MSA
The Safety Company

**Manual**

# SUPREMA Manager

## Software for Fire and Gas Warning Units

Order No.: 10154655/03

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# 1 Safety Regulations

## 1.1 Correct Use

The program SUPREMA Manager can be used to create and manage the data of multiple SUPREMA systems. The database can include the following information:

- System configuration and parameters
- System logs

This operating manual describes SUPREMA Manager version 2.5x.

**WARNING!**

Use of SUPREMA Manager is only approved for SUPREMATouch systems with firmware 3.01.06, 3.02.01 and higher.

It is imperative that this operating manual be read and observed when using the product. In particular, the safety instructions, as well as the information for the use and operation of the product, must be carefully read and observed. Furthermore, the national regulations applicable in the user's country must be taken into account for safe use.

**WARNING!**

Only trained individuals should use the SUPREMA Manager. Before uploading data from the SUPREMA Manager on a SUPREMA the data needs to be checked.

**DANGER!**

This product is supporting life and health. Inappropriate use, maintenance or servicing may affect the function of the device and thereby seriously compromise the user's life.

Before use the product operability must be verified. The product must not be used if the function test is unsuccessful, it is damaged, a competent servicing/maintenance has not been made, genuine MSA spare parts have not been used.

Alternative use, or use outside this specification will be considered as non-compliance. This also applies especially to unauthorised alterations to the product and to commissioning work that has not been carried out by MSA or authorised persons.

## 1.2 Liability Information

MSA accepts no liability in cases where the product has been used inappropriately or not as intended. The selection and use of the product are the exclusive responsibility of the individual operator.

Product liability claims, warranties also as guarantees made by MSA with respect to the product are voided, if it is not used, serviced or maintained in accordance with the instructions in this manual.

## 1.3 Safety and Precautionary Measures

- All parameters and configuration made with a PC must be checked for correctness on the SUPREMA system, or they must be checked for correctness on the PC after they have been read back to the PC.
- Ensure that no unauthorized persons have access to a computer running SUPREMA Manager.
- If an error message appears and the cause of the error is unclear or the error cannot be fixed, contact MSA.
- It is the responsibility of the user to check all data entered with SUPREMA Manager.

# 2 Hardware and System Requirements

## 2.1 System Requirements

### 2.1.1 Supported Operating Systems

- Windows 7 x86/x64
- Windows 10 x86/x64

### 2.1.2 Hardware Requirements

Recommended Minimum: Pentium 1,5 GHz or higher with 2 GB RAM

Minimum disk space:

- x86 – 2 GB
- x64 – 4 GB

Minimum screen resolution: 1024x768

Recommended screen resolution: 1280x1024

## 2.2 Interfaces

The PC must be equipped with:

- USB port or
- Serial port

If no USB port driver is installed, Windows will detect a new device after connecting the SUPREMA via USB cable for the first time. The driver should be installed automatically. If the driver is not installed automatically, it is possible to install the driver from the SUPREMA Manager CD.

## 2.3 Supported SUPREMA versions

- SUPREMATouch firmware 3.02.01 and higher
- SUPREMATouch firmware 3.01.06

For SUPREMATouch firmware or SUPREMA with a firmware version lower than 3.02.01 some functions of SUPREMA Manager are not available. Where applicable, the reduced functional range is mentioned in this manual.

The SUPREMA manual referred to in this manual is the SUPREMATouch manual, 10121863, rev. 03. While the references will not work, the relevant content can be found in the SUPREMA manual as well.

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# 3 Installation

Administration rights are required for installation.

## 3.1 Prior to Installation

It can be necessary to uninstall a previous version of the software, this depends on the version number of the existing installation.

| Installed version | Necessary action |
|---|---|
| Version numbers 1.X | Uninstall previous version |
| Version numbers 2.X | None, during installation of the new version an update is carried out automatically |

To uninstall SUPREMA Manager:

(1) Go to Start/Control Panel/Programs/Programs and Features

(2) Right-click on the entry “SUPREMA Manager + MSA-App”.

(3) Choose Uninstall from the list and confirm the dialogs until deinstallation is confirmed.

## 3.2 Installation Process

(1) Insert data carrier.

*Run the setup file on the data carrier to install both MSA-App and SUPREMA Manager.*

*Follow the instructions of the installation wizard.*

(2) Start the SUPREMA App on the PC.

To start SUPREMA Manager, use the following path:
*Start/Programs/MSA/MSA-App/MSAApp*

If the software PrimaX Manager is installed on the PC there will be two entries under MSA: “MSA-App” and “MSAApp”. For running SUPREMA Manager start the “MSA-App” entry.

(3) **After completing the setup start the software once with administrator rights/permission.**

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# 4 MSA-App

SUPREMA Manager and other software programs from MSA run as plug-ins inside the host application MSA-App. When SUPREMA Manager is installed, MSA-App is part of this installation.
The screen of the MSA-App has the following layout:

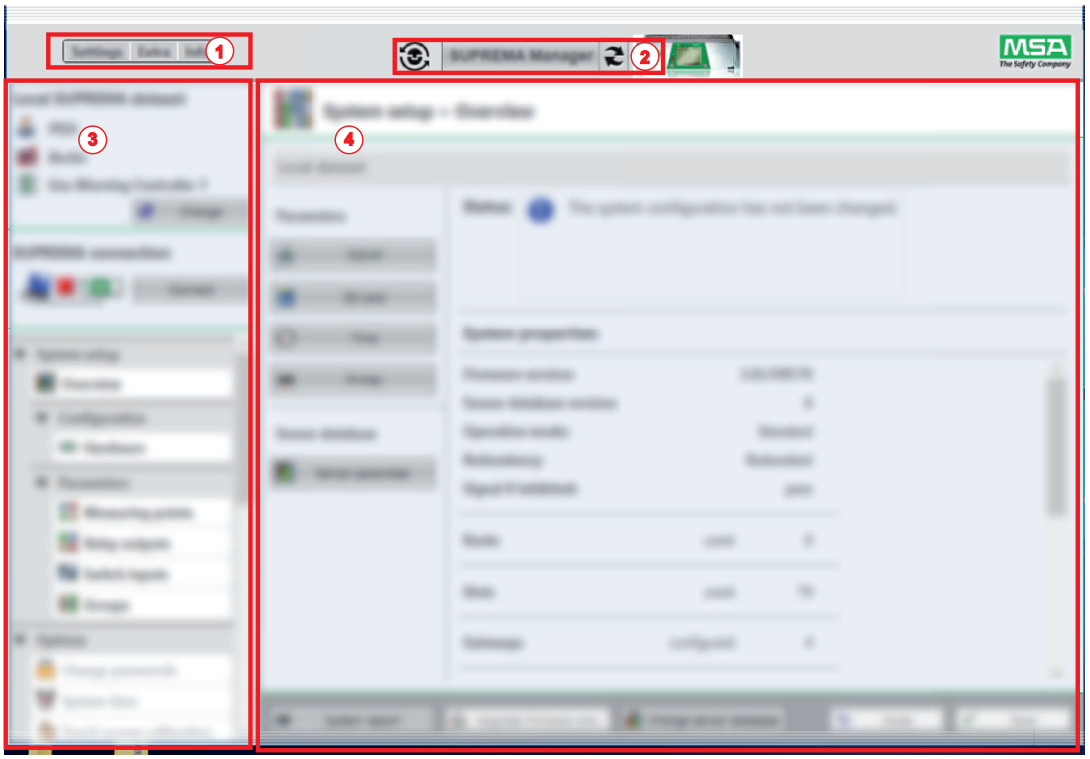


*Fig. 1 MSA-App Screen Layout*

| | | | |
|---|---|---|---|
| *1* | *Menu area* | *2* | *Plug-in selection* |
| *3* | *Toolbar* | *4* | *Content area* |

(1) Use this button to change between plug-ins.
*The active plug-in is shown (name and icon).*

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(2) Choose SUPREMA Manager from the list of plug-ins.
*The plug-in version is shown.*

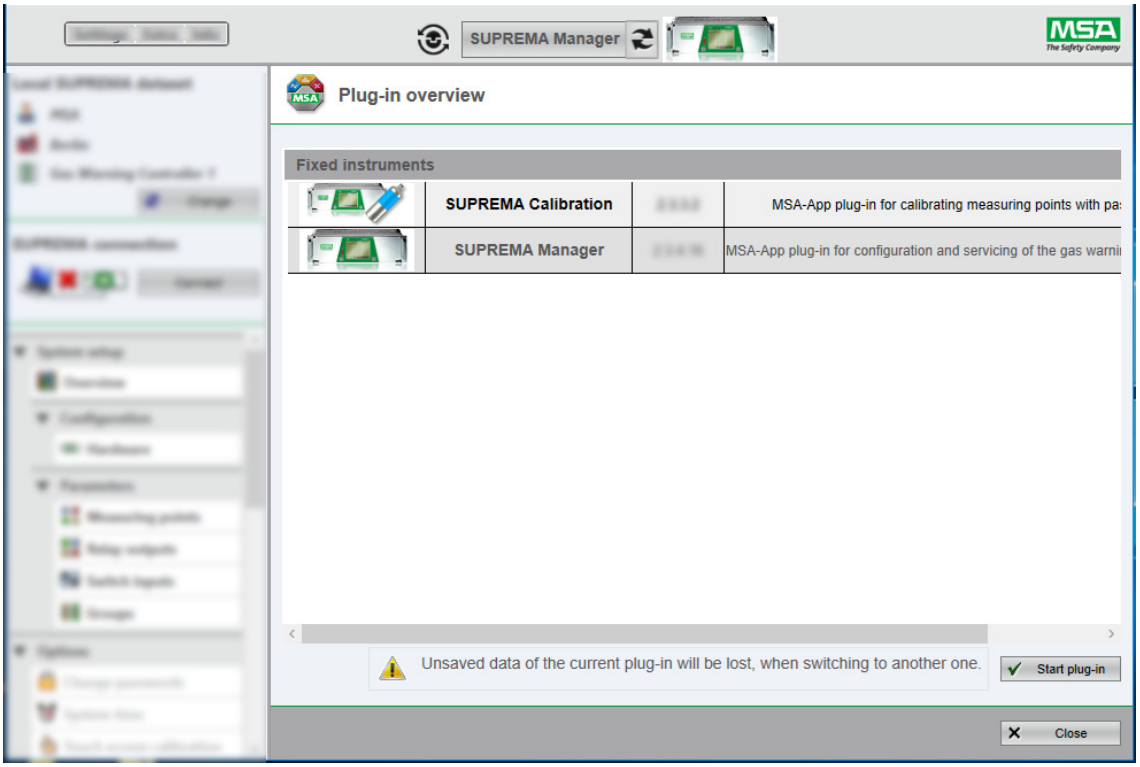


*Fig. 2 Choosing a plug-in*

(3) Activate the chosen plug-in with the *Start plug-in* button
*The chosen plug-in is active.*

Every window with a *Close* button has to be closed with this button to continue.

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**Menu area**

The menu has three entries, the first one is specific to the active plug-in and appears after a plug-in has been chosen, in case of SUPREMA Manager, it is *Settings* (see chapter 6 "Settings"). The settings for the MSA-App and the language can be changed with *Extra*.

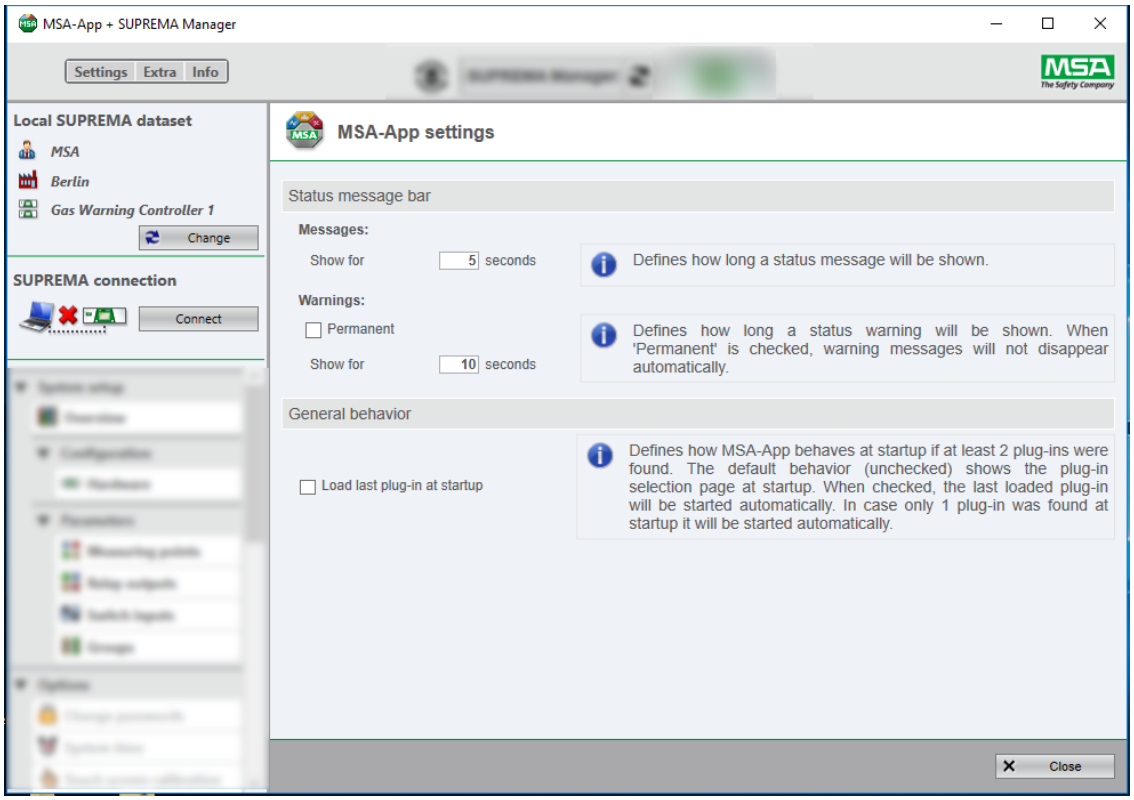


*Fig. 3 MSA-App settings*

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# 5 Overview

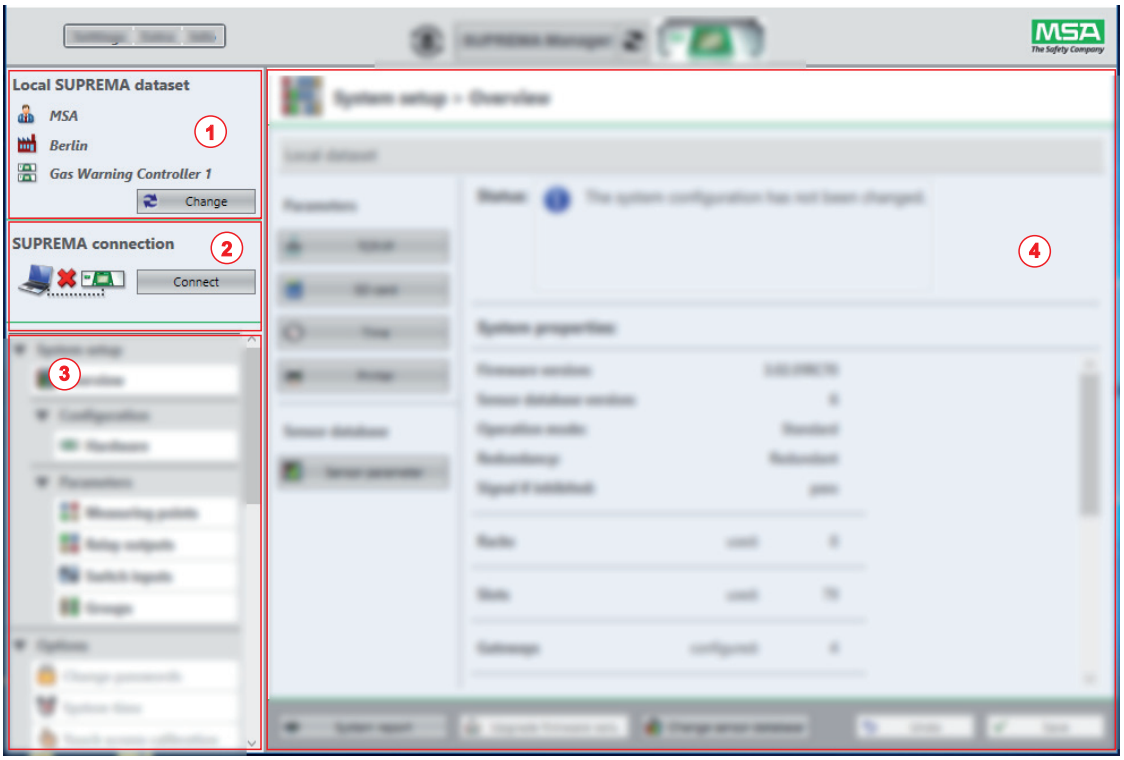


*Fig. 4 SUPREMA Manager*

| | | | |
|---|---|---|---|
| *1* | *Local SUPREMA dataset* | *3* | *Function nodes* |
| *2* | *SUPREMA connection* | *4* | *Content area* |

## 5.1 Markings and Symbols

### Status Bar Colors

*Fig. 5 Information: blue*

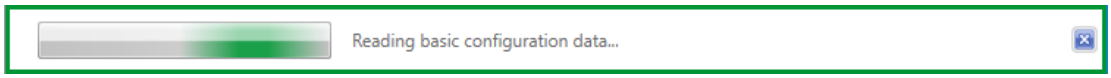


*Fig. 6 Status: green*

*Fig. 7 Warning: orange*

*Fig. 8 Error: red*

### Info and Warning Symbols

| | |
|---|---|
| | *Info* fields show information about data entries and button functions. |
| | *Attention* fields advice against possible user errors. |

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### Data Transfer Feedback

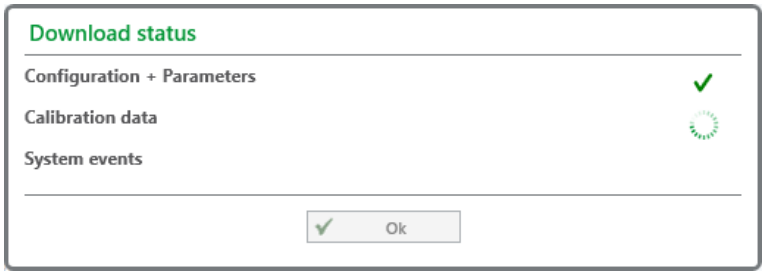


*Fig. 9 Green check mark: Transfer successful*

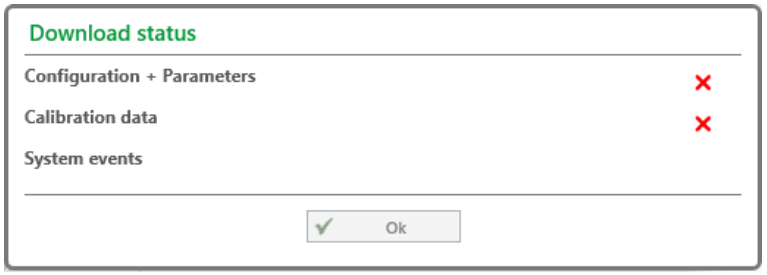


*Fig. 10 Red cross: Transfer unsuccessful*

### Entry Feedback

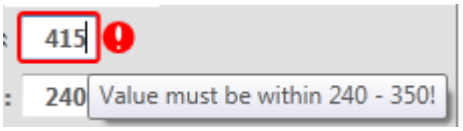


*Fig. 11 Wrong entry plus tooltip*

## 5.2 Local SUPREMA Dataset

Here the current local SUPREMA dataset is shown. Pressing *Change* opens the data management screen to select a different local dataset (see section 7 "Data Management").

## 5.3 SUPREMA Connection

To establish a connection between SUPREMA Manager and SUPREMA, click on *Connect* . The connection settings set according to section 7 "Data Management" or section 6.1 "General Communication Settings" are used. When connected, the access authorisation area and the *Synchronise* button are shown.

### 5.3.1 Access Authorisation

Functions that are changing settings (e.g. parameters etc.) require access authorization by entering the password required for the level. Functions not available for the user logged in are disabled. Any change on the connected SUPREMA requires the appropriate access level. For the login the access level can be chosen:

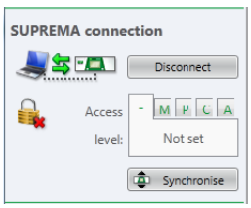


*Fig. 12 Access level*

The necessary password has then to be entered.

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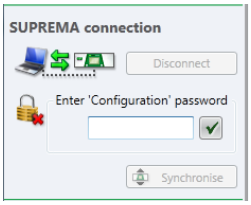


*Fig. 13 Enter password*

Five user groups with different access levels are defined:

- Read only (no password necessary)
- Maintenance (M)
- Parameterization (P)
- Configuration (C)
- Administration (for MSA use only) (A)

The passwords are saved on the SUPREMA system.

***Not applicable for firmware versions lower than 3.02.01:*** If a user with modification authorization is logged in and there has not been any communication between the SUPREMA and the SUPREMA Manager system for more than 5 minutes, password authorization will automatically expire.

The SUPREMA system is delivered with the default password “AUER” for all three accessible password levels.

When connecting to a SUPREMA, the default access level is *Read only.* If a key switch is used, the default access level is *Parameterization*.

### 5.3.2 Synchronise

Use *Synchronise* to synchronise the local dataset with the data of the connected SUPREMA. See chapter 8 "Synchronise Data" for details.

## 5.4 Function Nodes

Clicking on a node opens a list of all subnodes. Clicking on a subnode opens this subnode in the content area.

SUPREMA Manager has the following nodes:

- *System setup*, for configuration and parameterisation of the SUPREMA system
- *Options*, to change general SUPREMA settings
- *Logbooks*, to look at and to download log books from the SUPREMA
- *Maintenance*, to assist with SUPREMA maintenance
- *Diagnostics*, to carry out diagnostics
- *Tools*, other support functions

Subnodes that can only be accessed while a SUPREMA is connected are disabled when no SUPREMA is connected or the required access level is not set.

# 6 Settings

When starting SUPREMA Manager for the first time the following screen is shown:

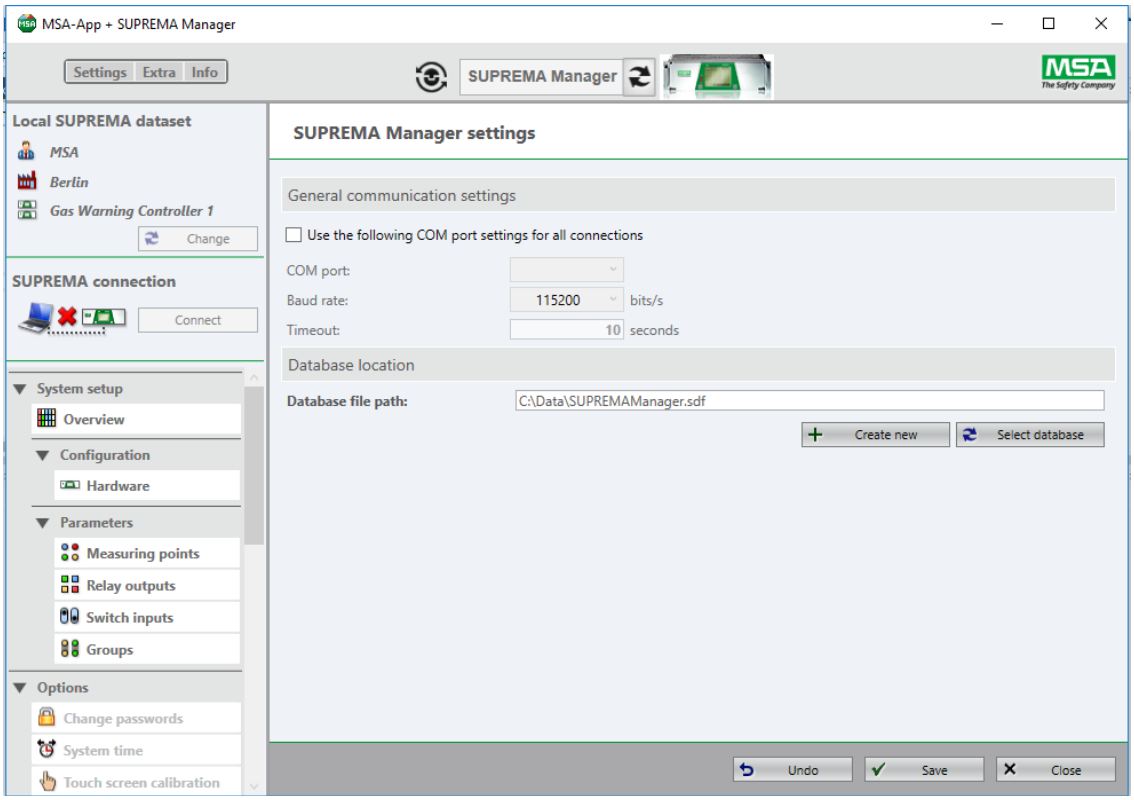


*Fig. 14 Settings*

To edit these settings later, click on *Settings* in the MSA-App menu area.

## 6.1 General Communication Settings

Here the connection settings for

- COM port settings
- Baud rate
- Timeout

can be edited. To edit these settings later, click on *Settings* in the MSA-App menu area.

(1) Make all necessary changes and save entries by clicking on *Save*.

If the checkbox is checked the communication settings entered here will overwrite the individual communication settings for each SUPREMA dataset.

## 6.2 Database Location

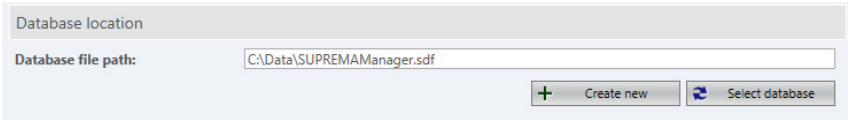


*Fig. 15 Database location*

When starting SUPREMA Manager for the first time, it is necessary to select a location for the database to store the data.
The data entered with SUPREMA Manager is stored in a database file (.sdf). Before any data can be entered, the Database File path must be defined.

(1) Use *Create New* for a new database, or select an existing database on the PC with *Select Database*.

(2) Make all necessary changes and save entries by clicking on *Save*.

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# 7 Data Management

At least one dataset is required for SUPREMA Manager. As long as no *Local SUPREMA dataset* has been entered, the button *Change* is marked red. In this case a new SUPREMA dataset has to be added using SUPREMA Manager.

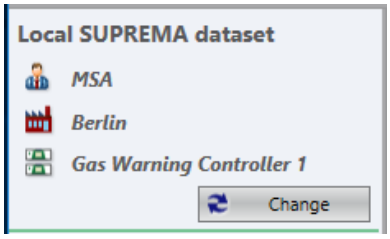


*Fig. 16 SUPREMA dataset*

(1) Click on *Change* to open *Data Management.*

The following screen is shown:

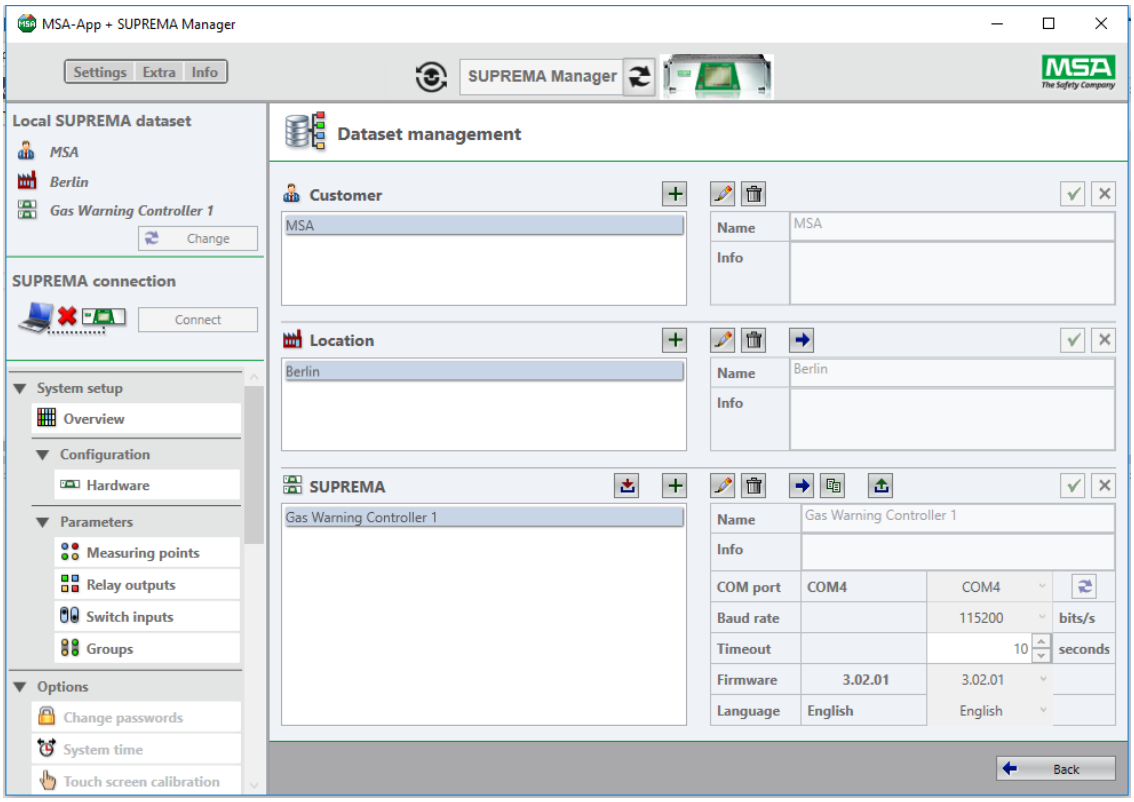


*Fig. 17 Dataset management*

(2) Enter the necessary information.

The text entered in the fields *Name* and *Info* is free text, *Info* can be left empty.
The data for *SUPREMA* (COM port, Baudrate, Timeout and Firmware) may have to be adapted (this data can be changed here for one connection or set for all connections using *Settings*, see section 6.1 "General Communication Settings").
Data can be changed or added later. The currently chosen dataset is displayed at the top of the Toolbar.

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| Symbol | Action |
|---|---|
| | Import exchange file to new SUPREMA. Dataset file format: .sef.<br>The exchange file format (*.sup) used in former versions of the software is no longer supported. |
| | Export selected SUPREMA into new exchange file. Dataset file format: .sef. |
| | Add new customer, location or SUPREMA entry |
| | Create a copy of the current SUPREMA entry |
| | Move is available when more than one *Customer* or *Location* has been entered.<br>• Move location (including SUPREMA entries for that location) between customers or<br>• Move SUPREMA entry to a different customer/location combination |
| | Edit current customer, location or SUPREMA entry |
| | Delete current customer, location or SUPREMA entry |
| | Apply the changes |
| | Cancel editing |

(3) Finish with the *Back* button.

At least one dataset is required for SUPREMA Manager. It is only possible to enter or change datasets when no SUPREMA is connected. As long as no *Local SUPREMA dataset* has been entered, the button *Change* is marked red.

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# 8 Synchronise Data

Here downloading a configuration or uploading either a configuration or parameters is possible.

## 8.1 Download

When downloading an existing configuration, it is possible to select which data is downloaded. Since downloading a complete dataset can take a long time, it is recommended to only download the data necessary.

Specific logbooks can be downloaded using *Logbooks*.

**WARNING!**

Downloading configuration and parameters will override the current local SUPREMA dataset!

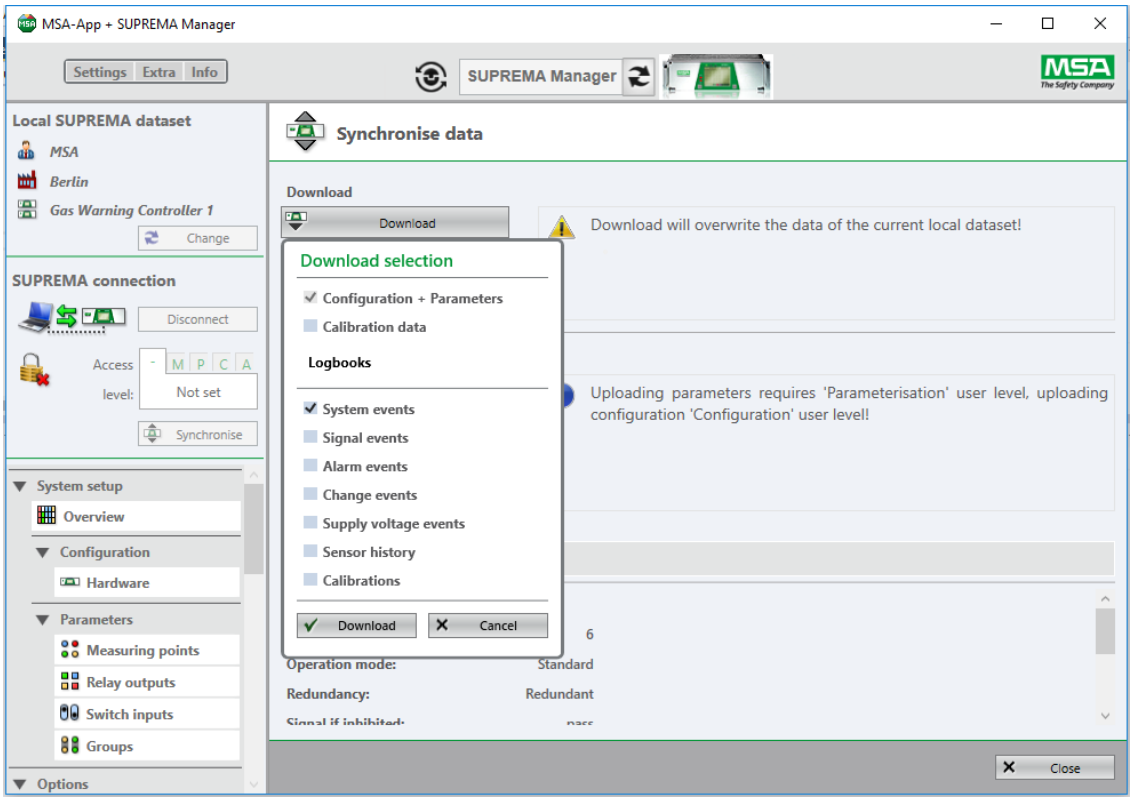


*Fig. 18 Download options*

During the download a status dialogue is shown. If the download was successful, a confirmation dialogue is displayed. In case of an unsuccessful data transfer, a red cross is shown.

*Fig. 19 Download status*

Because downloading logbooks can take a long time, it is possible to abort the download of the logbook in progress. The download will continue with the next logbook selected for download.

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## 8.2 Uploading

### 8.2.1 Upload Configuration

A system configuration can be created without a SUPREMA connection and uploaded later.

Configuration and parametrisation are uploaded to the SUPREMA separately.

The configuration will only be valid after a restart of the SUPREMA system. The parameterisation will be valid immediately.

**WARNING!**

Uploading will override the data of the connected SUPREMA.

**WARNING!**

To be able to upload a configuration or changed parameters to the SUPREMA, the firmware version of the MDO20/MCP20 modules must be up to date. The first two number blocks of the firmware number show the firmware line, the third number block is the version.

For example: Firmware 3.02.01. Here 3.02 is the firmware line, 01 is the firmware version.

To upgrade the system configuration for a newer firmware, see chapter 9.1.7 "System Setup > Overview > Upgrade Firmware Version".

For information on the current versions of the firmware, contact MSA.

(1) Connect the SUPREMA to the PC.

(2) To send a system configuration, select a working dataset in the *SUPREMA Data Selection* area.

(3) Open the connection to the already physically connected SUPREMA with the *Connect* button in the *SUPREMA connection* area.

(4) When connected change the user level to *Configuration*.

*The Configuration password is required here.*

(5) Open *Synchronise data* by clicking on the *Synchronise* button.

**WARNING!**

After uploading the configuration and restarting the SUPREMA the parameters have to be uploaded.

(6) Click on *Upload Configuration* to send the configuration to the SUPREMA.

*The upload process is shown.*

*If the upload was successful, a confirmation dialogue is displayed.*

*After upload completion the connection is closed automatically.*

**To activate the uploaded configuration the SUPREMA must be restarted by shutting the SUPREMA OFF and ON again.**

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### 8.2.2 Upload Troubleshooting

If the upload is interrupted due to read faults, repeat the upload.

If the system firmware is not compatible to the firmware of the configuration to be uploaded, the *Upload* button is disabled. To update the firmware, see chapter 9.1.7 "System Setup > Overview > Upgrade Firmware Version".

If the upload is not possible, information above the upload buttons shows possible causes.

An error will occur when uploading a new configuration with a reduced number of measuring points to a target system where these measuring points are still connected to outputs. In this case it is necessary to manually remove these connections before uploading the new configuration:

Download the current system configuration to a new SUPREMA data set, remove the connections and upload the changed parameters. Afterwards it should be possible to upload the final configuration.

### 8.2.3 Upload Parameters

When uploading parameters all parameters including measuring points, relay outputs, switch inputs and groups as well as changed custom sensor parameters and state texts are sent to the SUPREMA. Before the upload is carried out, it is checked if the parameters to be uploaded are compatible to the sensor database of the target system.

**⚠ WARNING!**

If an error message appears and the cause of the error is unclear or the error cannot be fixed, contact MSA.

It is the responsibility of the user to check all data entered with SUPREMA Manager.

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# 9 System Setup: System Configuration and Parameterisation

**WARNING!**

Any changes in this menu are temporary until the changes are saved to the dataset in the overview page.

Using this menu the complete SUPREMA system can be first configured and then parametrised. The configuration describes the system build up. It defines which module is installed in which slot, how the inputs and outputs are mapped and the basic system behaviour.
The parametrisation defines which measuring points are connected and the output switching conditions. For parametrisation it is necessary that the configuration is already defined.Only configured measuring points can be parametrised.
The changes affect the SUPREMA selected with *Local SUPREMA dataset.*
Changes entered in a submenu can be saved in that submenu, but the changes have to be stored in the database in a separate step:

(1) Carry out all necessary edits.

(2) Save with *Apply* or dismiss with *Cancel*.

(3) Leave the configuration with the *Overview* button.

(4) On the Overview page, save the changes to the database with *Save,* or use *Undo* to dismiss all changes.

*Only changes saved via the Overview page are stored in the database.*

*Undo reverts to the last imported data set.*

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## 9.1 System Setup > Overview

Gives an overview of the system setup of the local dataset.

Minor settings can be accessed on this page.

Any changes done on System setup pages must be saved to the local dataset or undone on this page. All system setup pages allow to navigate directly to the overview page via *Overview* in the page footer.

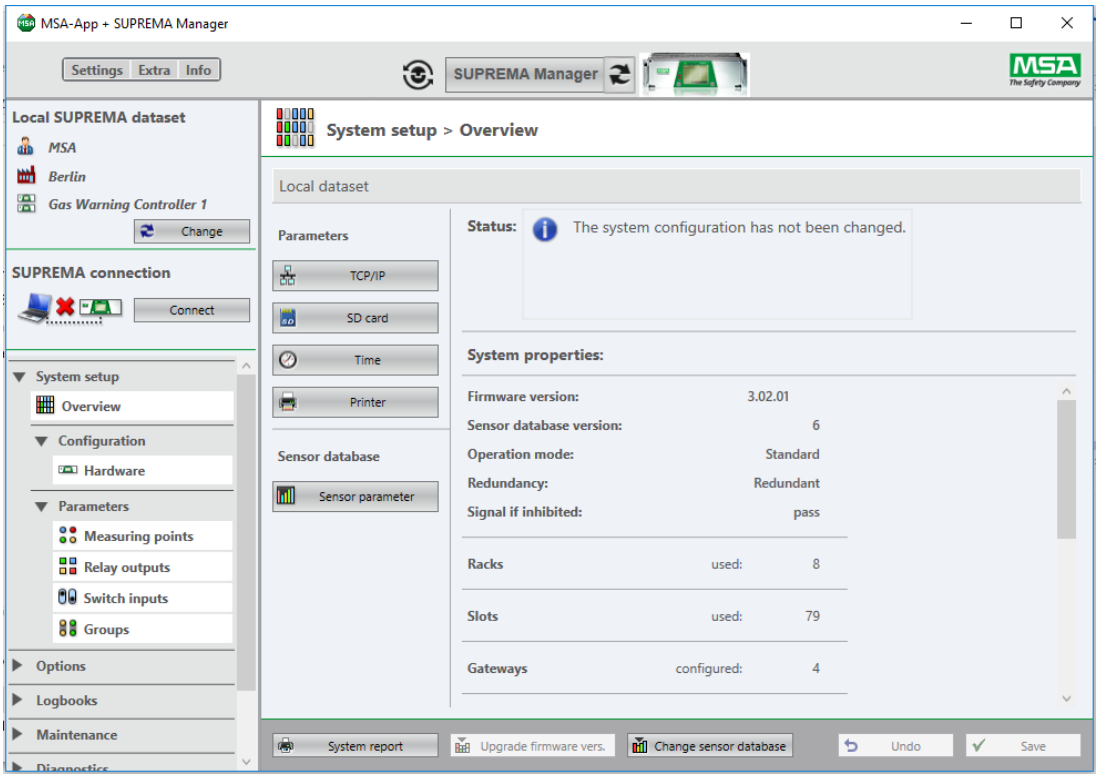


*Fig. 20 Overview*

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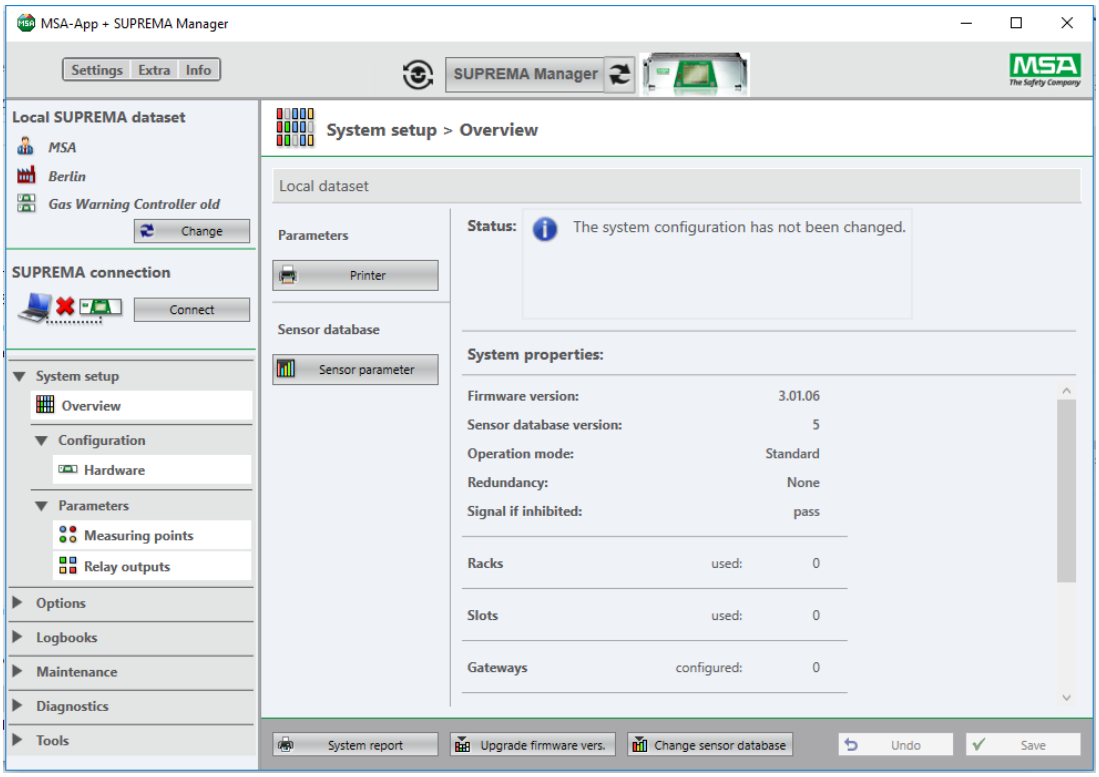



*Fig. 21 Overview for firmware versions lower than 3.02.01*

### 9.1.1 System Setup > Overview > Parameters > TCP/IP

Allows to change the settings of the ethernet port on the MDO20 card

**WARNING!**

Only available for SUPREMATouch with firmware versions 3.02.01 or higher.

GB

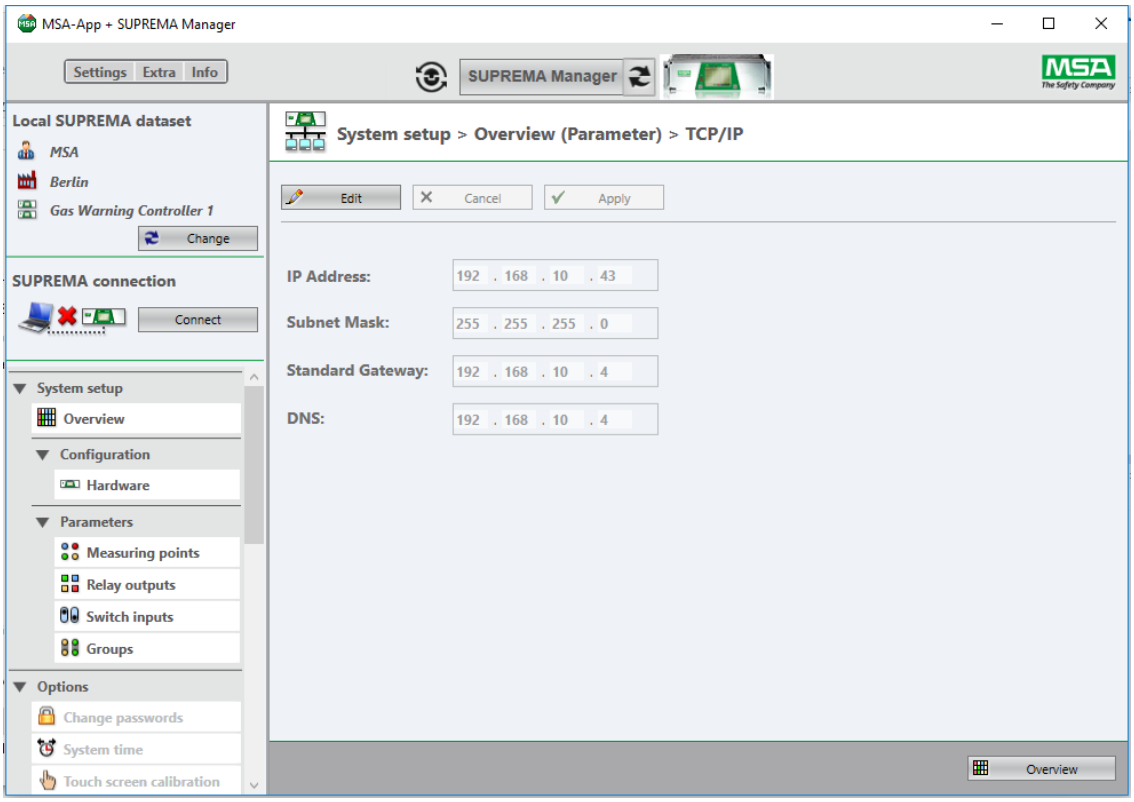



*Fig. 22 TCP/IP parameter*

| Input field | Function |
|---|---|
| IP Address | IP address of the MDO |
| Subnet Mask | Subnet mask of the subnet |
| Standard Gateway | Gateway to access other subnets |
| DNS | IP address of the domain name server |

GB

### 9.1.2 System Setup > Overview > Parameters > SD Card

Allows to change the settings for the SD card logging on the MDO20 card.

**WARNING!**

Only available for SUPREMATouch with firmware versions 3.02.01 or higher.

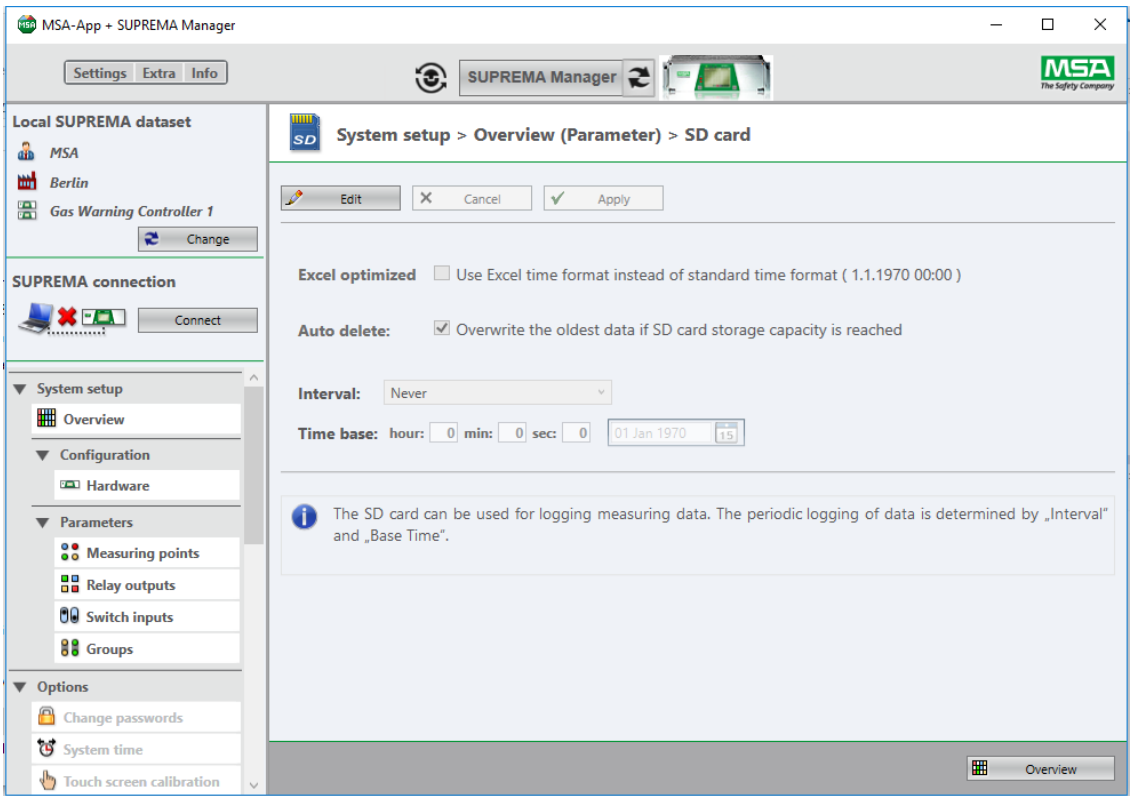



*Fig. 23 SD card parameter*

| Input field | Function |
|---|---|
| Excel optimized | Use Excel optimized time format |
| Auto delete | Overwrite oldest data if capacity has reached |
| Interval | To set the time interval/repetition rate of the measuring data log [never, annually, monthly, daily, …, every second etc.]. |
| Time base | To set the base time for the measuring data log |

GB

### 9.1.3 System Setup > Overview > Parameters > Time

Allows to change the time settings on the MDO20 card.

**WARNING!**

Only available for SUPREMATouch with firmware versions 3.02.01 or higher.

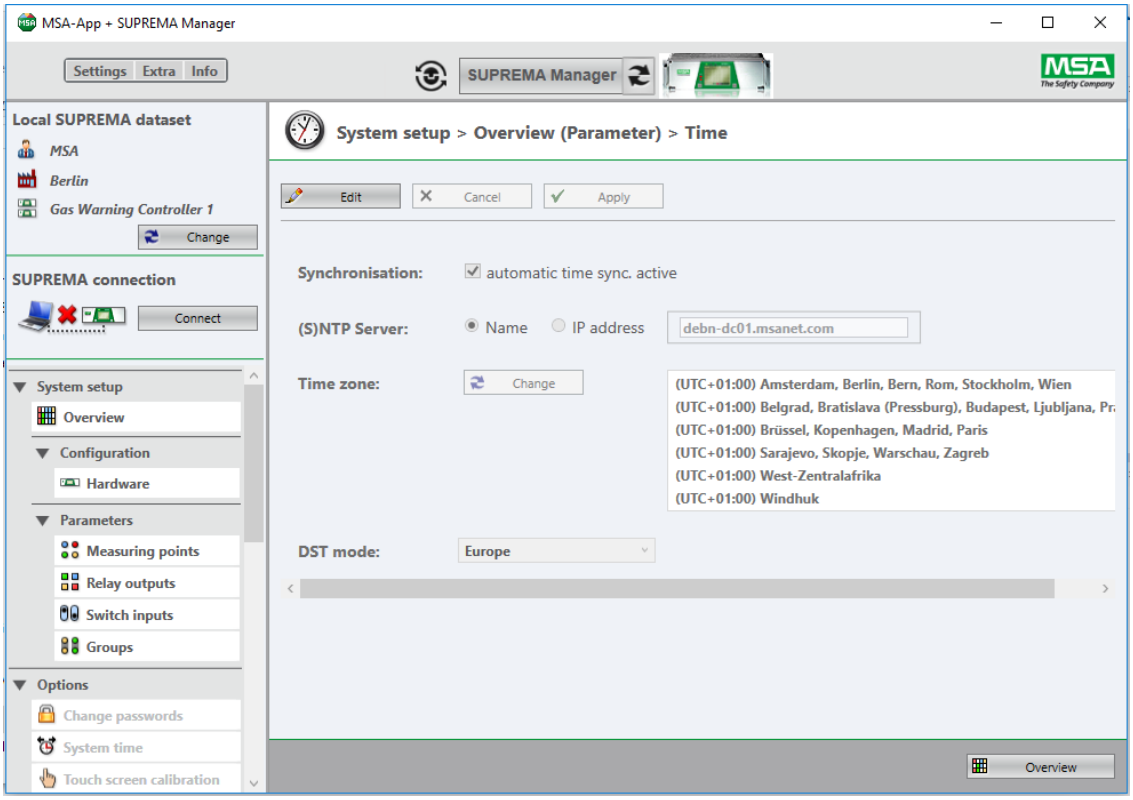



*Fig. 24 Time settings*

| Input field | Function |
|---|---|
| Synchronization | Enable automatic time sync with the set (S)NTP server |
| (S)NTP Server | IP address/name of the time server to be used |
| Time Zone | Time zone the SUPREMA is operated in |
| DST Mode | Select daylight saving mode |

GB

### 9.1.4 System Setup > Overview > Parameters > Printer

For continuous recording of events, a protocol printer can be connected to the SUPREMA. Two different protocols are defined - log outputs and alive messages. A log message will be printed if an alarm or a signal failure occurs on a parametrized measuring point. The alive message will be printed periodically to ensure the printer is still working. The period is defined by the time interval and base time.

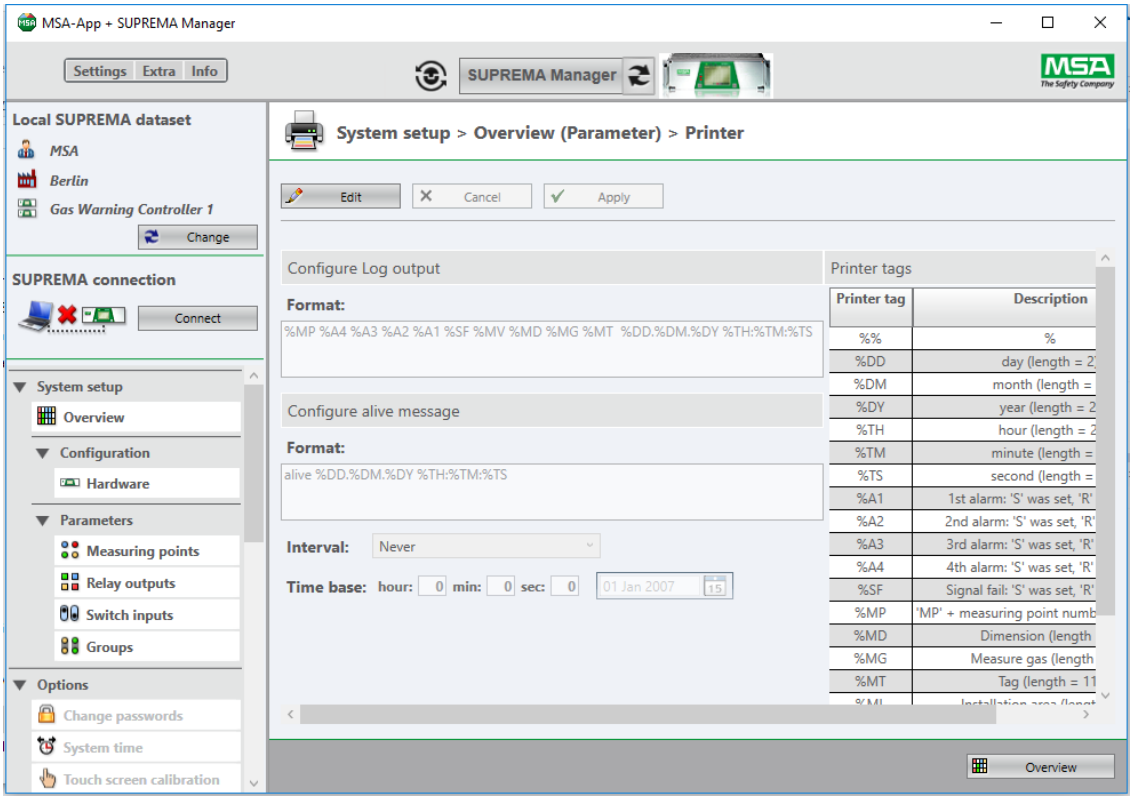



*Fig. 25 Printer settings*

A test message can e printed on the printer port under *Maintenance* → *Interface test*, see chapter 12.2 "Interface Test".

| Input field | Function |
|---|---|
| Log format | To specify the paper feed format. Besides free text, predefined tags can be used. See table below for a listing of possible tags. |
| Alive format | To specify the format of the alive message. Besides free text, predefined tags can be used. See table below for a listing of possible tags. |
| Time interval | To set the time interval/repetition rate of the alive message (never, annually, monthly, daily, …, every second etc.). |
| Time base | To set the base time for the alive message. |

GB

Available tags:

| Tag | Printout |
|---|---|
| %% | % |
| %DD | day (length = 2) |
| %DM | month (length = 2) |
| %DY | year (length = 2) |
| %TH | hour (length = 2) |
| %TM | minute (length = 2) |
| %TS | second (length = 2) |
| %A1 | ‘S’ if alarm 1 was set,‘R’ if alarm 1 was reset |
| %A2 | ‘S’ if alarm 2 was set,‘R’ if alarm 2 was reset |
| %A3 | ‘S’ if alarm 3 was set,‘R’ if alarm 3 was reset |
| %A4 | ‘S’ if alarm 4 was set,‘R’ if alarm 4 was reset |
| %SF | ‘S’ if signal fail was set,‘R’ if signal fail was reset |
| %MP | ‘MP’ and the Measuring point number (length = 5) |
| %MD | Measuring dimension (length = 5) |
| %MG | Measuring gas (length = 14) |
| %MT | Measuring tag (length = 11) |
| %ML | Measuring place (length = 21) |
| %MM | Measuring marking (length = 21) |
| %MS | Measuring serial number (length = 11) |
| %MV | Measuring value (length = 6) |

### 9.1.5 System Setup > Overview > Sensor Database > Sensor Parameters

Here the sensor parameters and state texts can be viewed and the changeable ones be altered.

The following parameters can be viewed and changed here:

- Heads
- Gas Names
- Dimensions
- Ranges
- Zero Gases
- Linearisations
- State Texts

Editing sensor parameters:

(1) Clicking on a sensor parameter opens the detail information for this sensor parameter on the right.

*If the status is Changeable, it can be edited with Edit.*

GB

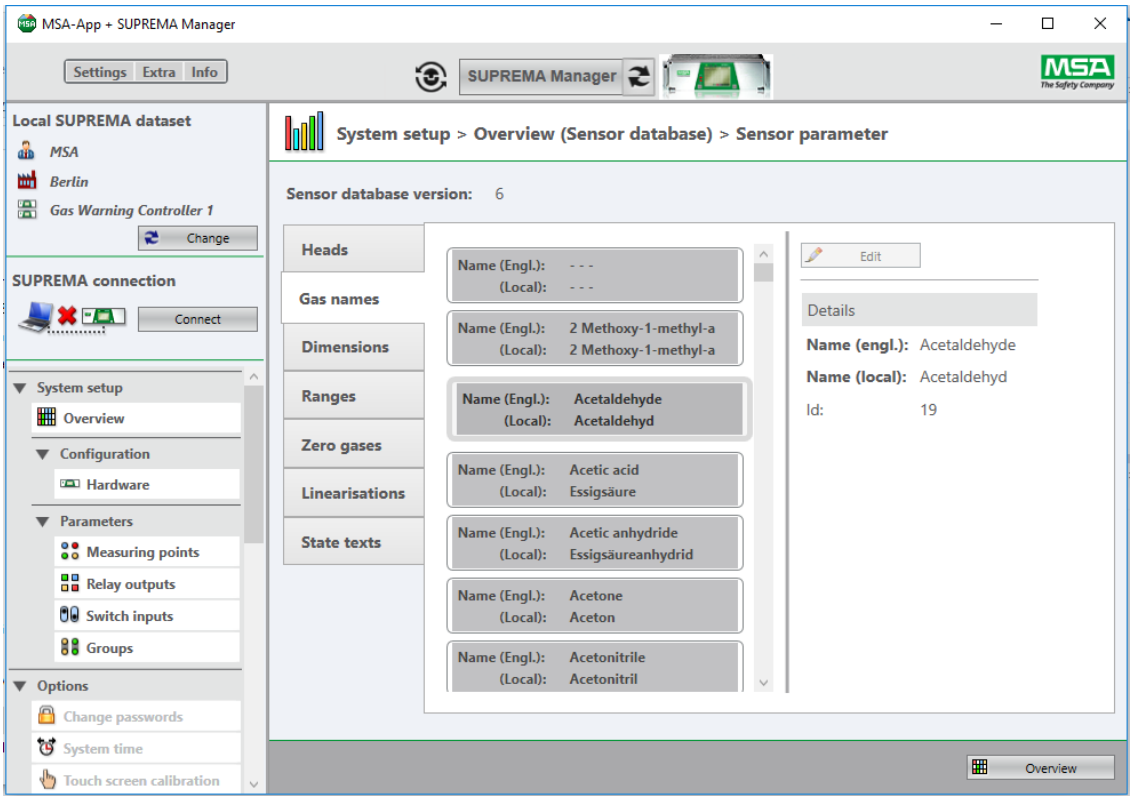



*Fig. 26 Gas names*

(1) Carry out all necessary edits in the detail area.

(2) Save with *Apply* or dismiss with *Cancel*

### 9.1.6 System Setup > Overview > System Report

A system configuration report can be printed and exported with the *System report* button.

(1) Click on *System report*
*Report Options opens.*

(2) Select the required report data.

(3) Press *Continue* to create the report.

GB

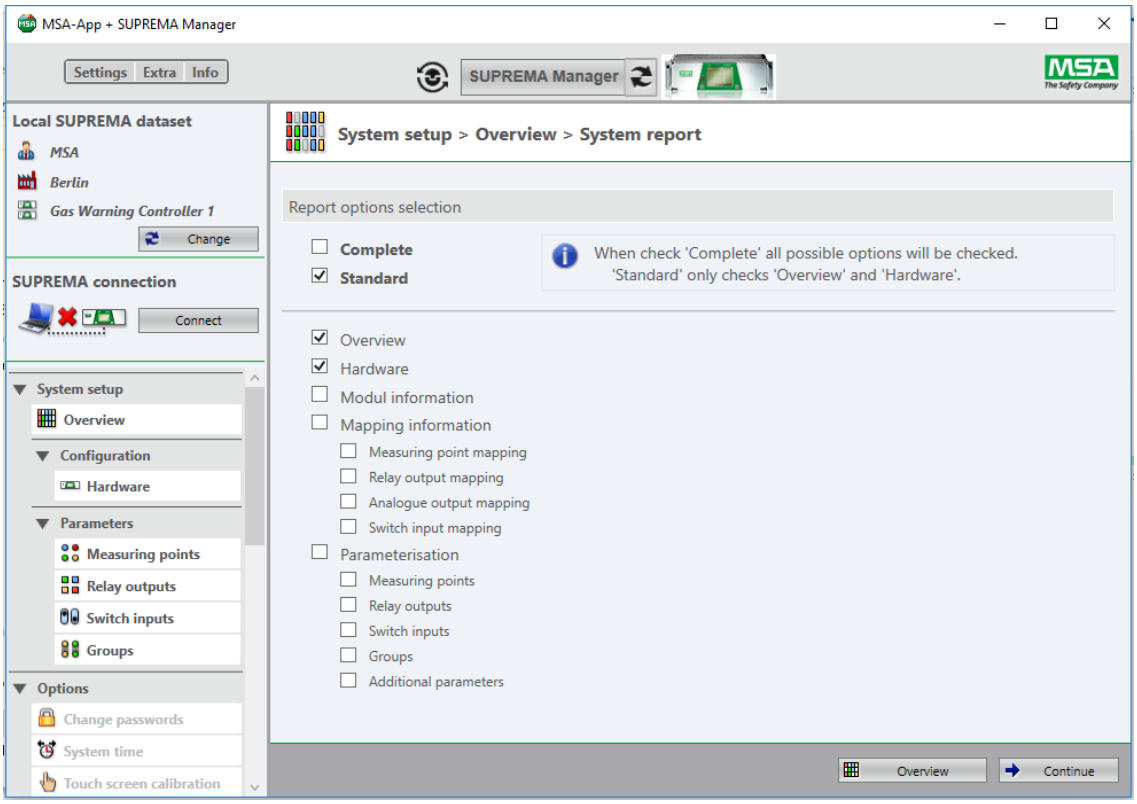



*Fig. 27 Report options*

(4) Select the desired action using the following buttons:

| Button | Action |
|---|---|
| | Refresh |
| | Print |
| | Print Layout (to choose page size for the print) |
| | Page Setup (to preview print), click again on icon to leave preview |
| | Export, as Excel, PDF or WORD file |

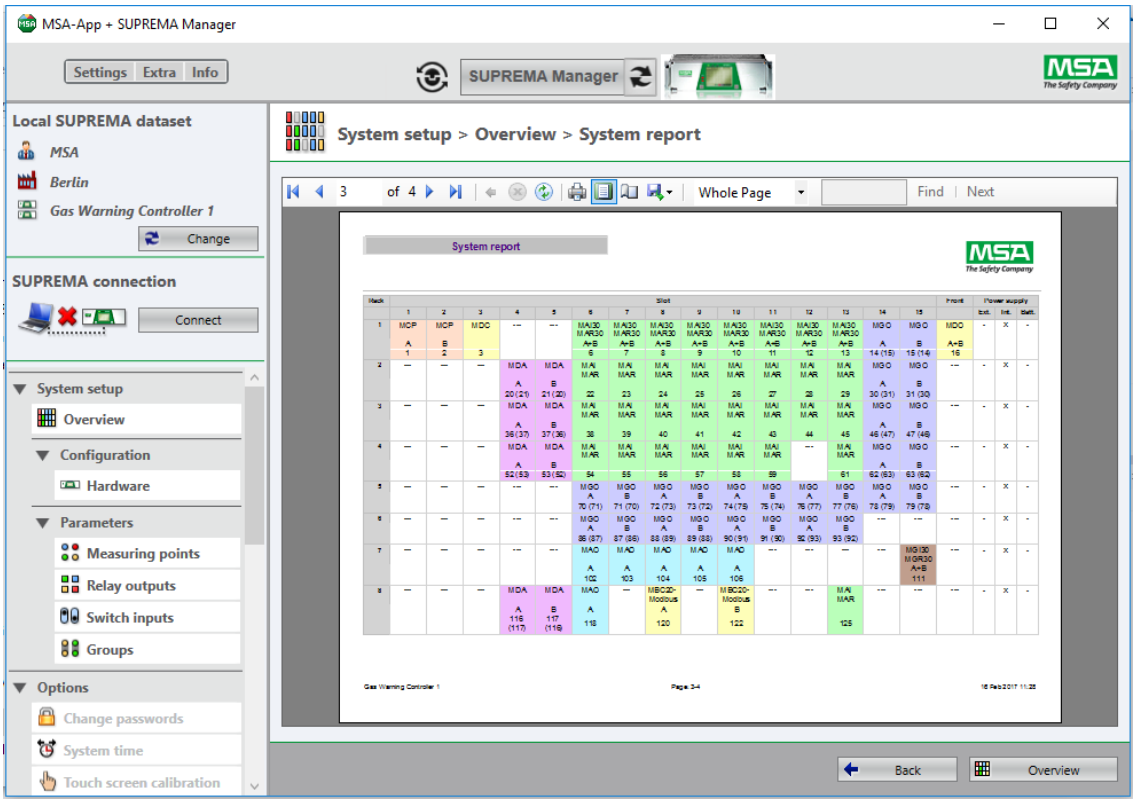



*Fig. 28 System report*

### 9.1.7 System Setup > Overview > Upgrade Firmware Version

This function is intended for upgrading an existing configuration to a higher firmware version. *Upgrade firmware version* is only enabled if the current configuration can be upgraded.

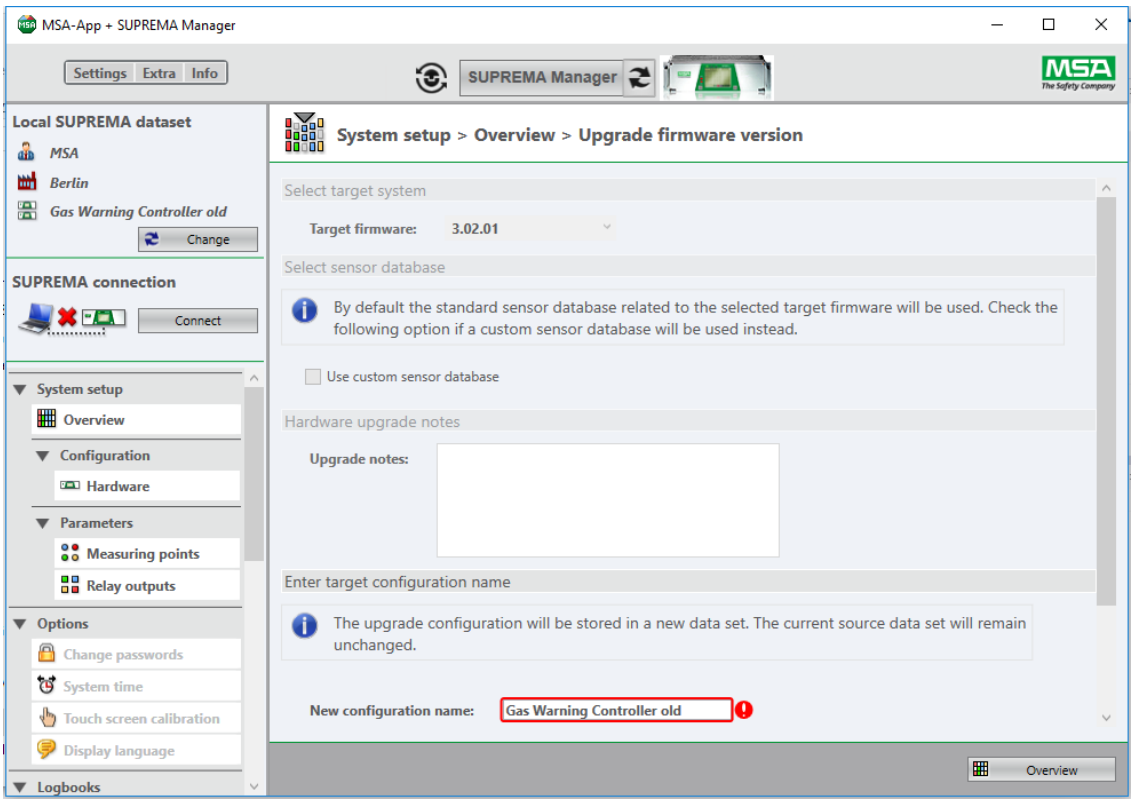



*Fig. 29 Select Target Firmware*

GB

*Select target system*

(1) Select the target firmware. The first two number blocks of the firmware number show the firmware line, the third number block is the version. If the target firmware version cannot be selected, choose the firmware version closest to the target version. The firmware line has to match.

*Select Sensor database*

The standard sensor parameter database of the target firmware is supported. In case a custom sensor database is in use or will be used on the target system, check *Use custom sensor parameter database*. If checked, the custom sensor parameter database file provided by MSA has to be selected.

*Compatibility to target system (optional)*

Read the appearing notes carefully. All notes marked red prevent from continuing the upgrade. Check the reason carefully and allow the automatic resolution if offered. In case not resolution is offered the cause must be eliminated manually by editing the configuration/parametrisation.

**WARNING!**

If an error message appears and the cause of the error is unclear or the error cannot be fixed, contact MSA. .

It is the responsibility of the user to check all data entered with SUPREMA Manager.

*Hardware upgrade notes*

- The current configuration is being analyzed for hardware incompatibilities, new required modules and required module firmware upgrades.

*Enter target configuration name*

The upgraded configuration will be stored in a new data set to keep the original configuration.

(1) Enter the name of the target configuration data set.

*Initially the name of the current data set is preselected.*

After pressing *Upgrade,* the upgrade will be performed. The local data set will be switched to the upgraded configuration.

### 9.1.8 System Setup > Overview > Change Sensor Database

This function is intended to change the sensor parameter database of the configuration. *Change sensor database* is only required if the target system is used with a customer specific sensor parameter database provided by MSA.

Selecting the sensor parameter database is described in *Select Sensor Parameter database* (chapter 9.1.7 "System Setup > Overview > Upgrade Firmware Version").

After pressing *Update* the sensor parameter database of the current configuration will be updated.

GB

## 9.2 System Setup > Configuration > Hardware

Here a new configuration can be created or an existing configuration can be changed.

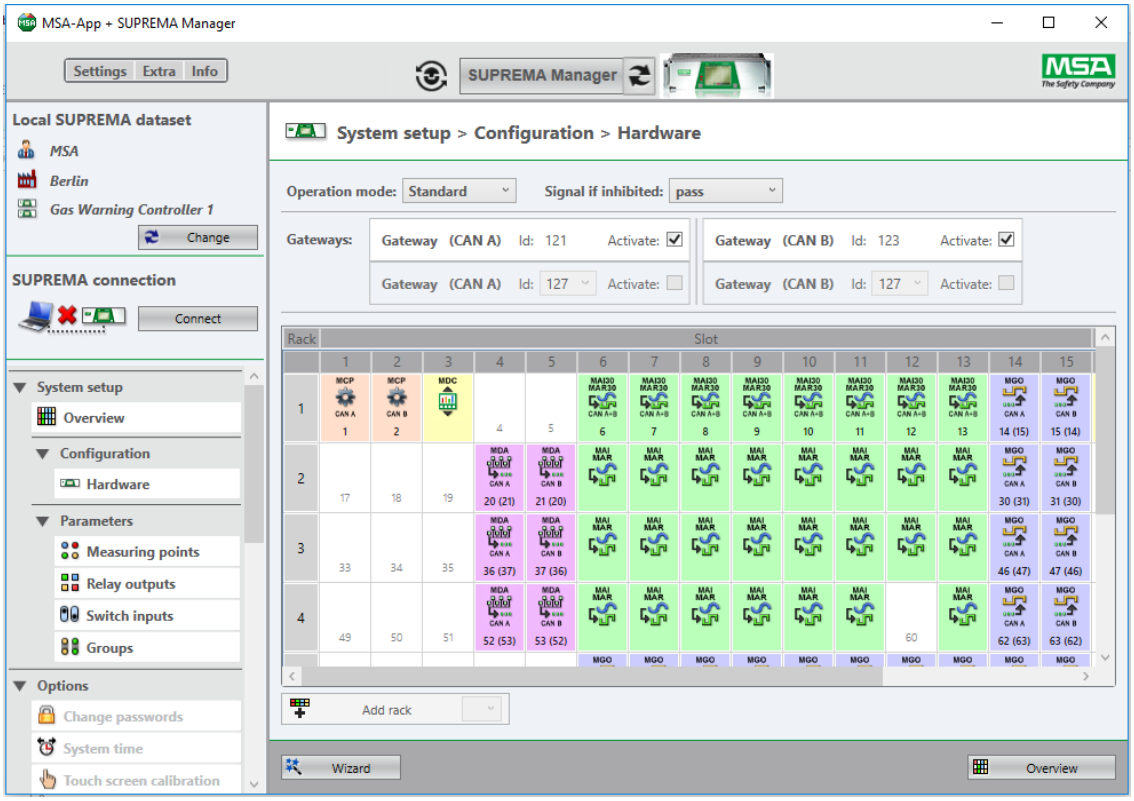



*Fig. 30 Configuration*

(1) Select the *Operation Mode* (only for SUPREMA Touch)

*Use the setting "Standard" for all countries except China.*

(2) Choose an option for *Signal if inhibited*.

*hold: last value before inhibit was set is held*

*pass: current value is passed through*

*maintain: maintenance signal is output*

(3) Adjust the settings for external gateways if necessary.

*Externally connected gateways can be configured in this menu.*

*Internal gateways are treated as modules and added to a rack.*

*If external and internal gateways are used at the same time, the limit of 2 gateways per bus is still valid.*

*The module configuration is shown and can be edited.*

External gateways:

- SUPREMA Gateway CAN/MODBUS RTU
- SUPREMA Gateway CAN/MODBUS TCP
- SUPREMA Gateway CAN/PROFIBUS DP
- SUPREMA Gateway CAN/PROFIBUS DP II

Internal gateway: SUPREMA MBC20-Modbus

(4) Configure the racks by adding or deleting modules and edit the mapping:

Add/delete modules:

(5) Right click on the target slot and choose the desired module in the context menu.

*Only modules fitting in that slot are available.*

GB

Detailed Information about modules can be found in the SUPREMA operating manual in chapter 11.

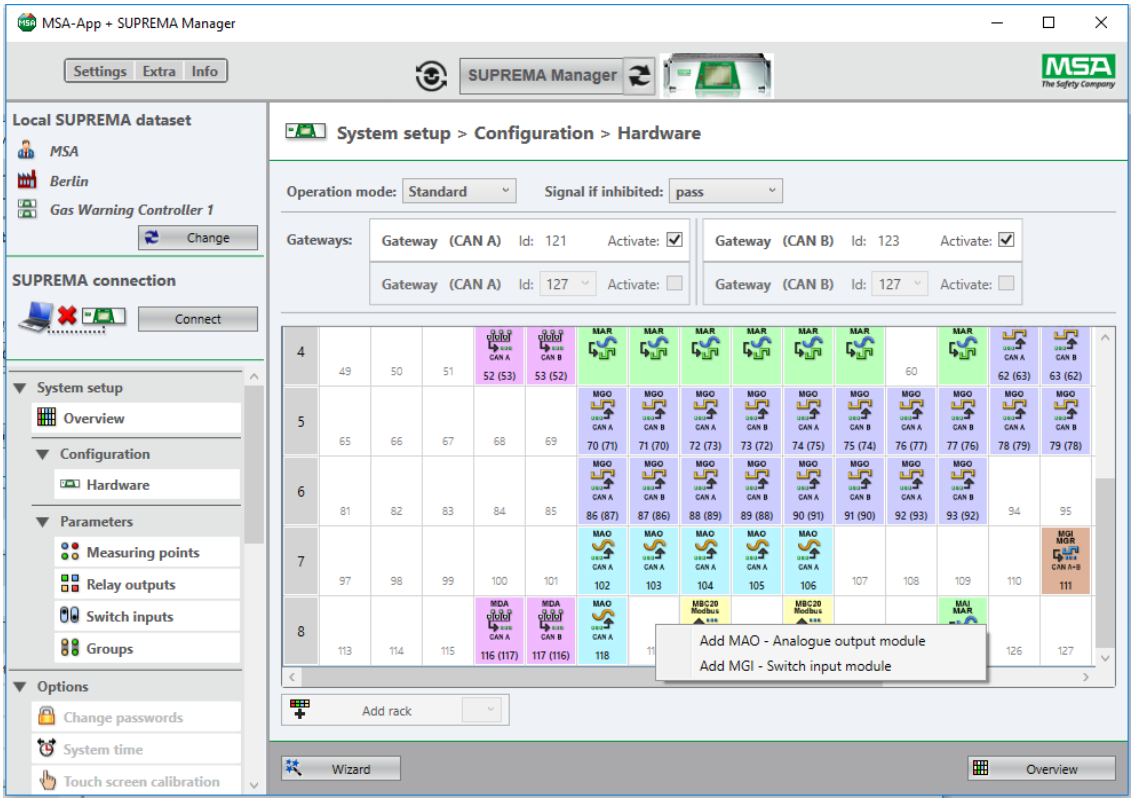



*Fig. 31 Adding a module*

View/edit mappings:

(6) Double-click on a module to open the detail view.
*For Input/Output modules the mapping can be edited.*

Mappings for MDA modules can only be viewed, editing them is only possible by editing the MAI modules.

The base channel for systems with firmware versions 3.01.01 or higher can only be changed for the module that serves as the CAN A bus. For redundant systems, these changes automatically apply to the module configured as the CAN B bus. It is not possible to change the base channel for older systems.

Usually, the default assignments do not need to be changed. Changes are only necessary for large systems, if not all slots are filled consecutively and gaps need to be filled.

**General Configuration Requirements:**
Slot 1,2 for MCP (SUPREMATouch) / Slot 1 to 3 for MCP (SUPREMA)
Slot 3 for MDC (SUPREMATouch)
Slot 4, 5 are reserved for MDA
Slot 6 to 15 are usable for IO-cards (Slot 6 to 13 only if MAI is used together with MDA)
The MDO has to be installed in the same rack as the MCPs and the MDC (not allowed at rack 8).

GB

**Analogue Input Modules Restrictions:**

- Up to 256 measuring points per system
- 1 MDA per Rack (2 for redundant system)
- Up to 8 MAI per MDA
- Up to 8 measuring points per MAI/MAI30
- Up to 64 measuring points per MDA / MBC20-AdvEI
- MAI30 replaces MDA + MAI cards
- one rack can only contain MAI30 or MDA/MAI cards
- a system can contain MAI30 and MDA/MAI cards in different racks
- MAI30 cards are supported by SUPREMATouch with fw3.02.01 or above only

There are three types of analogue input modules at the moment, MDA, MAI30 and MBC20-AdvEI. A block of 8 (MAI30) or 64 (MDA/MBC20-AdvEI) of the up to 512 input channels is assigned to each of these modules. The first of these channels is determined by the base channel. The channel blocks of two modules may not overlap.

The 512 assignable input channels can be mapped in the MDA / MAI30 / MBC20-AdvEI details area onto the 256 available measuring points, this means maximum 256 channels can be used. The MAI channels are assigned to the MDA channels according to their slot position in the appropriate rack.

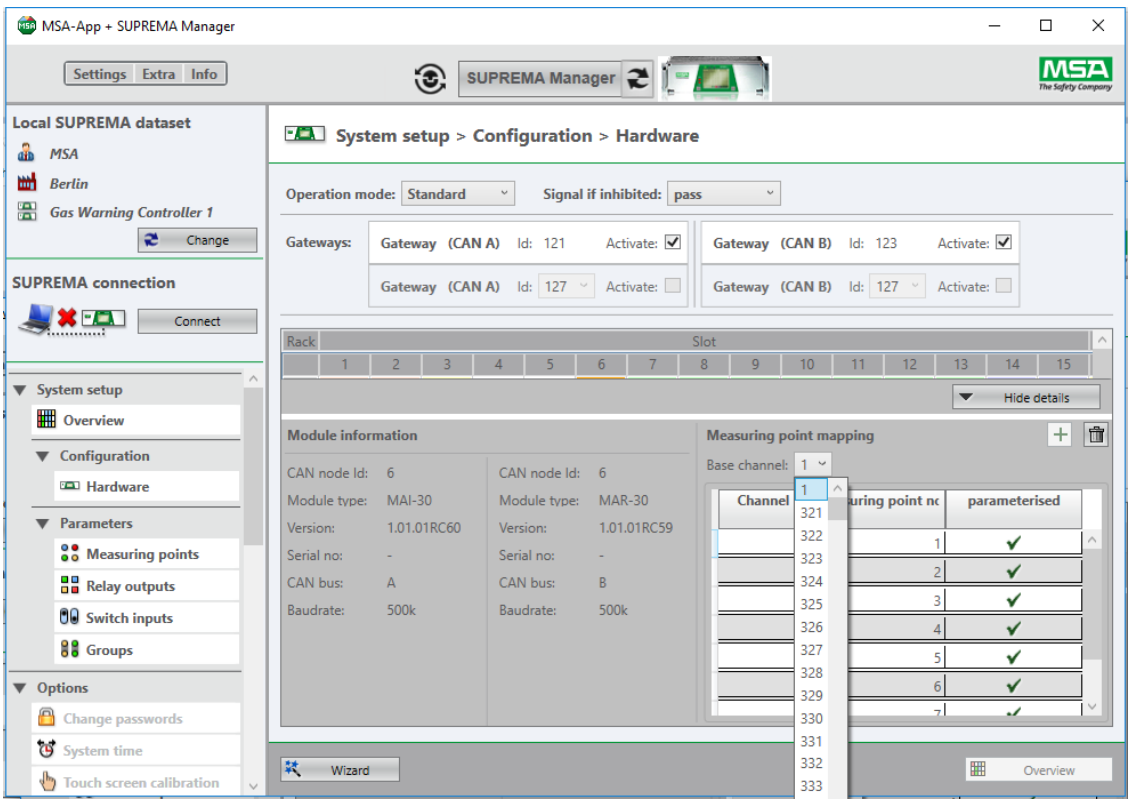



*Fig. 32 Assigning the base channel*

**Switch Input Module Restrictions**

- MGI cards and switch inputs are only supported by SUPREMATouch with firmware 3.02.01 or above
- Up to 64 switch inputs per system
- Up to 8 switch inputs per MGI

GB

**Analog Output Modules Restrictions:**

- Up to 256 analogue outputs per system
- Up to 8 analogue outputs per MAO
- Up to 32 MAO per system
- To each output a measuring point can be assigned:
- The mappings are changeable for SUPREMA Touch only.

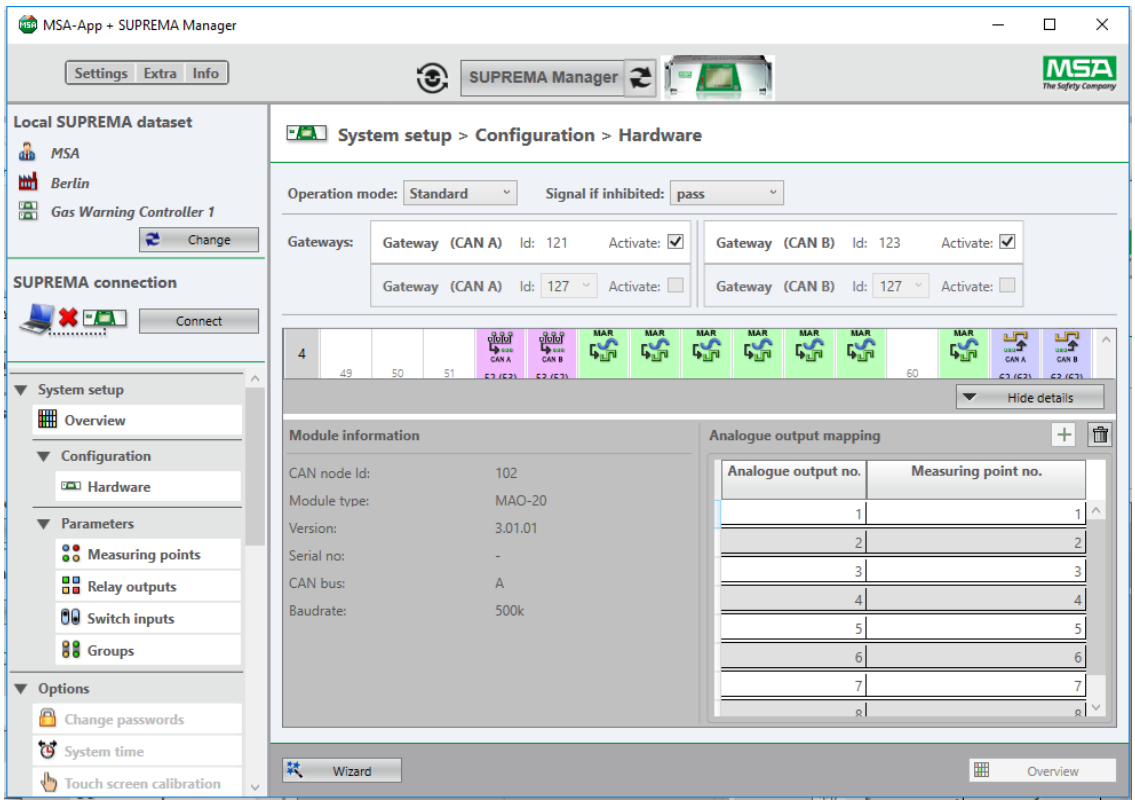



*Fig. 33 Assigning analog output mappings for SUPREMA Touch*

For SUPREMA the measuring points are fixed mapped automatically to the analogue outputs depending on their slot position starting from measuring point 1 (even if the measuring points are not configured):
1st MAO - measuring point 1 to 8
2nd MAO - measuring point 9 to 16

GB

**Relay Output Modules Restrictions:**

- Up to 512 relay outputs per system
- Up to 13 MGO per BUS (26 in total for redundant system)
- The channels are assigned to the MGOs according to their position in the system.
- The common relays (relay output numbers 1 to 8) are assigned to the first 8 channels of the first MGO on BUS (lowest CAN-Bus ID).
- The 520 output channels can be mapped in the MGO details area onto the 512 relay outputs provided so maximum 512 channels can be used.

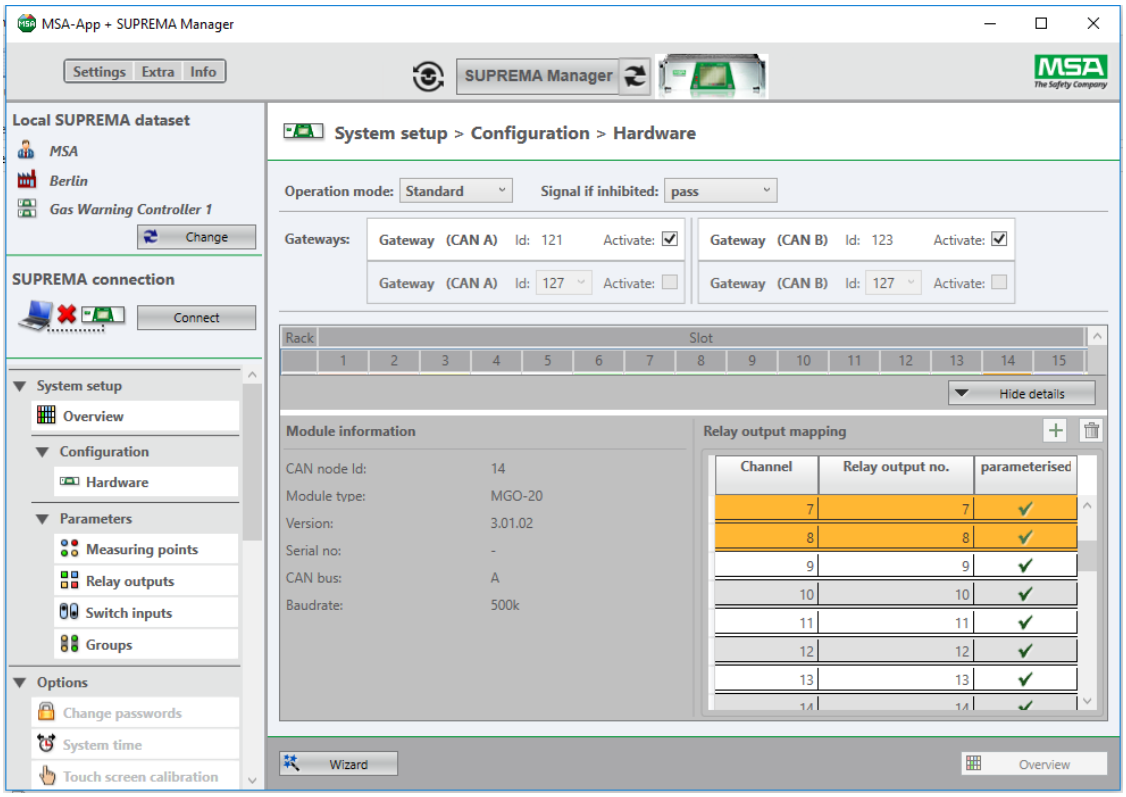



*Fig. 34 Mapping the relay output channels*

**WARNING!**

If a new MGO is added to the system with a lower CAN node ID than the last existing MGO or an existing MGO is removed, the mapping of the relay output may be affected and the wiring has to be checked.
For redundant systems both CAN buses have to be considered and checked separately.

(7) After all necessary edits are done, leave the configuration with the *Overview* button.

(8) *Save* or *Undo* on the main Configuration page.

The mapping can only be changed for the MGO module configured as CAN bus A. For redundant systems, the mappings of CAN bus B are then changed automatically.

GB

### 9.2.1 Configuration Wizard

When entering a new configuration, the *Wizard* can be used. The *Wizard* always creates a new configuration and cannot be used to edit an existing configuration. To start the *Wizard*, click the *Wizard* button at the bottom of the *Configuration* screen.

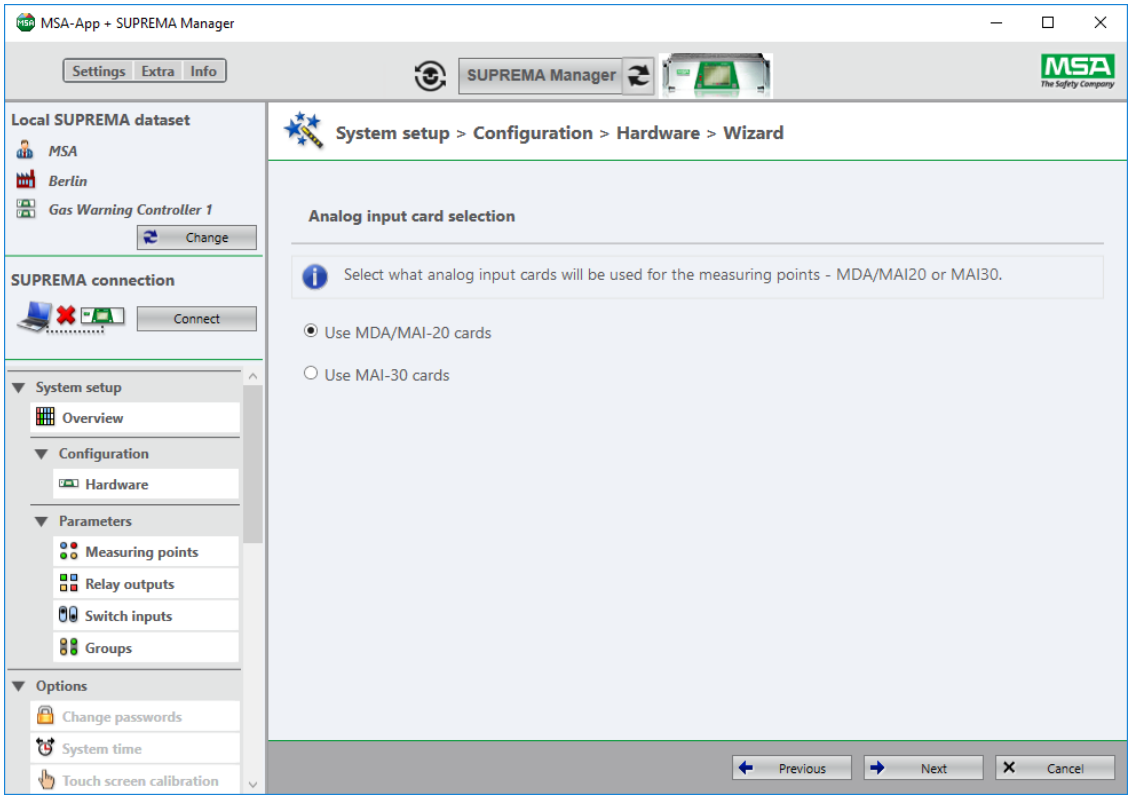



*Fig. 35 Analog input selection*

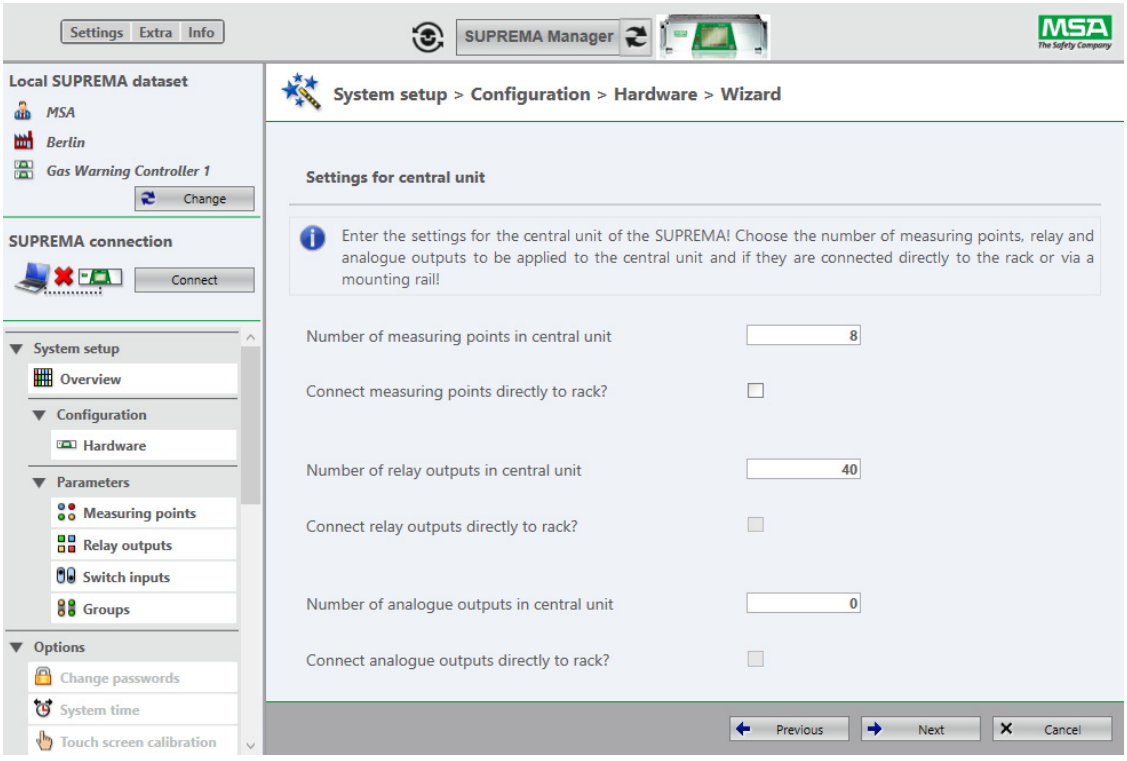



*Fig. 36 Wizard*

GB

The *Wizard* leads through the system configuration with the following steps:

- Redundancy Selection
- Analog input card selection
- Settings for Central Unit
- Settings for Satellites
- Power Supply Selection
- Gateway Settings

After all information has been entered, the following dialogue appears:

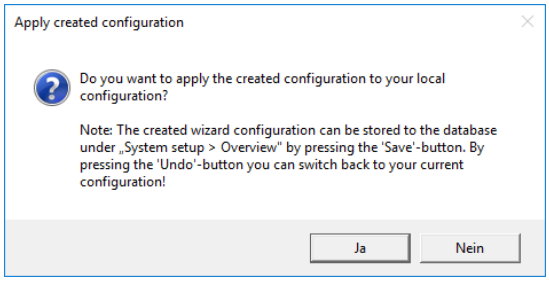



*Fig. 37 Apply configuration*

(1) Confirm with *Yes* or dismiss with *No*.

## 9.3 System Setup > Parameter

### 9.3.1 System Setup > Parameter > Measuring Points

Here all parametrized measuring points can be viewed, added, copied and deleted. New measuring points can be added as long as configured measuring points are available. If all configured measuring points are parametrized, *New* is disabled.

The Auto-detect button allows to read default parameters from the SUPREMA for measuring points which are not parameterized so far. The parameters are based e.g. on HART data read via a MAI30 with MHS30 from a HART enabled transmitter. The button is only enabled if a SUPREMA is connected as well as configured and if not parameterized measuring points are available.

Clicking on a measuring point opens the detailed information for the measuring point on the right.

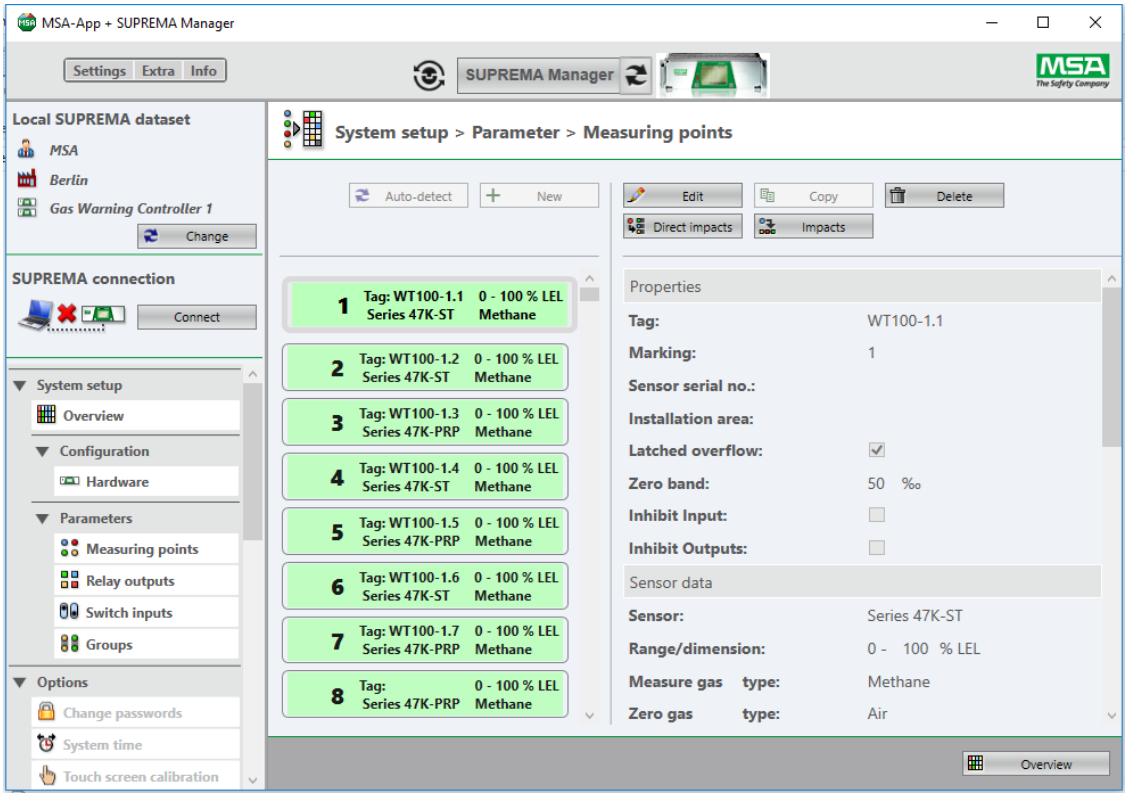



*Fig. 38 Measuring points with details*

The selected measuring point can be deleted or edited. Clicking on *Edit* shows the editable entries in the lower half of the content area.

*Delete* deletes the parameters of the measuring point, but the measuring point is still configured.

GB

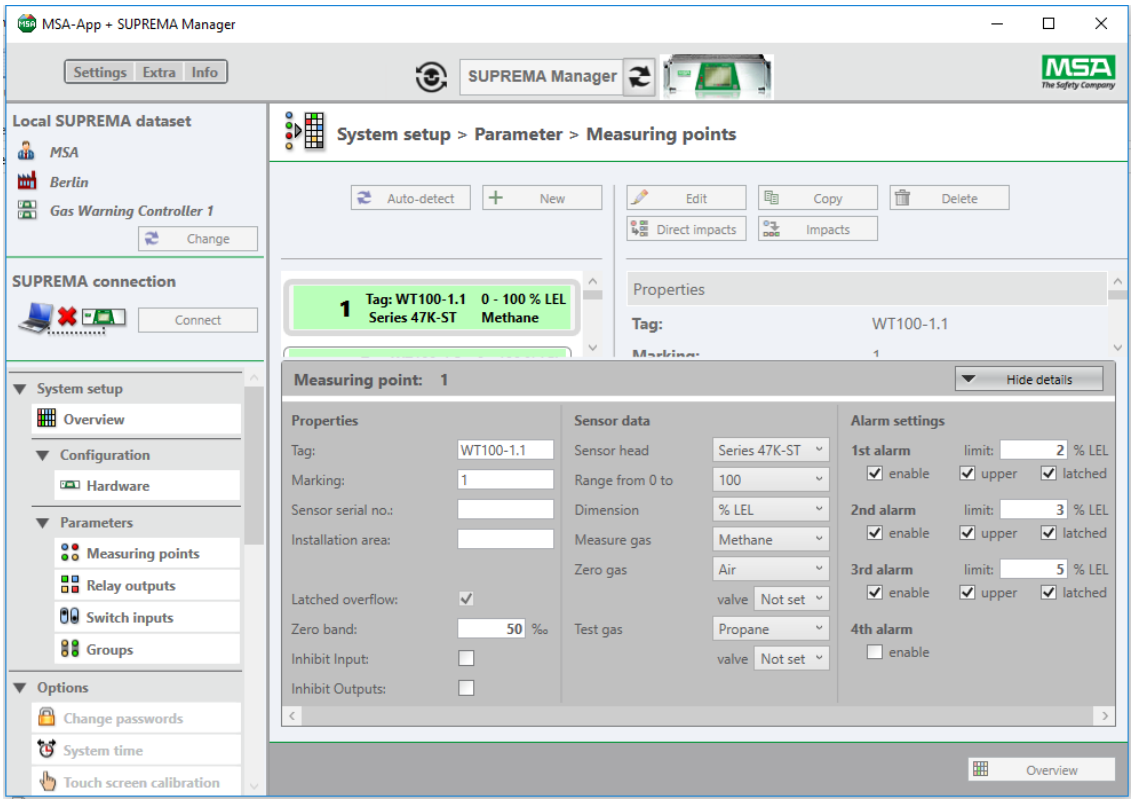



*Fig. 39 Editing measuring points*

(1) Carry out all necessary edits in the detail area.

(2) Save with *Apply* or dismiss with *Cancel*

(3) Leave the configuration with the *Overview* button.

(4) On the main Configuration page, save to the database with *Save* or *Undo* to dismiss all changes.

*Only changes saved in this second step are stored in the database.*

*Undo reverts to the last imported data set.*

**Description of Point Parameters for Firmware Version 3.01.06 and lower**

For these systems, the following parameters are fixed to the listed values:

Latched overflow → latched

Zero band → 2 %

GB

### Direct Impacts

All relay outputs that are directly impacted by the selected measuring point can be viewed by clicking on *Direct impacts*.

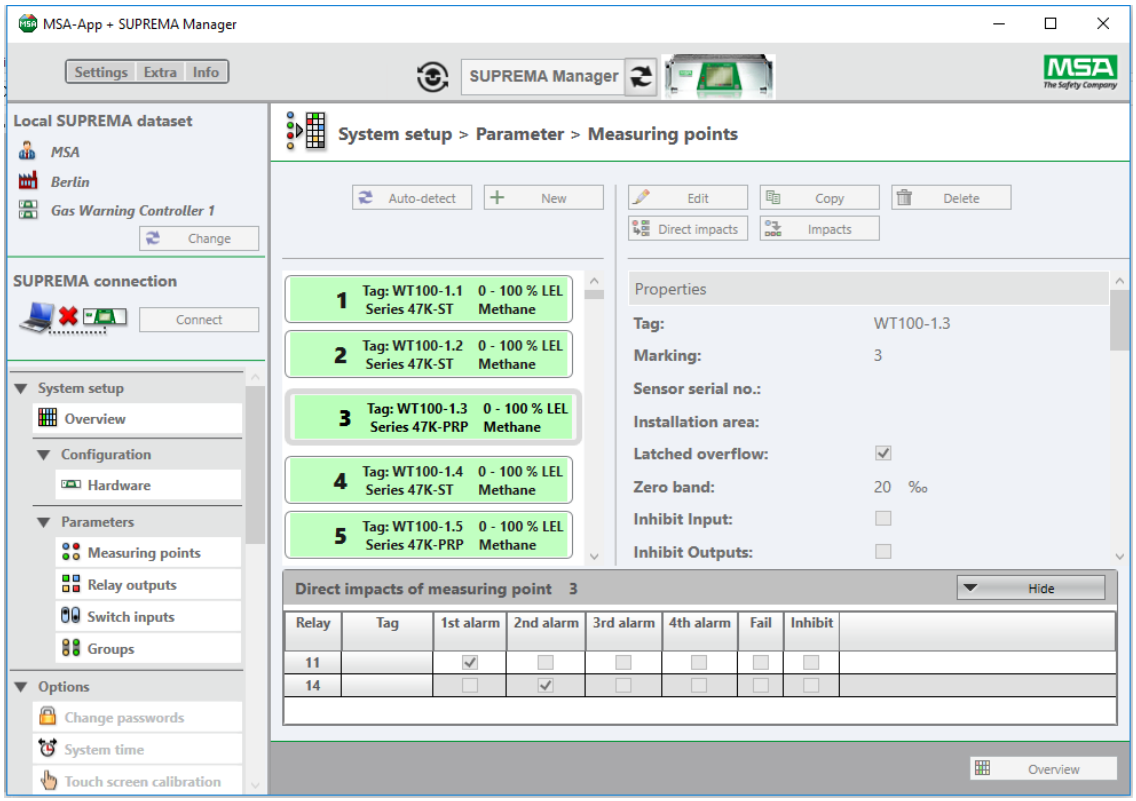



*Fig. 40 Direct impacts*

To modify the settings open the *Relay output* view.

### Impacts - Impact Tree for Measuring Points

(1) To display this tree of impacts for a selected measuring point/relay output, click on *impacts*.
*All relays which are impacted by the selected measuring point/relay output are displayed.*

The context menu of the relay nodes contain the item *Display parameterization*. It is not possible to alter the configuration.
To get an overview about the impact in depth, all levels of impact are displayed.

The displayed relays can be of course impacted by other measuring points as well; to see all dependencies for a relay, open the appropriate relay tree under *System setup →Parameter →Relay outputs*

GB

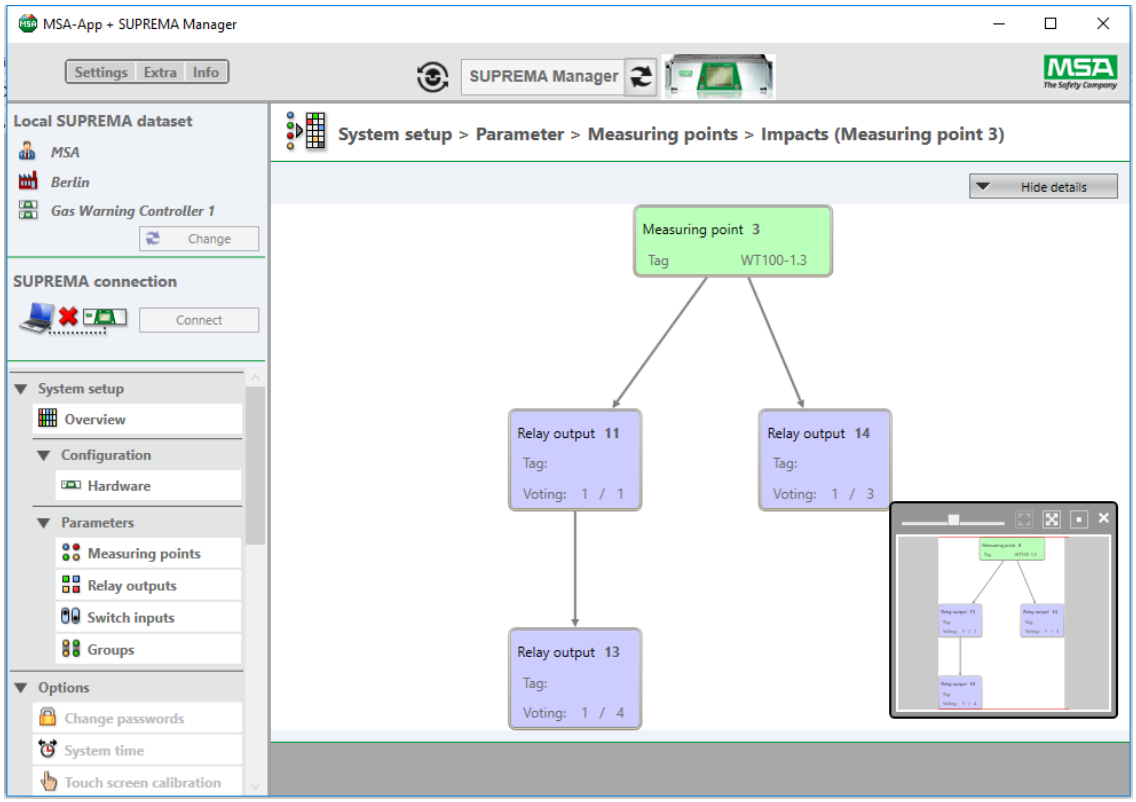



*Fig. 41 Impact tree of measuring point #1*

### 9.3.2 System Setup > Parameter > Relay Outputs

Here parameterised relay outputs can be viewed, added, copied and deleted.
The common relays cannot be edited and are marked orange.

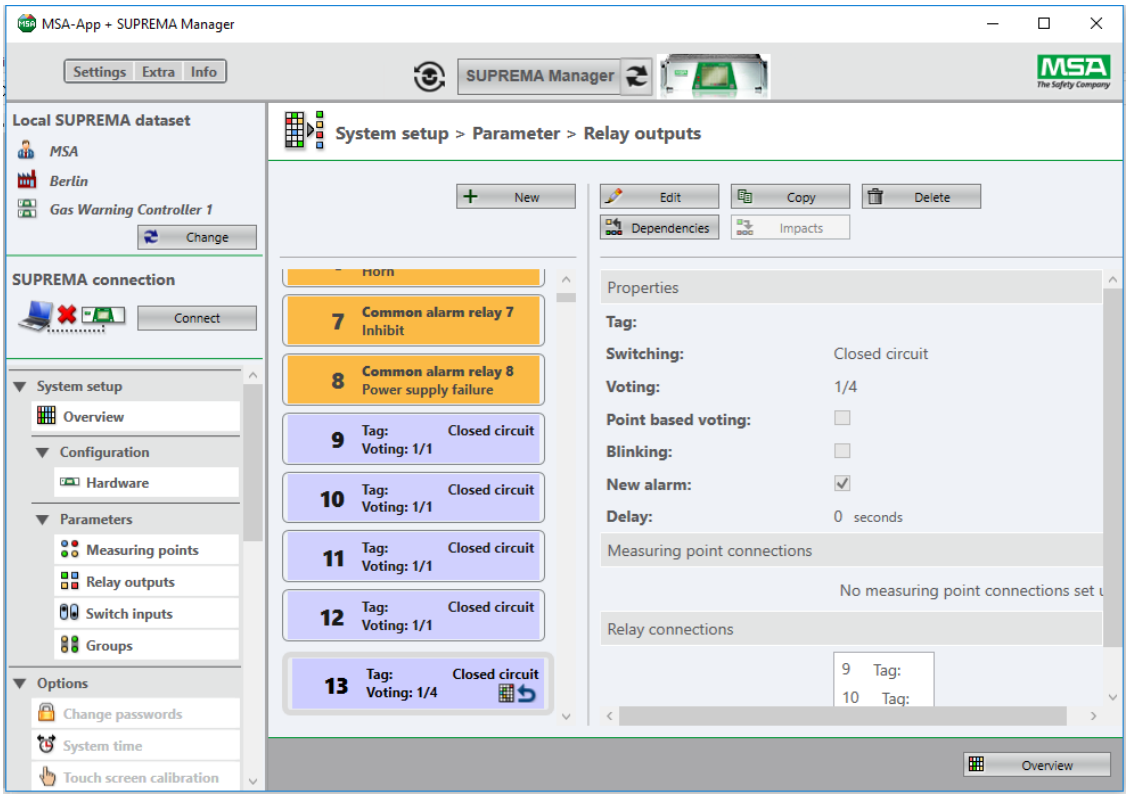



*Fig. 42 Relay outputs*

GB

When adding a new relay output, a drop-down menu offers all available relay output numbers (configured, not yet parameterised).
Clicking on a relay opens the detail information for this relay on the right. The selected relay output can now be edited or deleted.

*Fig. 43 Relay output details*

*Delete* deletes the parameters of the relay output, but the relay output is still configured.

**Edit Relay Output**

Clicking on *Edit* opens the details area in the lower half of the content area.

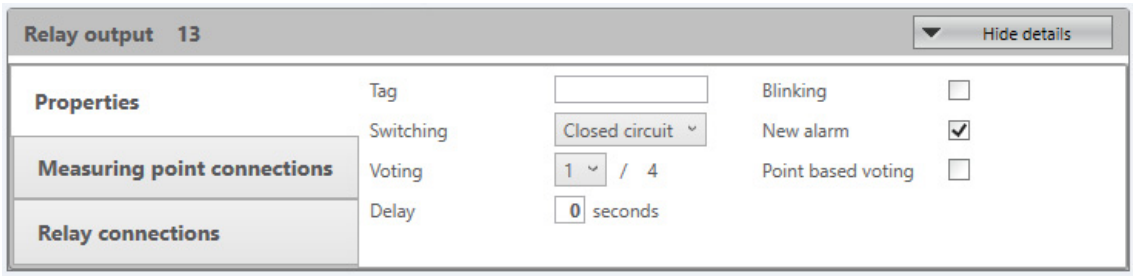



*Fig. 44 Detail area*

Clicking on *Edit* shows the editable entries in the lower half of the content area.

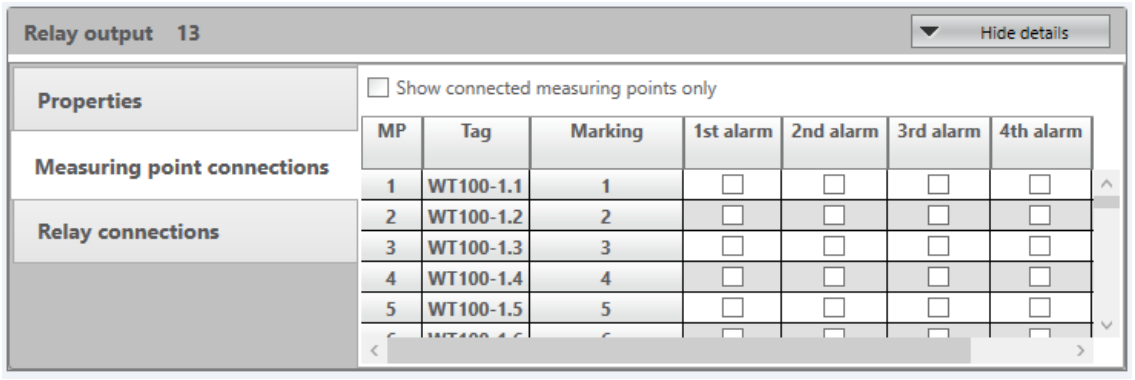



*Fig. 45 Measuring point connections*

A ✓ marks a connection between the selected relay output and condition of a measuring point.

GB

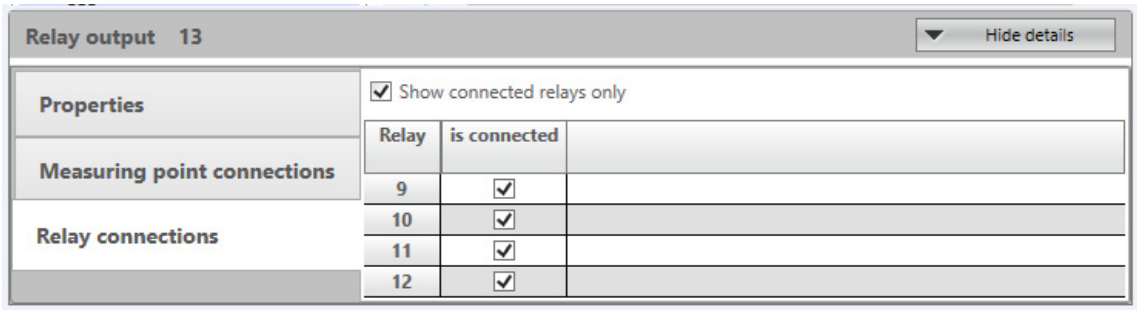



*Fig. 46 Relay connections – show all relays*

(1) Carry out all necessary edits.

(2) Store the changes with the *Apply* button or leave the details area without saving with *Hide details*.

The relays that can be added as condition are listed.For firmware versions lower than 3.02.01, *Relay connections*, *Point base voting* and *Delay* cannot be configured and are therefore not shown.

**Dependencies**

For firmware versions 3.02.01 and higher, the relay output logic is able to accept other relay outputs as conditions. The logical depth of these conditions is 3 and can best be visualized as a tree structure.

(1) To display this tree of dependencies for a selected relay, click on *Dependencies*.

*Shows the dependent measuring points and relays for a selected relay, the switching of the selected relay is determined by the tree nodes.*

Up to 3 levels with dependent nodes can be configured; in the 3rd level only measuring points are allowed.

The tooltip of a relay shows the deepest level of the relay independent of the current view.

Example: In *System Setup* → *Parameter* → *Relay outputs select Relay #9 and click on Dependencies*:

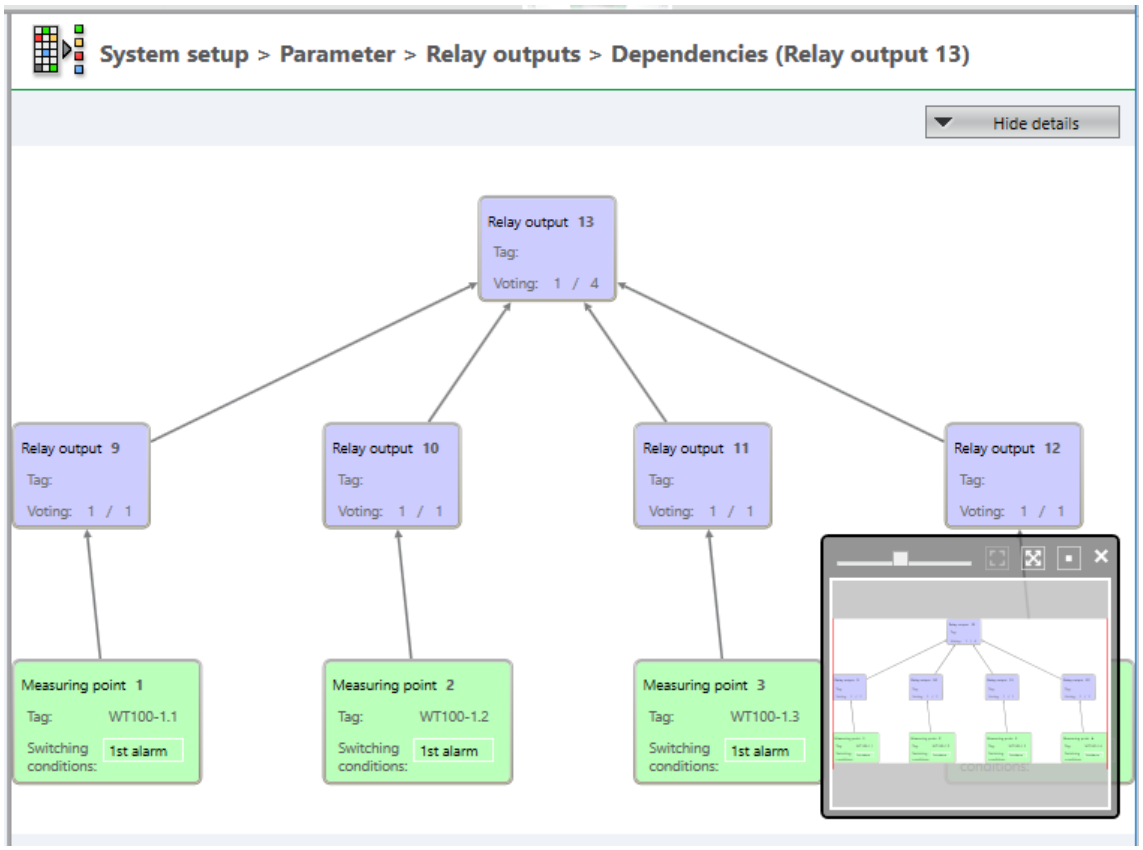



*Fig. 47 Dependencies: Dependency tree with 3 dependency levels*

If a new measuring point is added, the voting information of the relay changes: the value "max voting" is increased by the number of alarms the new measuring point has.
If for the relay 'Point based voting' is configured, each node counts as "1";
e.g. in Fig. 47 the voting of relay 11 would change from 1 / 6 to 1 / 2.

GB

**Context Menu of Tree Nodes**

Menu items for the tree elements:

| | | |
|---|---|---|
| Source relay | Relay selected in the *Relay outputs* view | – Edit parameterization<br>– Add measuring point condition<br>– Add relay condition |
| First level relays | Relays the source directly depends on | – Display parameterization<br>– Display parameterization |
| First level measuring points | Measuring points the source directly depends on | – Edit condition<br>– Delete measuring point condition |
| Subsequent relays | | – Display parameterization |
| Subsequent measuring points | | – Display condition |

**Relay Parameterization**

For the source relay the parameters can be changed; for all other relays the parameters can only be displayed.

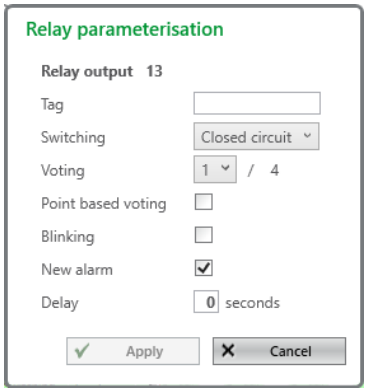



*Fig. 48 Relay parameterization*

**Measuring Point Conditions**

For the source relay the measuring point conditions can be edited and new conditions can be added.

For first level measuring points the condition can be edited and the measuring point can be removed as a condition of the source relay.

For all other measuring points the conditions can only be displayed.

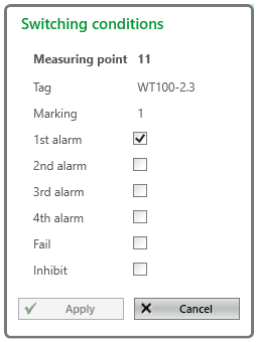



*Fig. 49 Menu item „Edit condition“ for first level measuring points*

GB

**Relay Conditions**

For the source relay new relay conditions can be added.
For first level relays the relay condition can be removed as a condition of the source relay.

**Impact Tree for Relay Options**

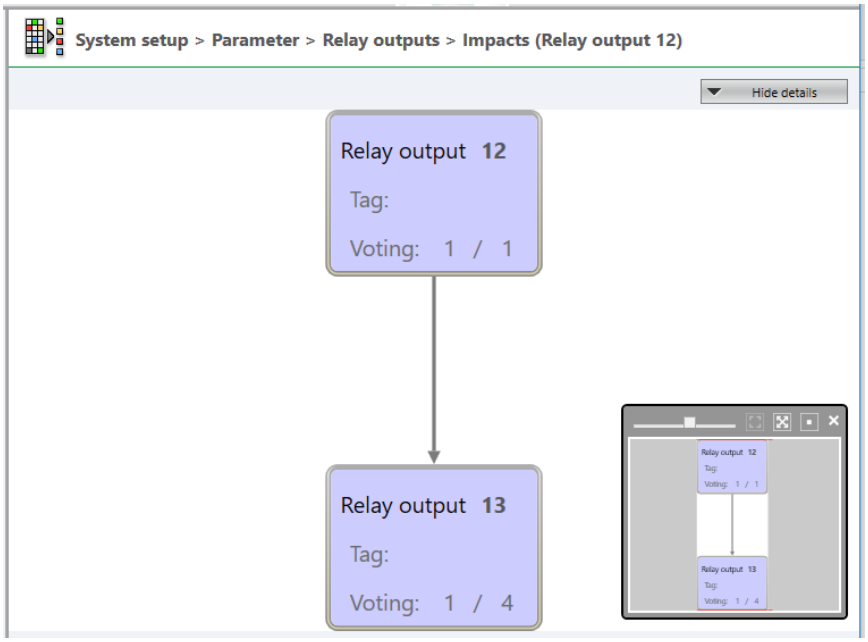



*Fig. 50 Impact tree of relay #12*

The context menu of the relay nodes contain the item *Show parameterization*. It is not possible to alter the configuration.

(1) To display this tree of impacts for a selected relay output, click on *Impacts*.
*All relays which are impacted by the selected relay output are displayed.*

The displayed relays can be impacted by other measuring points as well.
To see all dependencies for a relay, click on *Dependencies*. (*System setup* → *Parameter*→ *Relay outputs*)

Not available for firmware versions lower than 3.02.01.

### 9.3.3 System Setup > Parameter: Switch Inputs

Here all parameterised switch inputs can be viewed, added, copied and deleted. New switch inputs can be added as long as configured switch inputs are available. If all configured switch inputs are parameterised, *New* is disabled.
Clicking on a switch input opens the detailed information for the switch input on the right.

GB

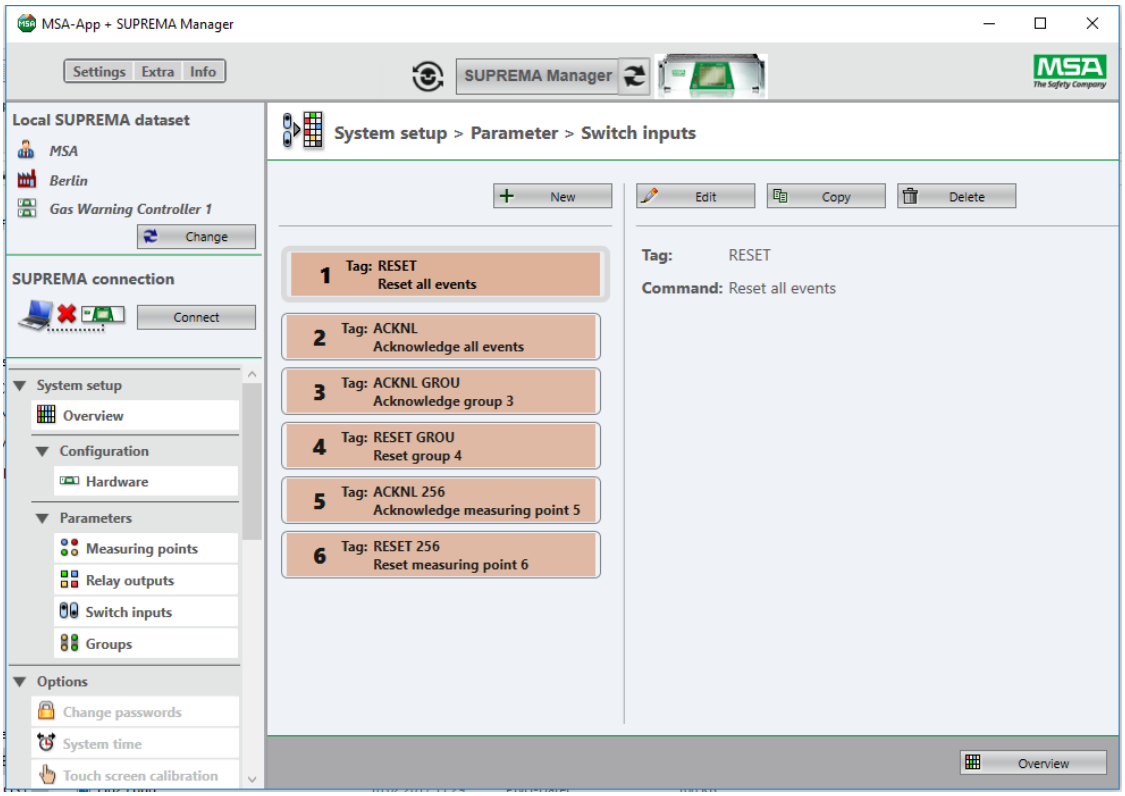



*Fig. 51 Switch inputs with details*

The selected switch input can be deleted or edited. Clicking on *Edit* shows the editable entries in the lower half of the content area.

*Delete* deletes the parameters of the switch input, but the switch input is still configured.

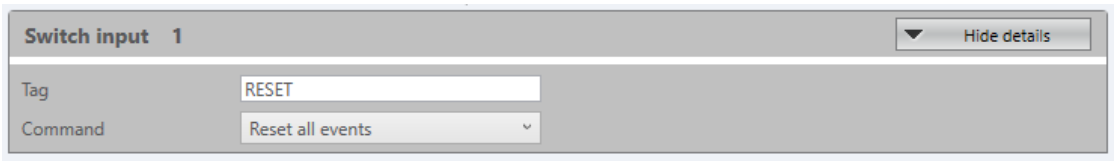



*Fig. 52 Editing switch inputs*

(1) Carry out all necessary edits in the detail area.

(2) In a first step, save with *Apply* or dismiss with *Cancel*

(3) Leave the configuration with the *Overview* button.

(4) *Save* or *Undo* on the main Configuration page.
*Only changes saved in this second step are stored in the database.*

### 9.3.4 System Setup > Parameter > Groups

This function is only available for firmware version 3.02.01.and higher.

Here all parameterised groups can be viewed, added, copied and deleted. New groups can be added as long as configured groups are available. If all configured groups are parameterised, *New* is disabled.

Clicking on a group opens the detailed information for the group on the right.

GB

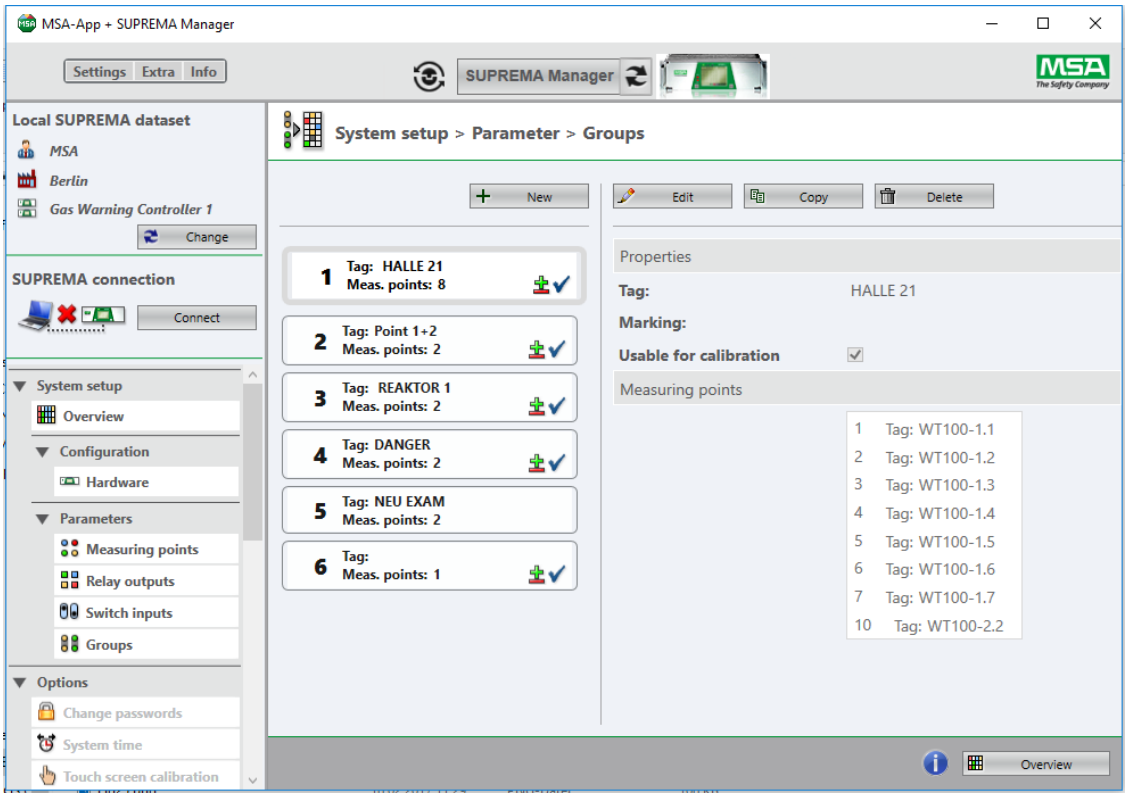



*Fig. 53 Groups with details*

The selected group can be deleted or edited. Clicking on *Edit* shows the editable entries in the lower half of the content area.

*Delete* deletes the parameters of group, but the group is still configured.

A group where *Usable for calibration* is checked will be marked in the group list with the calibration symbol. Such a group can contain max. 32 measuring points. The dimensions and ranges of all its measuring points must be equal.

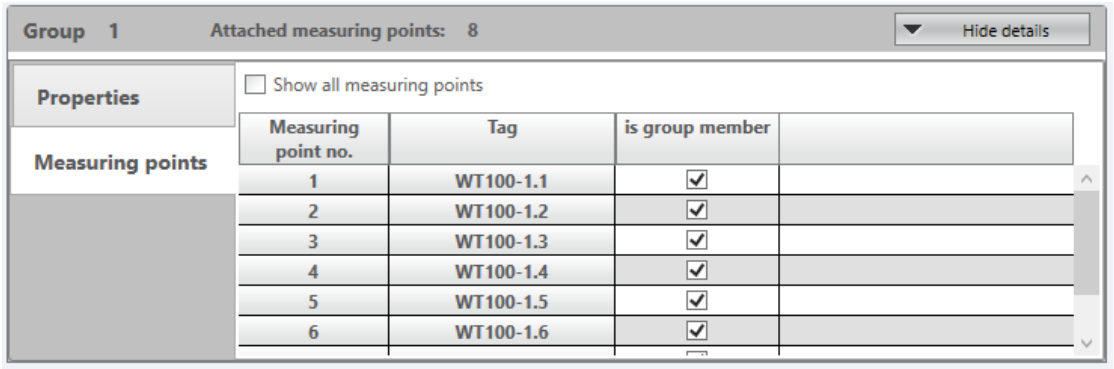



*Fig. 54 Editing groups*

(1) Carry out all necessary edits.

(2) Leave the configuration with the *Overview* button.

(3) *Save* or *Undo* on the main Configuration page.

GB

# 10 Options

The configuration access level is required to make any changes in *Options*.

This menu has the following submenus:

- Change Passwords
- System Time
- Touch Screen Calibration
- Display Language

The submenus are only enabled when a SUPREMA is connected. The current values of the connected SUPREMA for *System Time* and *Display Language* can be viewed with lower access rights.

## 10.1 Changing the Password

The password must have a minimum of four characters and may not have more than eight. Any symbol that can be entered on the SUPREMA can be used. The password is case-sensitive.

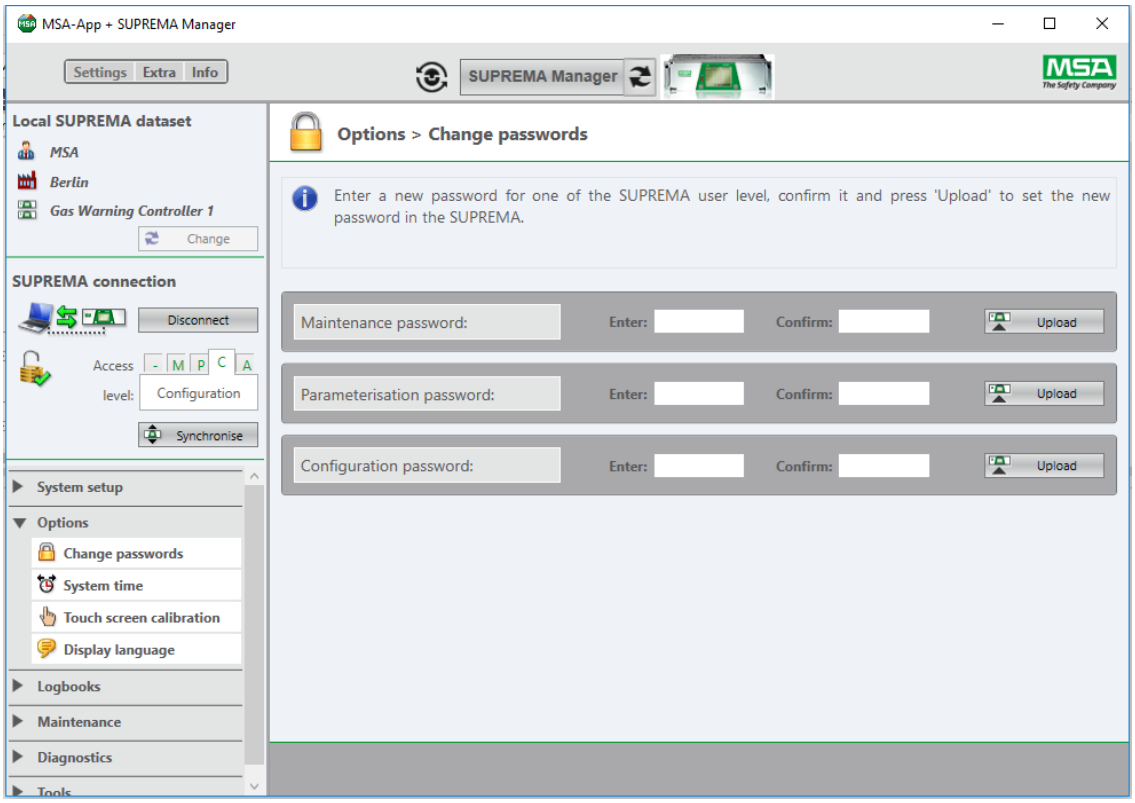



*Fig. 55 Changing passwords*

GB

## 10.2 System Time

Here the SUPREMA system time can be synchronized to the local computer time.

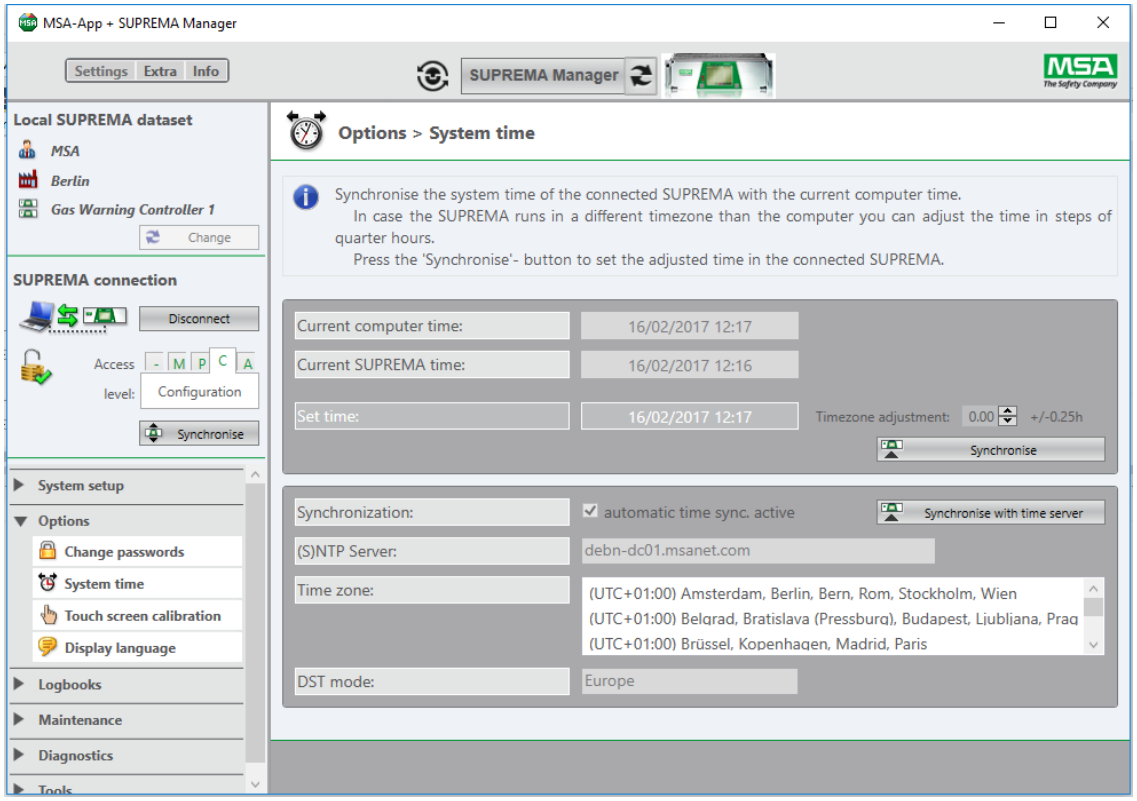



*Fig. 56 System time*

For firmware versions lower than 3.02.01, only the upper area is shown.

Time server, zone and DST mode can be configured under *System Setup* → *Overview* → Time, see chapter 9.1.3 "System Setup > Overview > Parameters > Time".The time synchronization with the time server is available for firmware version 3.02.01. and higher.

The configuration access level is required for synchronization.

GB

## 10.3 Touch Screen Calibration

Here the touch screen calibration of the SUPREMA Touch can be started.

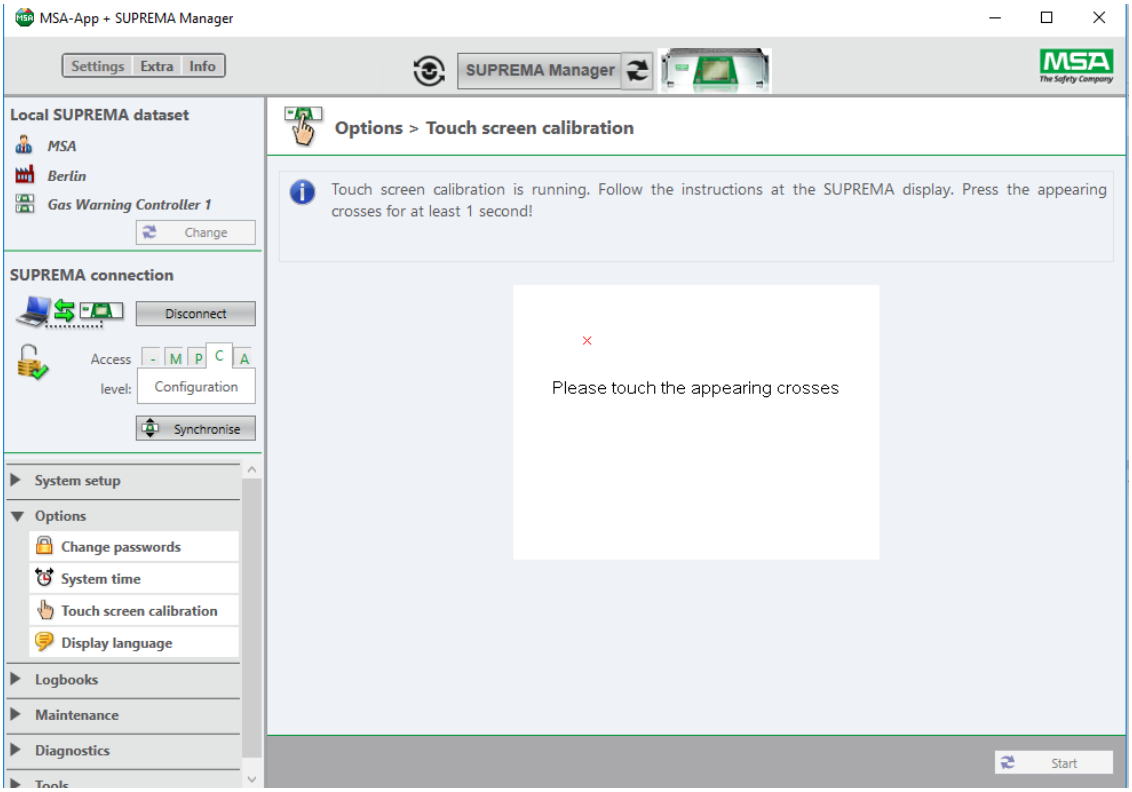



*Fig. 57 Touch screen calibration*

After pressing *Start* perform the touch screen calibration on the SUPREMA Touch display. Successively, crosses are displayed in all four corners of the SUPREMA Touch display. After touching a cross using a touch-pen for 1 second, the next cross is displayed. After the touch screen calibration has been finished press *Done*.

**WARNING!**

**If the touch screen calibration is not carried out properly, touch pad operation of the SUPREMA Touch is no longer possible.**

GB

## 10.4 Display Language

Here the SUPREMA display language can be changed. When changing the display language of the SUPREMA system, the language of the sensor parameters is not changed. The sensor language has to be changed directly on the SUPREMA.

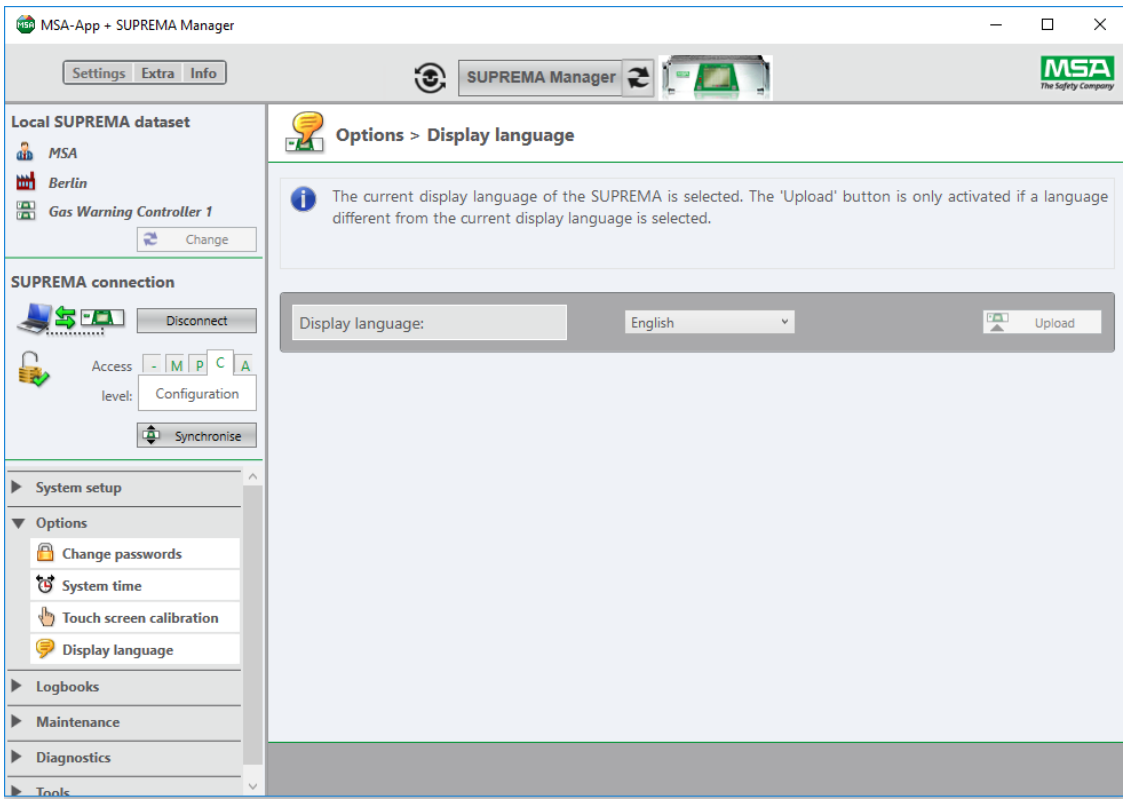



*Fig. 58 Display language*

The configuration access level is required for synchronization.

# 11 Logbooks

No set access level is required to read the logbooks of the SUPREMA.

- Sensor History (can be filtered by measuring point, date)
- System Events
- Signal Fail Events
- Alarm Events
- Changes
- Supply Voltage
- Processor Temperature
- Calibrations

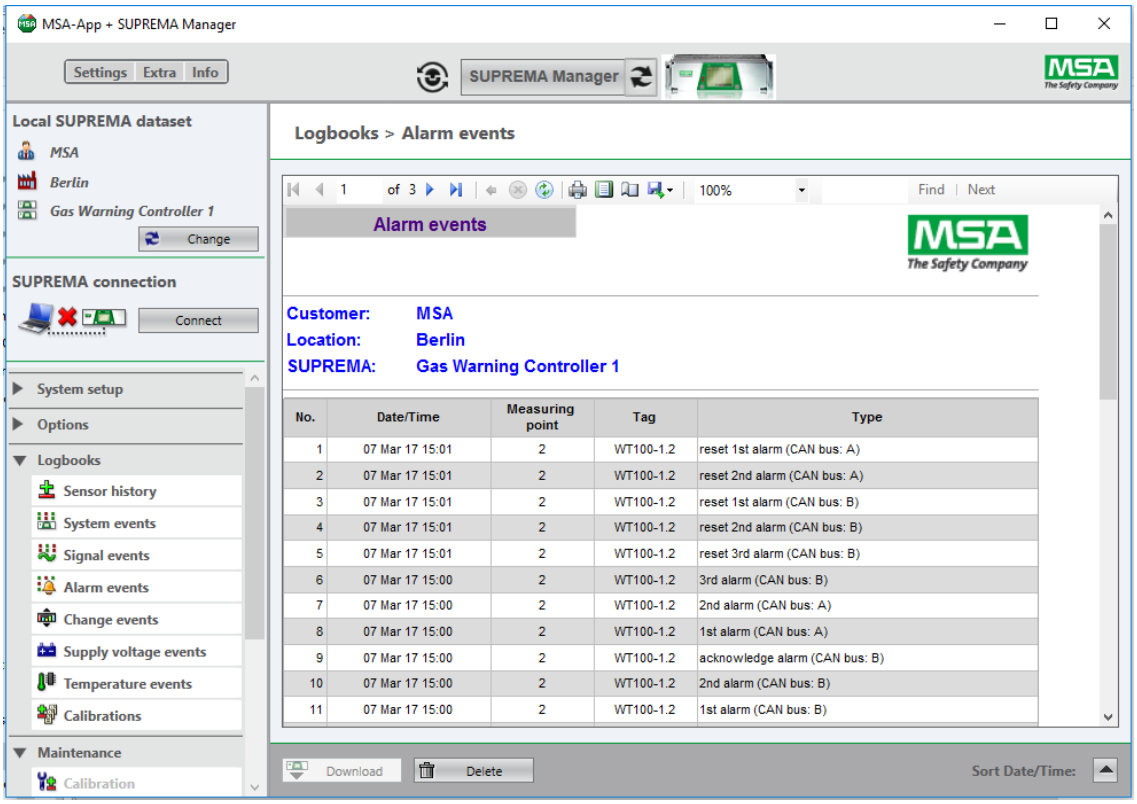



*Fig. 59 Example: Logbook alarm events*

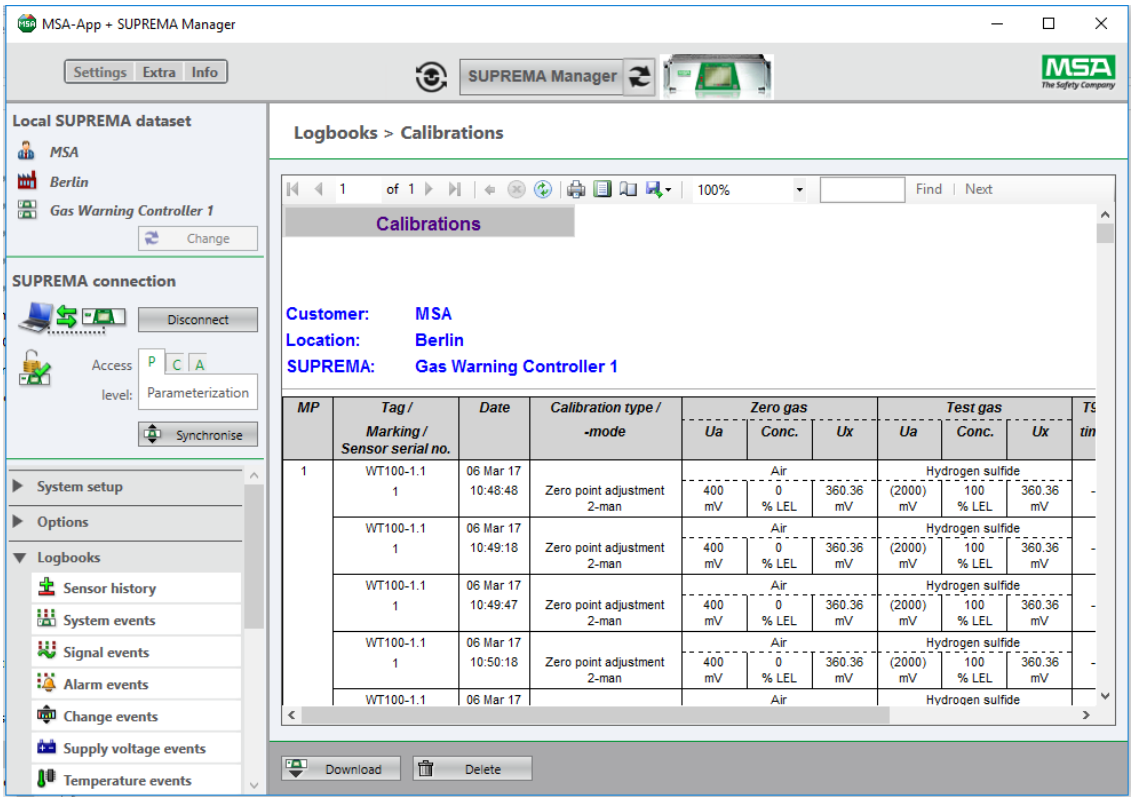



*Fig. 60 Example: Logbook calibrations*

Only downloaded logbook entries are shown. They can be sorted ascending/descending by date and can be filtered. The *Download* button can be used to get the logbook data from the connected SUPREMA. Be aware that a logbook can contain a huge amount of data and a download can last a long time. To reduce the amount of transferred data it is possible to filter the data to be downloaded.

Some detail information, especially regarding the user defined sensor data, reflect the current data base state and not necessarily the parameterisation at the point in time when the event was written into the logbook.

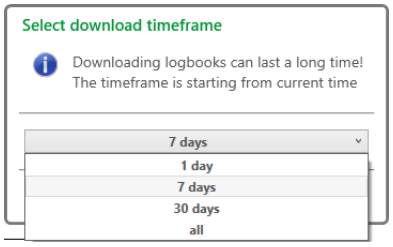



*Fig. 61 Download timeframe*

**WARNING!**

Reports of older data that has already been overwritten on the SUPREMA will be lost when using *Delete*, reports of older data can no longer be retrieved.

Logbooks can be printed and exported when clicking on the following buttons:

| Button | Action |
|---|---|
| | Refresh |
| | Print |
| | Print Layout (to choose page size for the print) |
| | Page Setup (to preview print), click again on icon to leave preview |
| | Export, as Excel, PDF or WORD file |

# 12 Maintenance

- Calibrations
- Interface Test
- Inhibit

## 12.1 Calibration

The required access level is *Maintenance*.

Here one measuring point at a time can be calibrated.Three different calibration procedures and a bridge current adjustment are available:

- Calibration
- First calibration with pre-adjustment
- First calibration without pre-adjustment
- Bridge current adjustment (IBR)

### 12.1.1 General Calibration Description

Only measuring points with passive detectors can be calibrated with the software.

To calibrate measuring points, the SUPREMA has to be connected and the minimum access level has to be *Maintenance*. With selecting Calibrations in the toolbar the relevant measuring point parameters are downloaded from the SUPREMA.

**Selecting Measuring Points For Calibration**

The selection of a measuring point for calibration as described in this chapter can be applied for standard calibration as well as for First calibration with or without pre-adjustment and for Bridge current adjustment.

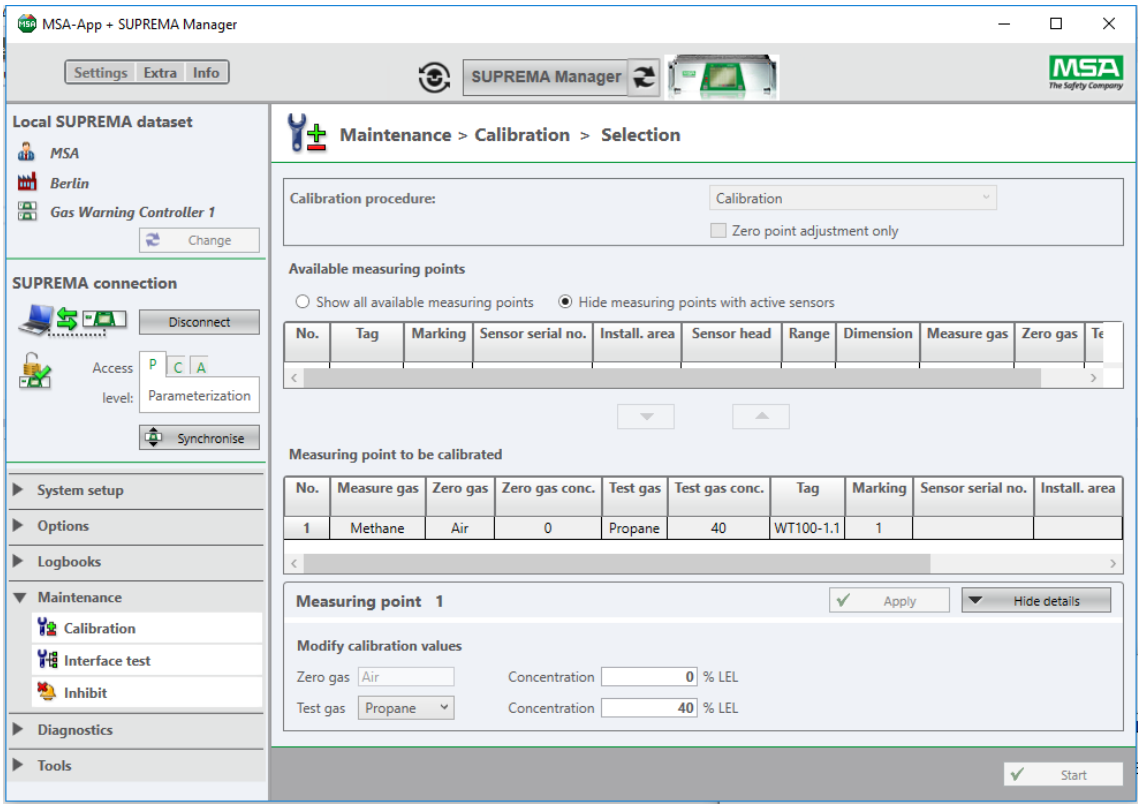



*Fig. 62 Calibrations selection*

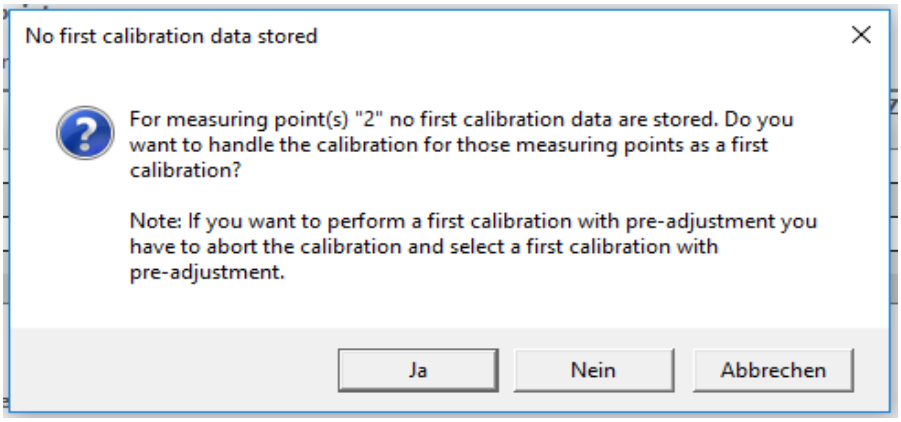
The upper list contains all measuring points available for calibration.

(1) Select one measuring point and move it to the list *Measuring point to be calibrated* by double-clicking or with the cursor button.

*If values for a chosen measuring point need to be adjusted, the line is outlined red. Double-clicking on the line opens the details, there the values can be adjusted.*

(2) Adjust values if necessary, confirm with *Apply*.

If no first calibration data is stored for a selected measuring point, a dialogue pops up.




(3) If applicable, choose an option to continue.

(4) Start calibration with the Start button.

If for the selected measuring point no first calibration is available, *Zero point adjustment* is not available and a warning is shown.

GB

| Calibration | |
|---|---|
| **PC** | **At the se+nsor** |
| (1) Start the calibration with *Start*.<br>The *Progress* field shows:<br>• Starting…<br>• Apply zero gas | |
| | (2) Apply Zero gas. |
| • Zero gas applied | |
| (3) Confirm zero gas | |
| • Zero gas confirmed<br>• Apply test gas | |
| | (4) Apply test gas. |
| • Test gas applied | |
| (5) Confirm test gas. | |
| • Test gas confirmed<br>• Apply purge gas | |
| | (6) Apply purge gas. |
| • Purge gas applied<br>• Stop purge gas | |
| | (7) Stop purge gas. |
| • Purge gas stopped<br>• Confirm | |
| (8) Click on *Confirm*. | |
| (9) Confirm the calibration values with *Accept* or dismiss the calibration with *Reject*. | |

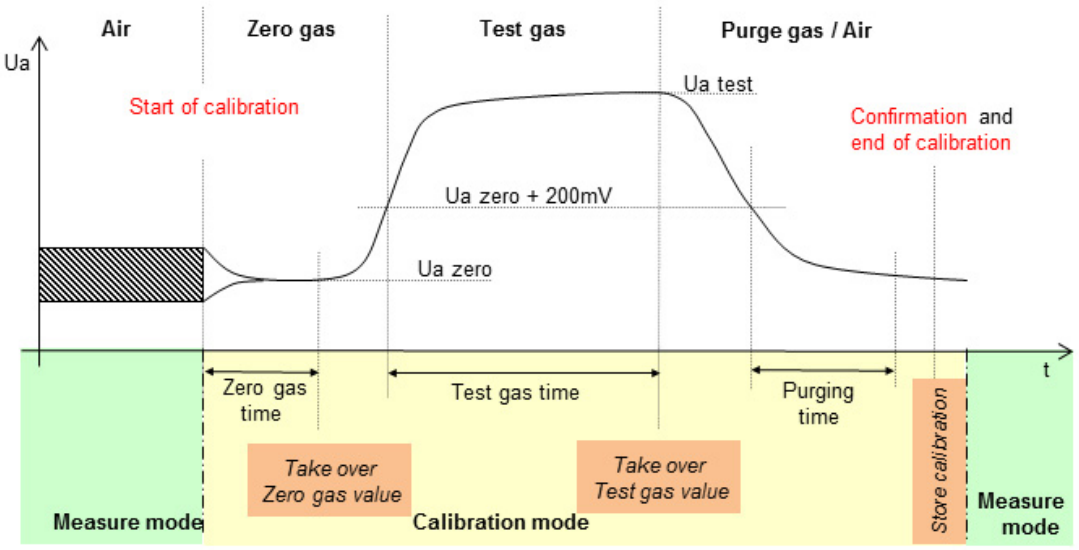



*Fig. 63 Calibration*

**Calibration Process**

The following example shows the screenshots for a standard calibration. Only the software interactions are shown, see the table in the previous section for the required actions at the sensor.
If user interaction is required, the field *User Action* shows the required action.
All values shown during calibration are the current values from the SUPREMA.
For standard calibration it is possible to check *Zero point adjustment* only. In this case the calibration is finished after the zero gas adjustment.

If for the selected measuring point no first calibration is available, *Zero point adjustment* is not available and a warning will pop up.

The *Progress* field shows the progress of the calibration:

- Starting…
- Apply Zero Gas
- Zero Gas applied
- Confirm zero gas

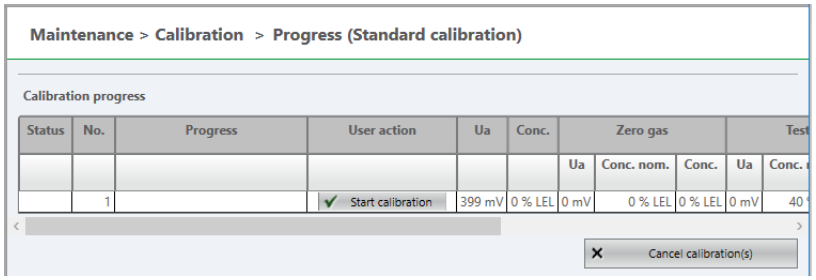



*Fig. 64 Start*

(1) Start the calibration with *Start*.

The *Progress* field shows:

- Starting…
- Apply zero gas

To take over the signals for zero point and sensitivity for the measuring point, press *Confirm* in the *User action column*. As long as the signal is rated as unstable, an hourglass is shown on the button. The user can still confirm the signal, since there may be conditions under which the signal will not be rated stable even after a longer time period. The values have to be verified when accepting the calibration.
When the signal is rated stable, a check mark is shown on the button. Additionally a green rating bar is shown on the button.
If insufficiently stable signals for zero point and sensitivity are taken over, incoherent calibrations can occur.

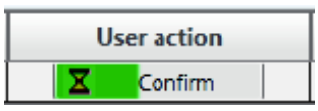



*Fig. 65 Waiting for stable signal*

*Fig. 66 Stable signal*

GB

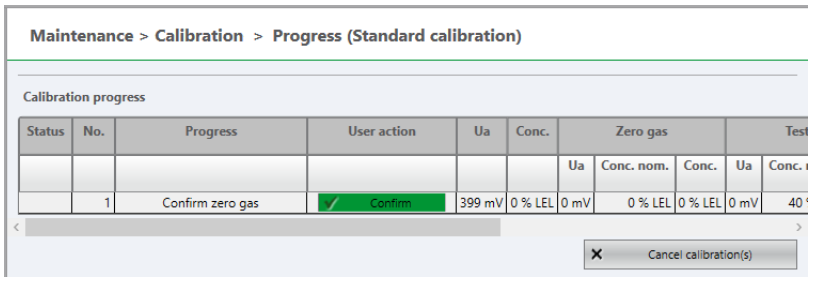



*Fig. 67 Confirm zero gas*

(2) Click on *Confirm*.

The *Progress* field shows:

- Zero Gas confirmed
- Apply test gas
- Test Gas applied
- Confirm test gas

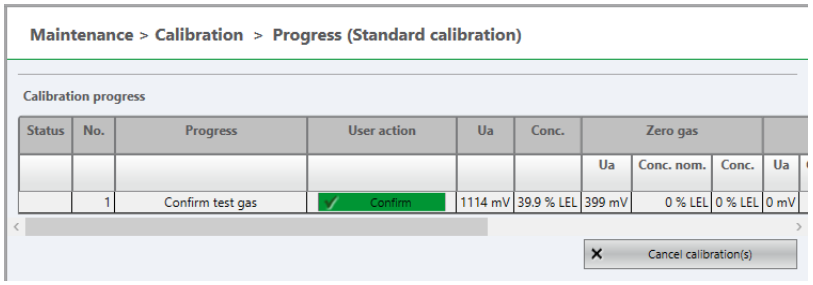



*Fig. 68 Confirm test gas*

(3) Click on *Confirm*.

The *Progress* field shows:

- Test Gas confirmed
- Apply Purge Gas
- Purge Gas applied

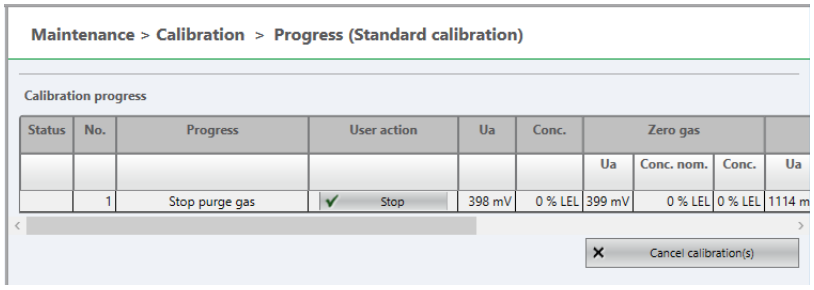



*Fig. 69 Stop purge gas*

(4) Click on *Stop* if applicable.

The *Progress* field shows:

- Purge gas stopped
- Confirm

GB

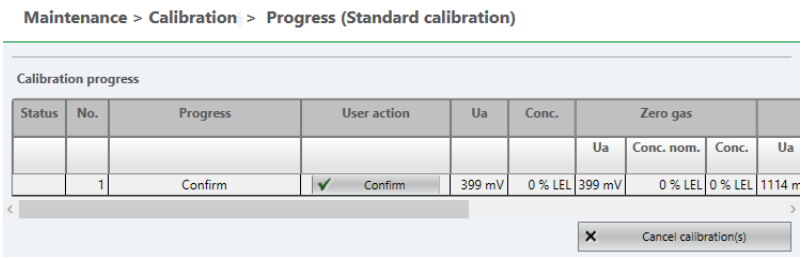



*Fig. 70 Confirm*

(5) Click on *Confirm*.

*The calibration values that will be sent to the SUPREMA are displayed in a pop-up window.*

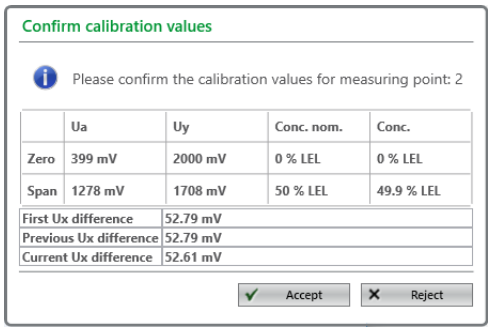



*Fig. 71 Calibration data*

(6) Check the values, click on *Accept* to save as a valid calibration.

*With Reject, the values are rejected, the previous calibration values stay valid.*

*With Accept, the calibration values will be send to the SUPREMA as valid calibration data.*

(7) After the sensor has been calibrated the calibration session ends automatically.

*The calibration values are read back from the SUPREMA.*

*If the calibration has ended with warning or error the calibration session has to be ended manually with Continue.*

*The calibration status is shown in the Status column.*

(8) Ensure that the data matches.

*After the calibration values are read back from the SUPREMA, they have to be checked by the user to ensure the sent and the readback data are the same.*

*If the data matches, the calibration has been successful.*

**WARNING!**

If the data does not match, the calibration has to be repeated.

| **Status** | |
|---|---|
| ✔ | *OK* (green check mark) confirms a valid calibration. |
| ⚠ | *Warning* shows that the calibration is valid, but with a warning. |
| ⊘ | *Error* signals an invalid calibration. |
| – | Calibration is not started yet, is cancelled or the values are rejected. |

GB

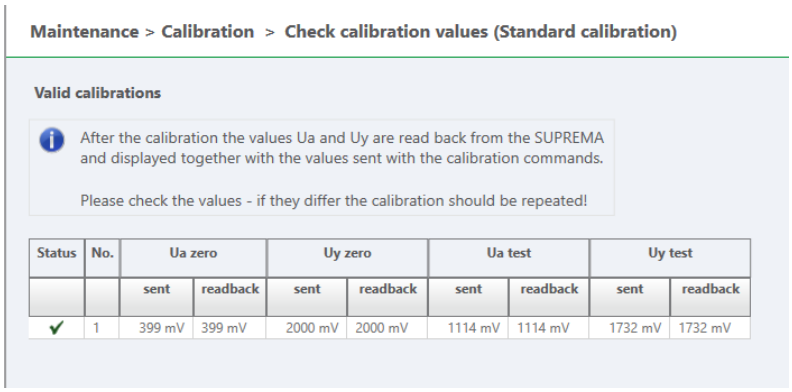



*Fig. 72 Check calibration values*

To check the calibration data stored in the SUPREMA go to *Logbooks/Calibration* and download the latest calibration data from the SUPREMA

#### 12.1.1.1 First Calibration with Pre-Adjustment

**WARNING!**

**Only carry out this calibration for new sensors. Using *First Calibration* for sensors already in use makes it impossible to track the sensitivity changes over the lifetime of the sensor.**

This node is used for a first calibration with preadjustment.
The process is similar to the standard calibration process, described in detail in the previous section. There is one difference: The preadjusting phases for zero and test gas cannot be canceled immediately. The current preadjusting process controlled by the SUPREMA must be finished first.
Afterwards the calibration will be canceled normally.

**WARNING!**

**If the calibration has been canceled for one measuring point, the calibration was not completed, although pre-adjustment was performed at least partially. The calibration for the affected measuring point(s) must be restarted to have valid calibrations stored in the SUPREMA!**

**WARNING!**

**As soon as a first calibration is started, all existing calibration data for a measuring point is deleted. It is not possible to save the data by interrupting or canceling a first calibration.**

GB

(1) Select measuring point for calibration (see chapter 12.1.1 "General Calibration Description").

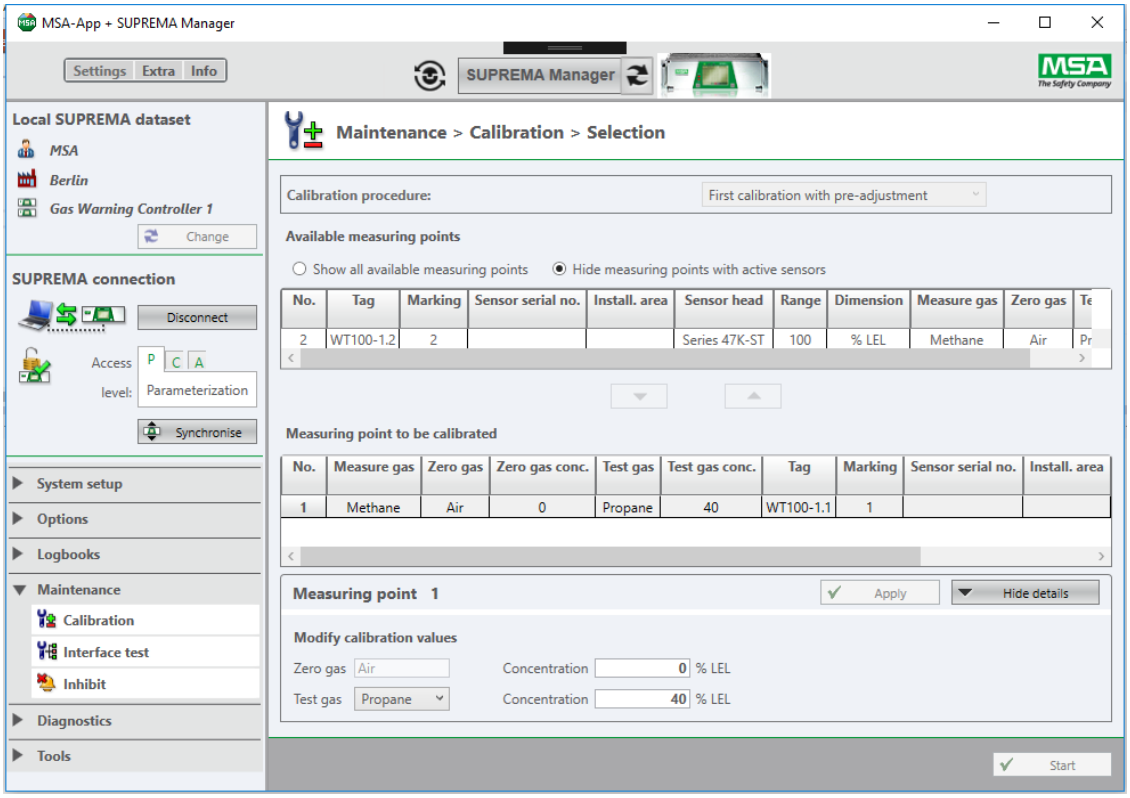



*Fig. 73 First calibration*

(2) Adjust values if necessary, confirm with *Apply*.

(3) Start the first calibration with *Start*.

### 12.1.1.2 First Calibration without Pre-Adjustment

**WARNING!**

Only carry out this calibration for new sensors. Using *First Calibration* for sensors already in use makes it impossible to track the sensitivity changes over the lifetime of the sensor.

This node is used for a first calibration if the hardware does not support pre-adjustment.The process is the same as for the standard calibration process. The calibration is stored as a first calibration and therefore all existing calibration data of the appropriate measuring point are deleted in the SUPREMA.

### 12.1.1.3 Bridge current adjustment

This node is used for adjusting the bridge current (IBR).

**WARNING!**

**When a bridge current adjustment is carried out, all existing calibration data for a measuring point is deleted.**

**WARNING!**

**It is not possible to cancel a running bridge current adjustment.**

GB

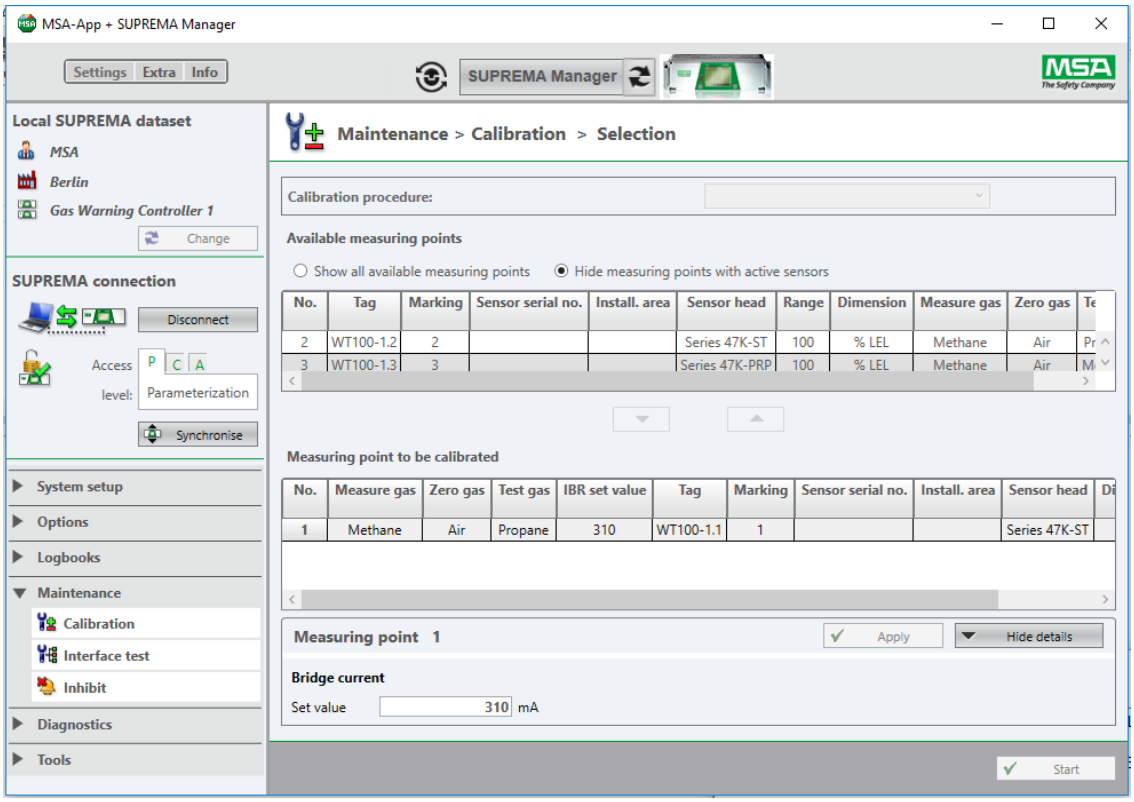



*Fig. 74 IBR adjustment*

(1) Select measuring point for adjustment (see chapter 12.1.1 "General Calibration Description").

(2) Adjust bridge current if necessary, confirm with *Apply*.

(3) Continue with *Start*.

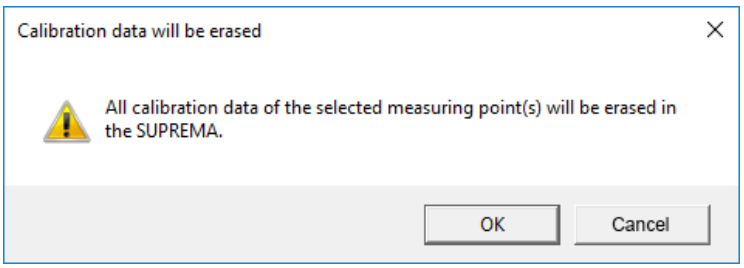



*Fig. 75 Calibration data will be erased*

(4) Start the adjustment with *OK*.

The *Progress* field shows the progress of the adjustment.

- Starting...
- Preparing bridge current adjustment
- Bridge current adjustment running
- Accepted
- Finished

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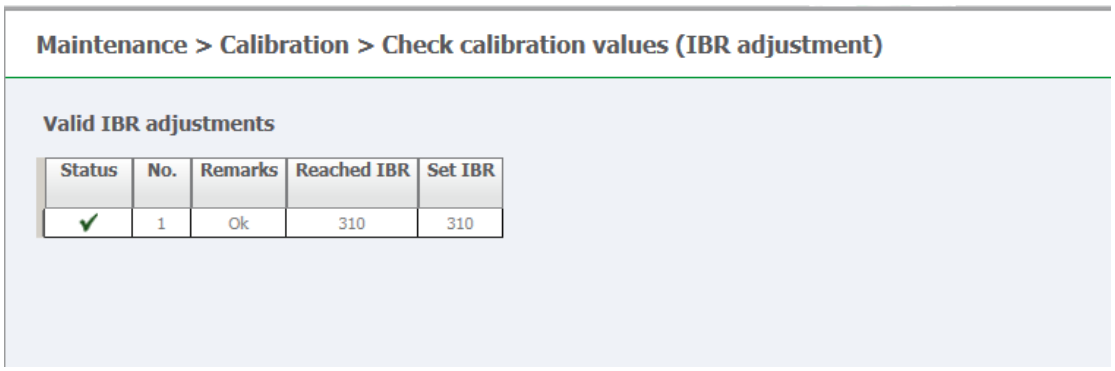


*Fig. 76 Valid IBR adjustment*

## 12.2 Interface Test

The required access level is *Maintenance*.

With *Interface Test* peripheral outputs can be tested: Relay outputs, Analogue outputs and printer settings.
The printer test might cause a system fail of the SUPREMA.

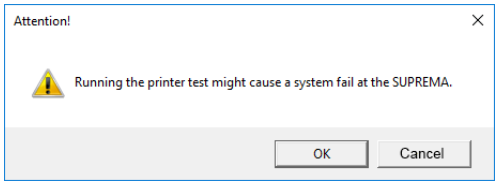


*Fig. 77 Possible system fail*

## 12.3 Inhibit

The required access level is *Maintenance*.

Inhibits can be set per measuring point.

**WARNING!**

**Do not inhibit all measuring points at the same time, since this would completely disable all alarms at the same time. Only inhibit alarms when it is safe to do so and no dangerous situation can occur from the absent alarm.**

*Inhibit* and *InhibitDO* interrupt the chain of alarms (measurement input, measurement processing, measurement output) at two different points.
*Inhibit* interrupts between input and processing, so that the system does not display a valid measurement. For the measuring point affected, Inhibit is displayed as the status. This function can be used if no sensor is connected or a sensor is exchanged/maintained.
*InhibitDO* interrupts between processing and output, so that while the correct status is displayed, no alarm outputs are activated. This function can be used to test the alarm parametrisation of the system without activating downstream actuators.
*Download* receives the current inhibit sets from the SUPREMA
*Upload* sends the inhibits sets with manager to the supreme

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(1) Inhibit one measuring point by checking the relevant fields.

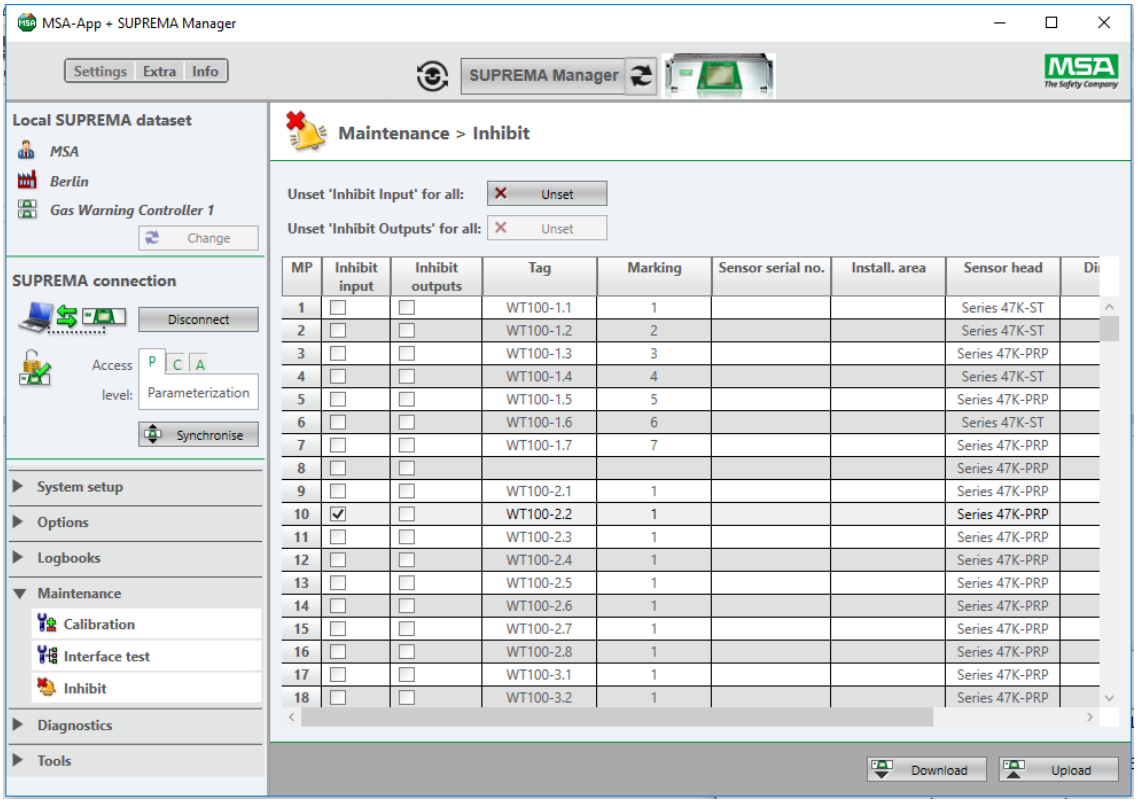


*Fig. 78 Inhibit*

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# 13 Diagnostics

## 13.1 Measurements

Living data or raw voltages for selected measuring points can be displayed here.

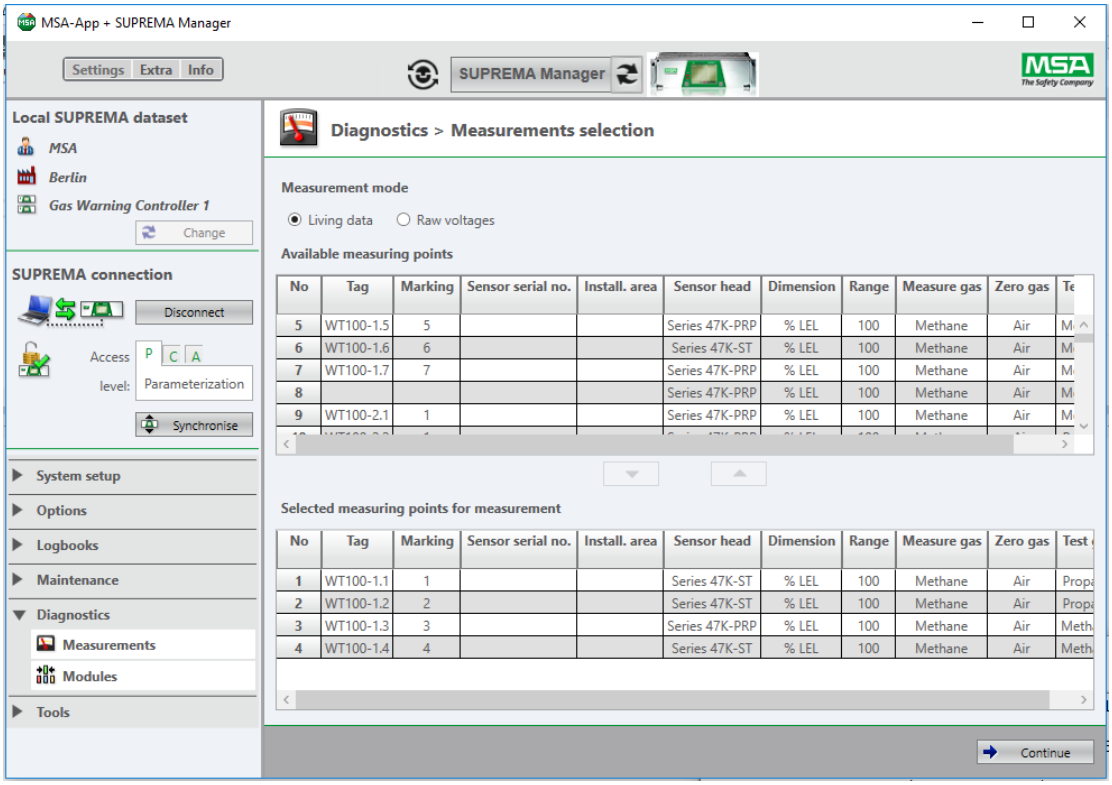


*Fig. 79 Measurement*

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(1) Select measuring point by double-clicking or with the arrow buttons.
*Selected measuring points are listed in the lower window.*

(2) Click on *Continue*.
*The data for the selected measuring points is displayed.*

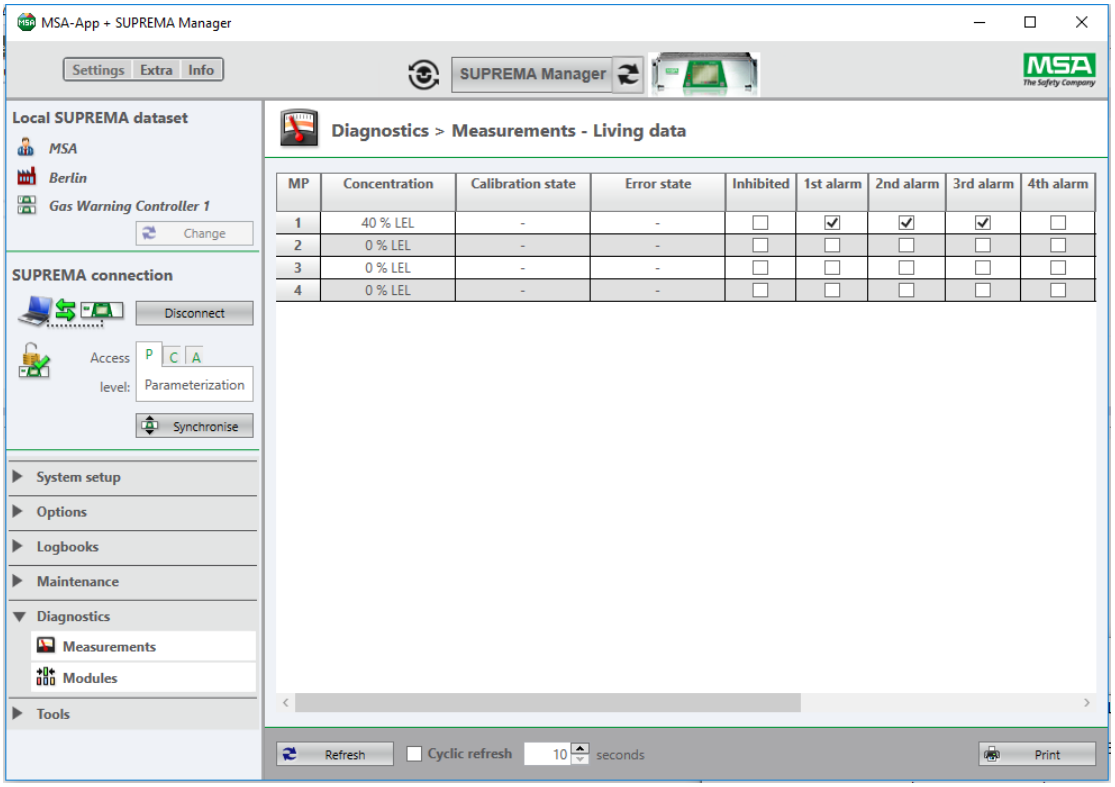
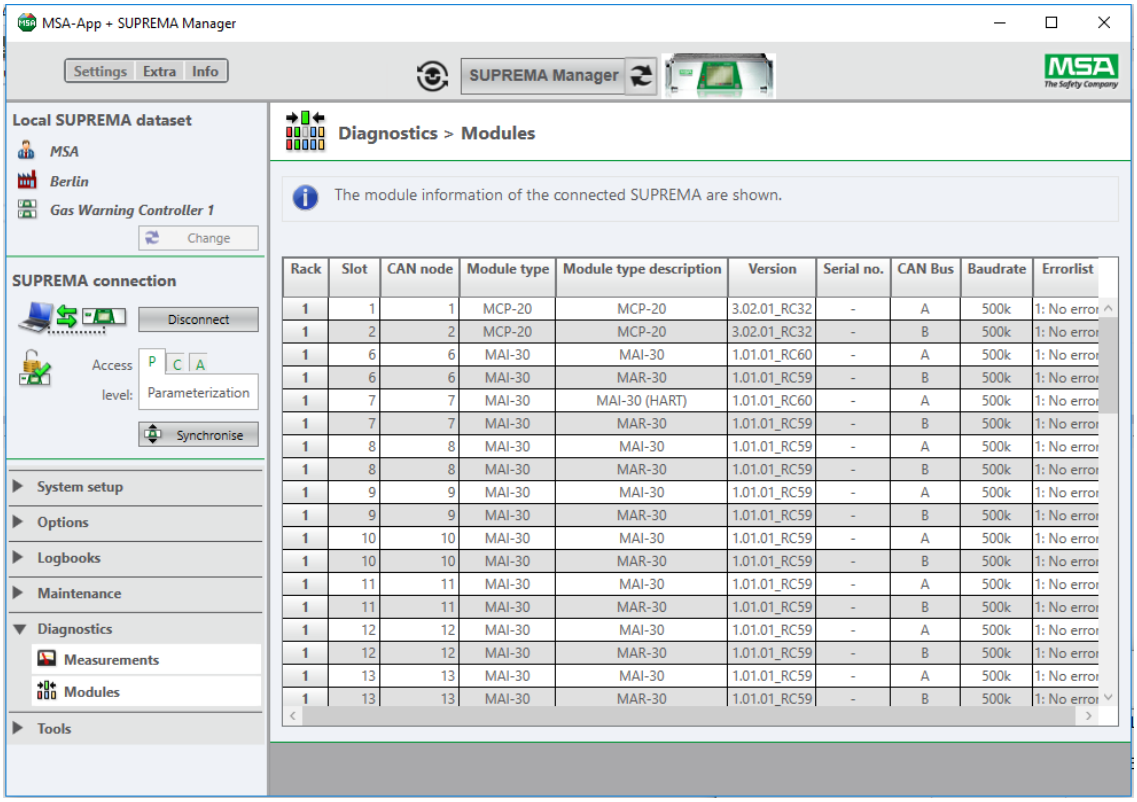



*Fig. 80 Data of the selected measuring points*

## 13.2 Modules

No set access level is required.

Here detailed module information is available.




| Rack | Slot | CAN node | Module type | Module type description | Version | Serial no. | CAN Bus | Baudrate | Errorlist |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | 1 | MCP-20 | MCP-20 | 3.02.01_RC32 | - | A | 500k | 1: No error |
| 1 | 2 | 2 | MCP-20 | MCP-20 | 3.02.01_RC32 | - | B | 500k | 1: No error |
| 1 | 6 | 6 | MAI-30 | MAI-30 | 1.01.01_RC60 | - | A | 500k | 1: No error |
| 1 | 6 | 6 | MAI-30 | MAR-30 | 1.01.01_RC59 | - | B | 500k | 1: No error |
| 1 | 7 | 7 | MAI-30 | MAI-30 (HART) | 1.01.01_RC60 | - | A | 500k | 1: No error |
| 1 | 7 | 7 | MAI-30 | MAR-30 | 1.01.01_RC59 | - | B | 500k | 1: No error |
| 1 | 8 | 8 | MAI-30 | MAI-30 | 1.01.01_RC59 | - | A | 500k | 1: No error |
| 1 | 8 | 8 | MAI-30 | MAR-30 | 1.01.01_RC59 | - | B | 500k | 1: No error |
| 1 | 9 | 9 | MAI-30 | MAI-30 | 1.01.01_RC59 | - | A | 500k | 1: No error |
| 1 | 9 | 9 | MAI-30 | MAR-30 | 1.01.01_RC59 | - | B | 500k | 1: No error |
| 1 | 10 | 10 | MAI-30 | MAI-30 | 1.01.01_RC59 | - | A | 500k | 1: No error |
| 1 | 10 | 10 | MAI-30 | MAR-30 | 1.01.01_RC59 | - | B | 500k | 1: No error |
| 1 | 11 | 11 | MAI-30 | MAI-30 | 1.01.01_RC59 | - | A | 500k | 1: No error |
| 1 | 11 | 11 | MAI-30 | MAR-30 | 1.01.01_RC59 | - | B | 500k | 1: No error |
| 1 | 12 | 12 | MAI-30 | MAI-30 | 1.01.01_RC59 | - | A | 500k | 1: No error |
| 1 | 12 | 12 | MAI-30 | MAR-30 | 1.01.01_RC59 | - | B | 500k | 1: No error |
| 1 | 13 | 13 | MAI-30 | MAI-30 | 1.01.01_RC59 | - | A | 500k | 1: No error |
| 1 | 13 | 13 | MAI-30 | MAR-30 | 1.01.01_RC59 | - | B | 500k | 1: No error |

*Fig. 81 Modules*

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# 14 Tools

## 14.1 CAN Bridge Calculator

To send the CAN bridge calculation to the CAN bridge, a programming cable is necessary (see chapter 15 "Ordering Information").

If more than one rack is connected and at least one of those racks is operated outside of the electrical cabinet, the CAN bridge calculator can be used to calculate the necessary reduction in Baud rate depending on the distance in meters.
The CAN bridge calculator leads through the calculation in 4 steps:

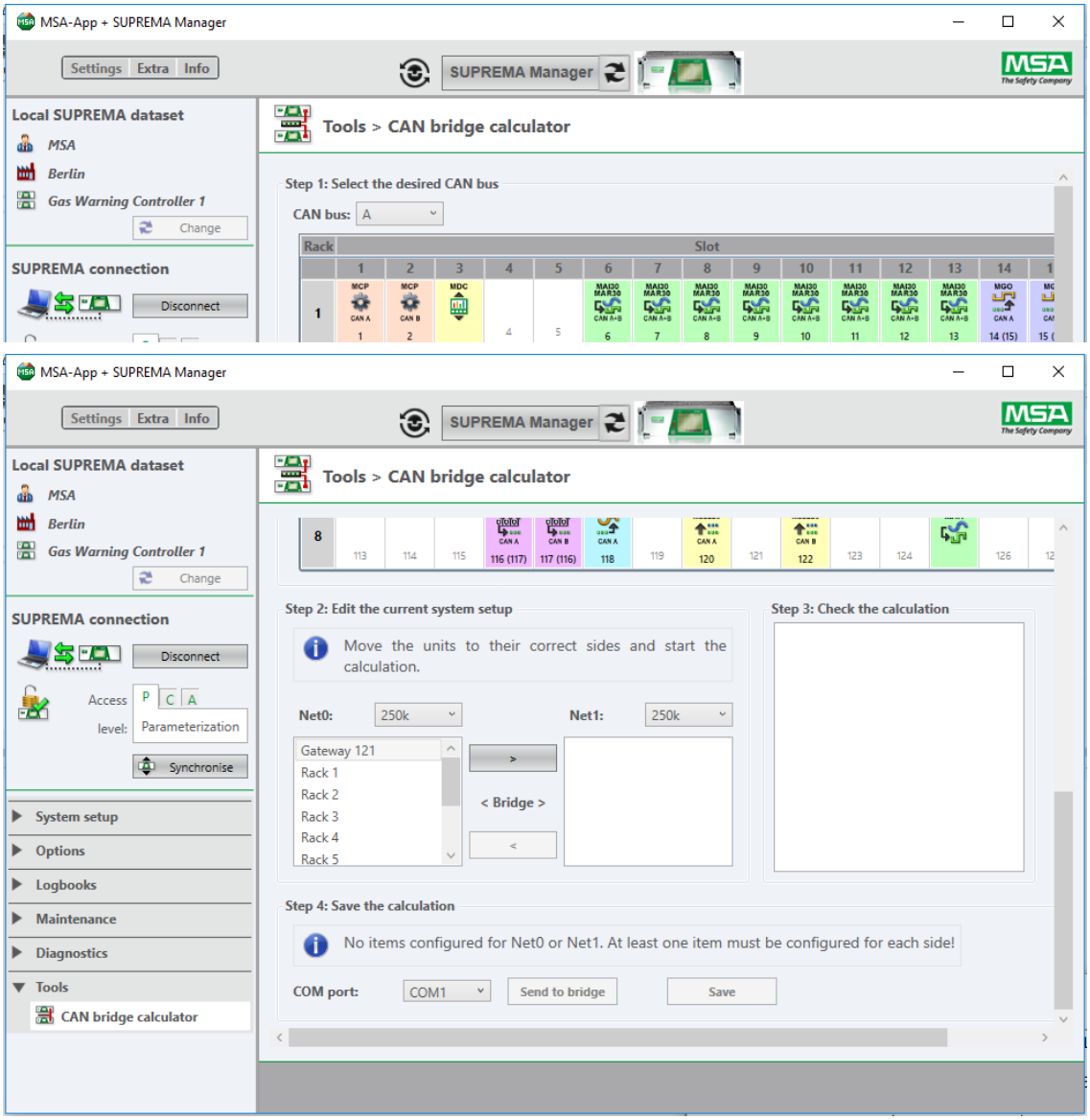


*Fig. 82 CAN Bridge calculator*

(1) Select the desired CAN bus.

(2) Edit the current system setup.
*Here values can be chosen for Net0 and Net1 and racks can be moved from Net0 to Net1.*

(3) Check the calculation.

(4) Save the calculation or send it to the bridge.

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# 15 Ordering Information

| Description | Part No. |
|---|---|
| SUPREMA Manager Instr. Manual, English | 10121655 |
| SUPREMA Touch CD ROM - SUPREMA Manager | 10121868 |
| SUPREMA Touch CD-ROM - Manuals | 10121867 |
| SUPREMA Touch Instr. Manual, English | 10121863 |

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