

Quick configuration guide

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1 About this document

This document describes how to setup functions in your Access controller and contains quick configuration guides for the most common functions. All available functionality is described in detail in the "Access 4x configuration manual" available on the online catalogue for products using the Access control platform.

2 How to set up a function

To set up a function in the access controller you need to be logged in as Service to access the configuration menu. After login you follow a 4-step procedure to successfully setup the function. Please note that not all functions require all four steps. The general procedure for setting up a function is described below. Function specific configuration guides are found later in the document.

2.1 Login

Log in with service mode using password 0612.

Overview:

	Service
	0612
	Login

Step by step:

1.  Open the log in window
2.  Select service from drop down list
3.  Type in password 0612
4.  Press Login.

2.2 Activation

Configuration > Function Configuration > Function activation

Activate a function in a list of available functions (e.g. heater).

2.3 Configuration

Configuration > Function Configuration

Select the function's configuration (e.g. if heater is water, electric etc.).

2.4 Allocation

Configuration > I/O allocation settings

Select the I/O (in-/output) placement of the connected signals and sensors. Configure I/O settings (sensor measuring range, polarity, edit name of sensor/signal etc.).



Caution

Do not use the same in- or output for several functions.

2.5 Operation settings

Data & settings

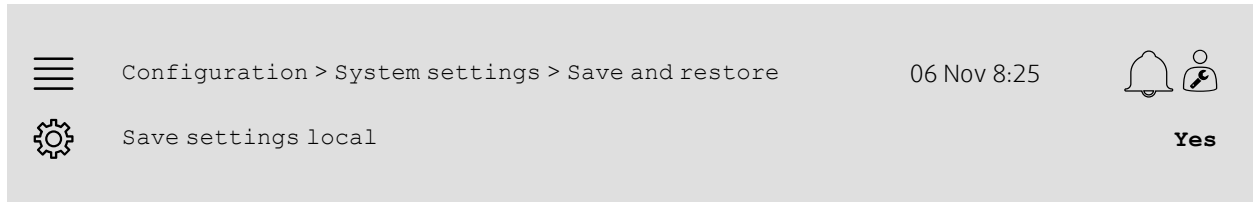
Setup how the function will work (e.g. setpoints, limits etc.)

3 Save commissioning settings

When the installation is complete and all functions are tested it is recommended to save a local backup of the current configuration in the control unit.

Select **Yes** on **Save settings local** in the **Configuration > System settings > Save and restore** menu.

Overview:



Step by step:

1.  Select Configuration from the navigation icons
2. Select System settings
3. Select Save and restore
4. Select **Yes** on Save Settings local.

4 Quick configuration guides

4.1 Editable naming

The access control unit interface allow for editable naming of the air handling unit, I/O's (in-/outputs), heating/cooling sequences and alarms. Edit name in the control unit is done in the Configuration submenus by editing the menu row Name. Edited names persist if a new language is selected but the menu row Original name will always be translated and can be used for reference.

4.1.1 Air handling unit naming

The air handling unit's name is shown in the top-right of the "Home" screen. Edit the name by changing the menu row Controller name found in the Configuration > System settings > Device list menu.

Overview:

	Configuration > System settings > Device list	06 Nov 8:25	 
	Controller name		Unit name

Step by step:

-  Select Configuration from the navigation icons
- Select System settings
- Select Device list
- Edit the name of the air handling unit by selecting Controller name.

4.1.2 I/O naming

Change the name of an I/O (in-/outputs), for example a temperature sensor, by selecting the desired I/O function in the Configuration > I/O allocation settings sub menus and changing the menu row Name.

Overview:

	Configuration > I/O allocation settings > Analog inputs	06 Nov 8:25	 
	Controller name	Device	Signal
	Supply air temperature	Controller	AI2

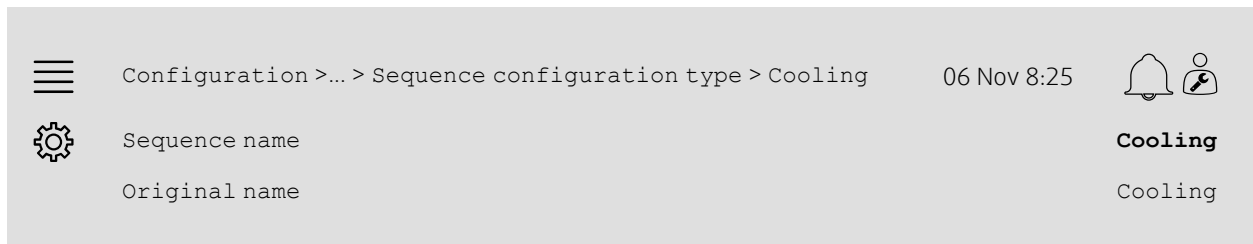
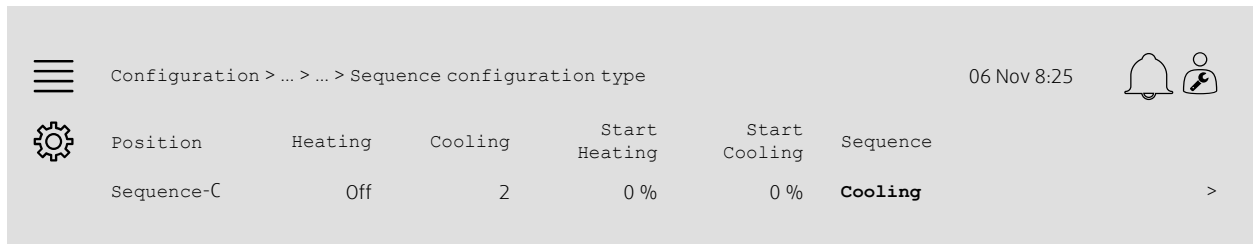
	Configuration >... > Analog inputs > Supply air temperature	06 Nov 8:25	 
	Name	Supply air temperature	
	Original name	Supply air temperature	

