Delete	Delete selected values
Select values	Select values (see section 9.12.1)
+	Define values (see section 9.12.2)
	Refresh reading

9.12.1 Selecting values*

Values from the device's holding and coil registers can be read in SAM DISTRICT ENERGY.

- Identically named values can be selected from several controllers when the menu item is opened in the overview level.
- Only values can be selected from one single controller when the menu item is opened in the device level.

Device settings

Selecting values in the overview level [Devices > ...]

- Select devices (☑) from which you want to select values.
- Click [🔧 ▲] and [Select values] to open the 'Select values' window.
The [Select values] menu item can only be opened if the selected devices have at least one identical named value (intersection values).

- Select values in the [Available] column to add them to the list of data points.
- Select values in the [Selected] column to remove them from the list of data points.
- Click [Save] to confirm the data point list.



Window 31: Select values

Selecting values in the values configuration

- Open [🔧 Administration > Configuration] menu.
A predefined data list (NAME | TYPE | NUMBER | LENGTH | UPDATE) is shown for controllers. Predefined data lists do not exist for gateways and meters.
- Click [🏠 Select values] to open the 'Select values' window.
- Continue as described in Window 31: Select values.

9.12.2 Defining values*

Definition of values in the device level

→ Open [🔧 Administration > Configuration] menu.

A predefined data list (NAME | TYPE | NUMBER | LENGTH | UPDATE) is shown for controllers. Predefined data lists do not exist for gateways and meters.

→ Click [➕] to open the 'Define value' window.

→ Defining values:

- Name
- Update (1 = frequently, 2 = often, 3 = rarely)
- Type (holding register, coil)
- Address (register number)
- Length
- Data type (number, date etc.) .
Only when type = Holding register
- Raw value start/end
(= adjustment range)
- Unit (definable as required) .
Only when type = Holding register

→ Click [Save] to confirm values.

Window 32: Define values

9.12.3 Controller backups

Controller backups are automatically performed by SAM DISTRICT ENERGY every two months as a TROVIS-VIEW file. A manual backup can be performed manually at any time.

Selecting values in the overview level [Devices > Controllers]

→ Select the controller for which you want to perform a backup (☑).

→ Click [⚙️ Controller backup] to open 'Controller configuration backup' window.

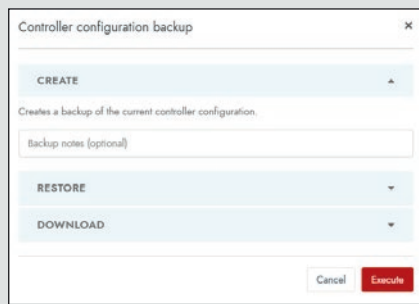
Device settings

Create a backup:

- If required, enter information on the backup in [Comments on backup (optional)].
- Click [Execute] to start backup process.
A backup file (TROVIS-VIEW file) is created and saved in SAM DISTRICT ENERGY.

Download backup file:

- Select [DOWNLOAD] menu.
- Select the backup file.
- Click [Execute] to download the backup file.
Single TROVIS-VIEW files are saved in the computer's download directory. Several files are saved to a ZIP file.




Window 33: Backup of the controller configuration

9.12.4 Editing firmware settings

The intervals of the update classes 1 to 3, the address, model and reading mode of meters 1 to 3 as well as the polling interval can be set for gateways.

Selecting values in the overview level [Devices >  Meter]

- Select the controller for which you want to perform a backup (.
- Select [ > Firmware settings] menu for the selected gateway to open the 'SAM MOBILE Gateway - Firmware settings' window.

→ Perform all required changes.

→ Click [Save] to confirm.

Click [Cancel] to close the window without performing any of the options.

	Address	Type	Reading mode
<input type="checkbox"/> Meter1	255	EN1434	cont.
<input type="checkbox"/> Meter2	255	EN1434	cont.
<input type="checkbox"/> Meter3	255	EN1434	cont.

Reading interval: 60 Sec.

Cancel Save

Window 34: Firmware settings of SAM MOBILE Gateway

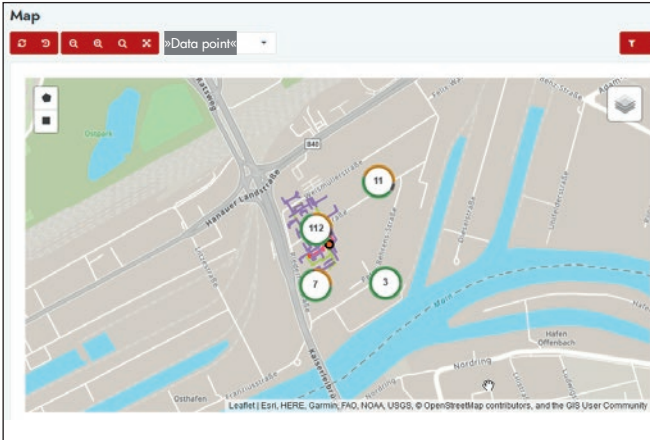
10 Tools

10.1 Map

Devices are identified by place markers on the map ([Map] menu).

Possible filter criteria include:




- Terms and conditions
- Device category (gateways, SAM LAN Gateways, controllers, meters, virtual devices, Modbus devices)
- Device status (operational, not reachable, with errors, inactive)






The devices are marked with place markers by default (see information under 'Placemarkers designs' on page 65).

To hide place markers, select any data point from the value list and uncheck the 'Icons' box (☐).

Executable actions

	Refresh reading
	Auto-Refresh: Continuous readout of devices. The devices do not need to be refreshed manually.
	Zoom out

Executable actions

	Zoom in
	Reset zoom
	Open/close fullscreen

Placemark designs

The placemarkers are color-coded: green = functioning, red = not registered, yellow = failed, gray = inactive



Several neighboring devices are shown as one marker:

- The number in the ring indicates the number of devices that summarized together in this marker.
- The color distribution of the ring represents the states of the devices (percent distribution within the ring).



Single device connected over a SAM HOME Gateway to SAM DISTRICT ENERGY



Single device connected over a SAM MOBILE Gateway to SAM DISTRICT ENERGY



Single device connected over a SAM LAN Gateway to SAM DISTRICT ENERGY



Single meter or single virtual device

Click a place marker to view device information and a list of the connected devices.

