

Super WISE® Web Page Manual

Super WISE, program version 1.25

The screenshot displays the Swegon Super WISE web interface. At the top left is the Swegon logo, and at the top right, it says "SuperWISE - Data recieved". Below this is a navigation bar with tabs: Overview, Optimizer, Zone, Commissioning, Alarms, Links, Log, and Admin. The "Zone" tab is currently selected.

On the left side, there is a tree view showing the system structure:

- Swegon Tomelilla
 - Z0 WISE conference room
 - Zonspjäll kontorsplan
 - Room 1 Free
 - Room 2 Sphere/Extri
 - Room 3 Colibri
 - Room 4 School WISE (selected)
 - RC M
 - RC S 1
 - Room 5 Parasol
 - DC 2 M
 - DC 3 S
 - Z1 Office ground floor
 - Z2 Office 1'st floor
 - Z3 Conference 1'st floor

The main control area shows a schematic diagram of the HVAC system for "Room 4 School WISE". It features two fan coils: a red one labeled "S" with a 35% valve position and a yellow one labeled "M" with a 43% valve position. A temperature sensor shows 19.2°C. A person icon indicates occupancy. A thermostat icon shows three temperature setpoints: 24.0°C (blue), 21.4°C (red), and 20.0°C (green). A CO2 sensor icon shows 841ppm and 27% CAC. A valve icon at the bottom shows 0%.

Below the schematic, a text box states: "Extract unit is supplied with DETECT SME".

The "Status" section shows "Application state: Normal".

At the bottom, the "Node name" dropdown menu is set to "Room 4 School WISE".

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1. General

Super WISE has a built-in web server that enables you to monitor, enter and change the settings on the various controllers in the WISE system. Access to this server requires a web browser with support for SUN Java and that J2SE 5.0 Runtime Environment (or a later version) is installed in the computer you will be using. You can download the most recent version of the SUN Java software from www.java.com.

2. Connections

The computer and Super WISE can be connected to one another in two different ways: by means of a crossover cable or with a network hub (HUB, switch or router).

The determining factor as to whether or not a network hub should be used could be the number units that are to be connected together, for instance. Two units can be connected together without any network hub.

One example of two units connected together is when a computer and Super WISE are connected together. Two or more units can be connected together with a network hub.

The Network connection socket of the Super WISE is located on the control unit in the Super WISE cubicle and is shown encircled in Figure 1.

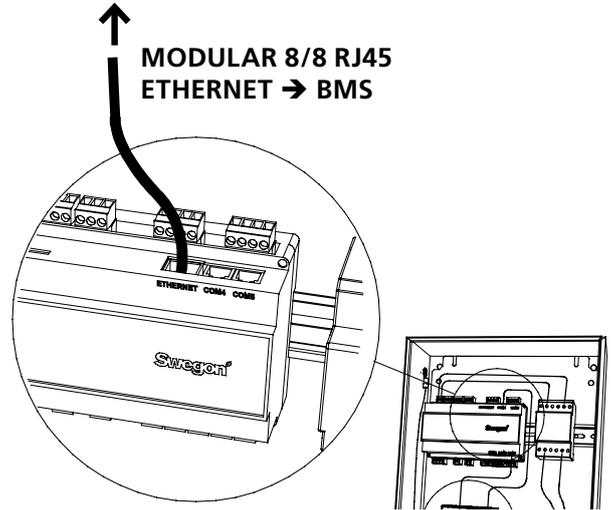


Figure 1. Ethernet connection, Super WISE .

2.1 Connection between two units

Connection of one or more Super WISE units to a computer is done with a crosslinked CAT5 cable with RJ45 plugs, see figure 2. Connecting through a network and hubs, switches or routers should be done with a straight CAT5 cable with RJ45 plugs, see figure 3. The cable should be of twisted-pair type, and can be shielded or unshielded.

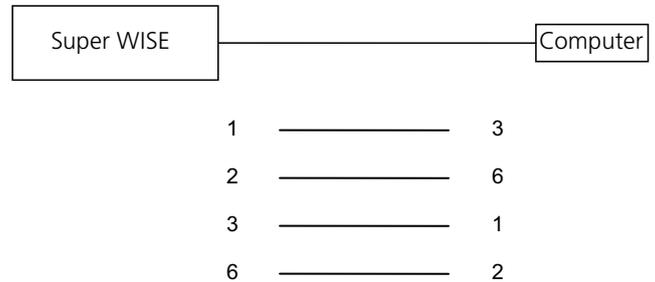


Figure 2. Connection between two units, crossover cable.

2.2 Connection between two or more units

A straight (not crosslinked) CAT5 cable with RJ45 plugs, see Figure 3, should be used for the connection between Super WISE and one GOLD air handling unit and computer/network. The cable should be of twisted-pair type, and can be shielded or unshielded.

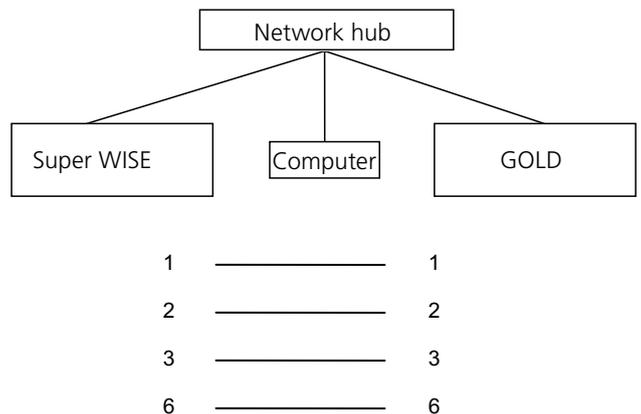
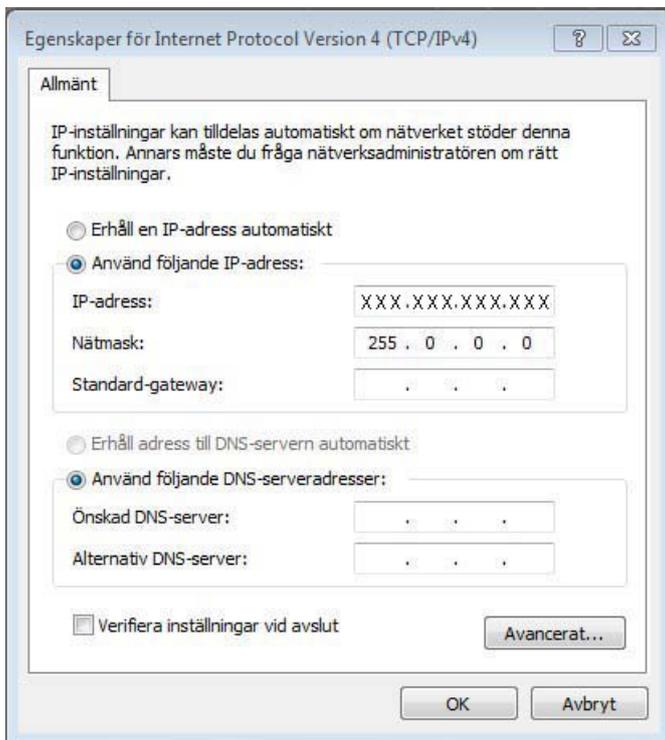


Figure 3. Connection between two or more units, network hub.

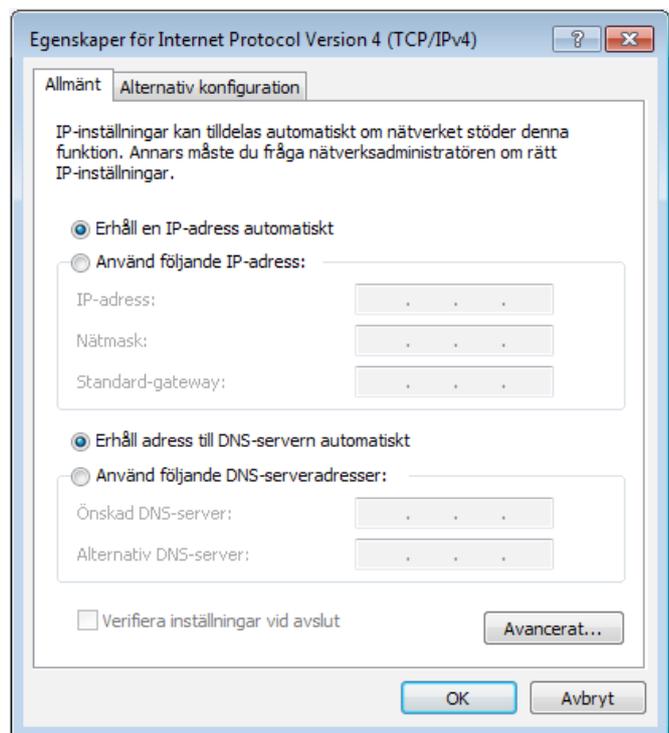
3. Settings in directly connected PC

Sun Java must be installed and activated. Activation is done differently depending on operating system and web browser. Contact the local IT-support for help. The computer must also be configured with appropriate netmask and IP number, see figure 4 for settings to Super WISE with default address.

If Super WISE has been installed on a network with DHCP-server the configuration is done in direct connected PC as shown in figure 5.



Figur 4. Settings in direct connected PC.



Figur 5. Settings in PC connected to network with DHCP-server.

3. Settings of the Super WISE

On delivery, the control unit has a static IP-address set to 10.200.1.2. To assign the control unit another static address, activate the DHCP, change the Subnet mask or do the following to change the Gateway:

Use the Golden Gate Config*) application which can be downloaded from www.swegon.com. Connect the Super WISE to the network. Start Golden Gate Config. Select Golden Gate Ethernet and press OK.

Golden Gate Config now searches through the network to find all the units that are supported by Golden Gate Config. Super WISE with IP. number 10.200.1.2 can be found on line two in the list in figure 7.

Double click on the row which is showing the Super WISE which should be configured, a new window will open where the configuration can be done.

*) NOTE: Golden Gate Config is only available in English.

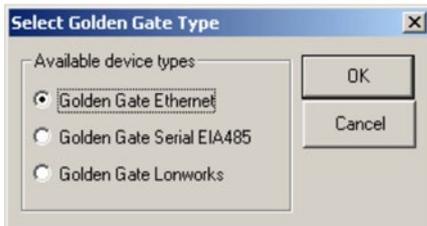


Figure 6. Selection in Golden Gate Config.

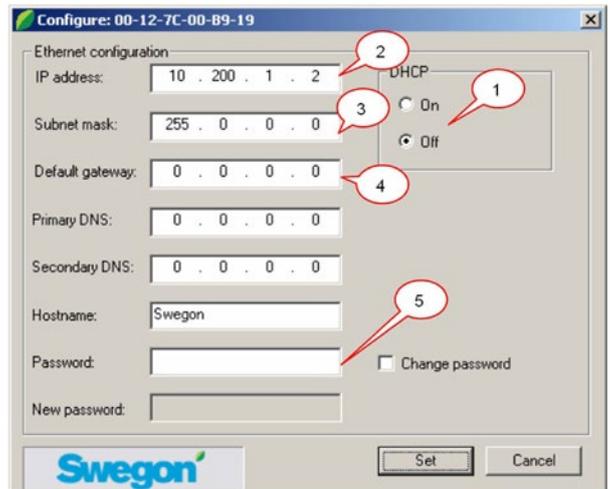


Figure 8.

1. If the DHCP is set to ON, the Super WISE automatically obtains an IP-address/subnet mask/Gateway and DNS from the network server. If the DHCP is set to OFF, the IP-address/subnet mask/Gateway and DNS must be set manually in the dialogue box.
2. IP address: Change or check the IP address here.
3. Subnet-mask: Change or check the subnet mask here. Keep in mind that you should select an IP-address and a subnet mask that are in agreement.
4. Default gateway: Change or check the Gateway here.
5. A password must be filled in before the changes will begin to apply. The standard password is **admin**. You can change the password by marking the Change password box with a cross and entering the new password on the New Password line.