Step by step:

-  Select Configuration from the navigation icons
- Select I/O allocation settings
- Select the submenu related to the I/O to rename (e.g Analog inputs if temperature sensor)
- Select the I/O function of which to rename (e.g Supply air temperature)
- Edit the name of the I/O (in-/outputs) by selecting Name.

4.1.3 Sequence naming

Change the name of a heating/cooling sequence by selecting the desired sequence in the Configuration > Function configuration > Function activation > Sequence configuration type menu and changing the menu row Sequence Name.



Step by step:

1.  Select Configuration from the navigation icons
2. Select Function configuration
3. Select Function activation
4. Select Sequence configuration type
5. Select the sequence to rename (e.g Cooling)
6. Edit the name of the sequence by selecting Sequence Name.

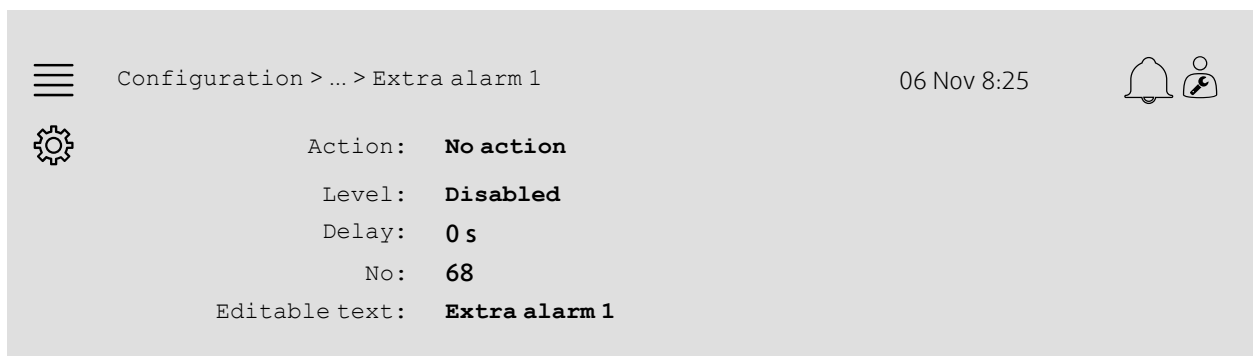
4.1.4 Alarm naming

How to edit alarm names are described in chapter 4.2.

4.2 Alarm configuration

Configure any alarm available in the controller in the Configuration > Alarm configuration menu.

Overview:



Step by step:

1.  Select Configuration from the navigation icons
2. Select Alarm configuration
3. Select the desired alarm after scrolling through the list of all alarms and identifying the alarm via either name or alarm number
4. Select the action the unit will take when the alarm is active (e.g Normal stop) as Action

5. Select the desired Alarm class or disable the alarm (e.g Class B) as Level
6. Adjust the time before the alarm activates as Delay
7. Adjust the name of the alarm as Editable text.

4.3 Fan control type (Pressure)

4.3.1 Activation

Activate pressure control.

Select Fan control type as Pressure in the Configuration > Function configuration > Function activation menu.

Overview:

	Configuration > Function Configuration > Function activation	06 Nov 8:25	 
	Fan control type	Pressure	

Step by step:

1.  Select Configuration from the navigation icons
2. Select Function configuration
3. Select Function activation
4. Select Pressure as Fan control type.

4.3.2 Allocation

Setup differential pressure sensors.

Select I/O (in-/output) placement for where the differential pressure sensors are connected. Set the sensors' signal and corresponding measuring range in the Configuration > I/O allocation settings > Analog inputs menu.



Caution

Do not use the same in- or output for several functions.

Overview:

	Configuration > I/O allocation settings > Analog inputs	06 Nov 8:25	 
	Analogue inputs	Device	Signal
	Pressure supply air	Controller	UAI2
	Pressure extract air	Controller	UAI1

	Configuration > ... > Analog inputs > Pressure supply air	06 Nov 8:25	 
	Volt minimum		0.0 V
	Volt maximum		10.0 V
	Minimum		0.0
	Maximum		500.0

Step by step:

-  Select Configuration from the navigation icons
- Select I/O allocation settings
- Select Analog inputs
- Select the input connected to the sensor (e.g. UAI2) as signal for Pressure supply air
- Select the input connected to the sensor (e.g. UAI1) as signal for Pressure extract air
- Select Pressure supply air
- Set Minimum the same as the start point of the sensor's selected measuring range
- Set Maximum the same as the end point of the sensor's selected measuring range
- Set Volt minimum and Volt maximum to values corresponding to the sensor's signal type (e.g. 0...10V, 2...10V etc.)
- Go back to Analog inputs (use the navigation path Configuration > I/O allocation settings > Analog inputs)
- Select Pressure extract air and repeat steps 7 through 9.

