MADOW 1.3.1

User Manual

Valid SIINEOS version: from 2.9.0
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Legal information

Safety information

This documentation contains information that you must observe for your personal safety and to prevent material damage. Read the safety information carefully and always keep this documentation within easy reach.

The safety information is presented in descending order of hazard level as follows:

⚠️	**DANGER** Indicates an immediate hazard to humans. Failure to comply will lead to irreversible injuries or death.

⚠️	**WARNING** Indicates an identifiable hazard to humans. Failure to comply may lead to irreversible injuries or death.

⚠️	**CAUTION** Indicates an identifiable hazard to humans or potential material damage. Failure to comply may lead to reversible injuries or material damage.

❗	**ATTENTION** This gives you information that may lead to material damage if not complied with.

✏️	**NOTE** A note gives you useful information on specific actions and issues.

💡	**TIP** A tip gives you tips, tricks or recommendations from in.hub that have proven to be helpful in handling the products.

Qualified personnel

The product associated with this documentation may only be handled by personnel qualified for the respective task. The device may only be installed, commissioned and operated in compliance with the associated documentation and the safety information contained therein.

Based on their training and experience, qualified personnel are able to recognize risks and avoid potential hazards when handling these products.

Knowledge of PCs, operating systems and web applications is a prerequisite. General knowledge in the field of automation technology is recommended.

Intended use

in.hub products may only be used for the applications specified in the corresponding technical documentation.

If third-party products and components are used, they must be recommended or approved by in.hub.

Proper storage, set-up, assembly, installation, commissioning, operation and maintenance are essential for the correct and safe operation of the products.

The permissible ambient conditions must be complied with. Instructions in the associated documentation must be followed.

Brands

All designations marked with the "®" symbol are registered trademarks. The other designations in this document may be trademarks whose use by third parties for their own purposes may infringe the rights of the owner.

Disclaimer

in.hub accepts no liability for product malfunctions resulting from improper handling, mechanical damage, incorrect application and improper use.

The contents of this document have been checked for conformity with the product described. However, deviations cannot be ruled out, so that we cannot guarantee complete conformity. The information in this publication is regularly reviewed. Necessary corrections are included in subsequent editions.

1. General information

This document contains all the information you need to commission and use the device/software.

The document is intended for service technicians, system administrators and installers who connect the product with other units, configure it and commission it.

1.1. Scope of delivery

1× MADOW licence for uploading the app to SIINEOS
1× User Manual as a PDF

1.2. Other applicable documents

In addition to this document, please observe the following documents. You can find these in the in.hub download portal at https://download.inhub.de/:

• User Manual for the IoT (Internet of Things) operating system SIINEOS

1.3. Compatible hardware

The application software MADOW can be used on the following devices:

• HUB-GM200

• HUB-EN200

• HUB-IO100

1.4. Network security

Please bear in mind that the product does not communicate in encrypted form within the internal network. Therefore, protect your network from unauthorized access from outside! Any integration into a network with Internet access must be undertaken with great caution. It is imperative to speak with your system administrator in advance.

2. What's new

MADOW is constantly being further developed. This chapter briefly introduces you to the new functions and improvements. This will give you a quick overview of what has changed compared to the previous version.

1.3.1	• You can now use the SIINEOS Time series database function to export data from MADOW to a CSV file. Export time series database [29]
1.3	• You can acknowledge downtimes directly in the shift view and assign a reason to those downtimes. Acknowledging downtimes directly in the shift view [17] • Colours can be assigned to the downtime reasons and this colour code is then displayed in the pie chart on the "Analytics" page. Managing downtime reasons [23] • When exporting the downtimes to a CSV file, you have to select the production line(s) for which you would like to save downtimes. Exporting a CSV file [27] • Data such as downtimes and downtime reasons are now written to the VictoriaMetrics database so that they can also be used by other applications for analyses.
1.2	• MADOW is now licensed for one production line each. If you want to monitor several production lines, please purchase one MADOW license each. Please contact service@inhub.de for this. • There is a new "Analytics" page, where the downtimes per week are shown according to reasons either in the bar or in the pie chart. Evaluating downtime analytics [18] • For better visualization of your production line / machine, you can now store a line scheme as an image file. The stations that you have created for the production line can be mapped on the MADOW line scheme. The plan is also displayed on the start page. There, you can click on the stations and get an overview of the downtimes. The line scheme is optional. If no scheme is stored, the stations are displayed as a list. Creating and editing production lines [20] • When exporting downtimes to a CSV file, you can now enter a period of time to limit the amount of downtimes and have data output for a very specific section. Exporting a CSV file [27] • You can acknowledge all downtimes at once and assign a reason to those acknowledged downtimes. Acknowledging all downtimes [27]

3. General product information

MADOW is a software application (app) in SIINEOS that you can use to monitor machine downtimes and productive times. The signals from the I/O units that were previously configured in SIINEOS are used in MADOW for downtime monitoring.

3.1. Principle

In MADOW, you can map your production process that you want to monitor by defining lines and stations and linking them to the signals.

A *line* can be a single machine or an entire process or production line with several processing steps, e.g. "Sheet-metal roller" or "Turning and milling line".

Stations reflect the process steps to be monitored in a line. For example, this could be the "Milling" station or the "Conveyor belt" station. You can individually model the scope of a line and its stations in MADOW.

MADOW only works with hardware on which SIINEOS is installed. For example, if you connect a current sensor to the in.hub gateway to measure whether current is flowing or not at the "Milling" station (machine running or not running), set up the interface to which the sensor "delivers" its signal in SIINEOS. In MADOW, you only define from which interface or sensors data is retrieved for the status monitoring of a station.

Several sensors can be attached to the station and connected to the gateway. In the SIINEOS I/O management, sensor signals can be linked to form a signal (see "Synthetic signals"). If, for example, the spindle current drops on a milling machine and the sensor on the door simultaneously signals "Open", then a downtime can be generated in MADOW via the synthetic signal, which is composed from the two individual signals.

> ✏️ **NOTE**
> If the signal values of a station fall outside the defined limits over a defined period of time, a downtime of the entire production line is triggered, even if the signal values of the downstream stations do not exceed any limit values.

In addition to the MADOW app, there is another app that allows you to monitor several machines or an entire machine park and display them in a floor plan – MADOW MASTER.

MADOW MASTER is described in a separate User Manual and can be downloaded from the in.hub download portal: https://download.inhub.de/.