Then press **Set**.

The Super WISE network configuration is now completed. To check that the changes have been implemented, carry out a new search by pressing **Scan**.

IP	SN	GW	DHCP	Version	Type	MAC
172.16.2.73	255.255.252.0	172.16.1.2	Off	0.33.0	SuperWISE	00-23-38-00-03-1F
10.200.1.2	255.255.255.0	0.0.0.0	Off	0.34.0	SuperWISE	00-12-7C-00-89-19
10.8.0.58	255.255.252.0	10.8.0.1	Off	4.00.0	GoldenGate	00-30-11-FB-00-AC
10.8.0.59	255.255.252.0	10.8.0.1	Off	4.00.0	GoldenGate	00-30-11-FB-00-83
172.16.1.165	255.255.252.0	172.16.1.2	On	1.10.1	Transparent Modbus	00-30-11-FB-0A-43
10.8.0.60	255.255.252.0	10.8.0.1	Off	4.00.0	GoldenGate	00-30-11-FB-00-73
10.8.0.61	255.255.252.0	10.8.0.1	Off	4.00.0	GoldenGate	00-30-11-FB-03-3E
10.8.0.54	255.255.252.0	10.8.0.1	Off	4.12.2	GoldenGate	00-30-11-FB-24-46
10.8.0.56	255.255.252.0	10.8.0.1	Off	4.11.3	GoldenGate	00-30-11-FB-1B-1F
10.8.0.55	255.255.252.0	10.8.0.1	Off	4.12.2	GoldenGate	00-30-11-FB-24-41
10.8.0.53	255.255.252.0	10.8.0.1	Off	4.11.3	GoldenGate	00-30-11-FB-1B-22
10.8.0.51	255.255.252.0	10.8.0.1	Off	4.00.0	GoldenGate	00-30-11-FB-00-11

Figure 7. Discovered units in the network.

3.1. Settings via Modbus RS-485

With modbus communication and connection on COM4, you can access all settings for external communication. See the sheet tab named "Local" in the Excel document "Super WISE Modbus list...", which is available on www.swegon.com.

Holding Registers. 16-bit integer value (R/W). (4x)						Local	
Modbus Adress	Name	MIN	MAX	Unit	DIV	FACT	Comment
65011	Ext485Protocol	0	1				Extern RS485-Protocol (0-MOD; 1-EXO)
65012	Ext485Baudrate	0	3				Extern RS485-Baudrate (0-4.8; 1-9.6; 2-19.2; 3-38.4 KBAud)
65013	Ext485Parity	0	2				Extern RS485-Parity (0-None; 1-Even; 2-Odd)
65014	Ext485StopBit	1	2				Extern RS485-StopBit's
65015	Ext485MOD_ID1	1	247				Extern RS485-MOD-Bus ID (EXO-Line ID-1)
65016	Ext485MOD_ID2	0	255				Extern RS485 EXO-Line ID-2
65017	TCP_MOD_ID	1	247				TCP MOD-ID
65031	GG Static IP	0	1				Golden Gate Static IP/DHCP (0: Static IP - 1: DHCP)
65032	GG_MAC_ADR_0	-32768	32767				Golden Gate MAC adresse 0
65033	GG_MAC_ADR_1	-32768	32767				Golden Gate MAC adresse 1
65034	GG_MAC_ADR_2	-32768	32767				Golden Gate MAC adresse 2
65035	GG_IP_Adr_0	0	255				Golden Gate IP adresse 0
65036	GG_IP_Adr_1	0	255				Golden Gate IP adresse 1
65037	GG_IP_Adr_2	0	255				Golden Gate IP adresse 2
65038	GG_IP_Adr_3	0	255				Golden Gate IP adresse 3
65039	GG_Netmask_0	0	255				Golden Gate Netmask 0
65040	GG_Netmask_1	0	255				Golden Gate Netmask 1
65041	GG_Netmask_2	0	255				Golden Gate Netmask 2
65042	GG_Netmask_3	0	255				Golden Gate Netmask 3
65043	GG_Gateway_0	0	255				Golden Gate Gateway 0
65044	GG_Gateway_1	0	255				Golden Gate Gateway 1
65045	GG_Gateway_2	0	255				Golden Gate Gateway 2
65046	GG_Gateway_3	0	255				Golden Gate Gateway 3
65047	GG_DNS1_0	0	255				Golden Gate Primary DNS 0
65048	GG_DNS1_1	0	255				Golden Gate Primary DNS 1
65049	GG_DNS1_2	0	255				Golden Gate Primary DNS 2
65050	GG_DNS1_3	0	255				Golden Gate Primary DNS 3
65051	GG_DNS2_0	0	255				Golden Gate Secondary DNS 0
65052	GG_DNS2_1	0	255				Golden Gate Secondary DNS 1
65053	GG_DNS2_2	0	255				Golden Gate Secondary DNS 2
65054	GG_DNS2_3	0	255				Golden Gate Secondary DNS 3

Figure 9 .Settings via Modbus RS-485.

4. To log on

Start your browser and enter the IP address for the Super WISE (default <http://10.200.1.2>). A login box will open, enter the username and password, see figure 9.

The appropriate authorization, reader, writer, service and admin status are allocated depending on your user name and password.

Enter the following the first time you log on:

User name = admin

Password = admin

Note! When you change the password, the new password must not consist of more than 15 characters. For security reasons, the password can not be reset without sending Super WISE for service. Keep the password in a safe place.

Then select the appropriate language to be used in the web interface. Press the button by the appropriate language to make your choice. See Figure 10.

NOTE! To avoid having to log in and select language every time you log on to a certain Super WISE, a favorite can be saved as a homepage in the browser.

A link to [#">http://10.200.1.2/start.html?lang=se #](http://10.200.1.2/start.html?lang=se) overview allows the user to come directly to the flow chart of the Super WISE 10.200.1.2 without logging in and selecting the language (assuming the user has done it before).



Figure 10. Logging on. From version 1.14 windows own logon function is used.



Figure 11. Choice of language.

5. User levels

The web page is divided into four authorization levels to prevent unauthorized persons from accessing and changing sensitive parameters.

At the "reader" level, all the tabs other than the admin tab are accessible. You can only view the readings; you CANNOT change them. You can reset any tripped alarms to zero.

At the next level, the "writer" level, you have the right to change setpoints. See feed-back control signals, change clock settings, etc.

At the "service" level, you are also given the right to change all the feed-back control parameters. The Admin tab is still inaccessible.

At the "admin" level, you have full rights to access and change settings. With this authorization it is possible to change the IP configuration, link tables, etc.

6. Tabs

The various tabs in the Super WISE web interface are described on the pages that follow. Note that any changes you make via the web interface will not be saved in the Super WISE memory but instead in each respective zone controller or room controller memory. This does NOT apply to changes that were entered under the Optimizer or Admin tabs. These changes are saved in the Super WISE. If you are logged on as someone other than the Administrator; the Admin tap will not be visible.

6.1 Overview

The overview image is shown as a starting page when you connect up to the Super WISE, provided that the administrator has not specified a different page. No settings can be made here.

The purpose of the flow chart is to provide a quick overview of the Super WISE and the controllers that are part of the system.

The overview page is divided into two parts, a right-hand and left-hand side. A tree structure describing the connected system is shown on the left-hand side. The various components in the tree structure can be selected by clicking on the components that are included. The selected component is highlighted as inverted text (dark

background and light text). The right-hand side shows what has been selected in the tree structure on the left-hand side.

The components included (see figure 9) on the left-hand side are as follows:

- Overview
- Zones
- Zone dampers/Routers
- Room
- Room controllers

Controllers (zone dampers, routers and room controllers) are indicated with a green square containing a damper for zone dampers and routers as well as a red square containing a thermometer for room controllers. Other units in the tree structure are shown with map icons. Alarms and warnings are also indicated in the tree structure. Alarms are shown by a red circle with a crossed out zone damper, router or room controller. Only these units can have an alarm. Zones and rooms containing controllers (zone damper, router or room controller) that have alarms, indicate this with a yellow triangle enclosing an exclamation mark.

By clicking on the air handling unit in the overview image, you are automatically linked to the GOLD-unit.

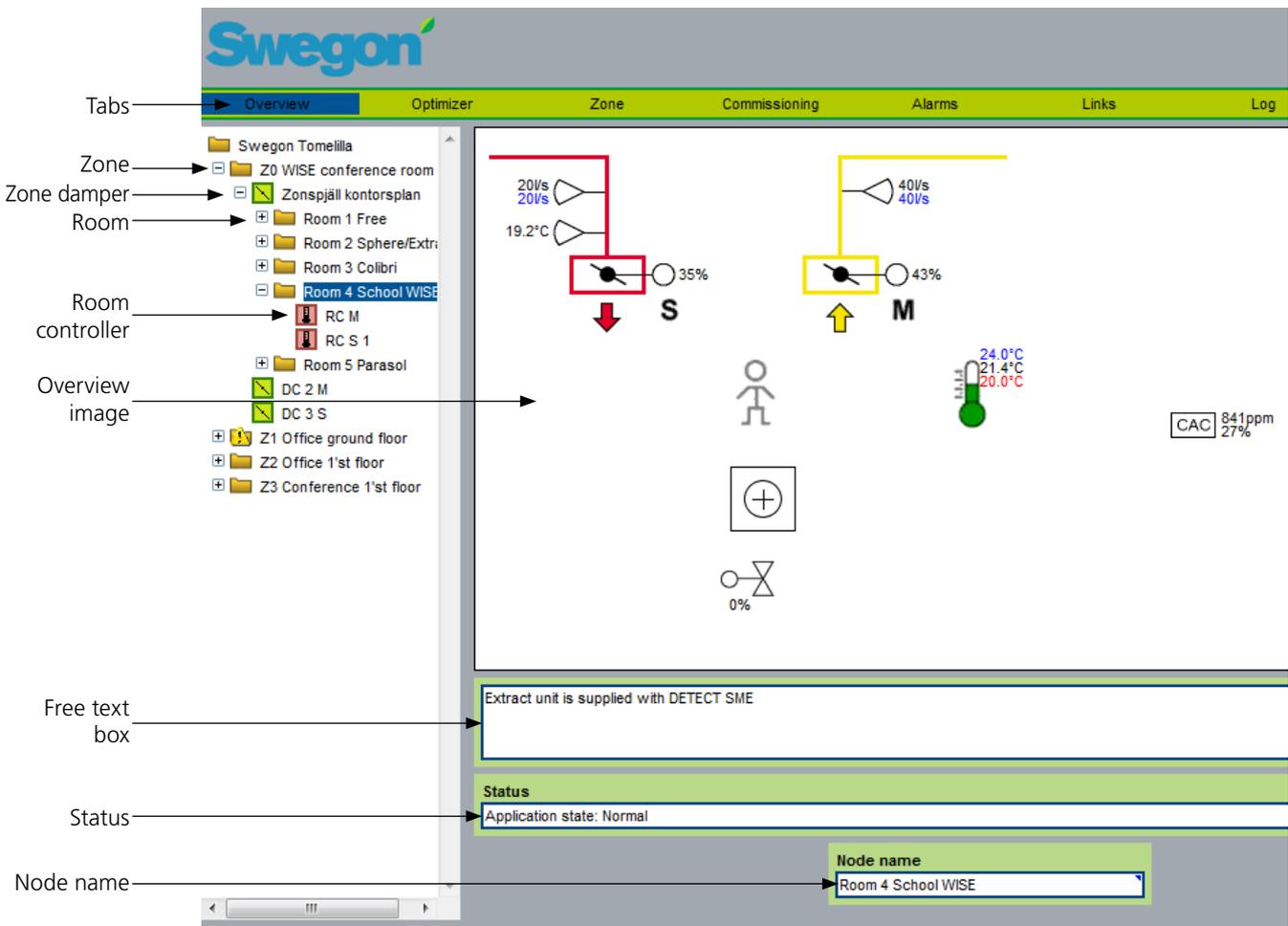


Figure 12. Tree structure and overview image.

6.1.1 Overview

If Overview is selected in the structure on the left-hand side, an overview image is shown on the right-hand side. See figure 13. The overview image shows the zones that have zone controllers or routers connected. The zone image shows a sum of the supply airflows and a sum of the extract airflows for each zone. The overview image contains a free text box where you can write a descriptive text for the system. Click on the box to make changes in the text. On the status line you can see whether the air handling unit has transmitted a signal to the Super WISE indicating that it is operational or not. This signal is a condition that must be satisfied before the Super WISE can start the Optimizer function.

The nod name is the name shown in the tree structure. By clicking on the text box, you can alter the text. When you have altered the name, this is also updated in the tree structure.

No settings can be entered on the overview page. The page looks the same for all user categories.

6.1.2 Zone

If one zone is selected in the structure on the left-hand side, the associated zone image is shown on the right-hand side. See figure 13. Max 8 zone dampers can be shown in the zone image. If the zone contains one or more routers, these are marked with a grey square. No values are shown for a router since it serves only as a communication link.

Supply air diffusers are shown in red and extract air registers are shown in yellow.

Pressure and flow sensors are shown depending on whether the zone damper is used for regulating the pressure or the flow. The setpoints are shown in blue text and the actual values are shown in black text. At every zone damper, its damper angle is also shown as a percentage.

Summation and slave control of certain zone dampers can occur within one zone. If a CONTROL Router, which has underlying products, is included in a zone it can not process any air flow from the underlying room products, the airflow summation will not be correct.

No values can be altered on the zone page.

The nod name is the name shown in the tree structure. By clicking on the text box, you can make changes in the text. When you have altered the name, this is also updated in the tree structure.

Figure explanation:

- Σ xxx l / s, the total flow for the zone supply- and extract air, if a zone damper PED is included its airflow is not included. A CONTROL Router can not show any airflow.
- Products named "Slave" are always controlled by the master product PSFE or MSFE.
- Products named "Group slave" are extract air dampers that gets its air from the sum of all supply air flow divided on the number of extract air slaves.

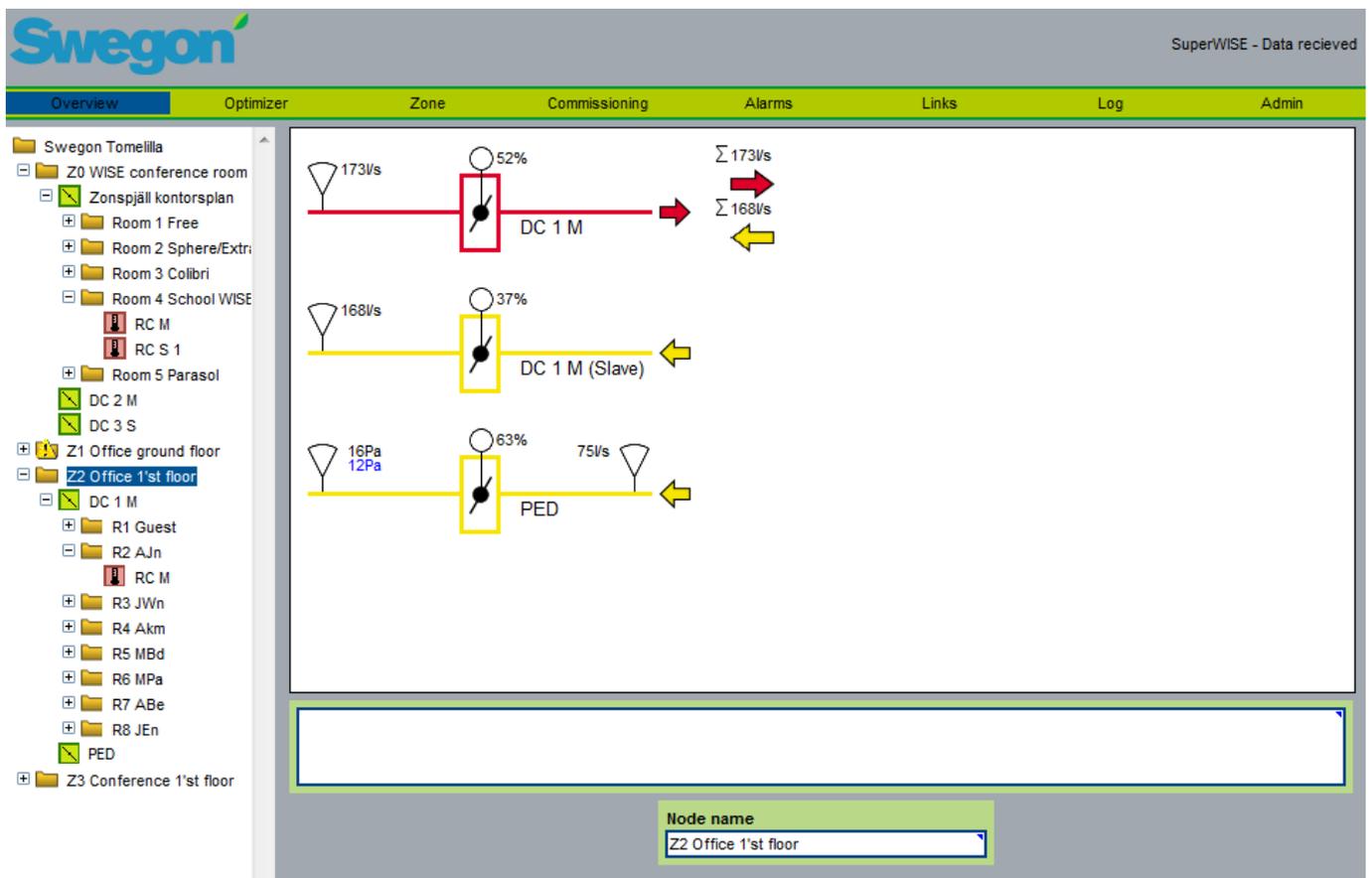


Figure 13. Zone.

6.1.3 Zone dampers/Routers

The parameters of the controller and its Modbus ID are both specified on the zone page. Which parameters are to be shown or can be altered is conditional on the type of user that has logged on. A Reader can only read values, whereas a Writer can also alter certain values. The service user can alter all the parameters

Parameters that can be altered are marked with a small blue triangle up in the right-hand corner in the box where the parameter is situated.

In groups with summary and breakdown on different group slaves an offset can be specified for each slave, this offset is not shown in the set point, it is only visible on the regulated airflow.

From version 1.16 of the Super WISE, it is possible to restart the regulator, use this function if the response from the regulator is in questionable.

Information indicating whether the zone damper is a master or a slave can be found in the heading of the page (i.e. slave-controlled based on the sum of the airflows in one zone). The parameters look alike for both the master and slave controllers.

A free text box for the controller is provided below the parameters, where a description can be written.

Alarms for the controller are shown below the free text box.

The nod name is the name shown in the tree structure. By clicking on the text box, you can make changes in the text. When the name is changed the change is also updated in the tree structure. In figure 11, the node name can be found by using the vertical scroll list to come further down the page.

For a CONTROL router there are no parameters to show or alter. Therefore only the free text box, alarm field and the node name are shown for a router.

The screenshot shows the Swegon SuperWISE web interface. The top navigation bar includes 'Overview', 'Optimizer', 'Zone', 'Commissioning', 'Alarms', 'Links', 'Log', and 'Admin'. The main content area is titled 'Zone damper parameters (master)' and displays data received from regulator Id:2. The parameters are organized into several sections:

- Extract air:**

Pressure reading	14Pa
Pressure setpoint	15Pa
Extract actual airflow	73l/s
Extract damper position	39%
- Emergency:**

Emergency control read	Normal
Extract action at emergency	Open
- Misc. parameters:**

Software	1.12
RFID	203
Control function	PE or FE
Control type	Pressure
Run time (Years)	0Y
Run time (Hours)	1021h
Run time (Minutes)	14min
Extract air P-term	25
Extract air I-term	22
- Manual operation:**

Reboot of controller	No action
Manual setting of state	Auto

Below the parameters is a large text input box. At the bottom, there is an 'ALARMS' section showing 'No active alarms' and a 'Node name' dropdown menu.

Figure 14. Zone damper/router.

6.1.4 Room

If one room is selected in the structure on the left-hand side, the associated room image is shown on the right-hand side. See Figure 15.

The room image looks different depending on which application is operating in the room.

The following applications are available:

Application	Number of controllers/room	Number of dampers
ADAPT Airborne products	Max 1 master and 3 slaves in each room	Max 1 + 3
CONTROL Ra FSFE	Only 1 per room	2
Conductor W4	1	3
Conductor W3	1	2
Conductor W1	1	0
ADAPT Parasol	1 SA + 3EA	4

Max 4 dampers can be shown in the room image. Supply air diffusers are shown in red and extract air registers are shown in yellow.

The following is shown in the room image:

- How many dampers are in the room (Supply air = red, Extract air = yellow).
- Flow and temperature sensors

(shown on supply air/extract air ducts)

- Damper openings
 - Presence detector connected if man symbol is shown.
 - Black and white man = Absence.
 - Green man = Presence.
 - Air Quality Sensors
 - CO2 sensor or
 - CAC sensor with correlated CO2 level or
 - Relative humidity, only applies ADAPT products.
 - The window sensor is connected if a window is shown.
 - Black and white window = Closed.
 - Green window = Open.
 - The condensation sensor is connected if drops of water are shown.
 - Black and white drops = No condensation
 - Green drops = Condensation
 - Actual value/setpoint in the room. Shown by the thermometer. Actual values in black text. Setpoints in blue text.
 - Connected Heaters/Coolers are shown if they are connected. The opening of the valve is also shown in %.
 - Red indicates an open heating valve.
 - Blue indicates an open cooling valve.
 - Relays are shown as a lamp symbol if selected.
 - Black and white if not active.
 - Green if activated.
- (The symbol is always shown for ADAPT regulators)

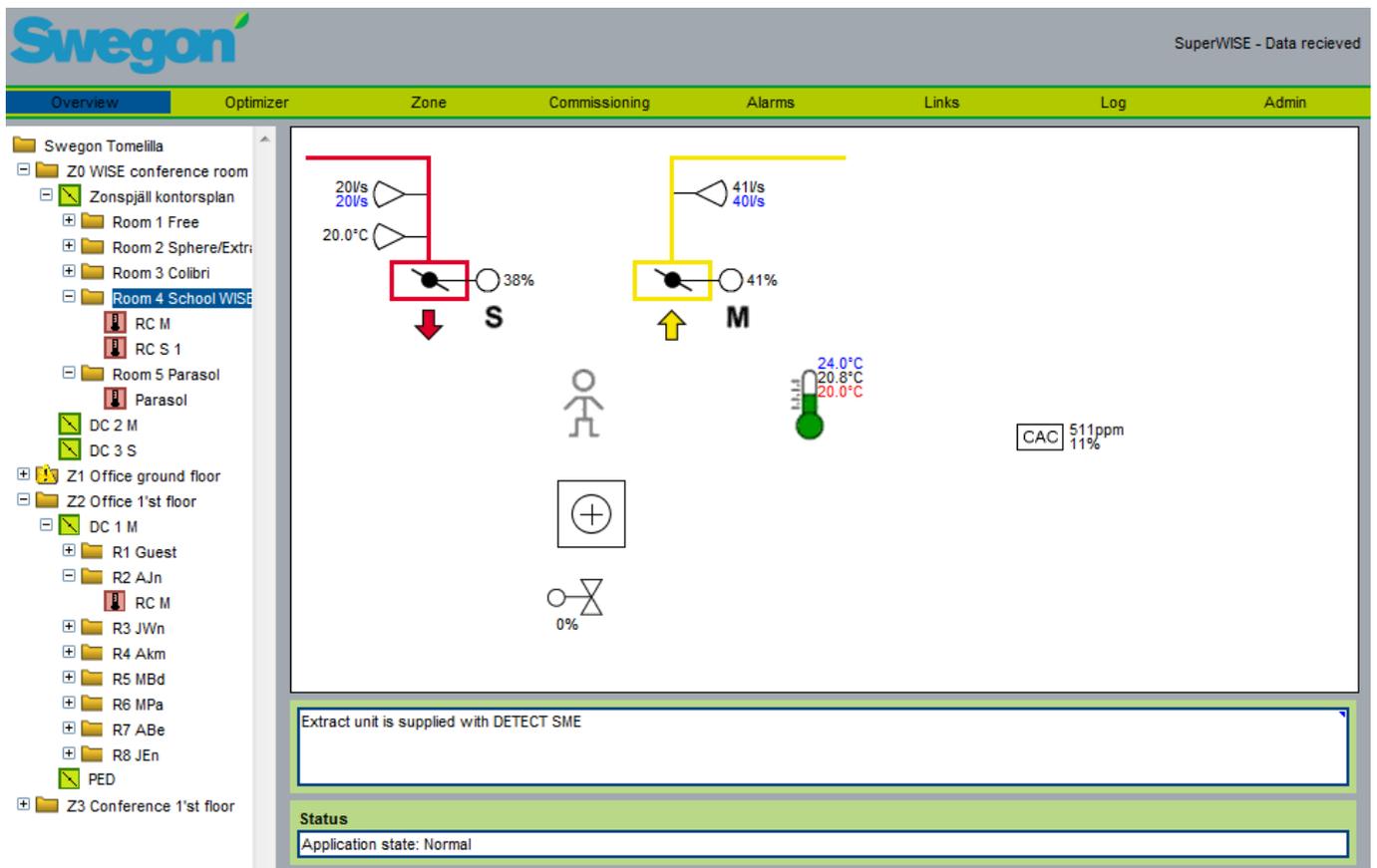


Figure 15. Room.

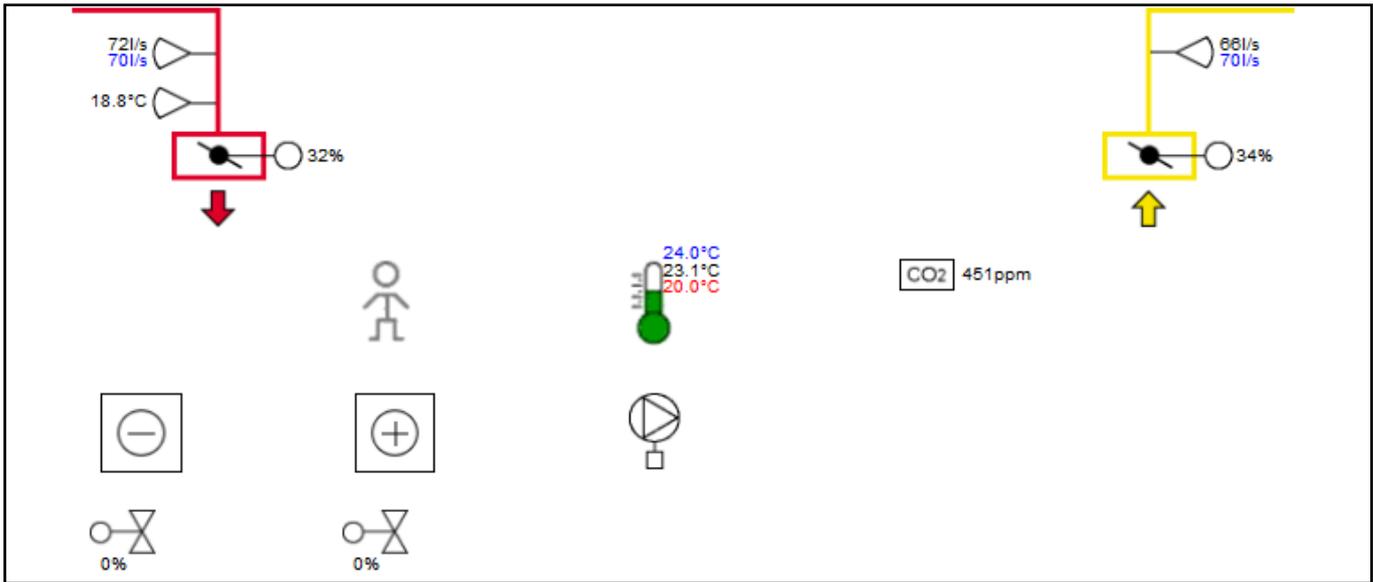


Figure 16. Room image, example 2, A3.

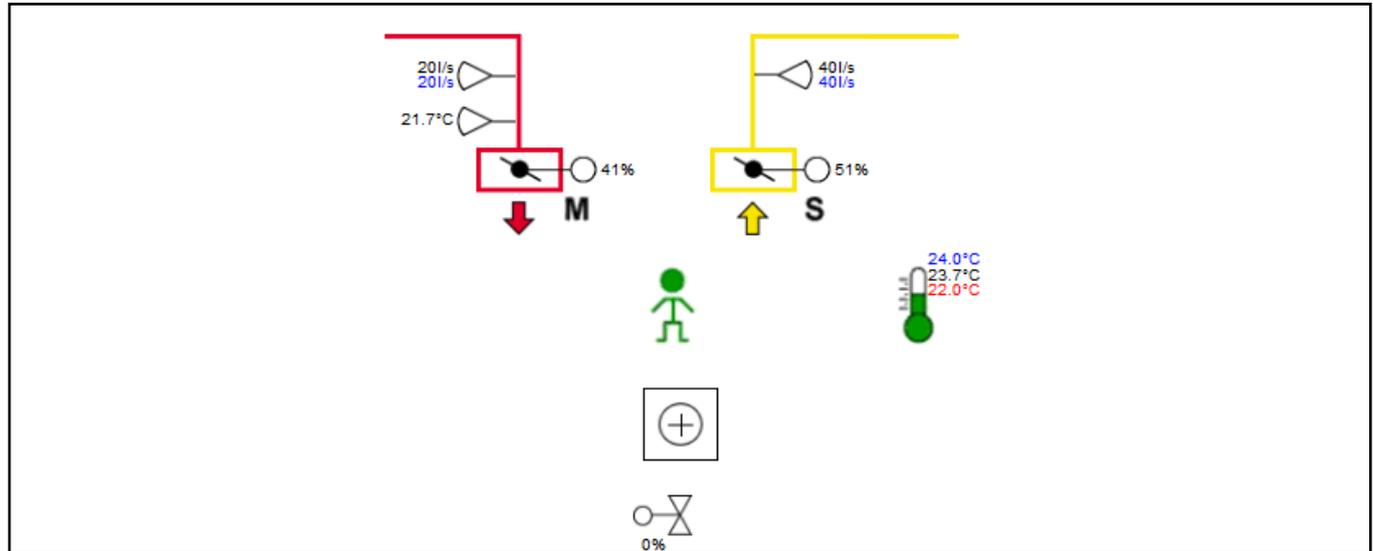


Figure 17. Room image, example 3, ADAPT.

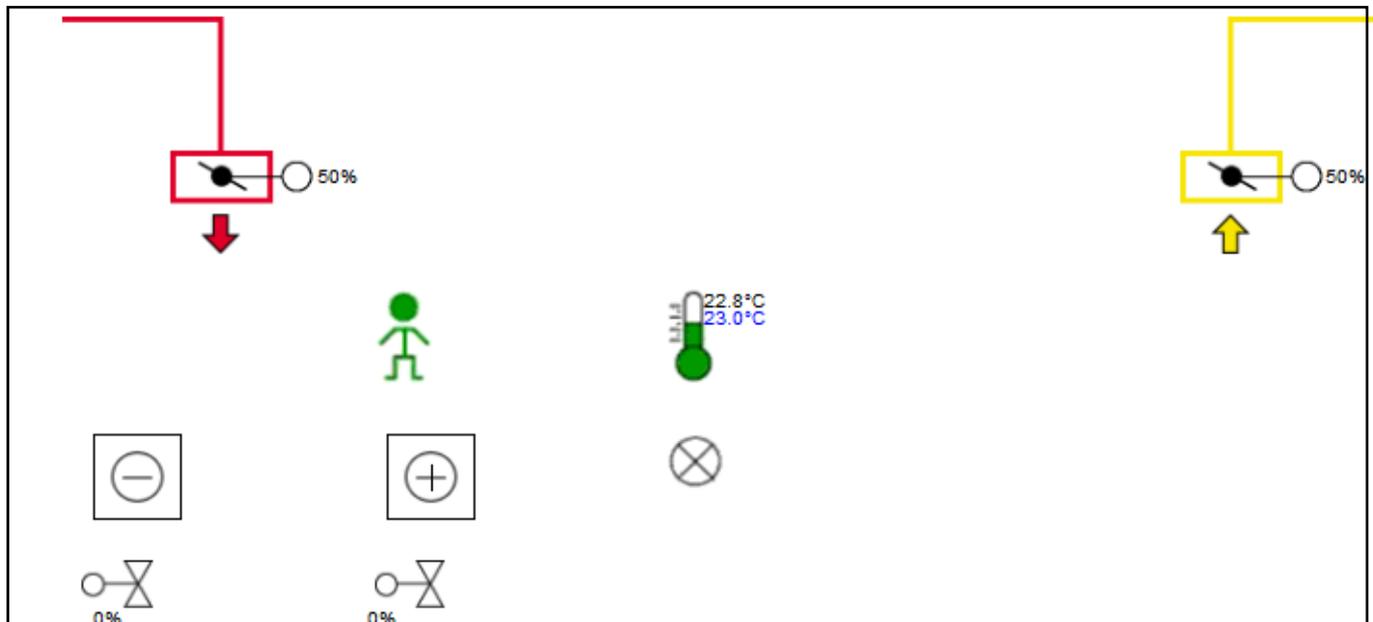


Figure 18. Room image, example 4, W4.

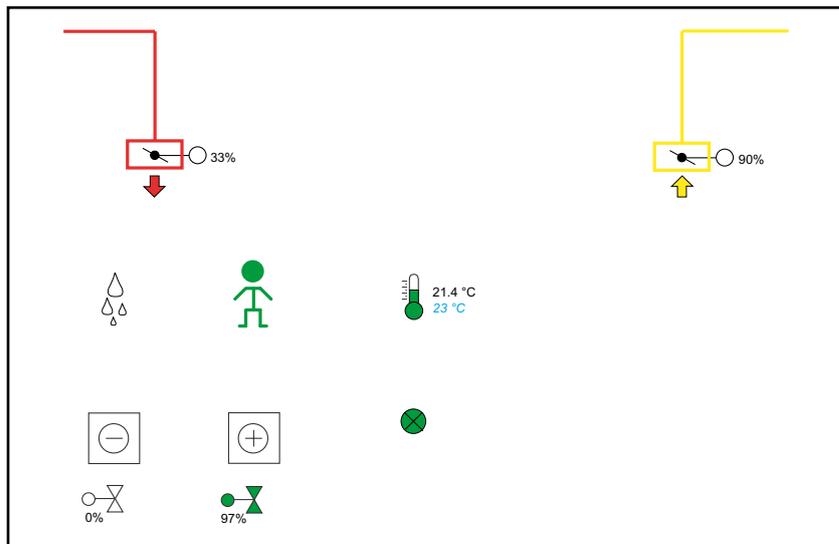


Figure 19. Room image, example 5, W3.

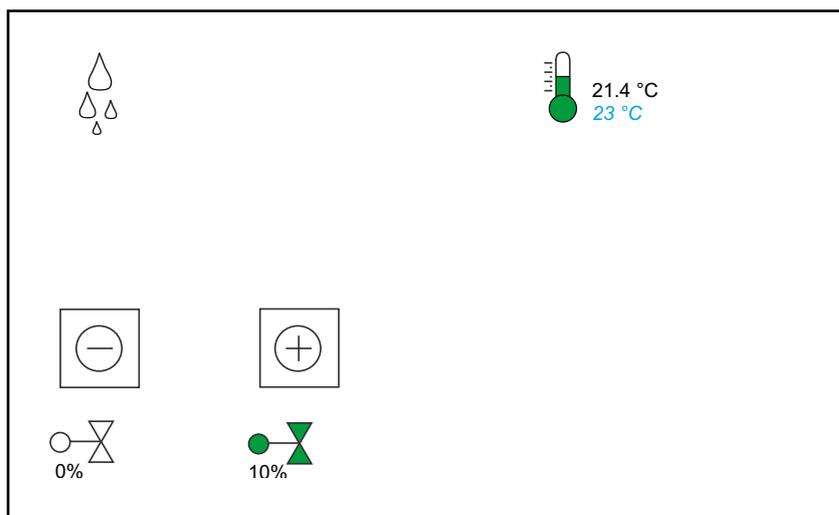


Figure 20. Room image, example 6, CONDUCTOR W1.

6.1.5 Room controller

The parameters of the controller and its Modbus ID are specified on the room controller page. The parameters which are shown or can be altered depend on the type of user that has logged on and the application that the controller is running. A Reader can only read values, whereas a Writer can also alter certain values. The service user can alter all the parameters

Parameters that can be altered are marked with a small blue triangle up in the right-hand corner in the box where the parameter is situated.

The name of the application appears in the page heading. Different applications have different sets of parameters,

A free text box for the controller is provided below the parameters, where a description can be written.

Alarms for the controller are shown below the free text box.

The nod name is the name shown in the tree structure. By clicking on the text box, you can make changes in the text. When the name is changed the change is also updated in the tree structure. The figure below shows how the page looks as a whole. There is not enough space on the screen to show the entire page. Therefore the scroll bar has to be used.

Further details of the parameters and their function are available in separate products manuals.

Starting from version 1.23, the parameters on the product pages are dynamic. The parameters are only displayed if enabled or relevant to the case.

The screenshot shows the 'ADAPT Master Parameters' page for a room controller. The interface includes a navigation menu on the left, a top menu bar, and a main content area with various parameter tables.

Temperature settings, Occupied		Occupancy functions	
Cool setpoint Occupancy	23°C	Occupancy	0
Heat setpoint Occupancy	21°C	Occupancy delay on	0s
Temperature settings, Unoccupied		Occupancy delay off	20min
Cool setpoint economy	24°C	Controller mode	1
Heat setpoint economy	20°C	Occupancy time count	2306h
Temperature readings		Total time count	3168h
Room temperature	20.9°C	Venting boost set	On
Calc room temp setpoint	22.0°C	Time count for vent boost	72h
Room temp deviation	-1.1°C	Vent boost time	5min
Calc Cooling value	0%	Misc. parameters	
Calc Heating value	0%	Software	6.06
Airflow settings		Application type (0-9)	0=Internal controller
Airflow min occupied	40Vs	Operating mode	Normal air cool
Airflow max occupied	50Vs	Emergency function	Damper closes
Airflow unoccupied	40Vs	Temp sensor use (0-4)	4 (Sens 1= Room, Sens 2= no value)
Airflow readings		Heat active	Heating/Water, Cooling/Air
Airflow actual	39Vs	Valve exercise interval	5day
Airflow calc setpoint	40Vs	Cold draught protection level	0%
Airflow pressure	165dPa	Cold draught off level	50%
Damper position	42%	LED function	Function
Damper stroke	95mm	Night cool temp setting	18°C
Offset for 0-calibration	3dPa	Air quality control	
Air quality control		CAC use	Present

Figure 21. Room controller.

6.1.5 ADAPT Room controller from version 1536

On newer controllers there are several new features therefore these have a different layout with new parameters, the version number can be found under the table "Misc. Parameters".

The screenshot shows the Swegon SuperWISE web interface. The top navigation bar includes: Overview, Optimizer, Zone, Commissioning, Alarms, Links, Log, and Admin. The main content area is titled "ADAPT Master Parameters" and displays data received from regulator Id:16. The parameters are organized into several sections:

- Temperature settings, Occupied:** Cool setpoint Occupancy (23°C), Heat setpoint Occupancy (21°C)
- Temperature settings, Unoccupied:** Cool setpoint economy (24°C), Heat setpoint economy (20°C)
- Temperature readings:** Room temperature (20.9°C), Calc room temp setpoint (22.0°C), Room temp deviation (-1.1°C), Calc Cooling value (0%), Calc Heating value (0%)
- Airflow settings:** Airflow min occupied (40/s), Airflow max occupied (50/s), Airflow unoccupied (40/s)
- Airflow readings:** Airflow actual (39/s), Airflow calc setpoint (40/s), Airflow pressure (165dPa), Damper position (42%), Damper stroke (95mm), Offset for 0-calibration (3dPa)
- Air quality control:** CAC.use (Present)
- Occupancy functions:** Occupancy (0), Occupancy delay on (0s), Occupancy delay off (20min), Controller mode (1), Occupancy time count (2306h), Total time count (3168h), Venting boost set (On), Time count for vent boost (72h), Vent boost time (5min)
- Misc. parameters:** Software (6.06), Application type (0-9) (0=Internal controller), Operating mode (Normal air cool), Emergency function (Damper closes), Temp sensor use (0-4) (4 (Sens 1= Room, Sens 2= no value)), Heat active (Heating/Water, Cooling/Air), Valve exercise interval (5day), Cold draught protection level (0%), Cold draught off level (50%), LED function (Function), Night cool temp setting (18°C)

Figure 22. Room controller.

6.2 Optimizer

On the optimizer page, you can see the values concerning the pressure optimizing function in the air handling unit. The pressure optimizing function is separate for supply air and extract air, but certain settings are common.

In the left-hand column there are status fields where the actual and the setpoint values are shown together with a note about how much time remains before the optimizing function will start. The largest damper angles for supply air and extract air respectively are also shown here. The object of optimizing is to adjust the pressure setpoints for the supply and extract air fans, so that the damper angles that are the most open come within the range preset in the Settings column to the right on the page (Upper damper limit and Lower damper limit). See Figure 23.

In the left-hand column there is also a Mode and an Alarm field respectively. The operation mode of the unit is shown in the Mode field, i.e. if it is running or not. Emergency and Summer night cooling status is also shown. These variables come from the GOLD or from the BMS system depending on which is connected. If the GOLD is connected, it is the master and writes over possible changes entered on the page. If the GOLD is not connected but the BMS system handles the communication with other air handling units, the BMS also writes over the selections made on the page, depending on how the BMS system implements this function.

The alarm field shows the alarm status for Super WISE internal alarm status. There are alarms for deviation between actual and setpoint pressure values from the unit as well as alarms if any damper has been 100% open for a longer period than the alarm delay period set in the right-hand column

Farthest down in the left-hand column is a button for resetting alarms.

There are settings in the right-hand column, i.e. all the configuration values for pressure optimizing.

Start-up delay denotes the time from when the air handling unit has signalled that it is in operation until its optimizing begins.

The purpose of this period is to give the system a chance to become stabilized.

There are several pressure configuring values for supply air and extract air respectively. Min/Setp/Max.

- **Min.** The pressure setpoint that the Super WISE must not require to be lower than that from the air handling unit during the optimizing procedure.
- **Setp.** The pressure set point used by the Super WISE is transmitted to the air handling unit before the optimizing begins.
- **Max.** The pressure set point that the Super WISE must not require to be higher than that from the air handling unit during optimizing.

Limit values for the upper and lower damper levels respectively denote the area in which Super WISE tries to optimize the dampers that are open the most in the supply air and extract air respectively. If the most open damper is more open than the upper damper limit, the air handling unit increases the pressure. When the air handling unit increases the pressure, the damper will slightly close.

If the most open damper is less open than the lower damper limit, the air handling unit decreases the pressure. When the air handling unit decreases the pressure, the damper will slightly open.

The alarm delay indicates how long time a fault must exist before the Super WISE initiates the alarm for it.

The size of the step indicates how many Pascal the pressure setpoints from the Super WISE shall be allowed to change between two updates.

Interval indicates how often the Super WISE is allowed to update its setpoints.

Permissible deviation indicates how much deviation is permissible between actual and setpoint values for pressure. Super WISE does not update the pressure setpoints until the actual values are within those that deviate.

Status	
SA pressure	0Pa
EA pressure	0Pa
SA requested pressure	50Pa
EA requested pressure	50Pa
Time to optimization start	900s
SA max. damper	77%
EA max. damper	65%
Mode	
AHU running	Off
Fire alarm	Inactive
Summernight cooling	Inactive
Alarms	
SA pressure setpoint not reached	0
EA pressure setpoint not reached	0
Damper 100% open alarm	0
Connection to GOLD lost	1
Reset all alarms	<input type="button" value="Reset"/>

Settings	
Startup delay	15min
SA min. pressure	50Pa
SA pressure setvalue	0Pa
SA max. pressure	100Pa
EA min. pressure	50Pa
EA pressure setvalue	0Pa
EA max. pressure	100Pa
Upper damper limit	95%
Lower damper limit	70%
Alarm delay	15min
Pressure step size	5Pa
Interval	2min
Allowed deviation	5Pa
GOLD communication settings	
GOLD version	GOLD ver. E
GOLD external IP address	172.16.50.206
GOLD external port number	502

Figure 23. Optimizer.

6.3 Zone

Summation flows for supply air and extract air respectively are specified on the zone page.

Within a zone there could be summation and slave control of some zone dampers. The slave flow that shall be divided to the slave dampers (one to three) also appears for each zone. See Figure 24 below. Offset flow for a summation zone should be entered into each extract air sum damper in the summation group. The offset set in the extract air product is applicable only to that specific product. The offset value is entered in the offset parameter in the parameter page for the products.

On the zone page there is also information and settings for position optimisation of zone dampers with respect to the room dampers' position. When a zone damper or a router is used to optimise the damper position on underlying room damper these values are automatically displayed.

- "Low limit damper position" sets the minimum damper position the most open room damper should have.
- "High limit damper position" sets the maximum throttle position the most open room damper should have.
- "Step size optimization %" sets how many percent the the zone damper shall increase / decrease at each optimisation cycle.
- "Interval time update damper pos%" sets how often the zone damper shall load the room dampers' damper position for optimisation.

The screenshot shows the 'Zone' configuration page in the Swegon SuperWISE web interface. The page is divided into sections for each zone (0-9) and their respective controllers. Each zone section contains a table with the following data:

Zone	Sumflow for supply zone	Sumflow for exhaust zone
Zone 0	54Vs	89Vs
Zone 1	328Vs	322Vs
Zone 2	160Vs	167Vs
Zone 3	0Vs	0Vs
Zone 5	0Vs	0Vs
Zone 6	0Vs	0Vs
Zone 7	0Vs	0Vs
Zone 8	0Vs	0Vs
Zone 9	0Vs	0Vs

Each controller section (e.g., Zone 0 Controller 1, Zone 2 Controller 1) contains the following parameters:

Parameter	Value
Low limit damper position	65%
High limit damper position	85%
Step size for optimize %	2%
Interval time update damper pos %	1min
Flowset for exhaust slave DC zone	100%

Figure 24. Zone.

6.3.1 Commissioning

On this page it is possible to change setpoints for all room products within a zone or all zones. Be careful not to change the air flow unless you are not sure that all should have the exact same airflow. Set the values to be changed, select zone or all zones and press the set and the Super WISE will updates the values. You can only change one set point at a time.

Figure 25. Commissioning.

6.4 Alarms

The alarms that exist as well as those that have occurred in the system are shown on the alarm page. The 100 most recent alarms are shown.

It is important that the Super WISE clock is correctly set in order to achieve accurate handling of alarms, see section 6.7.5. The alarms that are active just now are shown in red text. Alarms that have previously been active, but are not active any more are shown in black text with the appendix "Reset".

From version 1.14, all alarms are ignored while the air handling unit is turned off, see figure 19.

Each alarm contains the following information:

- Alarm number
- Date and time when it became active
- Information about the controller in which that the alarm is active, by a reference to zone/zone controller/room/room controller.
- Alarm text

Alarm ID	Date and Time	Alarm Text
A00	07 17/6 2014 15:49	"Z2 Office 1'st floor->DC 1 M->R4 Akm->RC M" VOC sensor fault (Reset)
A01	07 17/6 2014 15:44	"Z2 Office 1'st floor->DC 1 M->R4 Akm->RC M" VOC sensor fault
A02	06 17/6 2014 13:44	"Z0 WISE conference room->Zonspjäll kontorsplan->Room 1 Free->RC MMM" Setpoint for heating and cooling are overlapping
A03	02 4/6 2014 10:35	"Z0 WISE conference room->Zonspjäll kontorsplan->Room 1 Free->RC MMM" Actuator fault
A04	11 4/6 2014 03:41	"Z2 Office 1'st floor->PED" PI-controller overload
A05	11 3/6 2014 18:38	"Z2 Office 1'st floor->PED" PI-controller overload

Figure 24. Alarm.

Under the tab "Alarm settings" all settings for alarms are available. All alarms in Super Wise is divided into A and B alarms. By default, A-alarms are function alarms and B alarms are comfort alarms. It is possible to change the priority of an alarm, highlight the alarm in either list and move it to the other list by arrows between the lists. Under "Show A/B- alarm" you select how the alarm should be handled.

- "Show A-and B-alarms" means that all alarms are always displayed.
- "Hide B alarms in history" means all B-alarms are hidden in history and not sent out via email.
- "Hide B alarms on room pages and history" means B-alarms never appears in Super WISE.
- "Block alarms" blocks alarms which occurs because the AHU is turned off, these alarms are not shown in Super WISE. This function requires that the AHU or BMS/PLC writes the AHU's status to Super WISE.
- "Clear reseted alarms" will clear all alarms in the history that has been previously restored and are not active.
- "Clear all alarms" will clear all alarms in the history then re-read all active alarms again.

Figure 27. Alarm settings.

6.5 Links

Relevant links, such as the air handling unit's web page or BMS, if such exist, are shown on the link page. The links are created in the admin/link page. Links can only be created by users with administrator rights.

Figure 28. Links.

6.6 Log

The log flap consists principally of three parts, a parameter window, a diagram window and a memory selector. The parameter window consists of five columns, parameter name, parameter number, min. and max. for the parameter as well as its value in the item at which the cursor is pointing. The parameter window can contain a maximum of ten parameters at one time. The parameter number is the parameter's internal ID, which can be used to ensure which parameter is concerned, when you speak with a support technician, for instance. Min and Max are min. and max. signal values. These values can be changed by the user in order to obtain a different resolution in the diagram window. The value of the parameter at the point where the marker is situated in the diagram window is shown in the cursor column. A box, coloured the same as the parameter curve in the diagram window, is shown to the right of the parameter window.

The curves of the parameters that have been selected in the parameter window are shown in the diagram window.

The Y axis is graded from 0 – 100 % where 0 % corresponds to a parameter's min. value and 100% corresponds to the parameter's max. value.

Click with the mouse on the relevant point in the diagram to study a parameter's value at a given point. The cursor will then jump to the place where the user clicks. The value at the point where the cursor rests is displayed in the Cursor column in the Parameter window.

The zoom control enables the user to zoom in (move the control to the left) and zoom out (move the control the right). If the control is moved as far to the right as possible, all items in the current memory are shown. If the zoom control is not completely zoomed out, it is possible to move the diagram to the side using the horizontal scrollbar. Two time indications are shown at the lower left and lower right edge of the diagram window. They show the time at the data points that are at the beginning and end of the diagram. In the Memory selection box, the user can select the memory from which data will be studied.

MMC external; can be used if the user has inserted an SD card (min. 2 Gb) in the card holder on the Super WISE. The log file on a card is restricted to 999 days of logging. When data has been logged for 999 days, the Super WISE begins to write over the first day. All the data from the most recent 999 days are always accessible. The time-to-reply for changes in the display is long.

Real time: downloads data in real time and displays the data in the diagram window. The period between two data points can be selected in the time sample box. The shortest time is one second. Note that it takes a while before a time will be displayed to the left below the diagram window since it takes a while for the first saved point to appear at the extreme left.

N.B.! Log data from earlier versions can not be read after updating to version 1.14.

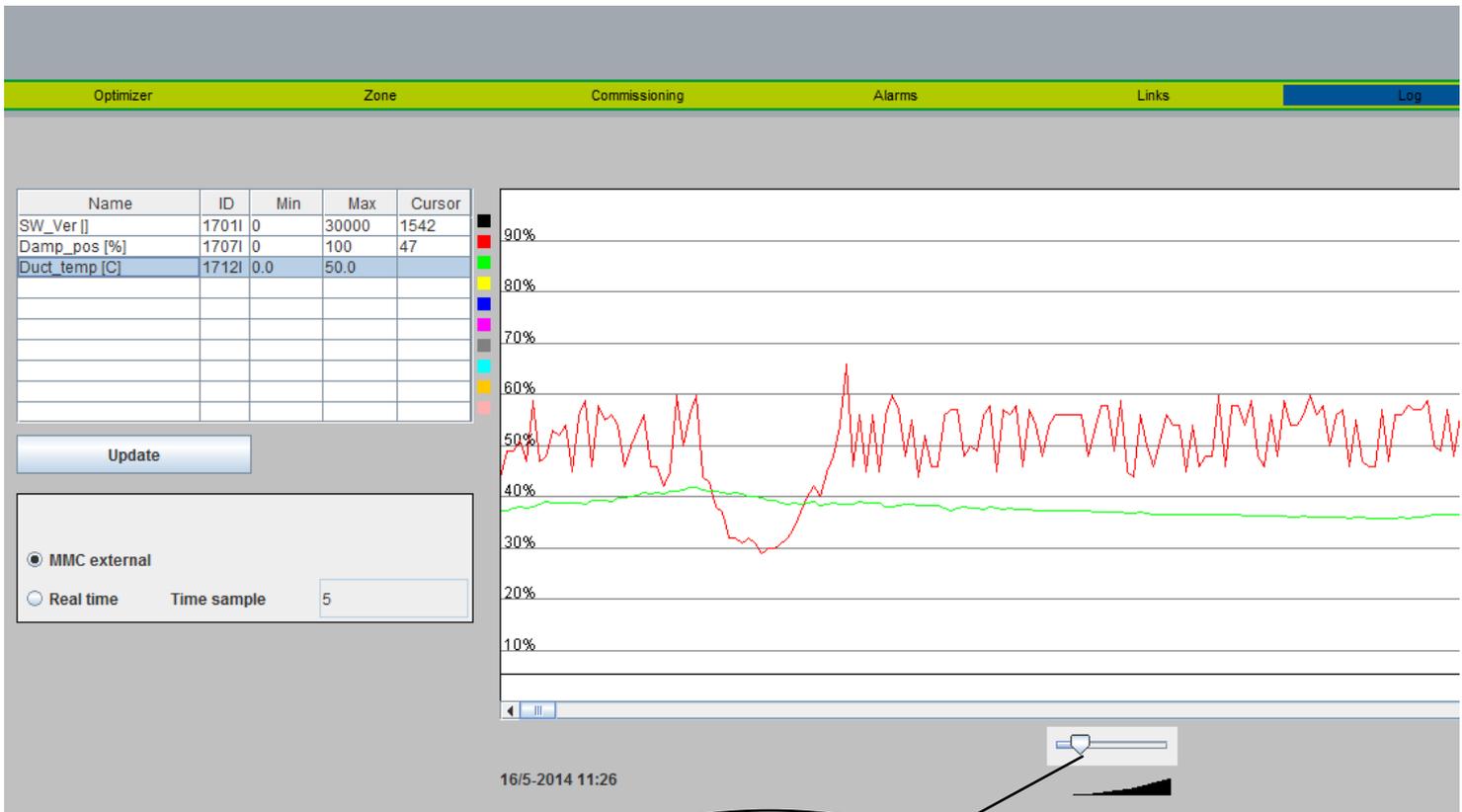


Figure 29. Log page.

Choose parameters

The number of parameters selected in the parameter window do not make any difference in the number of data points that can be saved, since all the available parameters are always saved. However only the changes are saved. In order to study a parameter, the user should click on an empty line in the parameter window in order to add a new parameter, or click on an already existing parameter for the purpose of exchanging it. A new window will then pop up where you can select a parameter. See figure 30. If the user clicked on an existing parameter, it is also possible to delete it by pressing "Remove". If the user uses the MMC and some time has elapsed, the user can press the Update button to make sure that the last data point will also appear in the diagram window. If the user uses the MMC memory, he or she can update the display by clicking on MMC one more time.

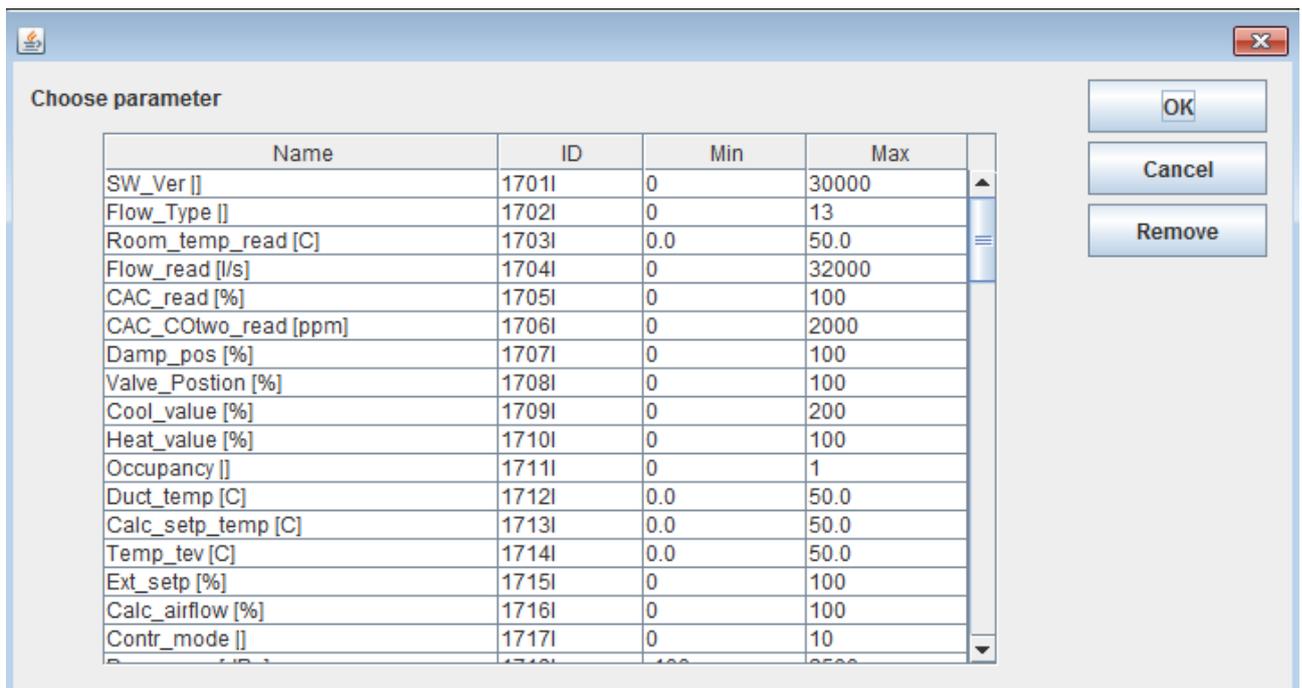


Figure 30. Parameter selection.

6.7 Admin

6.7.1 Admin – Users

Users can be managed under this tab. Here, you can specify who has access to web pages as well as how and who you should inform in the event of possible alarms. You can also enter a password for each user here. Maximum 10 users are allowed.



Figure 31. Users.

NOTE! The passwords and user names must not contain characters with accents of any kind used for indicating the quality of a vowel, for instance.

The initial setting for the various user passwords are as follows:

User	Password
reader	reader
writer	writer
service	service
admin	admin

Alarms can be sent via e-mail if the Super WISE is connected to the network/Internet via a local network. The settings can be changed for a user by pressing on Edit.

NOTE! A lost password can not be reset. If this happens, the device must be sent to the Swegon factory for reprogramming.

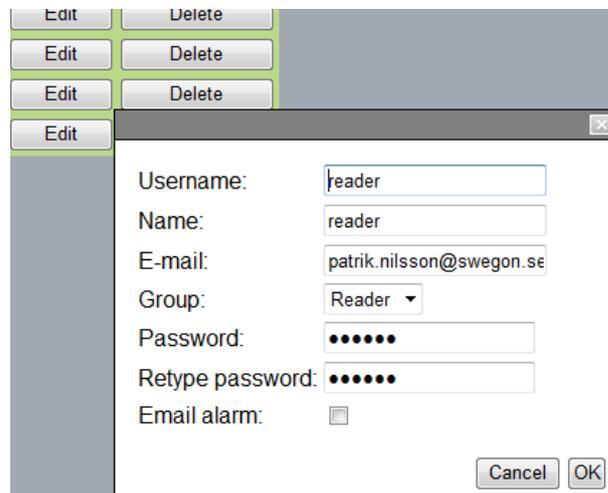


Figure 32. User settings.

6.7.2 Admin – TCP/IP

The settings for network communication with the Super WISE can be entered under the TCP/IP tab. If you have access to a DHCP server, it is almost always advisable to use this server. IP conflicts can then be avoided by using a DHCP. Static IP means that the Super WISE obtains a permanent IP address which the user must specify. This works well for small networks, however in other cases IP addresses should be selected with great care so that the selected IP address will not end up in conflict with someone else's IP address.

A DNS check whether the IP address is represented by some name.

One example is the IP address 62.119.110.110, which obtains the name swegon.com by a DNS. The MAC address is the unique hardware address allocated to the network card when the card is produced. This address can never be changed and is always unique. For information about which IP address, subnet mask, gateway and DNS is appropriate to use, get in touch with your network manager.

From version 1.16 there is the possibility to restart the Super WISE via the "Reboot" button.

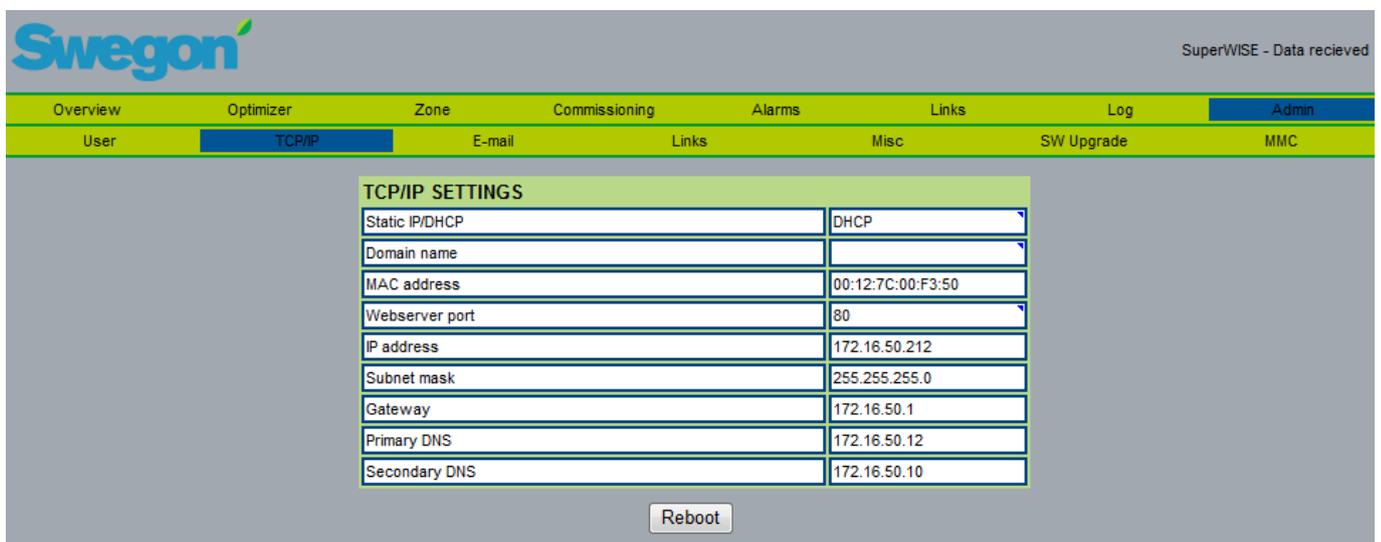


Figure 33. TCP-IP.

6.7.3 Admin - E-mail

You can select here whether the Super WISE shall manage outgoing e-mail, or whether some other Super WISE connected to the network shall do so. If Super WISE shall manage the e-mail, fill in the SMTP server. This address can be a domain name or an IP address. The e-mail reply-path can be the same as the sender address, if the Super WISE has a unique e-mail address of its own. It is often appropriate to enter the address to the person who is responsible for the Super WISE in both e-mail address boxes.

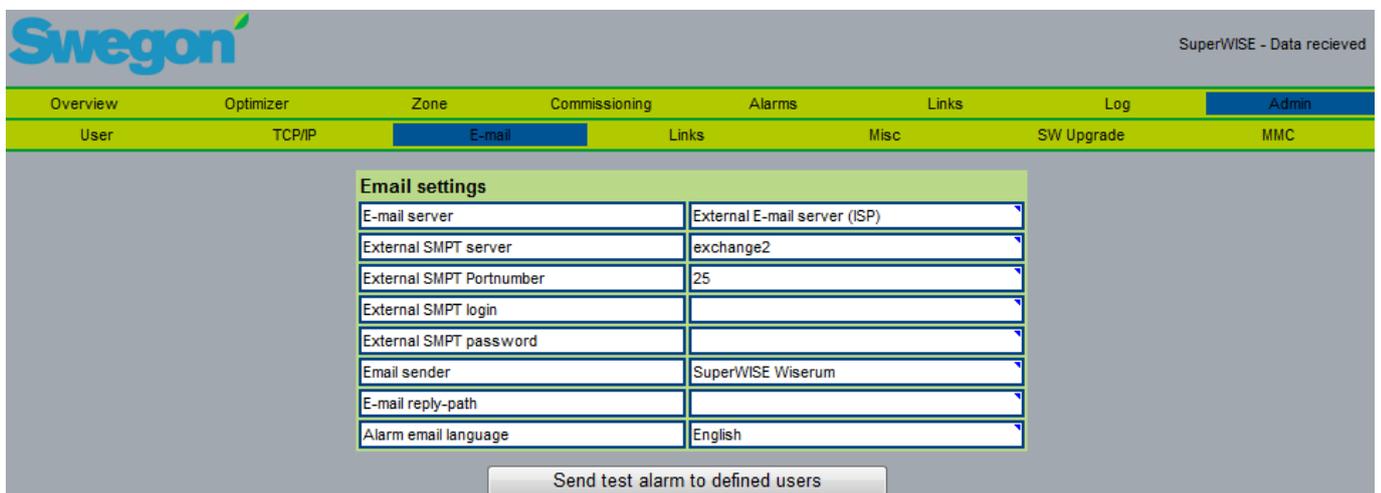


Figure 34. E-mail.

6.7.4 Admin - Links

Under this tab, you can set whatever links you want shown below the previous tab, Links. Here, you can create quick-access links to the other Super WISE units or the like, that are included in the network, for instance. Fill in the name and IP addresses to the connected units.

When the Links tab opens, links to all the Super WISE are named there. It also works just as well to specify the IP addresses for the various units directly in the web browser being used. You can also change the start page shown directly after you log on. There is also a special link to the air handling unit that provides the Super WISE with air.

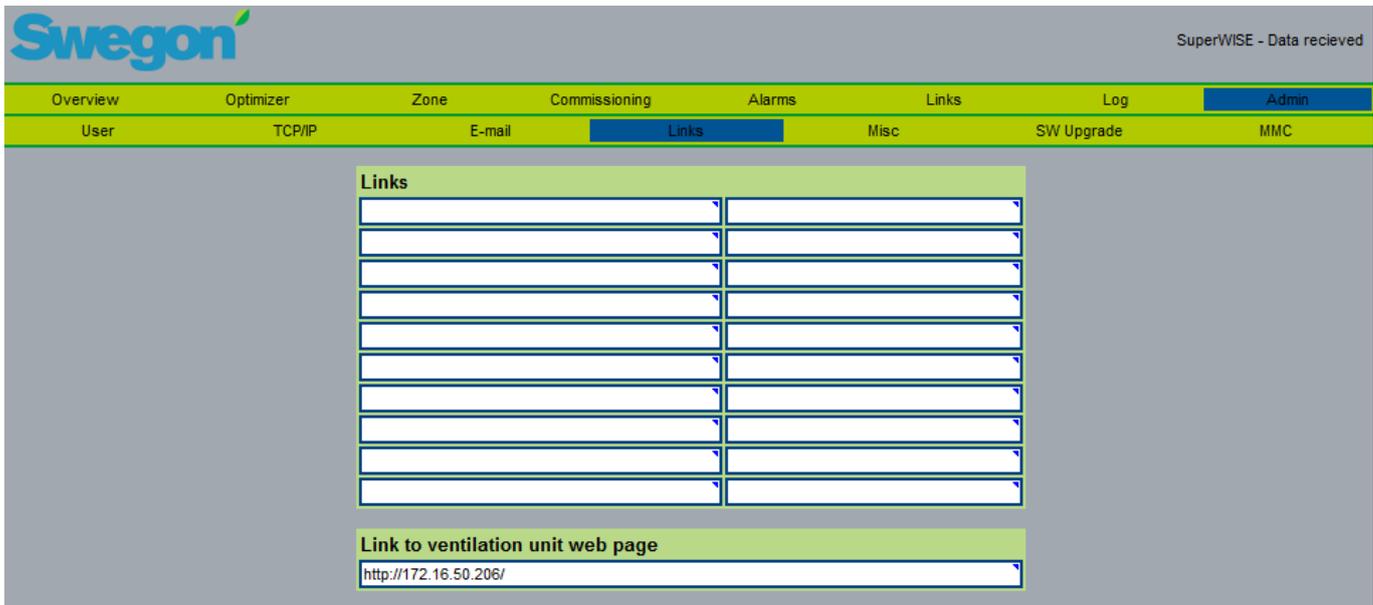


Figure 35. Links.

6.7.5 Admin – Misc.

There are settings on the Misc. page for External EIA/TIA-485 communication, TCP/IP communication, date and time. It is also possible to remove and search new units in the system.

Modbus RTU/EXoline settings

The following settings can be entered:

- "Protocol" – Can be set to Modbus or Exoline
- "Baud rate" – Communication speed. 4.8, 9.6, 19.2 or 38.8 kBaud
- "Parity" – None - Even or Uneven.
- "Stop bit" – 1 or 2
- "Modbus ID/EXoline PLA" – Modbus id for Modbus RTU via RS-485. This also sets the PLA-bit for EXoline when EXoline communication is selected.
- TCP Modbus ID - Modbus ID for MODBUS TCP via Ethernet.

BACnet IP settings

The following settings can be entered:

- BACNet IP – Inactive or Active. Select active so that BACNet will start.
- Device ID – BACNet device ID. BACNet IP will be Inactive when a change is made.
- Port number – Port number that BACNet TCP uses. BACNet IP will be Inactive when a change is made.
- Fetch EDE file – Downloads the current BACNet EDE file to the user's computer.

NOTE! The BACNet EDE-file is static and follows the structure specified in a separate Excel document. This applies from Version 1.07.

Date and time settings

This is where time and date can be set. Correct settings are important when storing logged data on the SD card.

WISE network devices

The WISE network offers opportunity to delete all controllers from the list and then reconstruct this list. When you press "Reset", this clears the list of its contents and a new search of all the zones and room products in the system is made. Components that have been assigned an alias keep this name also after the controllers have been deleted. The website must be updated by pressing "F5". The whole process takes about 3 minutes.

Room controller scan settings

The room controller search setting contains a setting for how often the Super WISE should look for new room controllers. If you set the value to 0, a search for new room controllers will never be made. By pressing the Search button, the user can force a search for new room controllers. A search takes 3 minutes.

Once the system has been built up and all the controllers have been detected, it is then advisable to set the scan time to 0 min., or to a value so high (480 min.) that the normal reading process will not be affected.

"Factory reset" means local parameters in the Super WISE are resetted. Zone or room product parameters are not resetted.

Modbus TCP settings

- "Modbus TCP approved client IP address" – together with "Modbus TCP approved client netmask", limits which IP or IP's that are allowed to connect with Modbus TCP to Super WISE (default 0.0.0.0).
- "Modbus TCP approved client netmask" – together with "Modbus TCP approved client IP address", limits which IP/IP's that are allowed to connect with Modbus TCP to Super WISE (default 0.0.0.0).
- "Modbus portnumber" – displays which port number Super WISE is set to scan for Modbus TCP communication (default 502).
- "Modbus TCP ID" – displays the Modbus TCP ID of the Super WISE.

WISE Apartment

This function activates the Super WISE for Swegon's apartment system. This system is not compatible with the normal zone and room functions, it is a completely independent system.

Power failure

After a power failure all controllers restarts. On older zone dampers, prior version 0:54, they must be initiated through force scan to find the room products again, this happens automatically after the selected time. If time is set to 0, the initiation must be done manually. For CONTROL regulators and router from version 0:54, an automatic scan will take place on startup.

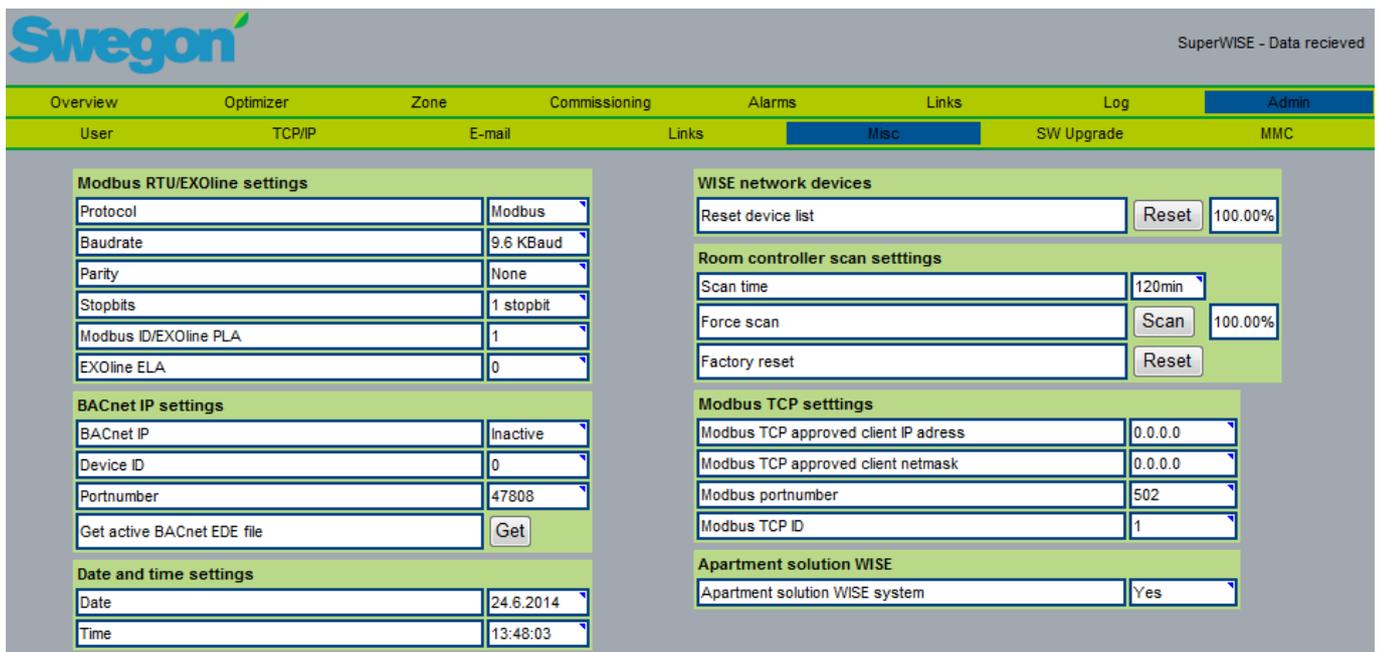


Figure 36. Misc.

6.7.6 Admin – Software updating

On the software updating page, the user can see which software version the Super WISE contains. If a memory card containing a newer software version is inserted into the memory card reader, the system will indicate on the status line that an update is available. When an update is available, the user can update Super WISE by pressing on

Start upgrading. When the system is to be updated, you must disconnect the network cord to COM5 as a measure to prevent conflicts. When the system is to be updated, you must disconnect the network cord to COM4 and COM5 as a measure to minimise conflicts. You must also stop the BACnet function. See section 6.7.5.

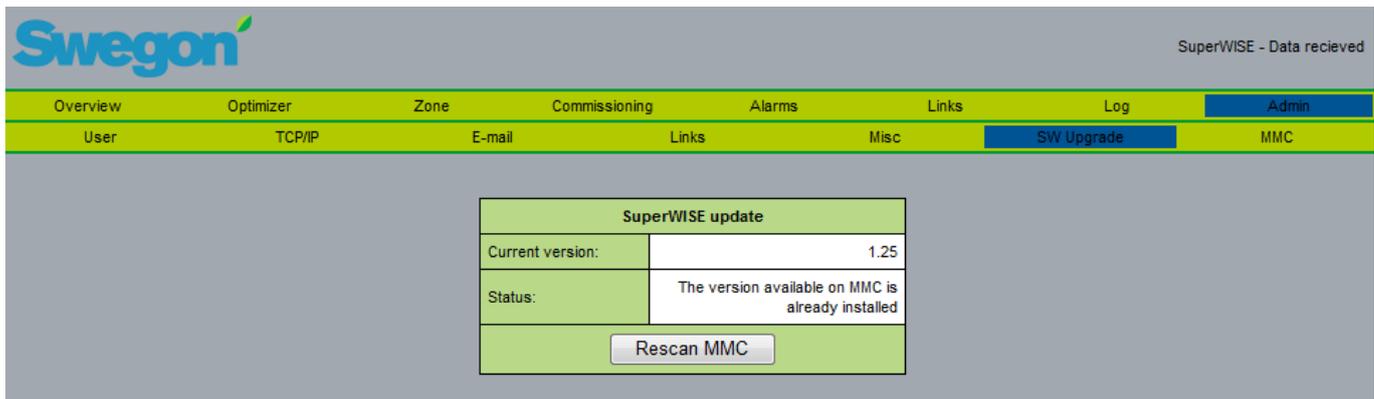


Figure 37. Software update.

6.7.7 Admin – MMC

If a memory card is installed, the user can remove, open or fetch files from the memory card to his or her computer on the memory card page. Manuals, etc. can be stored on the memory card so they will always be accessible. Log data can also be stored on the memory card if the memory card has been selected as the storage position location on the Log page.

NOTE! The files and Log data cannot be read but are used only for presenting data on the log page.

To select: Delete / Open / Save, the user must right-hand click on the file.

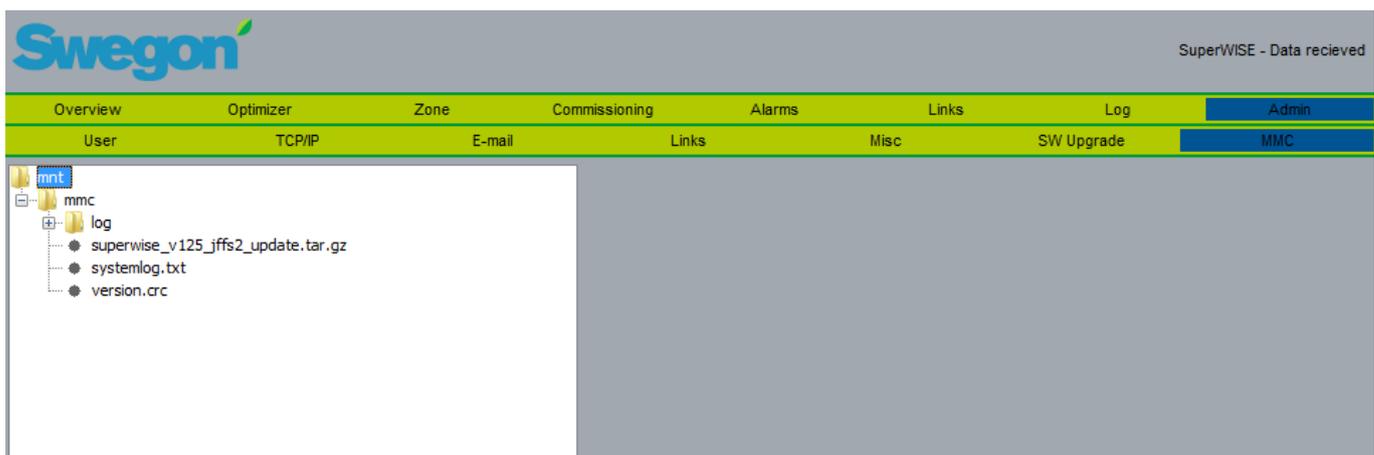


Figure 38. MMC.