4.3.3 Operation settings

Adjust the fan pressure set points in the Data & Settings > Fan Control > Main settings menu.

Overview:

	Data & settings > Fan control > Main settings	06 Nov 8:25	 
	Setpoint low speed supply air fan		100 Pa
	Setpoint low speed extract air fan		100 Pa
	Setpoint normal speed supply air fan		200 Pa
	Setpoint normal speed extract air fan		200 Pa
	Setpoint high speed supply air fan		200 Pa
	Setpoint high speed extract air fan		200 Pa

Step by step:

-  Select Data & settings from the navigation icons
- Select Fan control
- Select Main settings
- Select and adjust setpoints for the available fan speed levels.

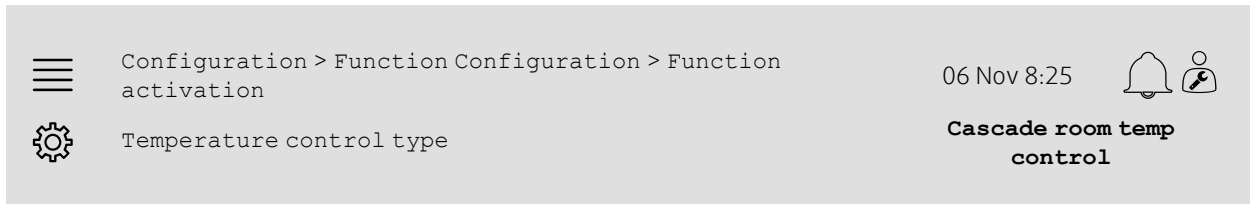
4.4 Temperature control type (Room)

4.4.1 Activation

Activate room temperature control.

Select Cascade room temp control as temperature control type in the Configuration > Function configuration > Function activation menu.

Overview:



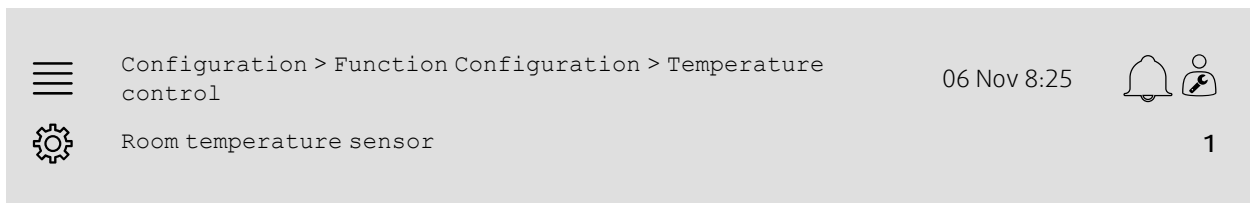
Step by step:

1.  Select Configuration from the navigation icons
2. Select Function configuration
3. Select Function activation
4. Select Cascade room temp control as Temperature control type.

4.4.2 Configuration

Configure the number of connected room temperature sensors in the Configuration > Function configuration > Temperature control menu.

Overview:



Step by step:

1.  Select Configuration from the navigation icons
2. Select Function configuration
3. Select Temperature control
4. Select number of connected Room temperature sensors

4.4.3 Allocation

Select I/O (in-/output) placement for where the room temperature sensors are connected to the controller in the Configuration > I/O allocation settings > Analog inputs menu.

Overview:

	Configuration > I/O allocation settings > Analog inputs	06 Nov 8:25	 
	Analogue inputs	Device	Signal
	Room temperature 1	Controller	Not used
	Room temperature 2	Controller	Not used
	Room temperature 3	Controller	Not used
	Room temperature 4	Controller	Not used

Step by step:

-  Select Configuration from the navigation icons
- Select I/O allocation settings
- Select Analog inputs
- Select the input connected to the sensor (e.g. UAI1) as signal for Room temperature 1/2/3/4
- Repeat step 4 for any remaining room temperature sensors.

4.4.4 Operation settings

Adjust the room temperature setpoint in the Data & Settings > Temperature control > Room air controller menu.

Adjust limits for the supply air controller in the Data & Settings > Temperature control > Supply air controller menu.

Overview:

	Data & settings > Temperature Control > Room controller	06 Nov 8:25	 
	Setpoint room air		22.0 °C

	Data & settings > Temp Control > Supply air controller	06 Nov 8:25	 
	Minimum limit supply air		14.0 °C
	Maximum limit supply air		30.0 °C

Step by step:

1.  Select Data & settings from the navigation icons
2. Select Temperature control
3. Select Room air controller
4. Adjust Setpoint room air to the desired temperature setpoint
5. Go back to Temperature control (use the navigation path Data & Settings > Temperature control > Room air controller)
6. Select Supply air controller
7. Set Minimum limit supply air to the lowest permitted supply air temperature
8. Set Maximum limit supply air to the highest permitted supply air temperature

4.5 Extended operation

4.5.1 Activation

Select Yes on Extended operation in the Configuration > Function configuration > Function activation menu.

Overview:

	Configuration > Function Configuration > Function activation	06 Nov 8:25	 
	Extended operation		Yes

Step by step:

1.  Select Configuration from the navigation icons
2. Select Function configuration
3. Select Function activation
4. Select Yes on Extended operation.

4.5.2 Configuration

Select which of the configured fan speeds to enable extended operation for in the Configuration > Function Configuration > Extended operation menu.