4. Setting up a working environment for MADOW

Before you can use MADOW, you must have completed the following steps:

☑ You have assembled and installed all the necessary devices, such as gateways, sensors, etc. For this, see the operating instructions of the respective device.

☑ You have installed at least the SIINEOS version valid for this MADOW version.
Checking the SIINEOS version [8] and Installing SIINEOS updates [9]

☑ You have purchased a licence for each production line that you want to connect and monitor and have activated the licence.
Requesting a voucher and activating a software licence [10]

☑ You have uploaded the licence to SIINEOS.
Adding a licence file to SIINEOS [12]

☑ The system administrator has received the software bundle for MADOW from in.hub and installed it in SIINEOS.
Installing app updates [12]

☑ The system administrator has also activated the app: **SIINEOS > Apps > MADOW > Activate app**.

☑ You are familiar with the user-role concept for MADOW.
User roles [13]

4.1. Checking the SIINEOS version

1. Go to the SIINEOS start page by selecting the **Overview** page on the left.
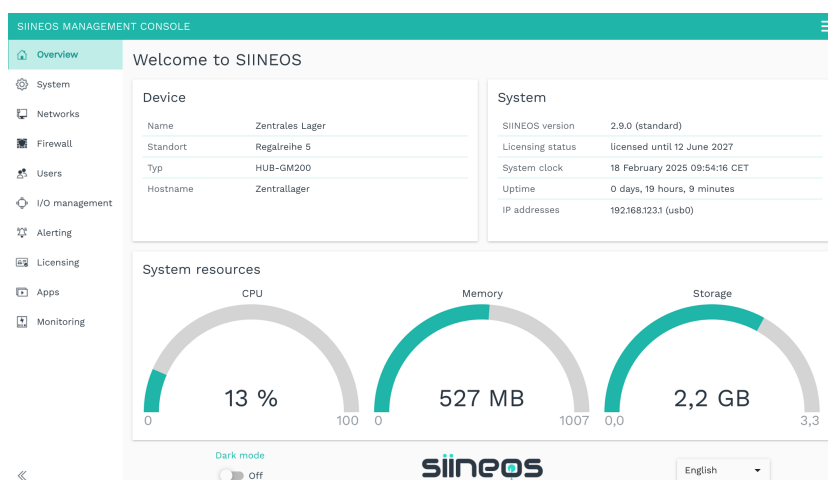
"Overview" start page (example)

2. Check the **SIINEOS version** field to see which version is installed on your gateway.

3. Go to the download portal at https://download.inhub.de/siineos/ and check whether a new version of SIINEOS is available.

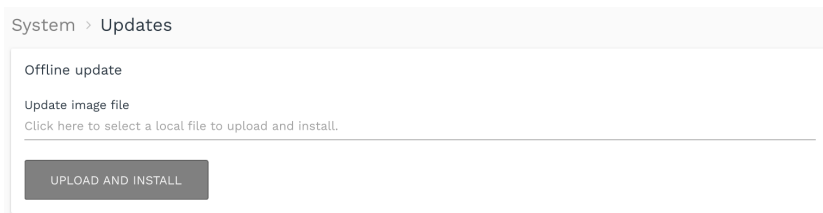## 4.2. Installing SIINEOS updates

> ✏️ **NOTE**
>
> You can only upload updates on the **System** page if you have a valid SIINEOS licence.
>
> If the licence has expired, you will be informed that you cannot import any updates.

1. Go to the download portal at https://download.inhub.de/siineos/ and select the required SIINEOS package.

   Two variants are available:

   • The complete software package for the gateways and modules, such as the HUB-GM200 or the HUB-EN200

   • The light version without Docker containers with a smaller file size for the HUB-IO100

2. When the download is complete, go to the **System** page in SIINEOS and select **Updates**.

System › Updates

Offline update

Update image file
Click here to select a local file to upload and install.

UPLOAD AND INSTALL

System > Updates

3. Click in the **Update image file** input field and select the software package provided by in.hub in `*.raucb` format from your local file-storage location.

4. Click on **Upload and install**.

   The installation will proceed automatically and takes about 1 minute. After a successful installation, you will be asked whether you want to restart the gateway.

5. Click on **Yes**.

6. After restarting, check that the new version of SIINEOS is displayed on the **Overview** page.

7. If the version has not been updated, proceed as follows:

   a. First delete your browser cache and refresh the page in your browser.

   b. If that doesn't work, switch off the power to the gateway and switch it on again after a few seconds.

   c. Start SIINEOS and check the version number.

4.3. Requesting a voucher and activating a software licence

1. Please contact service@inhub.de and let us know the term for which you would like to purchase the licence.

   MADOW licences can be purchased for 1 month or 1 year. Please also specify how many production lines you would like to monitor. All lines receive a licence each, which are combined in one voucher.

   You can activate the software licence with the voucher you receive from us.

2. Navigate to the website https://apps.inhub.de/ and register or log on if you are already registered.
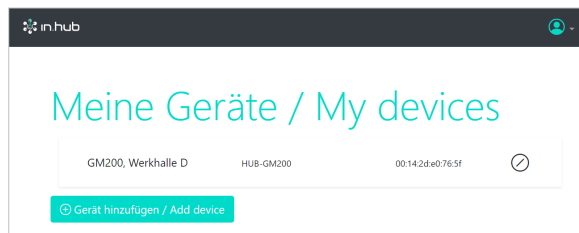
My devices (example)

3. If you want to extend a software licence, click on the device on which the software licence is to be renewed under **My devices**;

   – or –

   if you want to activate the software licence for a new device, click on **Add device**.

Add device

4. Enter the **Name** of the device, select the **Device Type** and enter the MAC address of the device.

   The MAC address can be found via **SIINEOS > Networks > Ethernet 1**.

   NOTE: Only the MAC address of Ethernet 1 is recognized and accepted.

5. Click on **Add**.

   The **License activation** page opens:

License activation

6. Copy the name of the voucher you received from in.hub into the **Voucher** field.

7. Click on **Next**.
   The information stored in the voucher, such as the term, product and validity, etc., will be displayed.