Tools

Further map options

Displaying values:

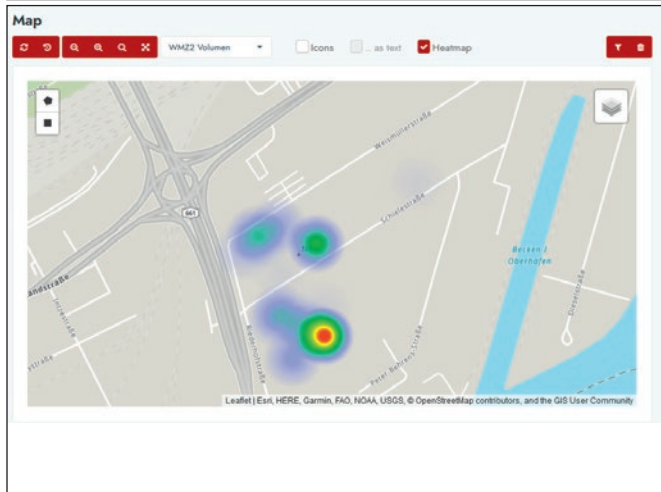
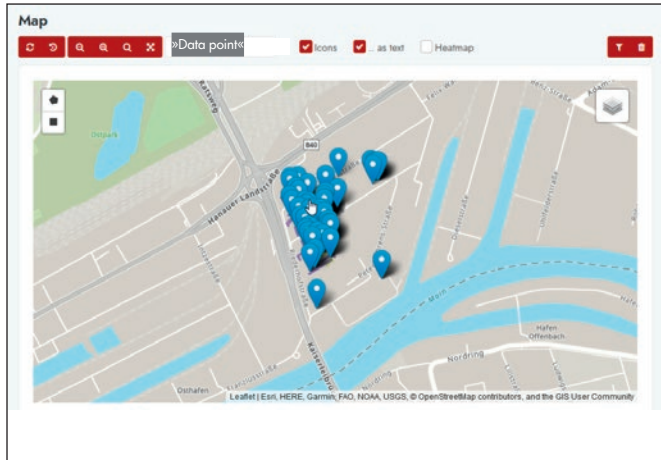
- Select data point.
- Check '... as text' box (☑).

The placemaker of devices that supply the value for the selected data point is replaced by a text box with the current value.

Blue placemarkers do not supply a value to the selected data point.

Showing the heat map:

- Select data point.
- Uncheck '... as text' box (☐).
- Check 'Heatmap' box (☑).



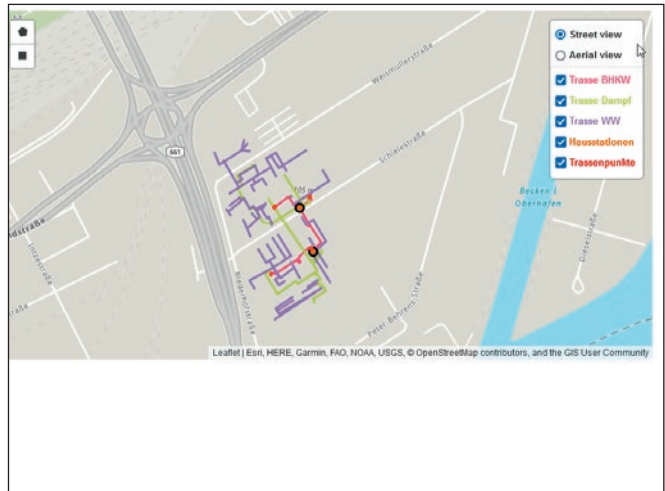
Showing embedded routes:

→ Click [].

The routes must be saved beforehand.

Note



The routes must be saved in SAM DISTRICT ENERGY before they can be shown on the map. Contact SAMSON if you want your routes to be shown in SAM DISTRICT ENERGY.



10.1.1 Analyzing device values*

The map can be used for a more precise analysis of device values of up to 100 devices.

→ Select devices with the polygon or rectangle selection tool:

- Polygon selection
 - Click [] and position the first point of the polygon on the map.
 - Define other points with a mouse click.
 - Complete the polygon by clicking on the first point again.
- Rectangle selection
 - Click [] and position the first point of the rectangle on the map.
 - Click and hold the left mouse button down to drag the rectangle to size. Release the mouse button to select the rectangle.

Tip

If you want to analyze the measured data of devices that cannot be selected with the polygon or rectangle selection tool, these data can be analyzed in the Statistics menu (see section 10.2).

→ Configure filter (all devices, gateways only, controllers only or meters only).

Tools

- Deselect individual devices () as required.
- Select device properties and/or data points for the analysis.

The following values are shown one after the other in the analysis:

- Number of selected values (count)
- Average of selected values
- Maximum of selected values
- Minimum of selected values
- Total of selected values


The screenshot shows a window titled "Display values" with a close button (X) in the top right corner. At the top, there are two dropdown menus for "Data point 1" and "Data point 2", each with a trash icon to its right. Below these is a table with a light blue background. The table has a header row with a checked checkbox, a "NAME" column, and a "Data point 1" column. There are eight rows of data, each with a checked checkbox, a green circle icon, a "Device name" field, and a temperature value. Below the table is a summary section with the following data:

Summary Item	Value
Count	2
Average	67 °C
Maximum	71.9 °C
Minimum	62.1 °C
Sum	134 °C

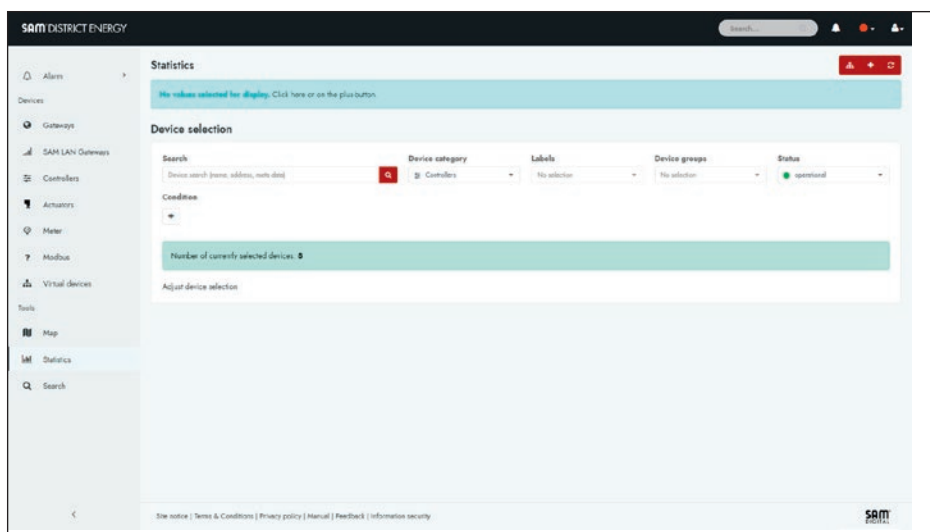
At the bottom of the window, there are two buttons: "Select values" (with a trash icon) and "Write value" (with a pencil icon). A "Close" button is located in the bottom right corner.