Overview:

	Configuration > Function Configuration > Extended operation	06 Nov 8:25	 
	Extended operation low		No
	Extended operation Normal		Yes
	Extended operation High		Yes

Step by step:

1.  Select Configuration from the navigation icons
2. Select Function configuration
3. Select Extended operation
4. Select Yes for desired extended operation fan speeds

4.5.3 Allocation

Select I/O (in-/output) placement for the extended operation speeds in the Configuration > I/O allocation settings > Digital inputs menu

Overview:

	Configuration > I/O allocation settings > Digital inputs	06 Nov 8:25	 
	Digital inputs	Device	Signal
	Extended operation low speed	Controller	Not used
	Extended operation normal speed	Controller	DI4
	Extended operation high speed	Controller	Not used

Step by step:

-  Select Configuration from the navigation icons
- Select I/O allocation settings
- Select Digital inputs
- Select the input of the extended operation (e.g. DI4) as signal for Extended operation low speed, Extended operation normal speed, Extended operation high speed
- Repeat step 4 for any remaining extended operation speeds.

4.5.4 Operation settings

Adjust extended operation time to the desired stop delay in the Data & Settings > Operation overview > Control overview menu.

Overview:

	Data & settings > Operation Overview > Control Overview	06 Nov 8:25	 
	Extended Operation time		0 min

Step by step:

-  Select Data & settings from the navigation icons
- Select Operation Overview
- Select Control Overview
- Set the desired stop delay as Extended operation time

4.6 Fan compensation

4.6.1 Activation

Select Yes for Fan Compensation in the Configuration > Function Configuration > Function Activation menu.

Overview:

	Configuration > Function Configuration > Function activation	06 Nov 8:25	 
	Fan Compensation		Yes

Step by step:

-  Select Configuration from the navigation icons
- Select Operation Overview
- Select Control Overview
- Set Yes ON Fan Compensation

4.6.2 Configuration

Select and configure a fan compensation curve in the Configuration > Function configuration > Fan compensation menu.

Overview:

	Configuration > Fan compensation	06 Nov 8:25	 
	Fan Compensation curve 1		>
	Fan Compensation curve 2		>
	Fan Compensation curve 3		>

	Configuration > Fan compensation > Fan Compensation curve 1	06 Nov 8:25	 
	Speed		All speeds
	Mode		Off
	Fan		Supply air fan and exhaust air fan
	Sensor		Not used

Step by step:

-  Select Configuration from the navigation icons
- Select Function configuration
- Select Fan compensation curve 1/2/3
- Select which fan speed(s) the compensation curve should apply to as Speed
- Select when the compensation curve is active as Mode
- Select which fan the compensation curve applies to as Fan
- Select which of the configured sensors to use for compensation.

4.6.3 Operation settings

Set up fan setpoint compensation values and sensor input values for the curve points in the Data & Settings > Fan control > Fan compensation menu.

Overview:

	Data & settings > Fan control > Fan Compensation	06 Nov 8:25	 
	Fan compensation curve 1		>
	Fan compensation curve 2		>
	Fan compensation curve 3		>

	Data & settings > ... > Fan compensation > Fan compensation curve 1	06 Nov 8:25	 
	Compensation curve	Input	Compensation
	Lower point	10.0 °C	0.0 m³/h
	Middle point	20.0 °C	400.0 m³/h
	Higher point	25.0 °C	500.0 m³/h

Step by step:

1.  Select Data & settings from the navigation icons
2. Select Fan control
3. Select Fan compensation
4. Select Fan compensation curve 1/2/3
5. Set up Lower point
 - a. Set the lowest sensor value for compensation as Input
 - b. Set the desired fan setpoint compensation at that sensor value as Compensation
6. Set up Middle point
 - a. Set a middle sensor value for compensation as Input
 - b. Set the desired fan setpoint compensation at that sensor value as Compensation
7. Set up Higher point
 - a. Set the highest sensor value for compensation as Input
 - b. Set the desired fan setpoint compensation at that sensor value as Compensation

4.7 CO2 control (Fan start/stop)

4.7.1 Activation

Activate the start/stop function for CO2 control from the list of available functions in the Configuration > Function configuration > Function activation menu.

Overview:

	Configuration > Function configuration > Function activation	06 Nov 8:25	 
	CO2 Control	Start/Stop function	

Step by step:

-  Select Configuration from the navigation icons
- Select Function configuration
- Select Function activation
- Press CO2 Control
- Select Start/Stop function from drop down list.

4.7.2 Configuration

Select which fan speeds the unit should start/run on when CO2 control Start/Stop function is active in the Configuration > Function configuration > CO2 Control menu.

Overview:

	Configuration > Function configuration > CO2 control	06 Nov 8:25	 
	Run exhaust air fan when active	Yes	
	Supply air fan mode	Normal speed	
	Exhaust air fan mode	Normal speed	

Step by step:

-  Select Configuration from the navigation icons
- Select Function configuration
- Select CO2 control
- Set the desired supply air fan speed for CO2 Control Start/Stop function as Supply air fan mode
- Set the desired extract air fan speed for CO2 Control Start/Stop function as Exhaust air fan mode.

4.7.3 Allocation

Select I/O (in-output) placement for where the CO₂ sensor is connected to the controller in the Configuration > I/O allocation settings > Analog inputs menu.