Voucher information (example: Activation of a SIINEOS licence valid for 3 years)

8. Check the details, especially whether the requested licence term matches the term specified here.

9. If the details are correct, click on Generate license.
   The licence file is downloaded automatically.

4.4. Adding a licence file to SIINEOS

1. In SIINEOS, navigate to **Licensing**.

   In the list, you will find all software licences that you have purchased and uploaded.
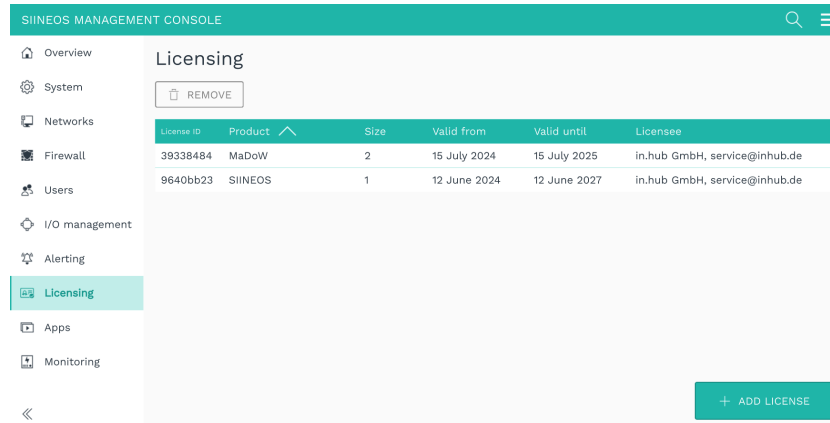
"Licensing" page (example)

2. Click on **Add license**.

3. Select the licence file from your file directory and click on **OK**.

   The licence is added to the list. From that point on, you can implement updates again or return to using a blocked app.

4. To remove a licence again – because it has become invalid, for example – select the licence ID and click on **Remove**.

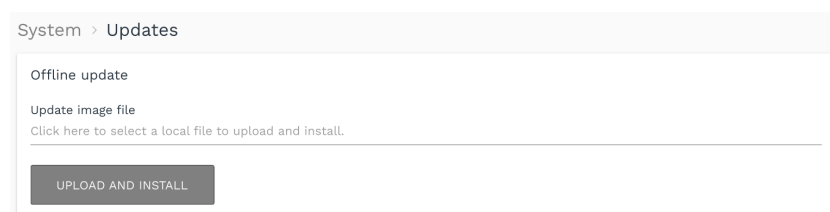   This will not delete the licence file itself, but only remove it from the list.

> **NOTE**
> Make sure that the system time of your device is correctly set and/or synchronized. Otherwise, the licence-file upload may fail.

4.5. Installing app updates

1. On the **System** page, click on **Updates**.

System > Updates

2. Click in the **Update image file** input field and select the software package provided by in.hub in `*.raucb` format from your local file-storage location.

3. Click on **Upload and install**.

   Installation will proceed automatically.

After a successful installation, you will be asked whether you want to restart the gateway.

4. Click on **No**.

   You do not need to restart the gateway when uploading apps.

4.6. User roles

There are two user groups with different user rights for operating MADOW.

- **Machine operator**

  The machine operator can access MADOW without having to authenticate him-/herself.

  In MADOW, he/she can now display downtimes in a weekly or daily view, acknowledge the downtimes with the reasons defined by the administrator and view statistics on the total running time of a line and its downtimes.

  All activities that the machine operator can perform can be found at Working with MADOW [14].

- **App administrator**

  The administrator can open MADOW without authentication.

  To administrate MADOW, however, the administrator must log on to the protected **Administration** area with his/her user data, see also Opening the Administration page [20].
  Here, he/she can create new lines, stations and downtime reasons, manage them and also delete them again. Optionally, the administrator can establish communication with a master gateway if the MADOW MASTER app is also used.

  All activities that can only be performed by the administrator can be found at Administrating MADOW [20].

  > **NOTE**
  >
  > A user account for the app administrator is already created by default in SIINEOS (**madowadmin**/**madowadmin**). For better security, you should change the password according to your security requirements.

5. Working with MADOW

The MADOW app accesses all configuration entries that you have made in SIINEOS. In the app itself, signals are processed in such a way that the downtimes of production lines and stations can be seen quickly and easily.

5.1. Opening MADOW

1. Enter the web address for MADOW, which you have received from your system administrator, into your browser.

   When you log on for the first time, you will see a default production line that you can delete.

   If the app administrator has already created lines and stations, this page is filled with data.
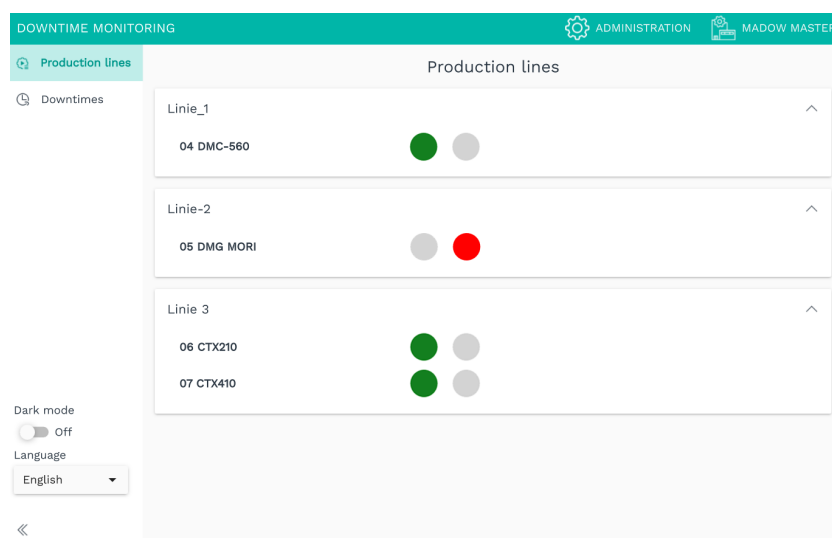
**Start page with an overview of the current status of the production line(s)**

> **IF YOU CANNOT ACCESS MADOW**
>
> If MADOW does not open or the IP address cannot be accessed, the app may not have been enabled in SIINEOS. Please contact your system administrator.
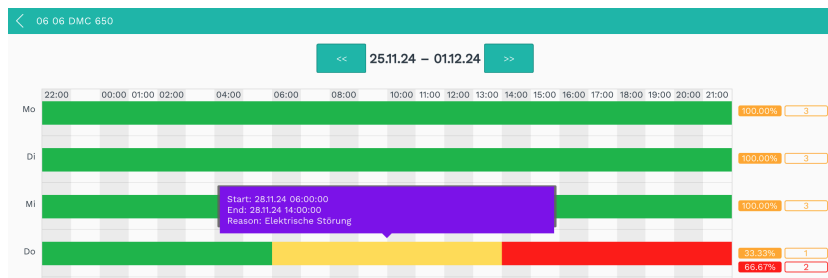
5.2. Viewing production lines and their statuses

1. Select a line and click on the station for which you want to take a closer look at downtimes.
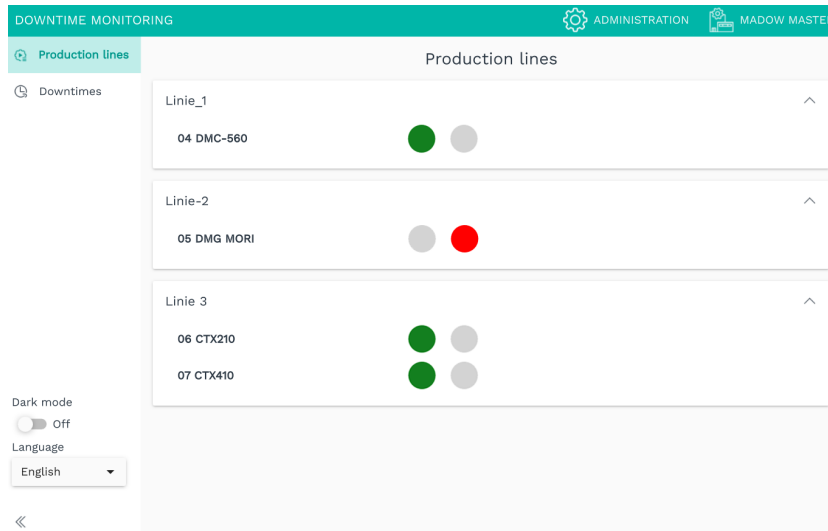
Overview of production lines (example)

A weekly view opens in which all 24 hours of the day are displayed with a bar.

Week view (example)

On the right-hand side, the traffic-light diagram shows the statistics for the monitored line:

- Green = Station ran without interruption

- Yellow = Intended downtime that has already been acknowledged

- Red = Unintended, acknowledged downtime or downtime that has not yet been acknowledged

Next to the traffic light scheme you will find the number of pieces produced per shift. This value is only displayed if you select the **Cycle** or **Counter** operating mode when creating a station. See Creating and editing production lines [20].

2. Move the mouse over a bar to find out the start, end and reason for the downtime. These details are displayed in a tooltip.

3. To go to the shift view for the day, click on a weekday or bar.
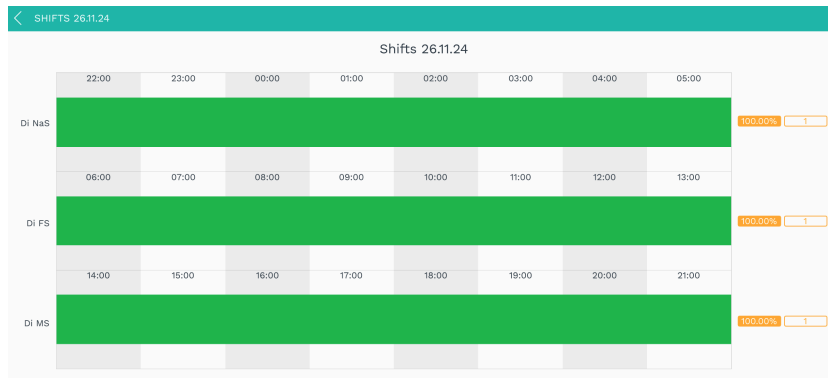
Shift view (example)

The three standard shifts (early, afternoon and night shifts) are shown there.

✎ **NOTE**

If your station only runs in two-shift or single-shift operation, the non-productive time is also displayed as downtime.

5.3. Acknowledging downtimes

You have three options for acknowledging downtimes and assigning them a reason:

1. Via the **Downtimes** page by clicking on a downtime from the list and selecting the reason for the downtime.
    See Displaying and acknowledging current downtimes [16].

2. Via the **Production lines > Week view > Shift view** page by clicking on the downtime bar and selecting the reason for the downtime.
    See Acknowledging downtimes directly in the shift view [17]

3. Via the **Administration > Reset downtimes > Acknowledge** section, in which you assign a reason to all unacknowledged downtimes and acknowledge them in one process.
    This task can only be carried out by the app administrator.
    See Acknowledging all downtimes [27]

5.3.1. Displaying and acknowledging current downtimes

Downtimes are always triggered by a station, but result in the entire line coming to a standstill. Every downtime is initially stored as an unintended downtime. You only assign a reason for the downtime when you acknowledge it.

On the **Downtimes** page, you can view the downtimes of a line and the triggering station and acknowledge the downtimes.

Overview of all unacknowledged downtimes of a selected production line (example)

1. Click on a line.
   A list opens with all downtimes that have not yet been acknowledged.

2. Click on a downtime.
   A selection of reasons is displayed with which you can acknowledge the downtime.
   If a reason is missing, please contact your app administrator. Only they can add and manage downtime reasons.

3. Select the appropriate reason for the downtime.
   The downtime is now acknowledged and deleted from the list;
   – or –
   if you have added several stations for this reason, a selection of stations will appear. Select the station that caused the downtime.

4. Continue until all downtimes have been acknowledged. Only then will the downtimes be recorded in the machine-monitoring statistics.
   NOTE Acknowledged but unplanned downtimes are still displayed in red in the overview of production lines.

### 5.3.2. Acknowledging downtimes directly in the shift view

1. Select a line and click on the station for which you want to take a closer look at downtimes.
   A weekly view opens in which all 24 hours of the day are displayed with a bar.

2. To go to the shift view for the day, click on a weekday or bar.

3. Click on an unconfirmed or not-yet-acknowledged downtime.
   A message is displayed requiring you to confirm whether you really want to acknowledge the downtime.

4. Click on **Yes**.

5. Now select the reason for the downtime.

The bar changes colour according to the colour coding you have defined for the down-time reason.
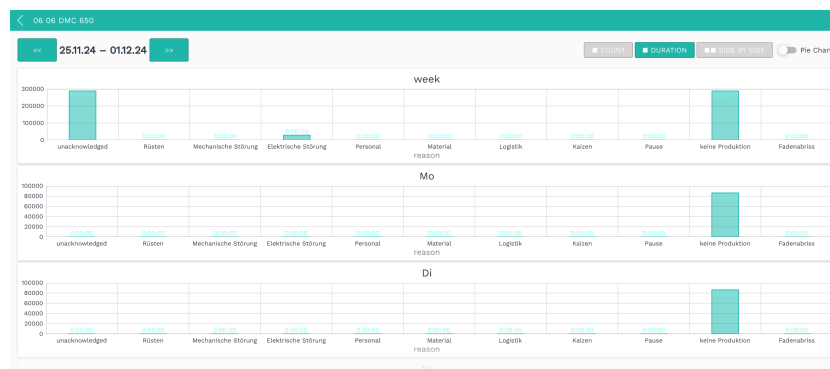
5.4. Evaluating downtime analytics

The **Analytics** page provides details of the number, duration and reasons for downtimes. This allows you to evaluate and analyse downtimes even better.

1. On the left, select the **Analytics** page.
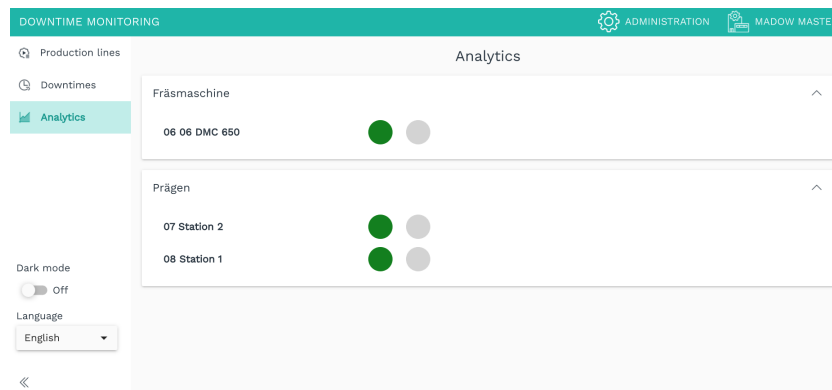

"Analytics" page

2. Double-click on a station for which you would like to analyse the downtimes. The following view opens:

Overview of all downtimes of the station for one week

3. In the top right-hand corner, click on **Count** to display the number of downtimes;
   – or –
   click on **Duration** to display the total duration of downtimes;
   – or –
   click **Side by side** to display both in an overview.

4. For more details on the individual days of the week, click on a day of the week.
   A view opens in which the shifts of the day are displayed in detail.

5. If you prefer a pie chart instead of a bar chart, activate the **Pie chart** slider.

The reasons for downtime are colour coded in the pie chart. If you have not defined the colours yourself, standard colours are stored, which you (as the app administrator) can change at any time, see Editing downtime reasons [24].
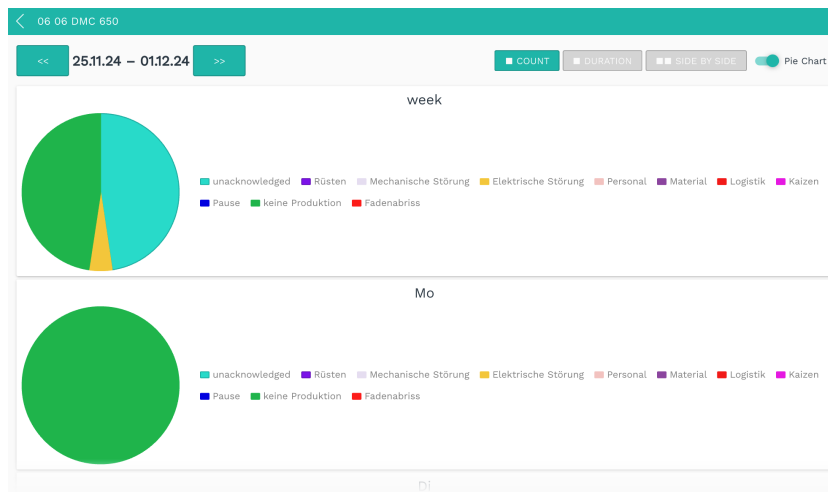
Pie chart with an analysis of downtime reasons
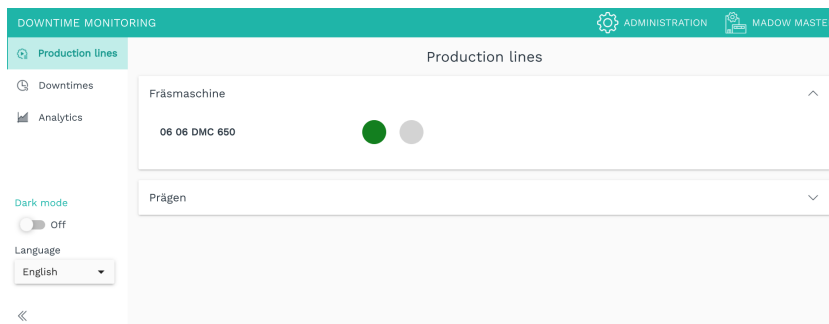
6. Administrating MADOW

> ✏️ **NOTE**
>
> The tasks described in this chapter are only accessible for the **App administrator** user role.

6.1. Opening the Administration page

1. In the MADOW app, click on **Administration** at top right.

Access to the Administration page

2. Log on.

   The user accounts for the apps are created in SIINEOS. To administer an app, you need the **App administrator** user role.

   You will see the following tasks in the **Administration** page:
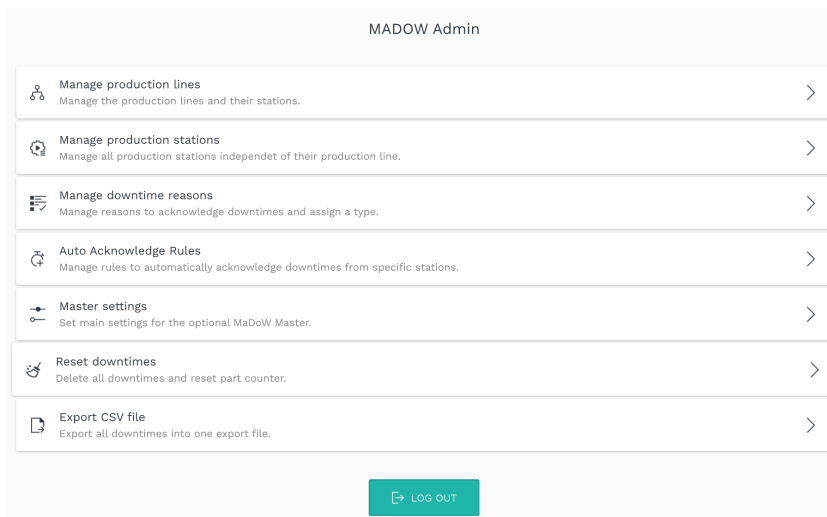
View of the Administration page

6.2. Creating and editing production lines

By default, you can only create one production line per license. If you want to monitor several machines or process lines, you must also purchase the corresponding number of licences.

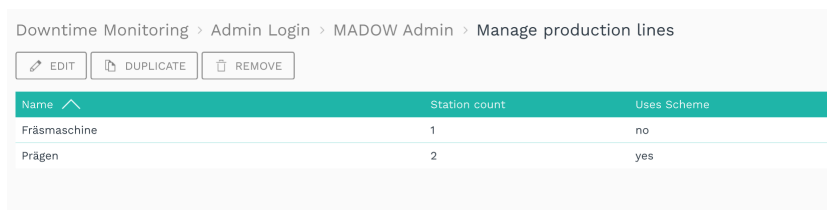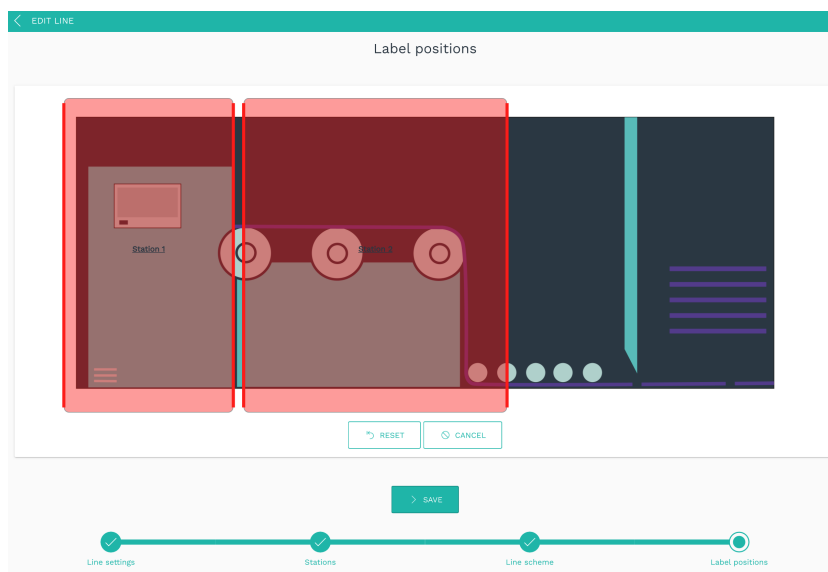1. On the **Administration** page, click on **Manage production lines**.

   Downtime Monitoring › Admin Login › MADOW Admin › Manage production lines

   | ✎ EDIT | ▯ DUPLICATE | ▯ REMOVE |

Name ⌃	Station count	Uses Scheme
Fräsmaschine	1	no
Prägen	2	yes

   Administration > Manage production lines

2. To create a new line, click on **Add line**.

   The setup wizard opens to guide you through the rule creation process. In the following, confirm each entry with **Next** or press **Enter**.

3. Assign a **Name**.

4. Click on **Add station**.

   The setup wizard opens again.

5. Complete the input fields as follows:

   a. **Name**: Enter the name of the station.

   b. **Source signal**: Select the I/O unit and the signal to be read from.

   c. **Operating mode**: Select how the source signal is to be read. The following modes are available:

Binary process status	You can define whether "0" or "1" is active. This mode is mainly used for digital signals.
Performance indicator	You can define a value range within which a process or machine is recognized as running. *For example*: You use a current sensor to detect the current signal from a machine.
Counter	This mode is suitable if a controller or a synthetic signal provides a piece count value and this increases by a certain value with each finished product.
Cycle	Select this mode if the input signal is representative of a finished part. The **Cycle** mode then acts as a piece counter.

   d. **Parameter**: Select when the process is characterised as "running" and enter the threshold value if necessary. The entry of the parameters is based on the selected operating mode, so the fields vary. Just follow the instructions in the UI.

   e. **Timing**: The entry of the value is based on the selected operating mode, so the fields vary. Either enter a cycle time in which the entries made under Operating mode and Parameters are queried. Alternatively, enter the shortest period of time after which a downtime is recognized or after which production is securely resumed.

   f. **Statistics display**: Activate the slider if you want the downtime details for this station to be collected separately.

6. Click on **Save**.

    This takes you to the Overview of the stations.

7. If you want to add more stations, repeat the actions from Step 4;
    – or –
    Click on **Next**.

    you will now be taken to the line scheme.

8. If you want to assign a line scheme to the production line, activate the **Assign a line scheme** slider.

9. Click on **Upload production line scheme** and select the image file from your local directory.

    TIP: We recommend a line scheme with a view from above or from the side.

10. Click on **Upload and use**.

11. Click on **Next**.

    This then takes you to **Label positions**.

12. Move the created stations on the line scheme to the position where they are also located on the machine.

Label positions in a line scheme

13. Click on **Save** to finish editing the line.

    This will take you back to the overview list with all production lines.

14. To edit a line, select a line and click **Edit** or double-click on the line.

    This will take you back to the setup wizard and you can continue as described from Step 3.

6.3. Managing production stations

1. On the **Administration** page, click on **Manage production stations**.

    All stations that have been created are listed.

Administration > Manage production stations

2. Double-click on a station for which you would like to adjust the settings;

   – or –

   click on **Edit**.

   The setup wizard opens to guide you through the rule creation process. In the following, confirm each entry with **Next** or press **Enter**.

3. Continue as described under Creating and editing production lines [20] from Step 5.

6.4. Managing downtime reasons

6.4.1. Adding downtime reasons

1. On the **Administration** page, click on **Manage downtime reasons**.

Administration > Manage downtime reasons (example)

2. To create a new downtime reason, click on **Add reason**.

   The setup wizard opens to guide you through the rule creation process. In the following, confirm each entry with **Next** or press **Enter**.

3. Enter a **Name** for the downtime reason.

4. In the **Category** drop-down menu, select one of the following entries:

   • **Intended**: The reason for the downtime is planned, e.g. maintenance, and is displayed in yellow in the overview of production lines.

   • **Unintended**: The reason for the downtime is unplanned, e.g. power failure, and is displayed in red in the overview of production lines.

   • **Ignored**: The downtime is ignored. It does not appear in the downtime overview. This can be useful if very short downtimes (e.g. refilling materials) should not be taken into account, but the accuracy of longer downtimes should not be affected.

5. Define the colouring of the downtime used in the pie chart on the **Analytics** page.
    You can select a colour in the RGB colour space or in the HSL colour space.
    NOTE: Make sure that the colours contrast well with each other so that you can distinguish them later in the pie chart.

6. Optional: Enter a **Description** of the reason.

7. In the **Stations** section, you can assign the reason you have just created to individual stations by activating the checkboxes.
    For general reasons that affect the entire line, such as "Break", you do not need to select a station.
    If you select several stations, you can only acknowledge the downtimes of these stations with the reason.

8. Click on **Finish** to confirm the entries.
    The list of downtime reasons appears again. There, you can **Edit**, **Duplicate** or **Remove** individual reasons.

6.4.2. Editing downtime reasons

If a downtime reason has been created, you can still edit the following parameters:

• Name of the reason

• Colour coding

• Assignment of the reason to one or more stations

> **NOTE**
> The category for the reason (intended, unintended or ignored) cannot be changed retrospectively. If the categories change, you must remove the reason and create a new reason.

1. On the **Administration** page, click on **Manage downtime reasons**.

2. Double-click on a downtime reason.
    The **Settings** page opens, where you can adjust your entries.

Edit reason > Settings

3. Customise the **Name**, **Colour** and/or **Stations**.

   By default, one colour is stored for each of the downtime reasons predefined in MADOW. However, this default colour is only visible in the pie chart, not in the list of downtime reasons (where the colour field is not filled in). Here, you can adjust and save the colour coding so that it is also displayed in the list of downtime reasons.

4. To save your changes, click on **Save & close**.

6.5. Managing automatic acknowledgement rules

You have the option of automating the acknowledgement of downtimes for certain stations. This can be helpful, for example, if you already know that a machine produces a lot of downtimes in a short period of time and you cannot immediately rectify the reason for the downtime. Or if there are repeated (intended) downtimes for the insertion or removal of parts at the beginning or end of a machine line.

> **TIP**
>
> Limit the conditions for the automatic acknowledgement rule as precisely as possible. This is the only way to ensure that other, possibly unplanned downtimes are not automatically acknowledged and thus lost in your statistics.
>
> The time until a downtime is triggered is not relevant; the acknowledgement refers exclusively to the duration of the downtime. The rule with the longest time is taken into account first.

1. On the **Administration** page, click on **Auto acknowledge rules**.

   All rules that have been created are listed.

Administration > Automatic acknowledge rules

2. To create a new rule, click on **Add acknowledge rule**.

    The setup wizard opens to guide you through the rule creation process. In the following, confirm each entry with **Next** or press **Enter**.

3. Enter a meaningful **Description** for the acknowledgement rule.

4. Select a **Reason** with which acknowledgement should be automatic.

5. For **Operation**, select from the drop-down list the duration of downtime to be automatically acknowledged.

    - **Duration is above (>)**: If the downtime to be acknowledged is longer than the downtime duration entered below, then the rule is applied.

    - **Duration is below (<)**: If the downtime to be acknowledged is shorter than the downtime duration entered below, then the rule is applied.

6. Enter the **Duration** (in seconds) to be used for the comparison.

    The acknowledgement rule is only applied automatically if the downtime is longer or shorter than the duration entered here.

7. Under **Stations**, select the station that triggers the downtime (i.e. is the first to stop) and for which the acknowledgement rule should apply.

8. Once you have made all the entries, click on **Finish**.

    You return to the list with all the acknowledgement rules.

9. If you want to edit a rule, select it and click on **Edit** or double-click.

    A page opens where you can see and edit all the rule settings at a glance.

10. To save your changes, click on **Save & close**.

11. If you want to duplicate a rule, select it and click on **Duplicate**.

    This will take you back to the setup wizard, where you can customise the rule.

12. To delete an acknowledgement rule, click on **Remove**.

6.6. Acknowledging all downtimes

If a large number of downtimes have occurred and you would like to acknowledge these downtimes completely, a new function is now available. This can be useful, for example, if you have defined monitoring times very broadly during setup or have tried out different scenarios and a large number of downtimes have been recorded as a result.

1. On the **Administration** page, click on **Reset downtimes**.

2. Click on **Acknowledge** to acknowledge all downtimes.

3. From the drop-down list, select a reason to be used for all acknowledged downtimes.

4. Confirm with **Apply**.

   All downtimes with the reason you have selected will be acknowledged.

6.7. Resetting all downtimes

If you want to delete all downtimes, a new function is now available. This is useful, for example, if you have set up your production line and tried out standstill monitoring with MADOW and now want to switch to live operation.

1. On the **Administration** page, click on **Reset downtimes**.

2. Click on **Delete data** to delete all downtimes.
   A message is displayed asking whether you really want to delete the data.

3. Click on **Yes**.
   The downtimes are deleted. All data entered for the stations and lines is retained.

6.8. Exporting a CSV file

1. On the **Administration** page, click on **Export CSV file**.

Administration > Export CSV file

2. If necessary, reduce the amount of data by entering a **Start date** and an **End date**.

3. Also select the line(s) for which downtimes are to be exported.

4. Click on **Export**.
   The download will start.

6.9. Making settings for MADOW MASTER

Before you can use the MADOW MASTER app, you need to make some settings in the MADOW app to establish the communication with the master gateway. The connection between the two software applications allows you to merge your machine monitoring and visualise the status of your production lines in the floor plan.

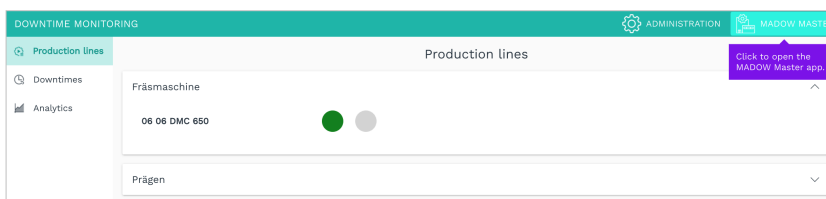1. In the MADOW app, navigate to the **Administration** page at top right.
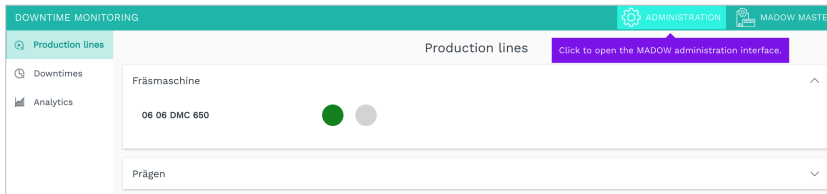
MADOW > Administration

2. Log on.

3. Click on **Master settings**.
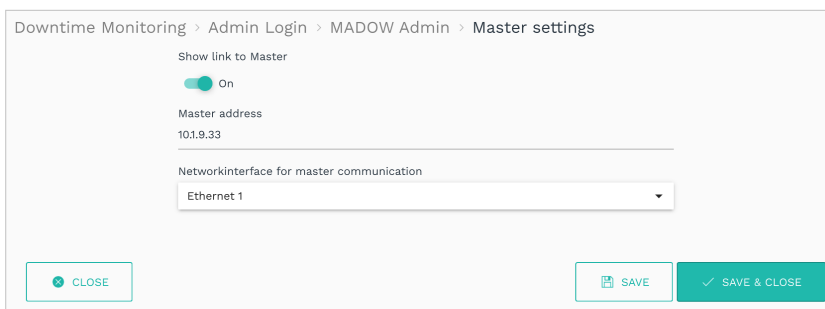
Administration > Master settings

4. Make the desired settings:

   a. **Show link to Master**:

   Set the slider to **On** if you want the **MADOW MASTER** button to be displayed in the MADOW app.

   Anyone who works with MADOW can open the floor plan;

   – or –

   set the slider to **Off** if only authorised persons are allowed to view the floor plan.

   MADOW MASTER can then only be accessed via the IP address or host name, which you can make available to selected persons.

   b. **Master address**:

   Enter the network address or host name of the master gateway that is connected to all other gateways in the production hall and via which you receive the signals from all gateways.

NOTE: MADOW MASTER can only retrieve the downtimes from MADOW and visualize them in the floor plan if an IP address is entered here.

c. **Network interface for master communication**:

Select the network to which you have access for communication with the master gateway.

5. Click on **Save & close**.

This will take you back to the **Administration** page.

6.10. Export time series database

This function allows you to export or delete the recorded measurements from the time series database (VictoriaMetrics). This can be useful, for example, if you want to start productive operation and tidy up test data.
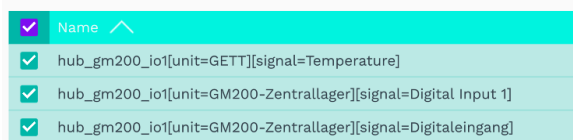
Log on to SIINEOS to access the time series database in **I/O management**.

1. On the **I/O management** start page, select **Time series database**.
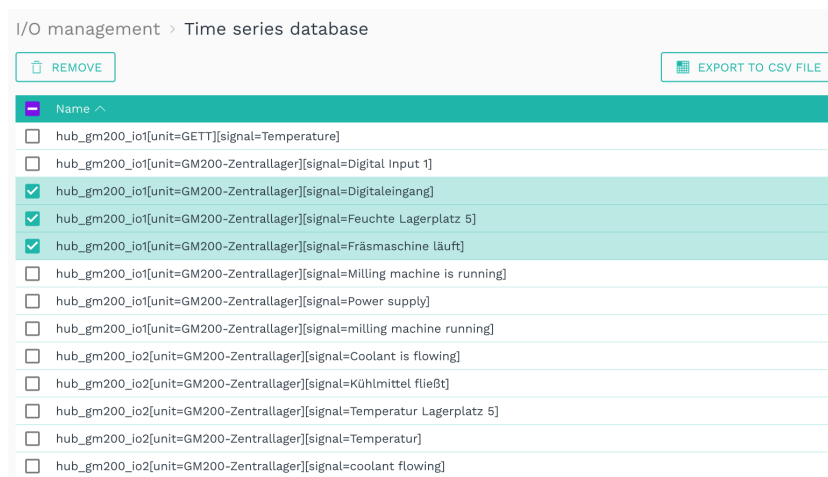
I/O management > Time series database

2. Select all database entries by activating the checkbox in the header;

– or –

Just start typing.

Your input will be transferred directly into the search field at top right and the hits will be displayed dynamically in the list.

You can enter upper- or lower-case letters and numbers.

you can then select the filtered hits again using the checkbox in the header.

3. To export the selected data, click on **Export to CSV file**.

   A window opens in which you can make detailed settings for the CSV export.

"CSV export" dialogue window (example)

4. Make the following entries in the **CSV export** dialogue window:

   a. By default, the period of one month is entered retroactively.

      If you want to adjust this period, enter a new **Start date** and **End date**.

   b. In the **Interval** drop-down list, you specify the intervals at which the entries are to be exported.

   c. Under **Decimal separator**, specify whether the decimal place should be a point or a comma.

   d. Under **Aggregation**, you can output additional columns for each measurement series, in which either the **Minimum**, **Maximum**, **Average**, **Sum** or **Number** of values within an interval are listed.

   e. In the **Date/time format** drop-down list, you can select the format in which the date and time of the database entry is to be displayed in the CSV file.

      Timestamp: A timestamp is set for each entry.

      Local date + time (2 columns): The date and time are converted into the time zone that you have specified under **SIINEOS > System > Date & time** and are output in the format `YYYY-MM-DD` and `hh:mm:ss`.

      UTC date + time (2 columns): The UTC date and UTC time are output in the format `YYYY-MM-DD` and `hh:mm:ss`.

      ISO string: Date and time in a machine-readable character format

      Localized string: Detailed date with day of the week and month written out in full. The format depends on the language environment.

> **TIP**
>
> The smaller the interval and/or the longer the time period, the more data has to be written and the longer the process takes.
>
> If the recording interval of the signal is greater than the interval entered here, the same value is output for each time unit. This increases the size of the CSV file and therefore also the duration of the download.

5. Click on **Start export**.

   Depending on the selected interval, period and selected summaries, this may take a few minutes.

6. To save data in a file, select individual or all data and click on **Export to CSV file**.

7. To delete data from the time series database, select individual or all data and click **Remove**.

7. Troubleshooting

Problem	Possible cause	Remedy
There is a grey veil over the start screen. You can no longer make any entries, but can still see the downtimes.	Your MADOW licence has expired.	1. Request a new voucher and activate the software licence. Requesting a voucher and activating a software licence [10] 2. Upload the licence to SIINEOS. Adding a licence file to SIINEOS [12] 3. Deactivate the app and reactivate it. You can now use the app.
Licence file upload fails	The system time of your device is not synchronized with the current time.	1. In SIINEOS, navigate to **System > Date & time** and select your time zone. 2. Click on **Save**.
App has no access to the Internet You can no longer open or restart an app.	Docker-based apps are temporarily unable to establish an Internet connection after changes to the firewall rules.	Restart the gateway. The firewall is reconfigured together with the Docker service.
The IP address of MADOW is not accessible.	The MADOW app may not have been activated in SIINEOS.	In SIINEOS, navigate to **Apps > Madow** and click on **Enable app**; – or – contact your system administrator.

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