- Click [Write] to write over data points in the selected devices (see Window 17: Write values (coils)).

10.2 Generating statistics*

In Statistics ([ Statistics] menu), you can analyze measured data of selected devices. SAM DISTRICT ENERGY analyzes the following values:

- Number of selected devices (device count)
- Total of selected values
- Average of selected values
- Minimum of selected values
- Maximum of selected values





Statistics

→ Click [**+**] to select measured values for the statistics.

Click [**x**] to remove a measured value from the statistics.

Executable actions

	Create virtual device from the device selection (see section 8.2)
+	Add measured value
	Refresh reading

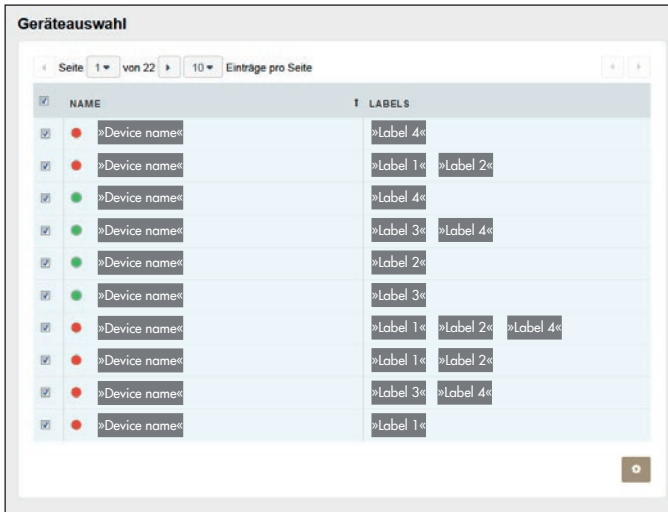
Tools

Device selection

Devices can be selected using various filters:

- Any text (name, label, device group)
- Device category (gateways, SAM LAN Gateways, controllers, meters, virtual devices, Modbus devices)
- Labels
- Device groups
- Status (operational, not reachable, with errors, inactive)
- Condition

The [Adjust device selection] command allows individual devices to be removed from the filtered devices:



Executable actions



Select/deselect device.



Configure table (see section on 'Customizing the device overview' on page 21)

10.3 Viewing Smart Detection*

The **optional** Smart Detection function registers station errors and malfunctions. It assesses them automatically based on defined limits and prioritizes them according to limit violation rules. The assessment is shown as color-coded bar charts depending on the severity of the station error or malfunction (short green bar, medium amber bar and long red bar).

Displaying devices according to filter criteria

Device list includes all the devices that found in the search with the corresponding priority and/or rule.















➔ Set filter criteria from the [Priority] and [Rule] drop-down lists.

NAME	RULE	PRIORITY	EVALUATION	START TIME
»Device names	LM Insufficient spreading ⓘ	Medium	Red bar	»DD.MM.YYYY HH:MM«
»Device names	LM Insufficient spreading ⓘ	Medium	Red bar	»DD.MM.YYYY HH:MM«
»Device names	LM Insufficient spreading ⓘ	Medium	Amber bar	»DD.MM.YYYY HH:MM«
»Device names	LM Insufficient spreading ⓘ	Medium	Green bar	»DD.MM.YYYY HH:MM«
»Device names	LM Insufficient spreading ⓘ	Medium	Amber bar	»DD.MM.YYYY HH:MM«
»Device names	LM Insufficient spreading ⓘ	Medium	Red bar	»DD.MM.YYYY HH:MM«
»Device names	LM Insufficient spreading ⓘ	Medium	Red bar	»DD.MM.YYYY HH:MM«

Table 3: Filter criteria

Priority	All, Low, Medium, High
Rule	No selection, Energy reserve low, Configurable alert (error 8) triggered, Frost risk, Insufficient spreading, Device could not be reached over a long period of time, Frequent system deviations HC 1, Frequent system deviations HC 2, Frequent system deviations HC 3, Communication error (RS-232/RS-485/meter bus), Primary return flow hotter than supply flow, Primary flow temperature too low, Control system hunts HC 1, Control system hunts HC 2, Control system hunts HC 3, Heat exchanger clogged with dirt or limescale deposits, Storage tank temperature too low (risk of legionella) ¹⁾


¹⁾ Multiple selections are possible. Click [All] to include all the rules in the search filter. Click [None] button to deactivate any active rules.

Executable actions	
	Sort entries
	Open the device analysis (see section 9.10) The device analysis starts as soon as the station malfunction occurs.
	Read detailed information with possible causes for the station malfunction
 menu, followed by	
 Hide	Hide selected devices
 Share	Share selected devices ¹⁾ with users (see section 9.11)
 Labels	Label selected devices ¹⁾ (see section 9.1.2)
 Alarm	Configure alarms for selected devices ¹⁾ (see section 7.2)
 Select values	Configure values for selected devices (see section 9.12)
 Write values	Write device data to selected devices ¹⁾ (see section 9.5)
	Show hidden devices
	Customize device overview (see section 5.2.1)
	Set filter (see section 10.4)
	Refresh reading

10.4 Searching for devices

Search function on the menu bar

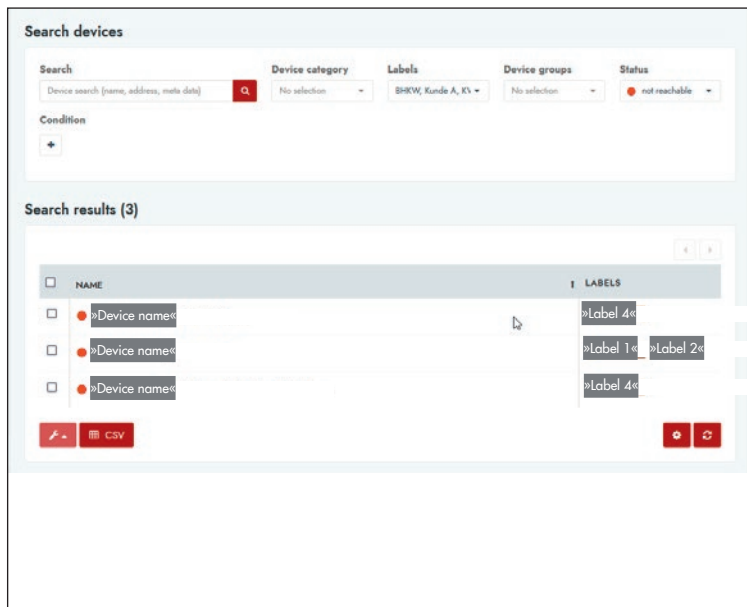
The search function on the menu bar allows to find devices with their name, group and labels included in the search term.