Overview:

	Configuration > I/O allocation settings > Analog inputs	06 Nov 8:25	 
	Analog inputs	Device	Signal
	CO₂ room/extract air	Controller	UA13

	Configuration > ... > Analog inputs > CO ₂ room/extract air	06 Nov 8:25	 
	Volt minimum		0.0 V
	Volt maximum		10.0 V
	Minimum		0.0
	Maximum		2000.0

Step by step:

-  Select Configuration from the navigation icons
- Select I/O allocation settings
- Select Analog inputs
- Select the input connected to the sensor (e.g. UA13) as signal for CO₂ room/extract air
- Select CO₂ room/extract air
- Set Minimum the same as the start point of the sensor's selected measuring range
- Set Maximum the same as the end point of the sensor's selected measuring range
- Set Volt minimum and Volt maximum to values corresponding to the sensor's signal type (e.g. 0...10 V, 2...10 V etc.)

4.7.4 Operating settings

Adjust CO2 limits for the start/stop function and adjust the minimum run time for CO2 control in the Data & Settings > Demand control > CO2 menu.

Overview:

	Data & settings > Demand control > CO2	06 Nov 8:25	
	Start limit		800 ppm
	Hysteresis		160 ppm
	Minimum time for CO2 control		20 min

Step by step:



Note:

Setpoint CO2 not active for this configuration.

1.  Select Data & settings from the navigation icons
2. Select Demand control
3. Select CO2
4. Set Start limit to the desired CO2 level to start the start/stop function
5. Set Hysteresis to the desired amount that the CO2 level needs to decrease before CO2 function.

4.8 Fire/Smoke function (Fire)

4.8.1 Activation

Activate the Fire function by selecting the Fire option for Fire/Smoke in the list of available functions in the Configuration > Function configuration > Function activation menu.

Overview:

	Configuration > Function Configuration > Function activation	06 Nov 8:25	
	Fire/Smoke		Fire

Step by step:

1.  Select Configuration from the navigation icons
2. Select Function configuration
3. Select Function activation
4. Select Fire as Fire/Smoke

4.8.2 Configuration

Configure the operation of the air handling unit, outdoor/exhaust air dampers, the fan setpoints and fire damper function when Fire alarm in the Configuration > Function Configuration > Fire/Smoke submenus.

Overview:

	Configuration > ... > Fire/Smoke > Fans	06 Nov 8:25	 
	Operation mode when fire alarm	Stopped	
	Supply air fan setpoint type when fire alarm	Off/Auto normal setpoint	
	Extract air fan setpoint type when fire alarm	Off/Auto normal setpoint	

	Configuration > ... > Fire/Smoke > Fire damper	06 Nov 8:25	 
	Mode	Dampers normally opened	
	Test	Test with unit stopped	
	Outdoor air damper function when fire alarm	Normal function (follow the fan)	
	Exhaust air damper function when fire alarm	Normal function (follow the fan)	

Step by step:

-  Select Configuration from the navigation icons
- Select Function configuration
- Select Fire/Smoke
- Select Fans
- Select desired air handling unit's operation when fire alarm as Mode
- Select desired fan setpoint type as Supply air fan setpoint type when fire alarm
- Select desired fan setpoint type as Extract air fan setpoint type when fire alarm
- If either Manual setpoint or Manual output was selected set the desired value in the corresponding menu row now visible
- Go back to Fire/Smoke (use the navigation path Configuration > Function Configuration > Fire/Smoke)
- Select Fire damper
- Select the normal position of the fire dampers or if fire damper function should not be used as Mode
- Select if and how the fire dampers shall be tested as Test
- Select the operation of the outdoor/exhaust air damper when fire alarm as Outdoor air damper function, Exhaust air damper function when fire alarm.

4.8.3 Allocation

Select I/O (in-/output) placement of where fire alarm activation input, fire damper output and position feedback input are connected to the controller in the Configuration > I/O allocation settings submenus Digital inputs and Digital outputs.

Overview:

	Configuration > I/O allocation settings > Digital inputs	06 Nov 8:25	 
	Digital inputs	Device	Signal
	Fire alarm	Controller	DI5
	Fire damper position switch	Controller	DI6

	Configuration > I/O allocation settings > Digital outputs	06 Nov 8:25	 
	Digital outputs	Device	Signal
	Fire damper	Controller	DO5

Step by step:

-  Select Configuration from the navigation icons
- Select I/O allocation settings
- Select Digital inputs
- Select the input connected to the fire alarm contact/sensor (e.g. DI5) as signal for Fire alarm



Note:

Step 5-8: Only applicable if fire dampers are configured.

- Select the input connected to the fire damper position switches (e.g. DI6) as signal for Fire damper position switch
- Go back to I/O allocation settings (use the navigation path Configuration > I/O allocation settings)
- Select Digital outputs
- Select the output connected to the fire damper (e.g. DO5) as signal for Fire damper.

4.8.4 Operation settings

Set up the Fire damper test settings in the Data & Settings > Fire/Smoke menu.



Note:

Only applicable if fire damper test is configured.

Overview:

	Data & settings > Fire/Smoke	06 Nov 8:25	
	Running time		90 s
	Pump-kick interval		7 days
	Pump-kick hour		15

Step by step:

1. Select Data & settings from the navigation icons
2. Select Fire/Smoke
3. Set max allowed fire damper run time as Running time
4. Set day interval between fire damper tests as Pump-kick interval
5. Select hour (1-24) for start of fire damper test as Pump-kick hour, e.g 15 means the fire damper test will initiate at 3 pm (15:00) on test day.

4.9 Free cooling

4.9.1 Activation

Select Yes as Free Cooling from the list of available functions in the Configuration > Function configuration > Function activation menu.

Overview:

	Configuration > Function Configuration > Function activation	06 Nov 8:25	
	Free cooling		Yes

Step by step:

1. Select Configuration from the navigation icons
2. Select Function configuration
3. Select Function activation
4. Select Yes as Free Cooling

4.9.2 Operation settings

Set up all operation parameters for the free cooling function in the Data & Settings > Demand control > Free cooling menu.

Overview:

	Data & settings > Demand control > Free cooling	06 Nov 8:25	 
	Running when day outdoor temperature >	22 °C	
	Stop when night outdoor temperature >	18 °C	
	Stop when night outdoor temperature <	10 °C	
	Stop when room temperature <	18 °C	
	Free cooling start hour	0	
	Free cooling stop hour	7	
	Time to block heat output after free cooling	60 min	
	Fan-kick test temperature	180 s	
	Interval time fan-kick	60 min	

Step by step:

1.  Select Data & settings from the navigation icons
2. Select Demand control
3. Select Free Cooling
4. Set day outdoor temperature min. limit to allow start of free cooling as Running when day outdoor temperature >
5. Set outdoor temperature interval during night where free cooling is allowed as Stop when night outdoor temperature >/<
6. Set Room/Extract air temperature min. limit to stop free cooling
7. Set a time interval for when free cooling is allowed to run (0-24) as Free cooling start/stop hour, e.g. 0-7 means free cooling will run between 12 am (12:00) and 7 am (07:00) if allowed by the temperature limits)
8. Set the desired time to block heating output from the controller after free cooling
9. Set the desired fan run time for checking the outdoor temperature with an intake temperature sensor
10. Set the time delay between outdoor temperature checks with an intake temperature sensor.

4.10 External cooler (DX)

4.10.1 Activation

Select and activate an unused cooling sequence (C, H or J) in the Configuration > Function configuration > Function activation > Sequence configuration type menu.

Overview:

	Configuration > ... > ... > Sequence configuration type					06 Nov 8:25		
	Position	Heating	Cooling	Start Heating	Start Cooling	Sequence		
	Sequence-C	off	2	0 %	0 %	Cooling		>
	Sequence-H	off	3	0 %	0 %	Cooling 2		>
	Sequence-J	off	off	0 %	0 %	External heating/ cooling capacity		>

Step by step:

-  Select Configuration from the navigation icons
- Select Function configuration
- Select Function activation
- Select Sequence configuration type
- Assign the activation order for the cooling sequence by selecting number (1-10) in column Cooling for Sequence-C, -H or -J



Note:

Off = Sequence not activated. Sequence with lower number activates before sequence with higher number.

4.10.2 Configuration

Configure what type of cooler is connected in the Configuration > Function configuration > Function activation > Sequence configuration type > Cooling menu.

Overview:

	Configuration > ... > Sequence configuration type > Cooling					06 Nov 8:25		
	Type of sequence	Cooling						
	Type of cooler	DX						
	Type of sequence indication	Alarm						

Step by step:

-  Select Configuration from the navigation icons
- Select Function configuration
- Select Sequence configuration type
- Select Sequence-C
- Set Type of sequence to Cooling
- Select the type of cooler (e.g. DX)
- Select the type of feedback from the cooler as Type of sequence indication (e.g. Alarm or Run indication).

4.10.3 Allocation

Select I/O (in-output) placement of where the cooler control signal output, digital start output and feedback input are connected to the controller in the Configuration > I/O allocation settings submenus Digital outputs, Digital inputs and Analog outputs.

Overview:

	Configuration > I/O allocation settings > Digital inputs	06 Nov 8:25	 
	Digital inputs	Device	Signal
	Feedback Sequence-C	Controller	UDI4

	Configuration > I/O allocation settings > Analog outputs	06 Nov 8:25	 
	Analog outputs	Device	Signal
	Cooling	Controller	AO4

	Configuration >... > Analog outputs > Cooling	06 Nov 8:25	 
	Range output		0-10 V

	Configuration > I/O allocation settings > Digital outputs	06 Nov 8:25	 
	Digital outputs	Device	Signal
	Sequence-C start	Controller	DO4

Step by step:

-  Select Configuration from the navigation icons
- Select I/O allocation settings
- Select Digital inputs
- Select the input connected to the cooler's feedback contact (e.g. UDI4) as signal for Feedback sequence-C
- Go back to I/O allocation settings (use the navigation path Configuration > I/O allocation settings)
- Select Analog outputs
- Select the analog output connected to the cooler control signal (e.g. AO4) as signal for Cooling
- Select Cooling
- Adjust Range output to fit with the signal range of the external cooler (e.g. 2-10 V)
- Go back to I/O allocation settings (use the navigation path Configuration > I/O allocation settings)
- Select Digital outputs
- Select the digital output connected to the cooler (e.g. DO4) as signal for Sequence-C start

4.10.4 Operation settings

Adjust the start/stop point for the digital output: Sequence-C start in the Data & Settings > Temperature control > Cooling menu.

Overview:

	Data & settings > Temperature Control > Cooling	06 Nov 8:25	 
	Step start point		10 %
	Step stop point		1 %

	Data & settings > Temperature Control > Supply air controller	06 Nov 8:25	 
	Minimum limit supply air		14 °C
	Maximum limit supply air		30 °C
	Lower minimum limit for supply air control on actual DX-cooling		5 °C

Step by step:

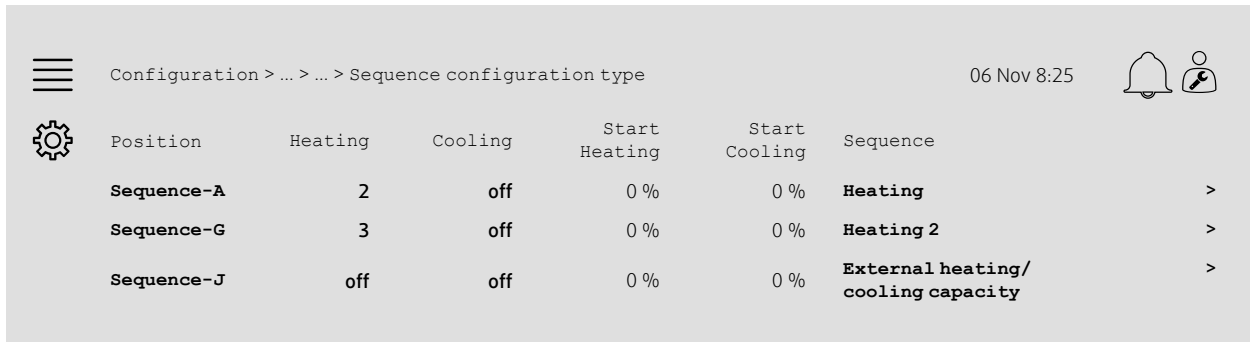
-  Select Data & settings from the navigation icons
- Select Temperature control
- Select Cooling
- Set the desired output % to activate the digital output as Step start point
- Set the desired output % to deactivate the digital output as Step stop point
- Go back to Temperature control (use the navigation path Data & Settings > Temperature control)
- Select Supply air controller
- Adjust the min. allowed supply air temperature when DX-Cooling is active as Lower minimum limit for supply air control on actual DX-cooling.

4.11 External heater (Water)

4.11.1 Activation

Select and activate an unused heating sequence (A, G or J) in the Configuration > Function configuration > Function activation > Sequence configuration type menu.

Overview:



Position	Heating	Cooling	Start Heating	Start Cooling	Sequence	
Sequence-A	2	off	0 %	0 %	Heating	>
Sequence-G	3	off	0 %	0 %	Heating 2	>
Sequence-J	off	off	0 %	0 %	External heating/ cooling capacity	>

Step by step:

1.  Select Configuration from the navigation icons
2. Select Function configuration
3. Select Function activation
4. Select Sequence configuration type
5. 5. Assign the activation order for the heating sequence by selecting number (1-10) in column Heating for Sequence-A, -G or -J



Note:

Note! Off = Sequence not activated. Sequence with lower number activates before sequence with higher number.

4.11.2 Configuration

Configure what type of heater that is connected (e.g. water) and additional functions such as freeze protection and pump control in the Configuration > Function configuration > Sequence configuration type > Heating menu.

Overview:

	Configuration > ... > Sequence configuration type > Heating	06 Nov 8:25	 
	Type of sequence		Heating
	Type of heater		Water
	Frost protection		Temperature sensor
	Frost protection temperature sensor		1
	Pump control		Yes
	Pump stop mode		Running depending on conditions
	Type of sequence indication		Alarm

Step by step:

-  Select Configuration from the navigation icons
- Select Function configuration
- Select Function activation
- Select Sequence configuration type
- Select Heating sequence (-A, -G or -J)
- Select Water as Type of heater
- Select Temperature sensor as Frost protection
- Select an unused sensor (e.g. 1) as Frost protection temperature sensor
- Select the desired type of pump control (e.g. Running depending on conditions) as Pump stop mode
- Select the desired type of pump feedback (e.g. Alarm) as Type of sequence indication.

4.11.3 Allocation

Select I/O (in-output) placement of where the heater control signal output, pump start output and pump feedback input are connected to the controller in the Configuration > I/O allocation settings submenus Digital outputs, Digital inputs and Analog outputs.

Overview:

	Configuration > I/O allocation settings > Digital inputs	06 Nov 8:25	 
	Digital inputs	Device	Signal
	Feedback Sequence-A	Controller	D2

	Configuration > I/O allocation settings > Analog outputs	06 Nov 8:25	 
	Analog outputs	Device	Signal
	Heating	Controller	AO3

	Configuration > ... > Analog outputs > Heating	06 Nov 8:25	 
	Range output		0-10 V

	Configuration > I/O allocation settings > Digital outputs	06 Nov 8:25	 
	Digital outputs	Device	Signal
	Sequence-A pump	Controller	DO1

Step by step:

-  Select Configuration from the navigation icons
- Select I/O allocation settings
- Select Digital inputs
- Select the input connected to the circulation pump's feedback contact (e.g. UDI4) as signal for Feedback sequence-A
- Go back to I/O allocation settings (use the navigation path Configuration > I/O allocation settings)
- Select Analog outputs
- Select the analog output connected to the valve actuator control signal (e.g. AO4) as signal for Heating
- Select Heating
- Adjust Range output to fit with the signal range of the valve actuator (e.g. 0-10 V)
- Go back to I/O allocation settings (use the navigation path Configuration > I/O allocation settings)
- Select Digital outputs
- Select the digital output connected to circulation pump (e.g. DO1) as signal for Sequence-A pump.

4.11.4 Operation settings

Adjust the start/stop point for the digital output: Sequence-A start in the Data & Settings > Temperature control > Heating menu

Overview:

	Data & settings > Temperature Control > Heating	06 Nov 8:25	 
	Pump stop delay		5 min
	Pump-kick hour		15 h
	Pump outdoor temperature limit		10 °C
	Pump stop hysteresis		1 °C
	Frost protection 1		>

	Data & settings > ... > Heating > Frost protection 1	06 Nov 8:25	 
	Alarm limitation running mode		7 °C
	P-band running mode		5 °C
	Setpoint stand-by mode		20 °C

Step by step:

-  Select Data & settings from the navigation icons
- Select Temperature Control
- Select Heating
- Set the desired time for Pump stop delay
- Set the desired hour to test the pump as Pump-kick hour (e.g. 15 means the pump will be tested at 3 pm (15:00) each day)
- Adjust the outdoor temperature to start the pump as Pump outdoor temperature limit
- Adjust the increase in the outdoor temperature to stop the pump as Pump stop hysteresis
- Select Frost protection 1
- Adjust the alarm limit temperature for the freeze protection as Alarm limitation running mode
- Adjust the temperature range of where freeze protection starts overriding the actuator as P-band running mode (e.g. if Alarm limitation running mode = 7 °C and P-band = 5 °C the Freeze protection will start overriding the actuator when the Freeze protection temperature reaches 12 °C)

4.12 Change over

4.12.1 Configuration

Select one heating sequence and one cooling sequence out of the configured sequences to use with the changeover function in the Configuration > Function configuration > Changeover settings menu.

Overview:

	Configuration > Function Configuration > Changeover settings	06 Nov 8:25	 
	Changeover 1		
	Changeover sequence for heating		Heating
	Changeover sequence for cooling		Cooling

Step by step:

-  Select Configuration from the navigation icons
- Select Function configuration
- Select which sequence to control the changeover function when heating as Changeover sequence for heating
- Select which sequence to control the changeover function when cooling as Changeover sequence for cooling.

4.12.2 Allocation

Select I/O (in-output) placement of where the changeover output and feedback input are connected to the controller in the Configuration > I/O allocation settings submenus Digital outputs, Digital inputs and Analog outputs.

Overview:

	Configuration > I/O allocation settings > Digital inputs	06 Nov 8:25	 
	Digital inputs	Device	Signal
	Cooling/ (heating) changeover 1	Controller	UDI4

	Configuration > I/O allocation settings > Analog outputs	06 Nov 8:25	 
	Analog outputs	Device	Signal
	Changeover 1	Controller	AO4

	Configuration > ... > Analog outputs > Changeover 1	06 Nov 8:25	 
	Range output		0-10 V

Step by step:

1.  Select Configuration from the navigation icons
2. Select I/O allocation settings
3. Select Digital inputs
4. Select the input connected to the heating/cooling feedback (e.g. UDI4) as signal for Cooling/ (heating) changeover 1
5. Go back to I/O allocation settings (use the navigation path Configuration > I/O allocation settings)
6. Select Analog outputs
7. Select the analog output connected to the control signal (e.g. AO4) as signal for Changeover 1
8. Select Changeover 1
9. Adjust Range output to the desired voltage range (e.g. 0–10 V).

4.13 External switch

4.13.1 Activation

Set External switch to Yes in the list of available functions in the Configuration > Function configuration > Function activation menu.

Overview:

	Configuration > Function Configuration > Function activation	06 Nov 8:25	 
	External switch		Yes

Step by step:

1.  Select Configuration from the navigation icons
2. Select Function configuration
3. Select Function activation
4. Select Yes as External Switch.

4.13.2 Allocation

Select the I/O (in-output) placement of where the external stop contact is connected to the controller in the Configuration > I/O allocation settings > Digital inputs menu.

Overview:

	Configuration > I/O allocation settings > Digital inputs	06 Nov 8:25	 
	Digital inputs	Device	Signal
	External stop	Controller	DI6

Step by step:

1.  Select Configuration from the navigation icons
2. Select I/O allocation settings
3. Select Digital inputs
4. Select the input connected to the external stop switch (e.g. DI6) as signal for External stop.

4.14 Support control

4.14.1 Activation

Set Support control to Yes in the from the list of available function in the Configuration > Function configuration > Function activation menu.

Overview:

	Configuration > Function Configuration > Function activation	06 Nov 8:25	 
	Support Control		Yes

Step by step:

-  Select Configuration from the navigation icons
- Select Function configuration
- Select Function activation
- Select Yes as Support Control

4.14.2 Operating settings

Adjust the start/stop limits for support heating/cooling and the min run time for the support control function in the Data & Settings > Demand control > Support control menu.

Adjust support heating/cooling setpoints in the Data & Settings > Temperature control > Supply air controller menu.

Overview:

	Data & settings > Demand control > Support Control	06 Nov 8:25	 
	Minimum time for support control		20 min
	Start heating at room temperature		15 °C
	Stop heating at room temperature		21 °C
	Start cooling at room temperature		30 °C
	Stop cooling at room temperature		28 °C

Step by step:

-  Select Data & settings from the navigation icons
- Select Demand control
- