

NESTOR Web Page Manual

NESTOR software version 1.2

1. GENERAL

NESTOR has a built-in web server that enables you to monitor or enter and change the settings in the system. Access to this server requires a web browser with support for SUN Java and that JRE Version 6 Runtime Environment (or a later version) is installed on the computer. The most recent version of the SUN Java software can be downloaded from www.java.com.

2. CONNECTIONS

The computer and NESTOR 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, for instance, be the number units that are to be connected together. Two units can be connected together without any network hub.

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

The NESTOR unit's network connection is located on the control unit in the NESTOR cubicle and is shown encircled in Figure 1.

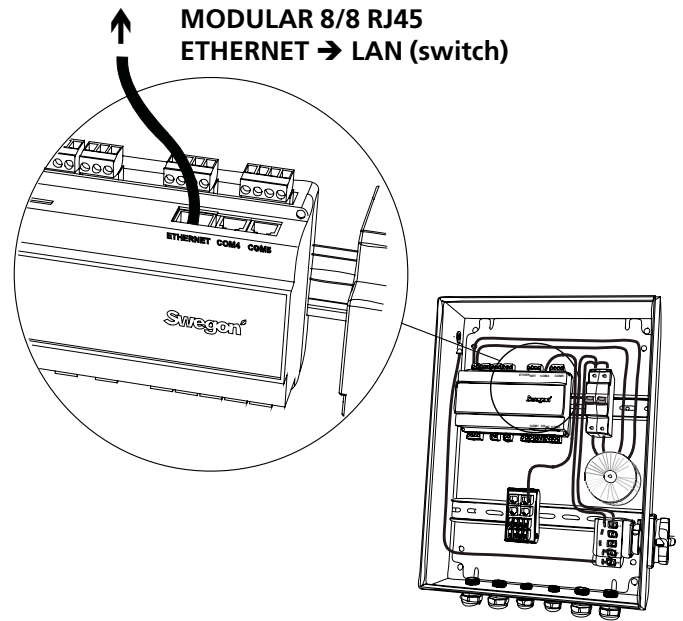


Figure 1: Ethernet connection, NESTOR

2.1 Connection between two units

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

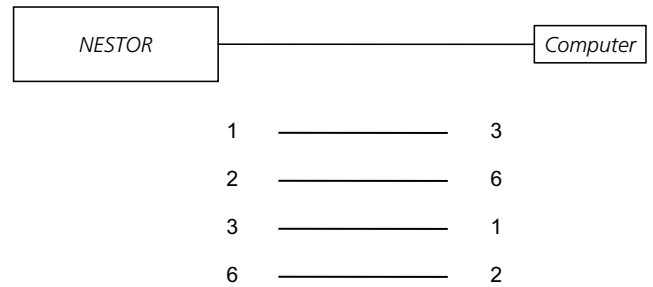


Figure 2: Connection between two units, crossover cable.

2.2 Connection between two or more units

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

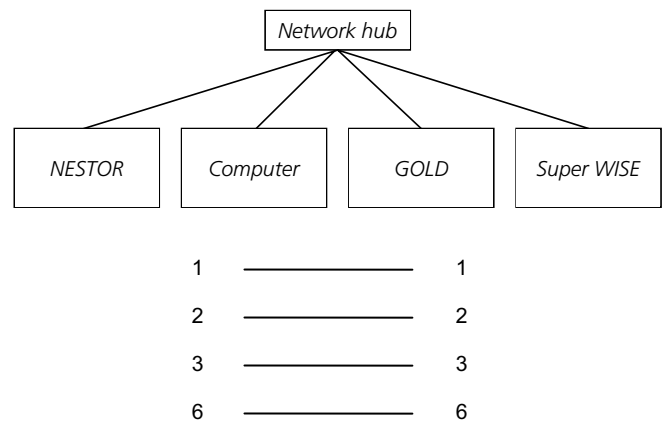


Figure 3. Connection between two or more units, network hub.

3. NESTOR SETTINGS

On delivery, the control unit has a static IP address set to 10.200.1.1. 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 program which can be downloaded from www.swegon.com. Connect the NESTOR to the network. Start Golden Gate Config. Select Golden Gate Ethernet and press OK. See Figure 4.

Golden Gate Config now searches through the network to find all the units that are supported by Golden Gate Config. NESTOR with IP. number 10.200.1.1 can be found on line three in the list in Figure 5.

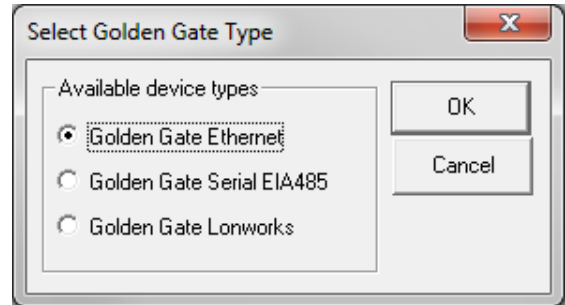


Figure 4. Selections in Golden Gate Config.

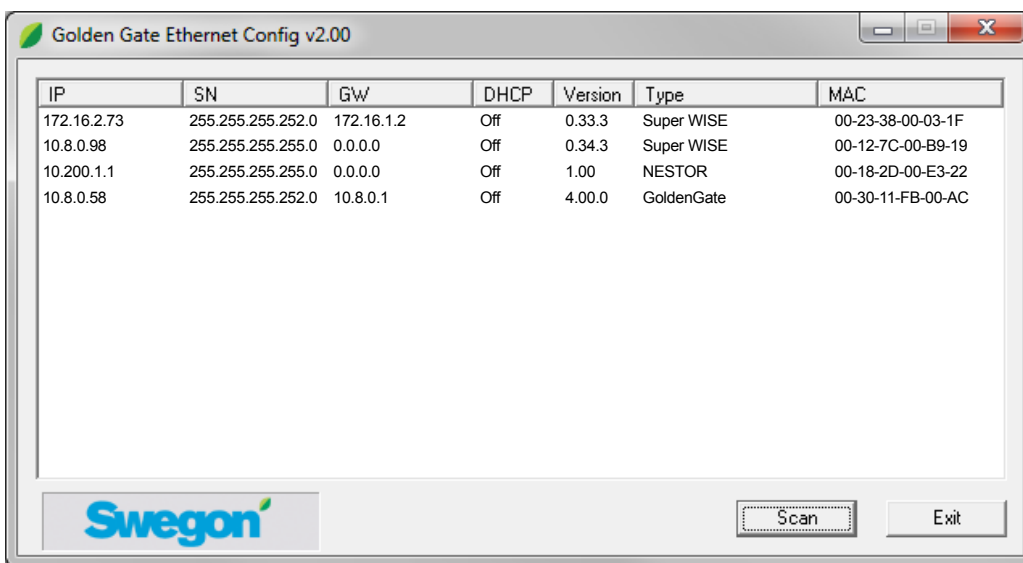


Figure 5. Discovered units in the network.

Double click on the line that shows the NESTOR to be configured and a new window will open where the unit can be configured. See Figure 6.

1. If the DHCP is set to ON, the NESTOR 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. It is recommended that static IP addresses are used.
2. IP address: Change or check the IP address here.
3. Subnet mask: Change or check the subnet mask here. Keep in mind to 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 password for the first found user profile with administrator privileges shall be used. The default password is admin. The Change password function does not work in NESTOR.

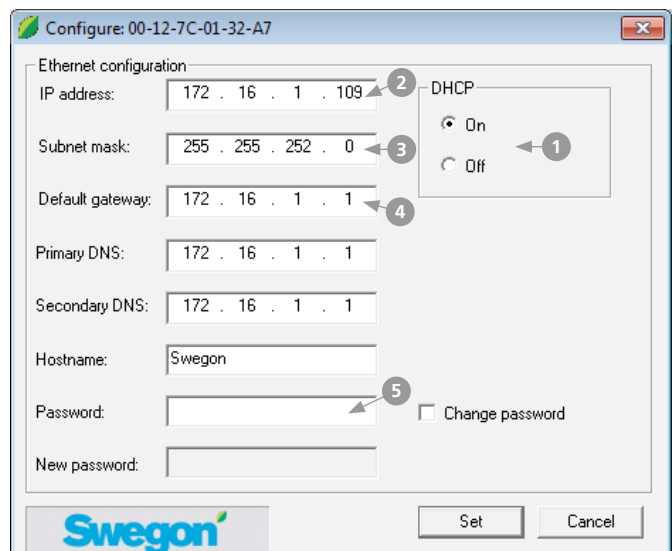


Figure 6: IP address settings.

Now click **Set**.

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

3.1 Settings via Modbus EIA485

All settings are accessible via Modbus communication and the COM4 connection. For further details, see the Excel document - *NESTOR_Modbus_list*.

N.B.! For configuration and settings of any underlying product (e.g. Super WISE, GOLD), see each specific product documentation.

4. LOG IN

Sun Java must be installed and activated. Sun Java can be activated at various places depending on the operative system and web browser in use. Contact local computer support group for help.

Start the web browser and enter the IP address for the NESTOR (Factory setting http://10.200.1.1). Enter your user name and password when the log in dialogue box opens. See Figure 7.

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

Enter the following the first time you log in:

User name = admin

Password = admin

N.B.! When changing the password, the new password must not consist of more than 15 characters.

Select the appropriate language to be used in the web interface. Press the button by the appropriate language to choose. See Figure 8.

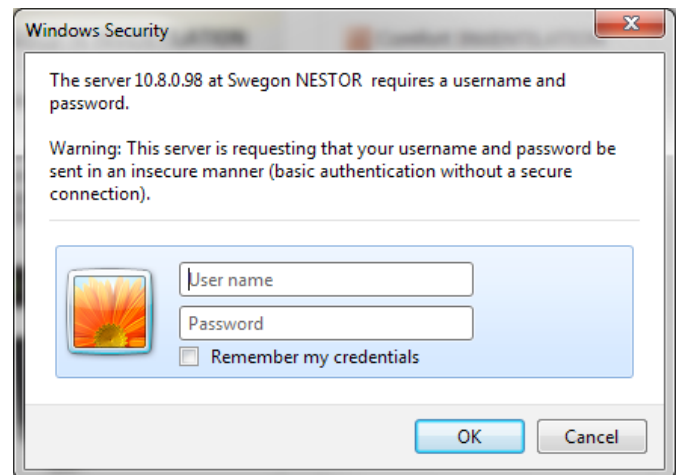


Figure 7: Logging in

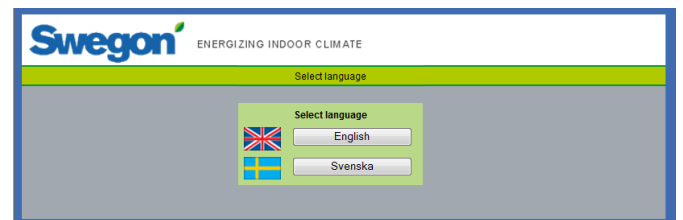


Figure 8: Choice of language

5. USER LEVELS

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

At the **Reader** level, all the tabs except the Configuration tab are accessible. At this level, it is only possible to view certain values. Nothing can be changed and the alarm list cannot be reset.

At the next level, the **Writer** level, it is possible to change all settings, except those on the Configuration tab that are still inaccessible. It is NOT possible to reset the Alarm list.

The **Service** level, has the same permissions as the Writer level.

The **Admin** level, gives full access to change all settings. The Configuration tab is fully accessible and it is possible to reset the Alarm list.

User	Read values	Change set points	Change settings	Access admin-tab
Reader	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Writer	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Service	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Admin	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Figure 9: User Levels

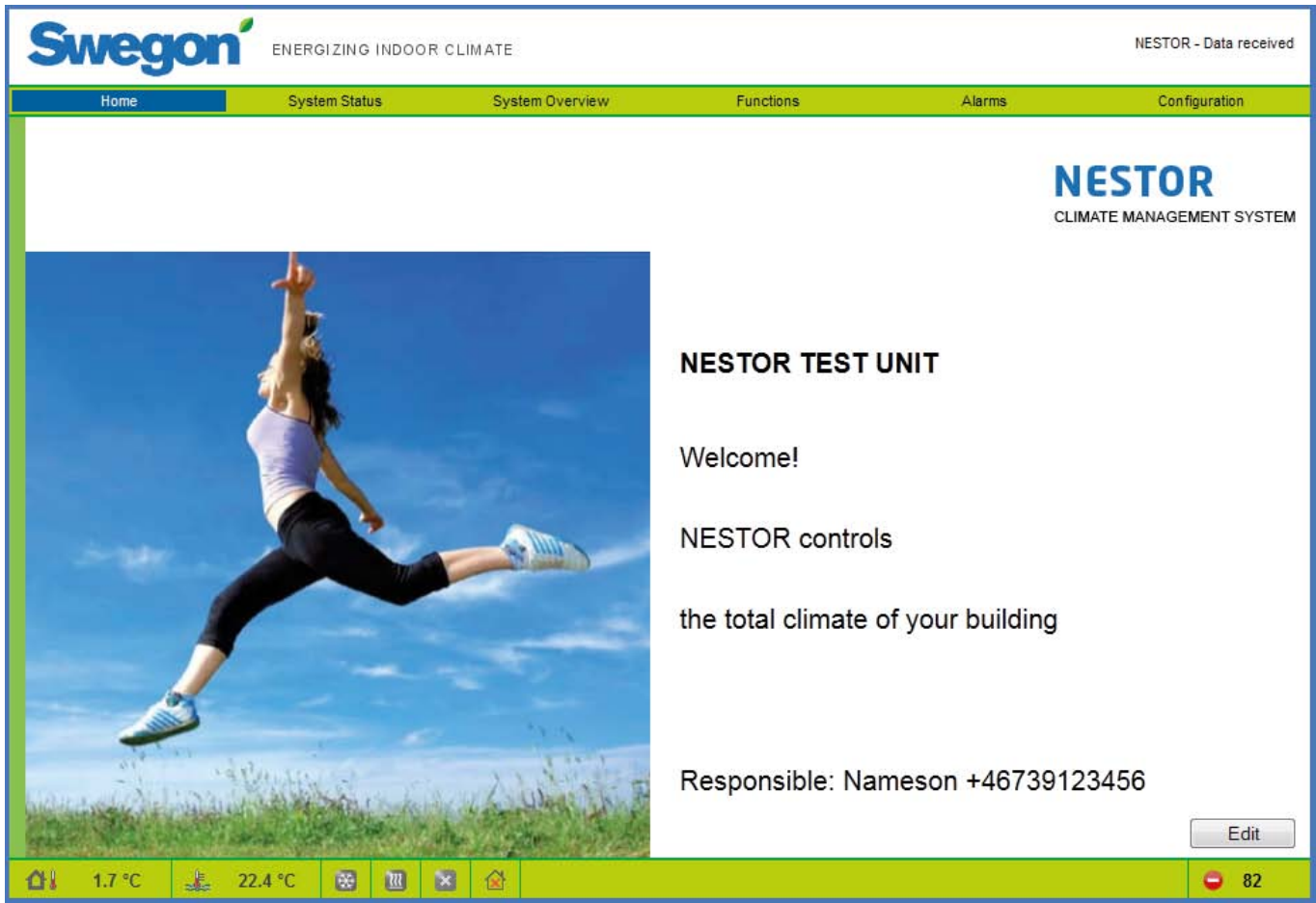


Figure 10: Home page

6. WEB PAGE

There is a status list at the bottom of each page showing:

- The system outdoor temperature
- The supply water temperature
- Cooling demand status (blue for demand, grey for no demand)
- Heating demand status (red for demand, grey for no demand)
- Current mode of the Swegon Chiller/Heat pump (grey for stop, flashing red for heating, flashing blue for cooling)
- Operation mode (No occupancy/Occupancy/Year channel)
- Number of active alarms

The various tabs in the NESTOR web interface are described on the following pages.

There are six main pages: Home, System Status, System Overview, Functions, Alarm and Configuration.

6.1 Home

When entering the NESTOR web page, after selecting the preferred language, the home page is displayed. The pictures and text shown on the home page can be changed by clicking on the "Edit" button.

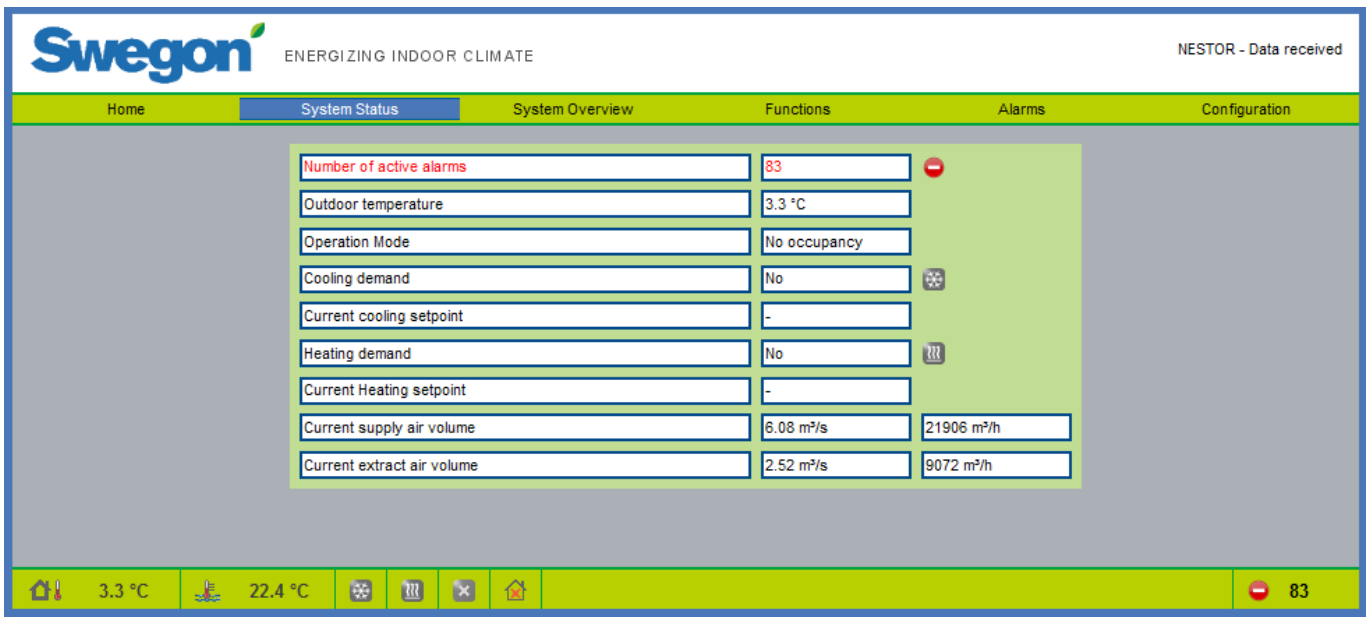


Figure 11: System Status

6.2 System Status

The system status page includes a short summary of the most important CMS system parameters:

- Number of active alarms
- Outdoor temperature
- Operation mode (No occupancy/Occupancy)
- Actual cooling demand
- Current cooling supply set point
- Actual heating demand
- Current heating supply set point
- Current total system supply airflow
- Current total system extract airflow

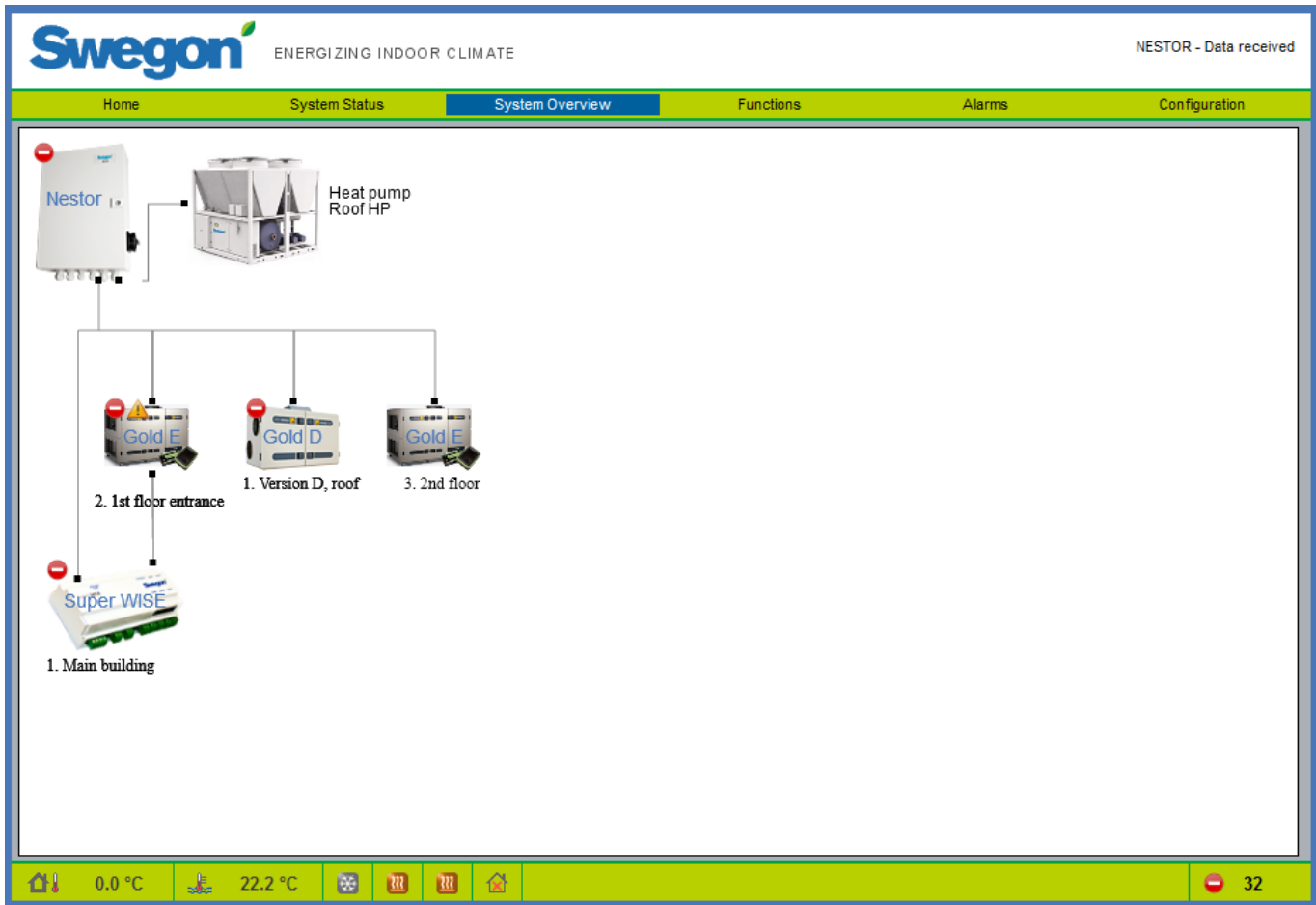


Figure 12: System Overview

6.3 System Overview

A schematic picture of all NESTOR connected products is shown in the system overview. Any names given to units on the configuration page will be displayed here. Two types of status symbols can appear on each connected unit.

- A yellow symbol indicates that communication to this particular unit is lost.
- A red symbol indicates that there is at least one active alarm on the particular unit.

Note that an alarm symbol on a Super Wise indicates either an internal Super Wise alarm or an alarm in any of its underlying products.

Click on the products to open up their own web page.



Figure 13. Functions; Temperature control

6.4 Functions

All NESTOR functionality settings are collected on this tab. It includes four sub-pages: *Temperature Control*, *Temperature Set Points*, *Operation Mode* and *Time Controlled Output*. The first one opens when accessing the Functions tab.

6.4.1 Temperature Control

The Temperature Control page mainly contains parameters for the control of a Swegon Chiller/Heat pump.

Only the relevant parameters and values are shown. If, for example, a Swegon Chiller that produces only cooling is present, no settings and values concerning heating are displayed. All values that can be displayed on this page are described in Table 1 in Appendix A.

The screenshot displays the Swegon NESTOR web interface for configuring temperature set points. The interface includes a top navigation bar with tabs for Home, System Status, System Overview, Functions, Alarms, and Configuration. Below this is a secondary navigation bar with sub-tabs for Temperature Control, Temperature Set Points (selected), Operation Mode, and Time Controlled Output. The main content area is divided into three sections:

- System Configuration:** A table with two columns: Parameter and Value.

Parameter	Value
Optimization Heating Diff.	3.0 K
Optimization Cooling Diff.	2.0 K
- Gold1 Configuration:** A section for a specific GOLD unit, featuring a dropdown menu set to 'Gold1'. It contains a table of optimization parameters.

Parameter	Value
Optimization: Heating set point increase speed (K/min)	0.50
Optimization: Heating set point decrease speed (K/min)	0.25
Optimization: Cooling set point increase speed (K/min)	0.25
Optimization: Cooling set point decrease speed (K/min)	0.50
Optimization: Valve upper limit	70 %
Optimization: Valve lower limit	50 %
Optimization: Delay	1.0 min
Heating set point	35.0 °C
Cooling set point	15.0 °C
- External demand set point configuration:** A table with two columns: Parameter and Value.

Parameter	Value
External heating demand set point	40.0 °C
External cooling demand set point	8.0 °C

The bottom status bar shows various system indicators, including a home icon, a fire alarm icon, and temperature readings of 0.0 °C and 22.2 °C. On the right side of the status bar, there is a red alarm icon and the number 32.

Figure 14. Functions; Temperature Set Points

6.4.2 Temperature Set Points

The page contains parameters for the optimisation of cooling and heating set points. The System Configuration parameters are common for the whole system. The "GOLDx Configuration" parameters are individual for each GOLD unit. Select the GOLD to be configured in the drop down list.

Configuration for external demand where set points are set for each respective parameter.

See Table 2 in Appendix A for more information.

Swegon ENERGIZING INDOOR CLIMATE

NESTOR - Data received

Home System Status System Overview **Functions** Alarms Configuration

Temperature Control Temperature Set Points **Operation Mode** Time Controlled Output

Time channel

Function: Operation mode switch:

Time Channel	Period	Start HH:MM	End HH:MM
1	Monday-Friday	00:00	00:00
2	Monday-Sunday	12:13	18:00
3	Inactive	00:00	00:00
4	Inactive	00:00	00:00
5	Inactive	00:00	00:00
6	Inactive	00:00	00:00
7	Inactive	00:00	00:00
8	Inactive	00:00	00:00

Year channel

Time Channel	Function	Start Date	Start HH:MM	End Date	End HH:MM
1	Low Speed, No Cooling	den 30 november 2011	00:00	den 30 november 2014	00:00
2	Inactive	den 30 november 2011	00:00	den 30 november 2011	00:00
3	Inactive	den 30 november 2011	00:00	den 30 november 2011	00:00
4	Inactive	den 30 november 2011	00:00	den 30 november 2011	00:00
5	Inactive	den 30 november 2011	00:00	den 30 november 2011	00:00
6	Inactive	den 30 november 2011	00:00	den 30 november 2011	00:00
7	Inactive	den 30 november 2011	00:00	den 30 november 2011	00:00
8	Inactive	den 30 november 2011	00:00	den 30 november 2011	00:00

0.3 °C 22.4 °C 89

Figure 15. Operation Mode

6.4.3 Times/Operation

The Operation Mode page is accessed from the Functions section. The user selects the required operation mode function and sets the time channels (weekly or yearly) and/or digital input 1 to trigger occupancy mode. See Table 3 in Appendix A for more information.

ENERGIZING INDOOR CLIMATE
NESTOR - Data received

Home
System Status
System Overview
Functions
Alarms
Configuration

Temperature Control
Temperature Set Points
Operation Mode
Time Controlled Output

Time channel

Time Channel	Period	Start HH:MM	End HH:MM
1	Friday	11:35	14:11
2	Inactive	00:00	00:00
3	Inactive	00:00	00:00

Year channel

Time Channel	Function	Start Date	Start HH:MM	End Date	End HH:MM
1	Active	den 30 januari 2013	12:30	den 5 februari 2013	12:30
2	Inactive	den 30 november 2011	00:00	den 30 november 2011	00:00
3	Inactive	den 30 november 2011	00:00	den 30 november 2011	00:00

0.3 °C
 22.4 °C

91

Figure 16. Time Controlled Output

6.4.4 Time Controlled Output

The Time Controlled Output page is accessed from the Functions section. The user selects the time channels (weekly or yearly) to set digital output 3.

See Table 4 in Appendix A for more information.

Date of appearance	Date of recovery	Device type	Location ID	Local Alarm No.	Priority	Class	Comment
2014-04-07 09:50:35		NESTOR	-	1	A	System products	Sensor error on Gold unit 1
2014-04-07 09:46:19	2014-04-07 09:50:50	NESTOR	-	10	A	System products	
2014-04-07 09:44:23		Gold AHU	2	14:1	A	Air production	
2014-04-07 09:44:23	2014-04-07 09:45:34	Gold AHU	2	69:5	A	Air production	Test comment 2
2014-04-07 09:44:17		Gold AHU	1	7	A	Air production	Test comment 1
2014-04-07 09:44:17	2014-04-07 09:47:45	Gold AHU	1	57	B	Air production	
2014-04-07 09:44:17		Gold AHU	1	58	B	Air production	
2014-04-07 09:44:17		Gold AHU	2	8:1	A	Air production	
2013-10-30 07:55:00		Zone controllers	1-0-2	65	A	Climate Supply	
2000-01-28 04:29:00		Zone controllers	1-0-2	65	A	Climate Supply	
2000-01-06 20:51:00		Zone controllers	1-0-2	65	A	Climate Supply	
1999-12-26 10:34:00		Zone controllers	1-0-2	65	A	Climate Supply	
1999-12-25 13:54:00		Zone controllers	1-0-2	65	A	Climate Supply	
1999-12-25 13:51:00		Room controllers	1-0-2-1	65	B	Climate Supply	
1999-12-25 13:44:00		Zone controllers	1-0-1	65	A	Climate Supply	
1999-12-25 13:09:00		Zone controllers	1-0-1	65	A	Climate Supply	
1999-12-24 21:14:00		Zone controllers	1-0-1	65	A	Climate Supply	

Figure 17. Alarm List

6.5 Alarms

6.5.1 Alarm List

The alarm list displays the 200 most recent alarms in the system. The list can be sorted by any of its columns, and the recovered alarms can be hidden.

The refresh button can be used if the user has administrator privileges. This will remove all posts and forces NESTOR to read the alarm status from all products once again. Note that no alarms are cleared in the underlying products.

Recovered alarms will not reappear in the list, except for the zone and room controllers, which are stored in Super WISE. NESTOR will find the recovered alarm posts and re-display them in the list.

See Table 5 in Appendix A for more information.

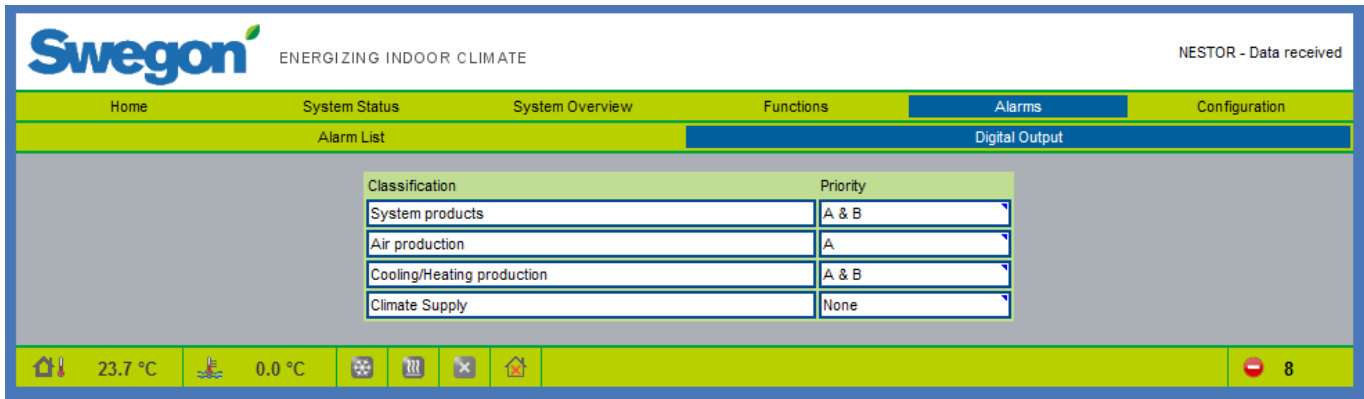


Figure 18. Digital output

6.5.2 Digital Output

The Digital Output page contains settings to use on digital output 4, to indicate an active alarm. The user selects the alarm priority for each device type classification which should set the digital output. Priority "None", "A" or "A and B" can be selected individually for each device class.

Figure 19. NESTOR configuration

6.6 Configuration

System configurations are entered in this section and its sub pages.

6.6.1 NESTOR

TCP/IP settings for NESTOR are entered here. If a DHCP server is accessible, it is recommendable to use this server in order to avoid IP conflicts.

Static IP means that the NESTOR 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 the selected IP address does not end up in conflict with another IP address.

A DNS checks 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, contact the network manager.

It is possible to reset the software from this page. This means that all functions restored to the factory settings. It is also possible to reboot the NESTOR from this page.

See Table 6 in Appendix A for more information.

ENERGIZING INDOOR CLIMATE
NESTOR - Data received

Home
System Status
System Overview
Functions
Alarms
Configuration

NESTOR
System Product Connection
System Product Config
E-mail settings
Users
SW Update
MMC

Blue Box

Type	ModBus ID	Name
Chiller	70	Roof Chiller

External sources

Parameter	Value
External heat source	On
External cool source	Off

External demands

Parameter	Value
External heating demand activation	Off
External cooling demand activation	On

Gold AHU

No.	Connected	IP number	ModBus Port	Remote Access port	Name	Gold version	Connected SuperWise
1	<input checked="" type="checkbox"/>	10.8.27.88	502	80	Version D, roof	Ver. D	None
2	<input checked="" type="checkbox"/>	10.8.27.56	502	80	1st floor entrance	Ver. E	1
3	<input checked="" type="checkbox"/>	172.16.0.109	502	80	2nd floor	Ver. E	None
4	<input type="checkbox"/>	10.8.27.255	502	80		Ver. E	None
5	<input type="checkbox"/>	0.0.0.0	502	80		Ver. E	None
6	<input type="checkbox"/>	0.0.0.0	502	80		Ver. E	None
7	<input type="checkbox"/>	0.0.0.0	502	80		Ver. E	None
8	<input type="checkbox"/>	0.0.0.0	502	80		Ver. E	None

SuperWise

No.	Connected	IP number	ModBus Port	Remote Access port	Name
1	<input checked="" type="checkbox"/>	10.8.27.92	502	80	Main building
2	<input type="checkbox"/>	0.0.0.0	502	80	
3	<input type="checkbox"/>	0.0.0.0	502	80	
4	<input type="checkbox"/>	0.0.0.0	502	80	
5	<input type="checkbox"/>	0.0.0.0	502	80	
6	<input type="checkbox"/>	0.0.0.0	502	80	
7	<input type="checkbox"/>	0.0.0.0	502	80	
8	<input type="checkbox"/>	0.0.0.0	502	80	

0.0 °C
 22.2 °C

34

Figure 20. System Product Connection

6.6.2 System product connection

Connection of devices (GOLD, Super WISE and Swegon Chiller/Heat pump, External sources) are made on this page. See Table 7 in Appendix A for more information.

Swegon ENERGIZING INDOOR CLIMATE

NESTOR - Data received

Home System Status System Overview Functions Alarms Configuration

NESTOR System Product Connection System Product Config E-mail settings Users SW Update MMC

Gold AHU Only for water coils supplied by a Nestor cooling and/or heating source

No.	Name	Use Nestor Operation Mode (Override)	Valid internal outdoor sensor	Use system outdoor temp.	Use Optimization	OH	EH	XH	AYCH	PH	OC	EC	XC	AYCC
1	Floor 1a	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
2	Floor 1b	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
3	Floor 1c	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4	Floor 2a	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5	Floor 2b	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6	Floor 2c	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Abbreviation for the heating and cooling sequences

OH = Ordinary Heating
 EH = Extra Heating
 XH = X-zone Heating
 AYCH = All Year Comfort Heating
 PH = Preheating
 OC = Ordinary Cooling
 EC = Extra Cooling
 XC = X-zone Cooling
 AYCC = All Year Comfort Cooling

17.9 °C 0.0 °C

Figure 21. System Product Config

6.6.3 System Product Config

Configurations for connected GOLD units are made on this page.

See Table 8 in Appendix A for more information.

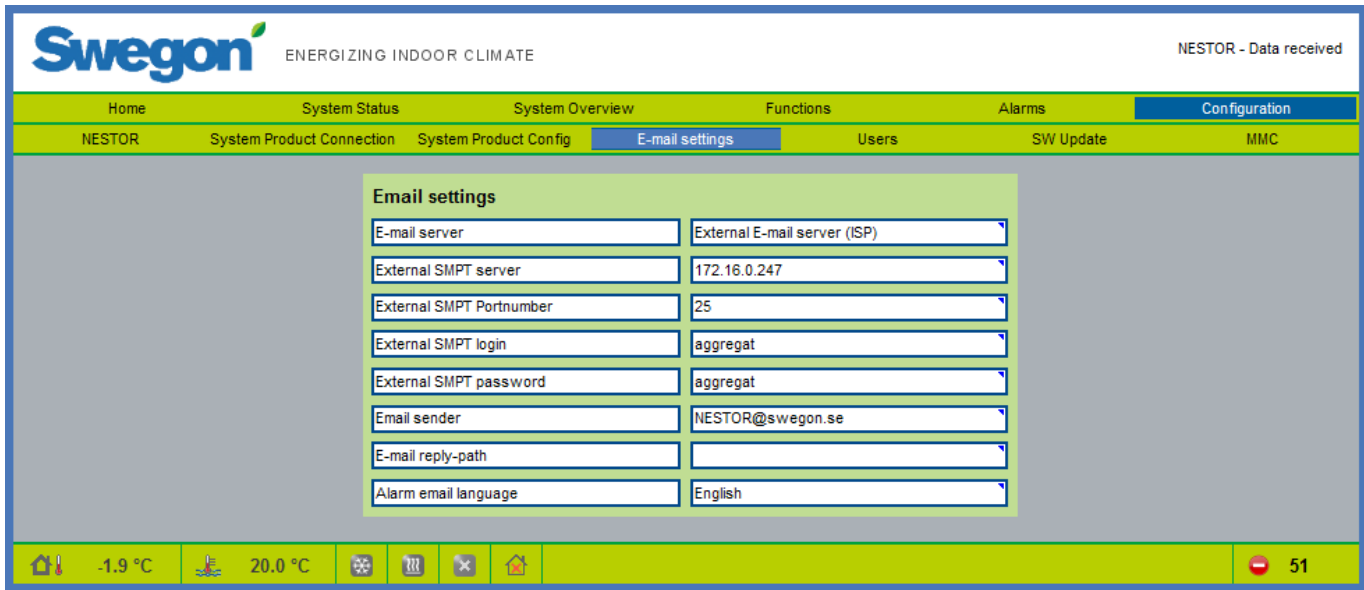


Figure 22. E-mail settings

6.6.4 E-mail settings

E-mail settings for alarm notifications are defined on this page. If NESTOR is to 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 NESTOR 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 NESTOR in both e-mail address boxes.

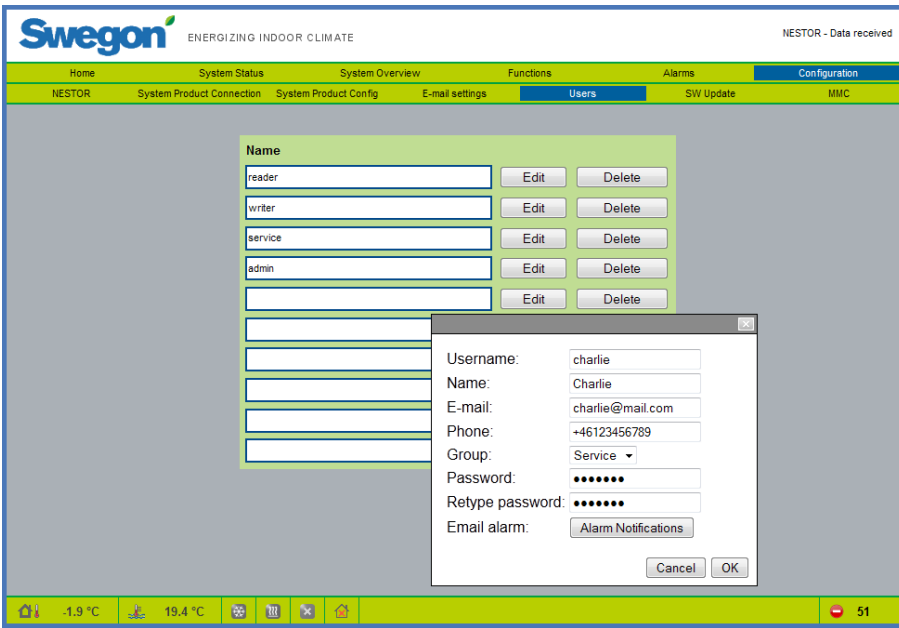


Figure 23. User settings

6.6.5 Users

Includes settings for different user access privileges, and configurations of alarm notifications by e-mail for each user.

Users can be managed on this tab. It is possible to specify who has access to web pages, as well as how and who to inform when alarms are generated.

Set the priority (None, A or A and B) for each device type that should generate an alarm e-mail. This is configured according to Fig. 24.

It is possible to enter a password for each user here. The passwords and user names must not contain any special characters.

The initial setting for the various user passwords:

User	Password
reader	reader
writer	writer
service	service
admin	admin

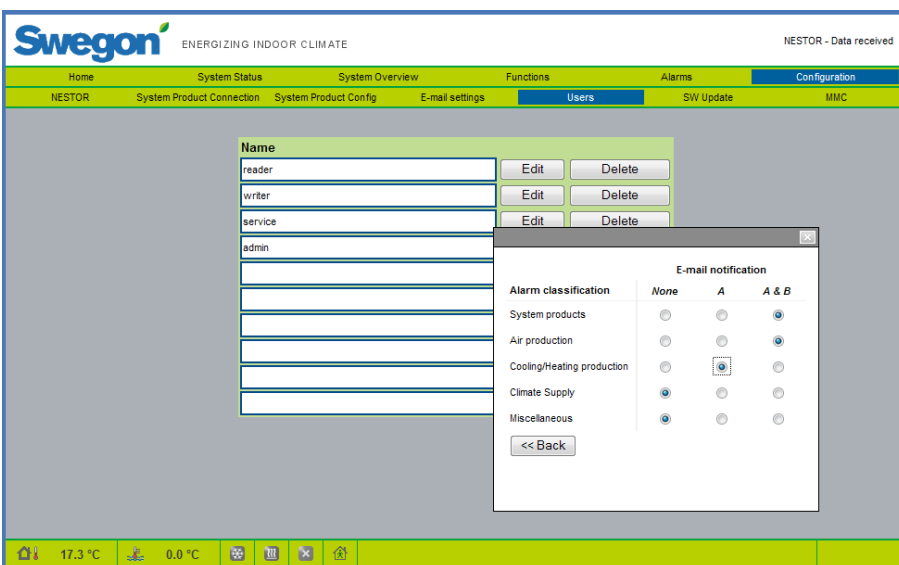


Figure 24. User settings

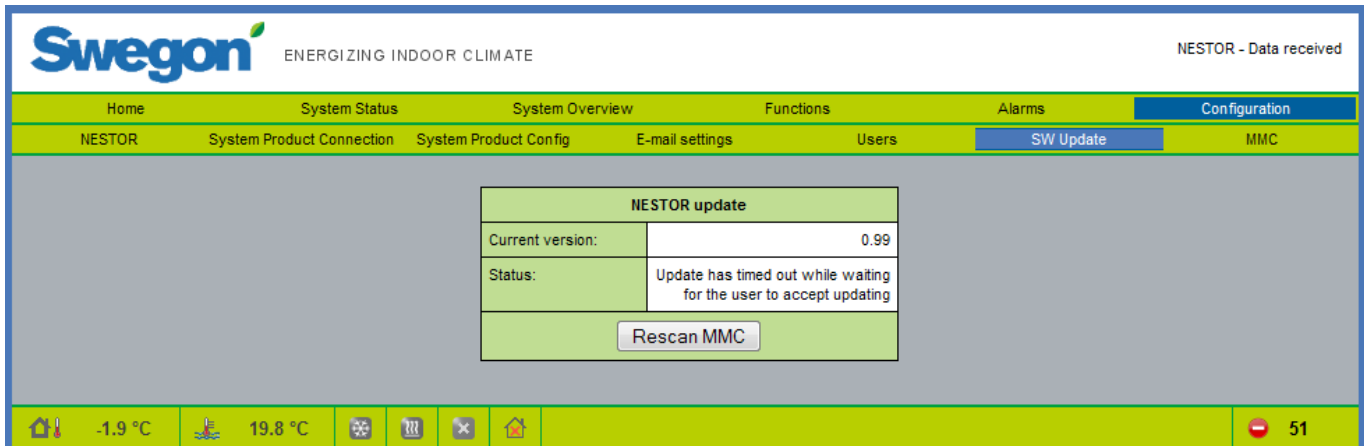


Fig. 25: Software Update

6.6.6 SW Update

On the software update page, the user can see which software version the NESTOR contains. If a memory card that contains 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 NESTOR by pressing on Start upgrading. The power supply must not be broken during the software update process.

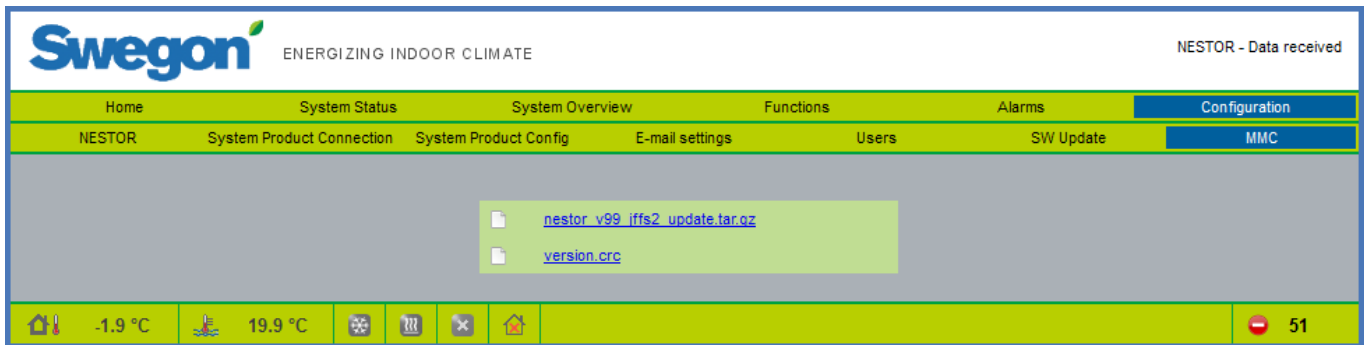


Fig. 26: MMC

6.6.7 MMC

If a memory card is inserted, the user can open or fetch files from the memory card to a local computer, on the memory card page. Manuals, etc. can be stored on the memory card so that they are always available.

Table 1: Temperature Control

Signal text	Description	Default	Min	Max	Device
Configurations					
Cooling activation delay	Delay time for each GOLD to switch between cooling demand and no cooling demand. Increase this time if the system cooling demand appear and disappear too often.	5	0	1000	minute
Heating activation delay	Delay time for each GOLD to switch between heating demand and no heating demand. Increase this time if the system heating demand appear and disappear too often.	5	0	1000	minute
Prioritise cooling at outdoor temp higher than	On a simultaneous cooling and heating demand, the unit will produce heating if the system outdoor temperature is lower than this value. Otherwise it will produce cooling. This is only applicable when using a Swegon Reversible Chiller. To always prioritise heating, set this value to 80 °C. To always prioritise cooling, set this value to -40 °C.	10	-40	80	°C
Min days between mode switches	Minimum number of days between switching from heat to cooling energy production and vice versa. This is only applicable when using a Swegon Reversible Chiller. If switching is allowed under all circumstances, set this value to 0.	0	0	365	day
Min hours between mode switches	Minimum number of hours between switching from heat to cooling energy production and vice versa. This is only applicable when using a Swegon Reversible Chiller. If switching is allowed under all circumstances, set this value to 0.	6	0	24	hour
Prioritised mode	Prioritised mode of heating or cooling regarding minimum switch time.	0	0	1	-
Min hour to force prioritised mode	The minimum time between switching from heating to cooling and switching from cooling to heating, if the "Prioritised mode" is "Heating". Otherwise, minimum time between switching in the other way. This value replaces the value of "Min days between mode switches" and "Min hours between mode switches" in the direction given by "Prioritised mode".	1	0	256	hour
Heat limit detection	Activation and type selection of Heat limitation. None: No Heat limitation. Outdoor temp.: Heat limitation activated when the outdoor temperature is lower than the "Outdoor temperature heat limit". Heat limitation is deactivated when the outdoor temperature has increased by 3 Kelvin. Supply flow temp.: Heat limitation is activated when the supply water temperature is more than "Heat limit hysteresis" below the heating set point for more than "Heat limit Delay" minutes. Heat limitation is deactivated in one of two ways, Alt. 1) When the Swegon Heat pump/Reversible unit is active and the supply flow temperature is less than "Heat limit hysteresis" below the heating set point for more than the Heat limit activation time in minutes. Alt. 2) When the Swegon Heat pump/Reversible unit is not active and the outdoor temperature has increased by more than 3 Kelvin since entering the Heat limitation mode. This is only applicable when using a Swegon Chiller of Heat Pump type or Reversible.	0	0	2	-
Heat limit action	Action to take when Heat limitation is active. None: The Swegon Heat pump/Reversible unit and the external heating are turned off. Switch: The Swegon Heat pump/Reversible unit is turned off and the external heating is activated. Both: Swegon Heat pump/Reversible unit continues to be activated and external heat is activated. This is only applicable when using a Swegon Chiller of Heat Pump type or Reversible.	0	0	2	-
Outdoor temperature heat limit	Heat limitation activation level when the Heat limit activation type is <i>Outdoor temp.</i> . See also description of parameter "Heat limit detection".	-5	-20	80	°C
Heat limit hysteresis	See description of parameter <i>Heat limit activation</i> , type <i>Supply flow temp.</i> .	3	0	10	K
Heat Limit Delay	See description of parameter <i>Heat limit activation</i> , type <i>Supply flow temp.</i> .	10	0	10000	minute
System outdoor temperature collected from	The GOLD unit to collect the system outdoor temperature from. If "GOLD 1"- "GOLD 8" is selected, NESTOR collects the external outdoor temperature in that GOLD unit. If "None" is selected, no common outdoor temperature is used and the system outdoor temperature is selected from the first found reliable internal outdoor sensor in any GOLD unit.	1	0	8	-
Aqualink Activation	Activation of AQUA Link function. Only relevant when the Swegon Chiller/Heat pump type is Chiller or Heat pump (not reversible).	0	0	1	-
Aqualink alarm input	Select if a closed input (NO) or open (NC) shall generate the AQUA Link alarm	0 (NO)	0	1	-
External cooling demand function	Function selection for external cooling demand. Economy: The total system cooling set point should always be set to the same setting as that of the GOLD system as long as there is a cooling demand in the GOLD system, regardless of the external cooling demand set point. If there is only external cooling demand, this cooling set point is used as the system set point. Comfort: When there is a cooling demand both in the GOLD system and externally, the lowest of these cooling set points is used as the system set point. If there is only external cooling demand at one location, this relevant cooling set point is used as the system set point.	0	0	1	-
External heating demand function	Function selection for external heating demand. Economy: The total system heating set point should always be set to the same setting as that of the GOLD system as long as there is a heating demand in the GOLD system, regardless of the external heating demand set point. If there is only external heating demand, this heating set point is used as the system set point. Comfort: When there is a heating demand both in the GOLD system and externally, the highest of these heating set points is used as the system set point. If there is only external heating demand at one location, this relevant heating set point is used as the system set point.	0	0	1	-
Ext. cooling demand input	Select whether a closed input (NO) or an open one (NC) shall indicate an external cooling demand.	0	0	1	-
Ext. heating demand input	Select whether a closed input (NO) or an open one (NC) shall indicate an external heating demand.	0	0	1	-
Readings					
Cooling supply set point	The current total system cooling set point. The value sent to the Chiller/Reversible Chiller.	-	-20	80	°C
Heating supply set point	The current total system heating set point. The value sent to the Heat pump/Reversible Chiller.	-	10	80	°C
System cooling demand	Indicates if there is a cooling demand or not in the system	-	0	1	-
System heating demand	Indicates if there is a heating demand or not in the system	-	0	1	-
Supply flow water temp:	The temperature of the supply water from the Swegon Chiller/Heat pump	-	-20	80	°C
Return water temp.	The temperature of the return water to the Swegon Chiller/Heat pump	-	-20	80	°C
Outdoor temperature	The system outdoor temperature	-	-50	80	°C
Time since last switch	Time since the most recent switch between cooling energy and heat production. Only relevant if a Reversible Chiller is used.	-	0	32767	minute
Current water type	Current water type in the system (hot or cold). Only relevant if a Reversible Chiller is used.	-	0	1	-

Table 1: Temperature Control

Table 2: Temperature Set Points

Signal text	Description	Default	Min	Max	Device
Common/Global Configurations					
Optimisation Heating diff.	The allowed difference between the set point and the reference water temperature. If the reference water temperature is between the set point value and the set point minus this value, optimisation is allowed. The value should normally have the same value as the heating diff. in the Swegon Heat pump/Reversible Chiller. Tuning tip: If the reference water temperature goes below "the set point minus the diff" in each cycle before the compressor(s) is started, the diff can be increased by the same amount that the temperature goes below that limit. This will allow a little more optimisation and result in a higher temperature set point. This in turn results in better heating comfort. NOTE! The heating diff in NESTOR, and NOT in the Swegon Heat pump/Reversible Chiller, shall be increased. The parameter is only relevant when using a Heat pump or Reversible Chiller.	3	0	10	K
Optimisation Cooling Diff.	The allowed difference between the set point and the reference water temperature. If the reference water temperature is between the set point value and the set point plus this value, optimisation is allowed. The value should normally have the same value as the cooling diff. in the Swegon Chiller/Reversible Chiller. Tuning tip: If the reference water temperature goes above "the set point plus the diff" in each cycle before the compressor(s) is started, the diff can be increased by the same amount that the temperature goes above that limit. This will allow a little more optimisation and result in a lower temperature set point. This in turn results in better heating comfort. NOTE! The cooling diff in NESTOR, and NOT in the Swegon Chiller/Reversible Chiller, shall be increased. The parameter is only relevant when using a Chiller or Reversible Chiller.	2	0	10	K
GOLD unique configurations					
Optimisation: Heating set point increase speed (K/min)	The speed at which the heating set point increases when optimisation is allowed, the delay time has elapsed and the valve is too open. Tuning tip: Increase this value if the heating power consumption varies often and the hot water temperature is sometimes too low. Decrease the value if the set point is periodically increasing and decreasing, and the tuning tip for the valve limits have already been performed without result.	0,5	0,01	10	K/ minute
Optimisation: Heating set point decrease speed (K/min)	The speed at which the heating set point decreases when optimisation is allowed, the delay time has elapsed and the valve is too closed. Tuning tip: Increase this value if the heating power consumption varies often and the hot water temperature is sometimes too high. Decrease the value if the set point is periodically increasing and decreasing, and the tuning tip for the valve limits have already been performed without result.	0,25	0,01	10	K/ minute
Optimisation: Cooling set point increase speed (K/min)	The speed at which the cooling set point increases when optimisation is allowed, the delay time has elapsed and the valve is too closed. Tuning tip: Increase this value if the cooling power consumption varies often and the cold water temperature is sometimes too low. Decrease the value if the set point is periodically increasing and decreasing, and the tuning tip for the valve limits have already been performed without result.	0,25	0,01	10	K/ minute
Optimisation: Cooling set point decrease speed (K/min)	The speed at which the cooling set point decreases when optimisation is allowed, the delay time has elapsed and the valve is too open. Tuning tip: Increase this value if the cooling power consumption varies often and the cold water temperature is sometimes too high. Decrease the value if the set point is periodically increasing and decreasing, and the tuning tip for the valve limits have already been performed without result.	0,5	0,01	10	K/ minute
Optimisation: Valve upper limit	The upper limit of the target zone for the valve position. Tuning tip: Set the gap between upper and lower valve limits to a slightly greater difference than the difference between the lowest and highest valve positions within a heating or cooling production cycle (from the compressor(s) being activated, until it is activated the next time). To save more energy, increase this upper limit. If a heating or cooling consumer does not get hot or cold enough water during some part of the cycle, decrease this upper limit.	70	20	100	%
Optimisation: Valve lower limit	The lower limit of the target zone for the valve position. Tuning tip: Set the gap between upper and lower valve limits to a slightly greater difference than that between the lowest and highest valve positions within a heating or cooling production cycle (from the compressor(s) being activated, until it is activated the next time). To save even more energy, increase this upper limit. If a heating or cooling consumer does not get hot or cold enough water during some part of the cycle, decrease this lower limit.	50	10	95	%
Optimisation: Delay	Delay time that must elapse before optimisation is allowed, when the reference water temperature "enters" the zone between the set point and the set point minus (plus for cooling) diff value. Tuning tip: If a cooling and heating production cycle is very short, this value can be decreased to allow optimisation before it is too late i.e. before the reference temperature leaves the zone between set point and set point minus (plus for cooling) diff. For systems with large volume (accumulator tanks) the value should be increased to achieve more stable set point optimisation. Decreasing the delay time can to some extent be compared to increasing the heating and cooling set point rates of change. Increasing the delay time can in turn be compared to decreasing the same.	1	0	60	minute
Heating supply set point	If optimisation is not activated for a particular GOLD unit, this value is used as the heating set point for that GOLD. If optimisation is activated, this value is the starting value for the optimised set point. When changing this value, the optimisation result (for the particular GOLD unit) is immediately updated to the new value for this parameter. Tuning tip: When starting up, set this value to what is believed to be a good hot water temperature for the moment.	35	5	60	°C
Cooling supply set point	If optimisation is not activated for a particular GOLD unit, this value is used as the cooling set point for that GOLD. If optimisation is activated, this value is the starting value for the optimised set point. When changing this value, the optimisation result (for the particular GOLD unit) is immediately updated to the new value for this parameter. Tuning tip: When starting up, set this value to what is believed to be a good cold water temperature for the moment.	15	-5	25	°C
External demand set point configuration					
External cooling demand set point	Set point for external cooling demand. See the description of the External cooling demand function for more information about how the value is used.	8	-50	50	°C
External heating demand set point	Set point for external heating demand. See the description of the External heating demand function for more information about how the value is used.	40	0	100	°C

Table 2. Temperature Set Points

APPENDIX A

Table 3: Operation Mode

Signal text	Description	Default	Min	Max	Device
Time channel					
Function	Selection of action in No occupancy and Occupancy respectively. Occupancy occurs when the actual time is within any of the 8-week based time channels OR when digital input 1 indicates Occupancy. Auto – Auto: Each GOLD works according to individual time channel settings. Auto, No cooling – Auto: The chiller is not allowed to produce cooling in No occupancy mode. Using this setting, but no time channels, results in cooling never being activated. Auto – Low speed: In No occupancy mode, each GOLD works according to individual time channel settings. In Occupancy mode, they run at low speed (or the higher prioritised <i>High speed</i> or <i>Stop</i> , set from local time channels for GOLD). Auto, No cooling – Low speed: Same as above, but the chiller is not allowed to produce cooling in No occupancy mode. Auto – High speed: In No occupancy mode, each GOLD works according to individual time channel settings. In Occupancy mode, they run at high speed (or the higher prioritised <i>Stop</i> , set from local time channels for GOLD). Auto, No cooling – High speed: Same as above, but the chiller is not allowed to produce cooling in the No occupancy mode. Low speed – High speed: In No occupancy mode, GOLD AHU runs at low speed (or the higher prioritised "high speed" or "stop" set from the local GOLD time channels). In Occupancy mode, they run at high speed (or the higher prioritised <i>Stop</i> , set from local time channels for GOLD). Low speed, No cooling – High speed: Same as above but the chiller is not allowed to produce cooling in No occupancy mode.	0	0	7	-
Operation mode switch	Selects whether the digital input 1 shall indicate Occupancy mode when it is closed or open. NO: When the input is closed, it activates Occupancy mode NC: When the input is open, it sets Occupancy mode	0	0	1	-
Period (for Time Channels 1 – 8)	Selects the type of repeating Occupancy "window".	0	0	10	
Start HH:MM (for Time channels 1 – 8)	Selects the start hour and minute for the repeating Occupancy "window".	00:00	00:00	23:59	hour: minute
Stop HH:MM (for Time channels 1 – 8)	Selects the end hour and minute for the repeating Occupancy "window".	00:00	00:00	23:59	hour: minute
Year channel					
Function (for Time channels 1 – 8)	Selection of action when the Year channel is active. The Year channel has higher priority than the Time channel. The Options are the following: Inactive: The Year channel is deactivated Stop, No cooling: Each GOLD unit is stopped and no cooling is allowed. Auto: Each GOLD works according to individual time channels. Auto, No Cooling: As above but no cooling is allowed. Low speed: Each GOLD AHU runs at low speed (or the higher prioritised "high speed" or "stop" set from the local GOLD time channels). Low speed, No Cooling: As above but no cooling is allowed. High speed: Each GOLD AHU runs at high speed (or the higher prioritised "stop" set from the local GOLD time channels). High speed, No Cooling: As above but no cooling is allowed.	0	0	7	-
Start date (for Time channels 1 – 8)	Selects the start date for the one time appearance of the Year channel action.	2012-01-01	2010-01-01	2100-12-31	year: month: day
Start HH:MM (for Year channels 1 – 8)	Selects the start hour and minute for the one time appearance of the Year channel action.	00:00	00:00	23:59	hour: minute
End date (for Year channels 1 – 8)	Selects the end date for the one time appearance of the Year channel action.	2012-01-01	2010-01-01	2100-12-31	year: month: day
Stop HH:MM (for Year channels 1 – 8)	Selects the end hour and minute for the one time appearance of the Year channel action.	00:00	00:00	23:59	hour: minute

Table 3. Operation Mode

Table 4: Time Controlled Output

Signal text	Description	Default	Min	Max	Device
Time channel					
Period (for Time Channel 1-3)	Selects the type of repeating " " window " " to set the digital output 3 within.	0	0	10	-
Start HH:MM (for Time channels 1 – 3)	Selects the start hour and minute for the repeating "window".	00:00	00:00	23:59	hour: minute
Stop HH:MM (for Time channels 1 – 3)	Selects the end hour and minute for the repeating "window".	00:00	00:00	23:59	hour: minute
Year channel					
Function (for Year channels 1 – 3)	Activate/deactivate use of the Year channel to set digital output 3.	0	0	1	-
Start date (for Year channels 1 – 3)	Selects the start date for the one time appearance of the Year channel action.	2012-01-01	2010-01-01	2100-12-31	year: month: day
Start HH:MM (for Year channels 1 – 3)	Selects the start hour and minute for the one time appearance of the Year channel action.	00:00	00:00	23:59	hour: minute
End date (for Year channels 1 – 3)	Selects the end date for the one time appearance of the Year channel action.	2012-01-01	2010-01-01	2100-12-31	year: month: day
Stop HH:MM (for Year channels 1 – 3)	Selects the end hour and minute for the one time appearance of the Year channel action.	00:00	00:00	23:59	hour: minute

Table 4. Time Controlled Output

Table 5: Alarm List

Signal text	Description
Date of appearance	Date and time when the alarm appeared
Date of recovery	Date and time when the alarm recovered. This field is empty if the alarm is still active
Device type	The device type which generates alarms. Possible types: NESTOR, Swegon Chiller/Heat pump, GOLD AHU, Super WISE, Zone controllers, Room controllers, Room slave controllers
Location ID	The ID number of the unit that generates the alarm. Single (1–8) denotes the product at system level, which can be a GOLD unit, a Super WISE or a Swegon Chiller/Heat pump. Zone controllers (always connected to a Super WISE) are shown with three digits in the A B C format, where A is the number of the Super WISE to which it is connected, B is the zone number and C is the number of the duct/damper in the zone. Room controllers (always connected to one zone controller) are shown with four digits in the A B C format, where A, B and C have the same meaning as for one zone controller and D is the number of the room. Room slave controllers (always connected to a zone controller) are shown with five numbers as A-B-C-D-E where A, B, C and D indicate the same as for a room controller and E is the slave number.
Local Alarm No	The alarm number in the device. Alarms for Version E GOLD units are displayed as group and alarm number (e. g.: 10:10).
Priority	Can be A or B where A has the highest priority.
Class	Device type class, which is: System products for Swegon Chiller/Heat pump and NESTOR. Air production for one GOLD unit. Climate supply for Super WISE, zone controller, room controller, slave room controller.
Comment	Field for adding any additional information text

Table 5. Alarm List

Table 6: NESTOR configuration

Signal text	Description	Default	Min	Max	Device
TCP/IP SETTINGS					
Static IP/DHCP	Alternatives are: DHCP and Static IP If a DHCP server is accessible, it is recommendable to use this server. IP conflicts can then be avoided by using DHCP. Static IP means that the NESTOR 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 the selected IP address does not end up in conflict with another IP address.	1 (Static IP)	0	1	-
Domain name		-	-	-	-
MAC address	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.	-	-	-	-
IP address	Displays the assigned IP address when using a DHCP server. Input field for the IP address to use when using Static IP.	10.200.1.1	0.0.0.0	255.255.255.255	-
Web server port					
Subnet mask					
Gateway					
Primary DNS					
Secondary DNS					
Date/Time					
Date	Input field for configuration of the current date	2000-01-01	2000-01-01	2099-12-31	
Time	Input field for configuration of the current day	00:00:00	00:00:00	23:59:59	

Table 6. NESTOR configuration

Table 7: System Product Connection

Signal text	Description	Default	Min	Max	Device
Blue Box					
Type	Swegon Chiller/Heat pump type is selected as "None", "Heating" (Heat pump), "Cooling" (Chiller), "Reversible" or "Hybrid system".	0 (none)	0	4	-
Port	Not relevant	-	-	-	-
ModBus ID	Modbus ID for the Swegon Chiller/Heat pump control interface. Should be 70.	70	1	255	-
Name	Input field. Name of the product which is displayed in the System Overview page.	-	-	-	-
External sources					
External heat source	Activates external heating. Is automatically activated if <i>Hybrid system</i> is selected as Swegon Chiller/Heat pump type.	0	0	1	-
External cool source	Activates external cooling. Is automatically activated if <i>Hybrid system</i> is selected as Swegon Chiller/Heat pump type.	0	0	1	-
External demands					
External heating demand activation	Activates (enables use of) external heating demand on digital input (DI) 2.	0	0	1	-
External cooling demand activation	Activates (enables use of) external cooling demand on digital input (DI) 3.	0	0	1	-
GOLD AHU					
Connected	Connect the actual GOLD AHU to NESTOR. Select this after the correct IP number is given for the unit.	0	0	1	-
IP number	IP number for the actual GOLD AHU	0.0.0.0	0.0.0.0	255.255.255.255	-
Port	Port number in the actual GOLD AHU to use for the Modbus TCP communication with NESTOR. Normally, this is 502.	502	1	30000	-
Name	Input field. Name of the product which is displayed in the System Overview page.	-	-	-	-
Connected Super WISE	Select the number of the Super WISE, if any, which is connected to the actual GOLD AHU.	0 (none)	0	8	-
Remote Access port	The port mapping number for which the GOLD unit can be connected by Remote Access.	80	0	10000	-
GOLD version	As the GOLD version, select "Version D" or "Version E".	1	0	1	-
Super WISE					
Connected	Connect the actual Super WISE to NESTOR. Select this after the correct IP number is given for the unit.	0	0	1	-
IP number	IP number for the actual Super WISE	0.0.0.0	0.0.0.0	255.255.255.255	-
Modbus port	Port number in the actual Super WISE to use for the Modbus TCP communication with NESTOR. Normally, this is 502.	502	1	30000	-
Remote Access port	The port mapping number for which the Super WISE unit can be connected by Remote Access.	80	0	10000	-
Name	Input field. Name of the product which is displayed in the System Overview page.	-	-	-	-

Table 7. System Product Connection

Table 8: System Product Config

Signal text	Description	Default	Min	Max	Device
GOLD AHU					
Name	Input field. Name of the product which is displayed in the System Overview page. Same field as in the System Product Connection page.	-	-	-	-
Use NESTOR Operation Mode (Override)	Select this to get the particular GOLD AHU affected by the NESTOR operation mode.	0	0	1	-
Valid internal outdoor sensor	The GOLD unit's INTERNAL outdoor temperature sensor is treated as <i>reliable</i> or <i>valid</i> , which means it can be used as the system outdoor temperature if no external sensor is selected in the Functions->Temperature Control tab or if the selected external sensor is not available.	0	0	1	-
Use system outdoor temperature	The particular GOLD unit will obtain and use the system outdoor temperature. If not selected, the GOLD unit will use its own temperature setting according to a standard routine.	0	0	1	-
Use Optimisation	Select this setting to use the cooling and heating temperature set point optimisation. Other configuration of the optimisation is done on the Functions->Temperature set points tab.	1	0	1	-
OH	Select this if the Ordinary heating sequence for supply air heating is fed by the NESTOR heating source. Note that if it uses an electrical heating coil it is not fed by the NESTOR source. Hence, it should not be selected.	0	0	1	-
EH	Select this if the <i>Extra heating</i> sequence for supply air heating is fed by the NESTOR heating source.	0	0	1	-
XH	Select this if the <i>Xzone heating</i> sequence is fed by the NESTOR heating source.	0	0	1	-
AYCH	Select this if the <i>All Year Comfort heating</i> is fed by the NESTOR heating source.	0	0	1	-
PH	Select this if the <i>Preheating</i> is fed by the NESTOR heating source.	0	0	1	-
OC	Select this if the <i>Ordinary cooling</i> sequence for supply air cooling is fed by the NESTOR cooling source.	0	0	1	-
EC	Select this if the <i>Extra cooling</i> sequence for supply air cooling is fed by the NESTOR cooling source.	0	0	1	-
XC	Select this if the <i>Xzone cooling</i> sequence is fed by the NESTOR cooling source.	0	0	1	-
AYCC	Select this if the <i>All Year Comfort cooling</i> is fed by the NESTOR cooling source.	0	0	1	-

Table 8. System Product Config