- Enter the search term in the search field on the menu bar ().
- Press Enter key to start search.

Search function in the overview level

A text search function is also available in the overview level.

- Open device search function on the navigation bar in the overview level [Q].
- Set filter criteria and/or enter search term into the search field.
The filter is active after checking the box (☑).
- Press Enter key to start search.














The screenshot shows the 'Search devices' interface. At the top, there are several filter sections: 'Search' (with a search field containing 'Device search (name, address, meta data)' and a magnifying glass icon), 'Device category' (set to 'No selection'), 'Labels' (set to 'SHKW, Kunde A, K's'), 'Device groups' (set to 'No selection'), and 'Status' (set to 'not reachable'). Below these is a 'Condition' section with a plus sign icon. The main area displays 'Search results (3)' in a table format. The table has columns for 'NAME' and 'LABELS'. Three rows are visible, each with a checkbox, a red status indicator, and a device name. The 'LABELS' column shows expandable lists of labels for each device. At the bottom of the table, there are icons for edit, copy, and refresh.

Table 4: Search and filter criteria

Plain text	Enter name, label or group
Device category	Gateway, SAM LAN Gateway, controller, meter, virtual device, Modbus device
Labels	Labels describe devices based on keywords (see section 9.1.2).
Device groups	Group device groups ...
Status	operational, not reachable, with errors, inactive
Condition	Click [+] to add condition.

Executable actions

	Sort entries
 menu, followed by	
 Unlock	Share selected devices ¹⁾ with users (see section 9.11)
 Labels	Label selected devices ¹⁾ (see section 9.1.2)
 Alarm	Configure alarms for selected devices ¹⁾ (see section 7.2)
 Select values	Configure values for selected devices (see section 9.12)
 Write values	Write device data to selected devices ¹⁾ (see section 9.5)
 Delete	Delete selected devices ¹⁾ (see section 8.3)
 CSV	Write data to a CSV file (see section 5.2.1)
	Customize device overview (see section 5.2.1)
	Refresh reading

11 User profile

Administrators can view their own settings as well as the settings of all other administrators in user profiles.

→ Click [👤 > 👤 Profile] to open user profile.

Profile settings






Username	>Username<		
E-Mail	>E-mail address of users<		
Cell phone	No telephone number saved.		
Language	English		
Password	*****		
Presentation	Expert mode		

Device overview

	Controllers 8		Gateway 1		Meter 65
	Modbus 2		SAM LAN Gateway 59		Virtual device 3

User profile

Managing profiles on the menu bar



	My profile	Changing profile settings of 'My profile' (see section 11.1)
	Invoices	View invoices (see section 11.2)
	Design	Changing the online design of SAM DISTRICT ENERGY (see section 11.3)
	Access privileges	Manage access privileges (see section 11.4)
	API	See section 11.4.5.

11.1 Changing profile settings of 'My profile'

Open profile

→ Open profile window ( >  Profile).

The following settings can be changed:

- **Username**
 - Click  to open edit window.
 - Edit username.
 - Click [Save] to confirm entry.
- **E-mail address**
- **Click  to open edit window.**
 - Change e-mail address.
 - Enter your password in [Current password].
 - Click [Save] to confirm entry.

You will be sent a validation e-mail to the new e-mail address.
 - Follow the instructions in the e-mail to validate the new e-mail address.

The new e-mail address is validated and must be used for login.

If you do not validate the new e-mail address, use your old e-mail address for login.

– Cell phone number

The cell phone number is required if you want to receive text messages from the web portal.

! NOTICE

*Additional charges possible as a result of notification by text messaging.
Mobile access service providers charge for text messages sent as notification.*

- Click [✎] to open edit window.
 - Enter your cell phone number in the [Telephone number] input field.
 - Click [Next >] to confirm your cell phone number.
You will receive a verification code by text message.
 - Enter the verification code.
 - Click [Save] to confirm the verification code.
- **Language**
- Click [✎] to open edit window.
 - Select language (Deutsch/English).
 - Click [Save] to confirm.
- **Password**
- Click [✎] to open edit window.
 - Enter your new password in [New password].
 - Enter your password in [Current password].
 - Click [Save] to save the new password.
- **Presentation**
- Click [✎] to open edit window.
 - Select presentation (Standard/Extended (expert mode)).
 - Click [Save] to confirm.

Device overview

The device overview shows the number of devices that have been shared for the user. Click the device category tile to open the corresponding device overview.

11.2 Viewing invoices*

The number of SAMSON devices are shown for which your organization has been invoiced in the current month.



Reading invoices from the menu bar

→ Select [👤] > Profile > Invoices].

11.3 Changing the online design of SAM DISTRICT ENERGY*

The colors used on the web interface can be changed to match the corporate design of an organization.

Changing the interface design in the menu bar

→ Open profile window (👤 > 👤 Profile > Presentation).

The colors of the following elements can be changed:

- **Menu colors** (primary, menu separating lines)
- **Backgrounds** (menu bar, main window, page menu)
- **Fonts** (menu, page menu, body text, deactivated text, link text)
- **Buttons** (confirmation, tags, groups)

→ Click [] to open color menu.

→ Changing the color:

- By changing the RGB color palette
- By clicking the required color in the palette

→ Click [Save] to confirm the change.

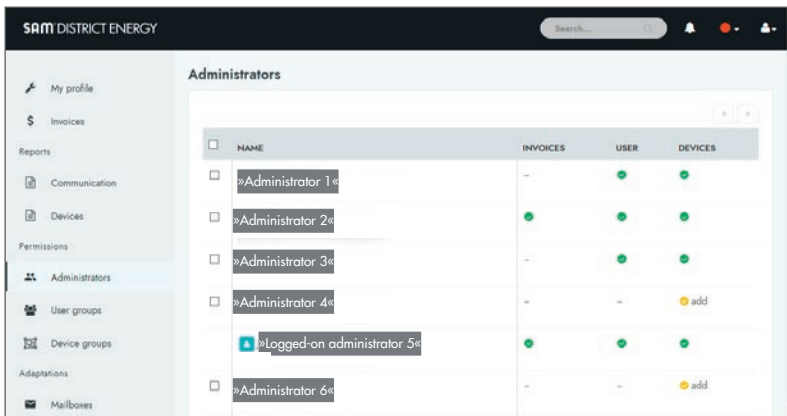
11.4 Access privileges

11.4.1 Managing administrators*

NOTICE

Loss of admin privileges as a result of changing your admin privilege settings. The lost admin privileges can only be recovered by another administrator.

→ Do **not** change the admin settings.



NAME	INVOICES	USER	DEVICES
»Administrator 1«	-	●	●
»Administrator 2«	●	●	●
»Administrator 3«	-	●	●
»Administrator 4«	-	-	● add
»Logged-on administrator 5«	●	●	●
»Administrator 6«	-	-	● add

User management on the menu bar

i Note

The [Administrators] menu item is only visible for users with admin privileges.

→ Select [👤 > 👤 Profile > Administrators].

All administrators with their admin privileges are listed.

The 👤 icon indicates the user currently logged in.

i Note

An administrator can only change already assigned admin privileges.

→ Select administrator whose admin privileges you want to change.

- Assign [✓] or withdraw ([−] admin privileges.
- Click [Save] to save the changed setting.

Adding a new administrator

- Click [+] (bottom right).
- Enter the e-mail address of the new administration in the [New administrator] window.
- Assign [✓] or withdraw ([−] admin privileges.
- Click [Save] to confirm the newly added administrator.

The newly added administrator receives an e-mail with a link to access SAM DISTRICT ENERGY (see section 3).

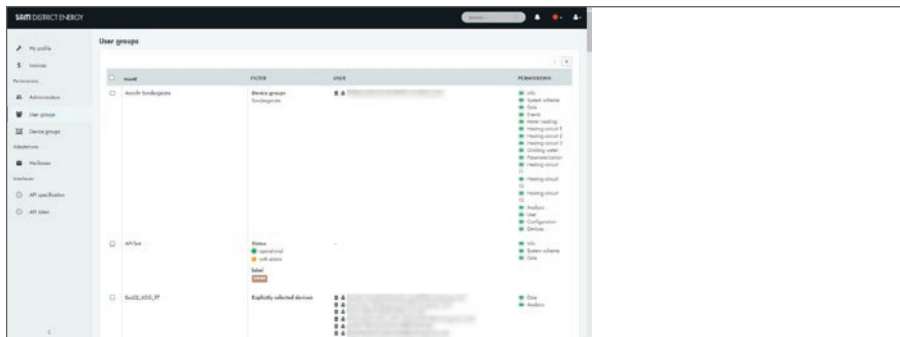
Deleting administrators

- Select administrator (☑) that you want to delete.
- Click [Delete] (bottom left) to delete the selected administrator.

11.4.2 Managing device groups*

To make it easier to find devices in SAM DISTRICT ENERGY, they can be organized in device groups.

Managing device groups in the menu level



Executable actions

Delete	Deleting selected device group
+	Add device group (see information under 'Managing user groups*' on page 85)
↻	Refresh reading

User profile

→ Click [👤 > 👤 Profile > Permissions > Device groups] to open 'Device grouping' window.

Device grouping ✕

1. Filter 2. Geräte 3. Gruppe

Search
Device search (name, address, meta data) 🔍

Device category No selection ▾

Labels No selection ▾

Device groups No selection ▾

Status No selection ▾

Condition
+

Cancel < Back Next > Save

Window 35:
Device groups


→ Set filter to find devices that you want to add to a device group.

Possible filter criteria include:

- Plain-text search by device name, labels or device groups
- Device category (gateways, SAM LAN Gateways, controllers, meters, Modbus devices)
- Labels (user-defined labels listed)
- Device groups (user-defined device groups listed)
- Status (operational, not reachable, with errors, inactive)
- Conditions (customizable entries):

Conditions include:

Current flow set point (total)	<=	Fixed value	80 °C
[Device property/data point]	[Operator]	[Source]	[Value]

→ Click  to add condition.

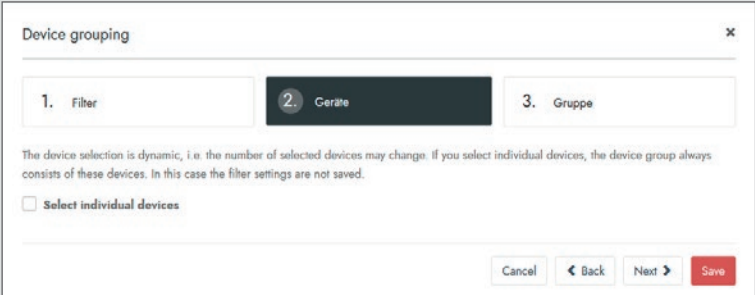
→ Define device property/data point, operator, source and value.

→ If several conditions are to apply, add additional condition.

Click  to delete conditions.

→ Click [Next >] to confirm filter criteria.
The reading changes to '2. Devices'.

User profile



The screenshot shows a dialog box titled "Device grouping" with a close button (X) in the top right corner. It contains three steps: "1. Filter", "2. Geräte" (highlighted in dark grey), and "3. Gruppe". Below the steps, there is a text block: "The device selection is dynamic, i.e. the number of selected devices may change. If you select individual devices, the device group always consists of these devices. In this case the filter settings are not saved." Below this text is a checkbox labeled "Select individual devices" which is currently unchecked. At the bottom right, there are four buttons: "Cancel", "Back" (with a left arrow), "Next" (with a right arrow), and "Save" (in red).

→ Select devices for the new device group.

All filtered devices can be added to the device group. The device group changes automatically when the filter criteria for devices applies or no longer applies.

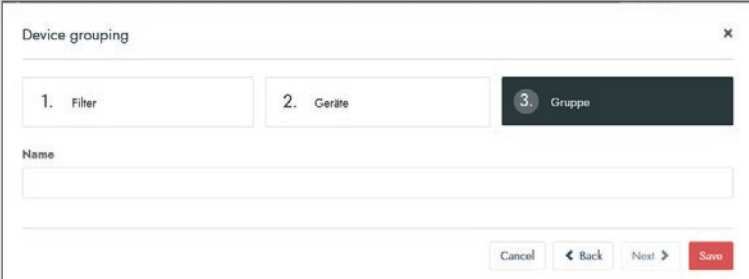
You can select individual devices for the device group if you want the same devices always to be added to the device group:

→ Check the 'Select individual devices' box (☑).

→ Select devices for the device group.

→ Click [Next >] to confirm the device group.

The reading changes to '3. Device groups'.



The screenshot shows the same "Device grouping" dialog box, but now step "3. Gruppe" is highlighted in dark grey. Below the steps, there is a text label "Name" followed by an empty text input field. At the bottom right, the buttons are the same as in the previous screenshot: "Cancel", "Back", "Next", and "Save".

→ Enter a name for the device group.

→ Click [Save] to confirm the new device group.

11.4.3 Managing user groups*

Certain privileges are defined in user groups. As a result, it is possible to assign ready-defined privileges.

Benutzergruppen

NAME	FILTER	DATEN	ZUGRIFFSRECHTE
<input type="checkbox"/>	Gerätegruppen	alles	alles
	Status		● funktioniert
<input type="checkbox"/>	Suchtext	alles	<ul style="list-style-type: none"> ✓ Info ✓ Anlagenschema ✓ Daten ✓ Ereignisse ✓ Zählerstand ✓ Heizkreis 1 ✓ Heizkreis 2 ✓ Heizkreis 3 ✓ Trinkwasser ✓ Analyse ● Konfiguration ● Geräte
	Label		
	Alle Geräte	alles	—

Legende: ✓ = Vollzugriff, ● = Nur lesen

Executable actions

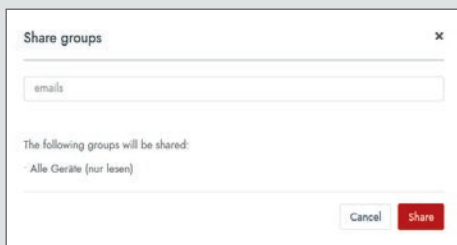
Delete	Deleting selected user group
Unlock	Sharing selected user group (see Window 36: Sharing groups)
+	Adding user groups (see Window 37: User groups)
↻	Refresh reading

Sharing user groups in the menu level

- Select [] > Profile > Permissions > User groups].
- Click [Share] to open the 'Share groups' window.

User profile

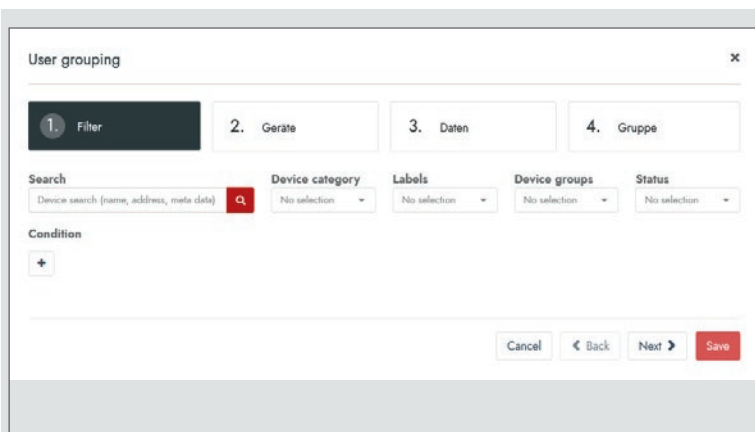
- Enter the e-mail address of the user that you want to add to the user group.
- Click [Share] to confirm.



Window 36: Sharing groups

Adding user groups in the menu level)

- Select [Person icon] > Profile > Permissions > User groups].
- Click [+] to open the 'User groups' window.



Window 37:
User groups

→ Set filter to find devices that you want to share in an user group.

Possible filter criteria include:

- Plain-text search by device name, labels or device groups
- Device category (gateways, SAM LAN Gateways, controllers, meters, Modbus devices)
- Labels (user-defined labels listed)
- Device groups (user-defined device groups listed)
- Status (operational, not reachable, with errors, inactive)
- Conditions (customizable entries):

Conditions include:

Current flow set point (total)	<=	Fixed value	80 °C
[Device property/data point]	[Operator]	[Source]	[Value]

→ Click **[+]** to add condition.

→ Define device property/data point, operator, source and value.

→ If several conditions are to apply, add additional condition.

Click **[X]** to delete conditions.

→ Click **[Next >]** to confirm filter criteria.

The reading changes to '2. Devices'.

User grouping ✕

1. Filter 2. Geräte 3. Daten 4. Gruppe

The device selection is dynamic, i.e. the number of selected devices may change. If you select individual devices, the device group always consists of these devices. In this case the filter settings are not saved.

Select individual devices

User profile

→ Select devices for the new device group.

All filtered devices can be added to the user group. The device group changes automatically when the filter criteria for devices applies or no longer applies.

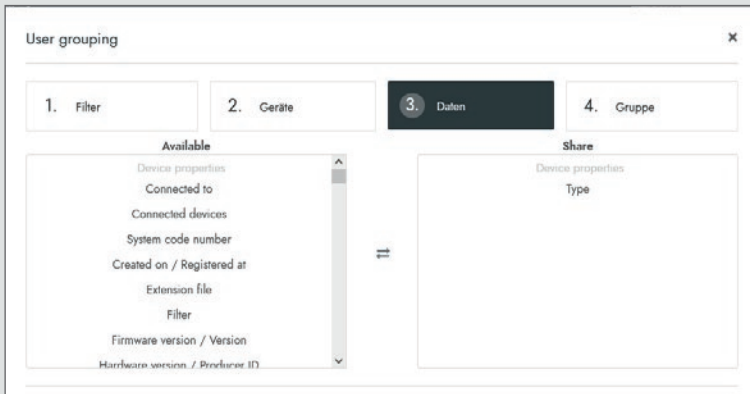
You can select individual devices for the user group if you want the same devices always to be added to the device group:

→ Check the 'Select individual devices' box (☑).

→ Select devices for the user group.

→ Click [Next >] to confirm the device group.

The reading changes to '3. Data'.



→ Select data point that you want to be shared.

→ Select data points from the [Available] column to add them to the selection.

→ Select data points in the [Shared] column to remove them from the selection.

→ Click [Next >] to confirm data points.

The reading changes to '4. Group'.

User grouping
✕

1. Filter

2. Devices

3. Data

4. Group

Name

Presets

»Mailbox 2«

»Mailbox 3«

Everything

Expert

Standard

None

Permissions

Info	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
System scheme	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Data	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Events	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Meter reading	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Heating circuit 1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Heating circuit 2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Heating circuit 3	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Drinking water	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Parameterization	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Heating circuit 11	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Heating circuit 12	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Heating circuit 13	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Analysis	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
User	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- ➔ Enter name for the user group.
- ➔ Assign authorizations.
- ➔ Click [Save] to confirm the new user group.

11.4.4 Managing mailboxes*

Mailboxes allow alarms to be sent to a group of users.

→ Select [👤 > 👤 Profile > Mailboxes] to open the communication statistics.



	NAME	E-MAIL ADDRESSES / TELEPHONE NUMBERS	ALARMS	REPORTS
<input type="checkbox"/>	Mailbox 1		0	0
<input type="checkbox"/>	Postfach 1	-	0	0
<input type="checkbox"/>	WebHook	-	0	0

Buttons: Delete, +, ↻

Executable actions

Delete	Delete mailboxes
+	Add mailboxes (see Window 38)
↻	Refresh reading

Adding mailboxes in the menu level

→ Select [👤 > 👤 Profile > Permissions > Mailboxes].

→ Click [+] to open the 'User groups' window.

→ Clarify which users are to added to the mailbox to ensure the right users are notified of alarms.

→ Enter the name of the mailbox.

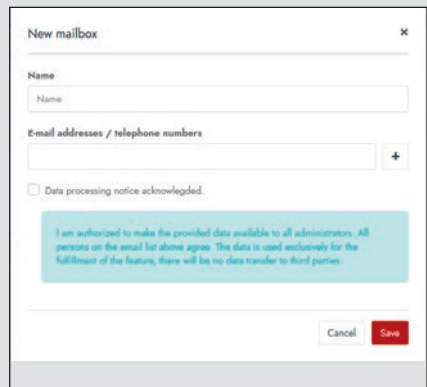
→ Enter the e-mail address of the first user that is to receive the alarm.

→ Click [+] to enter further e-mail addresses.

→ Agree to the privacy policy (☑).

→ Click [Save] to confirm the mailbox.

Click [Cancel] to close the window without performing any of the options.



New mailbox

Name: _____

E-mail addresses / telephone numbers: _____ +

Data processing notice acknowledged.

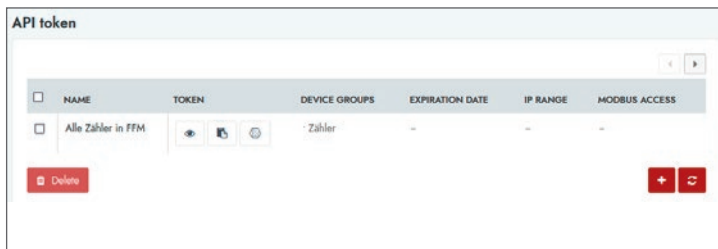
I am authorized to make the provided data available to all administrators. All persons on the email list above agree. The data is used exclusively for the fulfillment of the feature, there will be no data transfer to third parties.

Buttons: Cancel, Save







Window 38: New mailbox

11.4.5 Managing API token*

API tokens are required to allow devices to access SAM DISTRICT ENERGY. API tokens are assigned in SAM DISTRICT ENERGY for previously defined device groups.



Executable actions

	Delete selected API token
	Show API token
	Copy API token to clipboard
	Change to test level ([API] menu)
	Create API token (see Window 39)
	Refresh reading

Creating API token in the menu level

- Select [👤] > 👤 Profile > API].
- Click [+] to open the 'User groups' window.

User profile

- Select device groups in the [Available] column to share them.
- Select device groups in the [Shared] column to remove them from the selection.

i Note

Device groups are managed in the [👤] > 👤 Profile > Permissions > Device groups] menu (see section 11.4.2).

- Click [Next >] to confirm device groups.
The reading changes to '2. Token'.
- Enter names, expiry date and permissible IP range.
- Click [Save] to confirm the entries.

The screenshot shows the 'API token create' dialog in step 1, 'Device groups'. It features two columns: 'Available' and 'Share'. The 'Available' column contains a list of device groups: 'Alle Geräte (nur lesen)', 'Regler (lesen)', 'Zähler', and 'Standard'. The 'Share' column is currently empty. A double-headed arrow indicates the selection process. At the bottom, there are buttons for 'Cancel', '< Back', 'Next >', and 'Save'.

The screenshot shows the 'API token create' dialog in step 2, 'Token'. The 'Device groups' column is now empty, and the 'Token' column is active. The form includes the following fields:

- Name:** A text input field with the placeholder 'Token description'.
- Expiration date:** A dropdown menu currently set to 'not set' with a trash icon to its right.
- Valid IP range:** A text input field with the placeholder 'CIDR'.
- Request limit per hour:** A numeric input field with a value of '000' and a spinner icon.
- Request limit per month:** A numeric input field with a value of '450000' and a spinner icon.

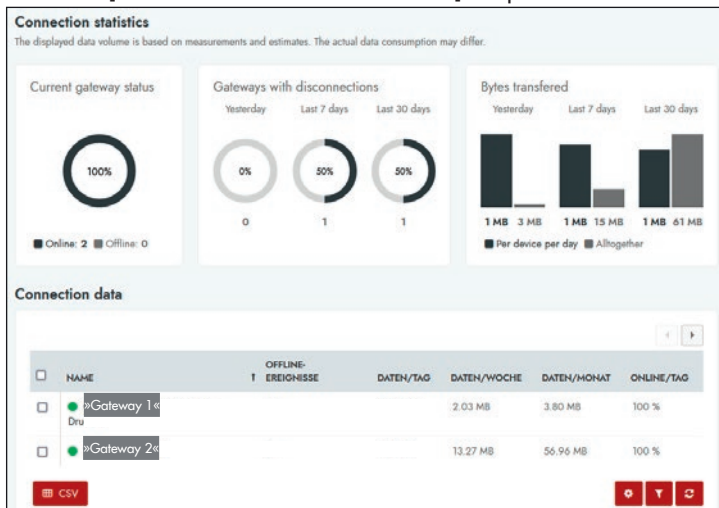
At the bottom, there are buttons for 'Cancel', '< Back', 'Next >', and 'Save'.

Window 39: Creating API token

11.5 Viewing the connection status*

The connection statistics show the current connection status of the gateways (online/offline) and the bytes transferred per day and per device.

→ Select [👤 > 👤 Profile > Communication] to open the connection statistics.



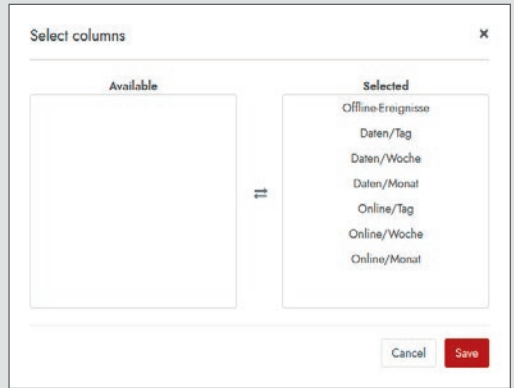
Executable actions

↑	Sort entries
📄 CSV	Write data to a CSV file (see section 5.2.1.1)
⚙️	Select columns (see section 11.5.1)
🔄	Refresh reading

11.5.1 Selecting columns

→ Click [⚙️] to open the 'Select columns' window.

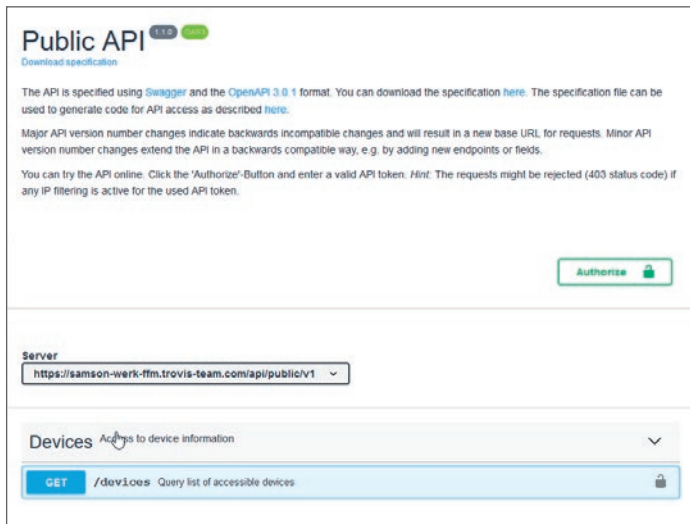
- Select column headings in the [Available] column to add them to the table.
- Select column headings in the [Selected] column to remove them from the table.
- Click [Save] to confirm the columns.



Window 40: Select columns

11.6 API

The [API] menu contains API documentation and serves as a test level for software developers who are in charge of connecting devices with SAM DISTRICT ENERGY over the API interface.




The screenshot shows the 'Public API' documentation page. At the top, it says 'Public API' with version 'v1.0' and a 'Download specification' link. Below this, there are three paragraphs of text explaining the API specification (Swagger and OpenAPI 3.0.1), version changes, and how to try the API online. An 'Authorize' button is located on the right side. The 'Server' section shows a dropdown menu with the URL 'https://samson-werk-ffm.trovis-team.com/api/public/v1'. The 'Devices' section is expanded, showing a 'GET /devices' endpoint with the description 'Query list of accessible devices'.

Public API v1.0 ●
[Download specification](#)

The API is specified using [Swagger](#) and the [OpenAPI 3.0.1](#) format. You can download the specification [here](#). The specification file can be used to generate code for API access as described [here](#).


Major API version number changes indicate backwards incompatible changes and will result in a new base URL for requests. Minor API version number changes extend the API in a backwards compatible way, e.g. by adding new endpoints or fields.

You can try the API online. Click the 'Authorize'-Button and enter a valid API token. *Hint:* The requests might be rejected (403 status code) if any IP filtering is active for the used API token.

[Authorize](#) 

Server

Devices Access to device information ▼

[GET /devices](#) Query list of accessible devices 

12 Annex

12.1 Secure login

SAM DISTRICT ENERGY offers various methods for secure login. This section contains recommended practices.

Secure passwords

Secure passwords should contain at least 10 characters and include uppercase and lowercase letters, digits and special characters.

Login and logout practices

A user can only be logged in to one device at a time. A further login from another browser or end device causes an automatic logout of the previous login session.

The users are also automatically logged out after 15 minutes inactivity in SAM DISTRICT ENERGY.

We recommend the following behavior to work securely in SAM DISTRICT ENERGY:

- Only assign user privileges that users need to perform their work.
- Delete user access after it is no longer required.
- Do not make the password accessible to third parties. Do not save them in a browser. Change passwords regularly.
- Log out to close SAM DISTRICT ENERGY in the [👤▼ > 🚪 Logout] menu.

12.1.1 Two-factor authentication

Two-factor authentication (2FA) is widely used method for a more secure logon over the Internet. If the 2FA method is not used, user log on by entering their user name and password. Two-factor authentication involves a login in two stages: after entering the username and password, a PIN automatically generated on the user's smartphone must be entered.

A TOTP authenticator app (e.g. Microsoft® authenticator app) is required for two-factor authentication in SAM DISTRICT ENERGY. Contact your IT department in your organization to select an appropriate app.

2FA can be activated as an option for a client in SAM DISTRICT ENERGY. In this case, this login option is mandatory for all the client's users.

Registering and changing 2FA login

Once the 2FA authentication is activated in an organization or for a client, all SAM DISTRICT ENERGY users must register their end device to be able to log in. Users must perform the following action while logging in for the first time:

→ Scan the QR code with an appropriate app. The organization/client receives the QR code during the 2FA activation.

The authenticator app generates a PIN for login.

→ Enter the PIN into the login window of SAM DISTRICT ENERGY.

When users log into SAM DISTRICT ENERGY the next time, they receive an automatically generated code on their authenticator app after entering a password. Users must then enter this pin into the login window of SAM DISTRICT ENERGY.

i Note

After changing the end device, users must first log in using the old device and deactivate it in [Profile > My Account > 2FA]. User can then log in using the new end device as described above.

Restore 2FA registration without an active end device (device lost or stolen)

If the 2FA registration is activated in SAM DISTRICT ENERGY and the user no longer has access to the end device used for login, SAMSON can be contacted to delete the registered end device. However, only registered contacts are authorized to have end devices deleted. A customer reference number is required in this case.

i Note

- *The client contact must be specified in the SAM DISTRICT ENERGY contract.*
 - *We strongly recommend that organizations/clients only accept personal demands to delete a registered user. Do not react to demands sent by e-mail or by a third party.*
-

12.2 Forgotten password or locked account

Proceed as follows if you have forgotten your password or your account has been locked:

- Click [🔒 Forgot password].
You will receive an e-mail with a link to unlock your account and assign a new password.
- Click the line in the e-mail and follow the instructions.

SAM DISTRICT ENERGY 

E-Mail

Password

Remember me

LOG IN

 [Forgot password?](#) Language: EN ▾

i Note

Administrators and the support team are unable to reset the password.

EB 6901 EN



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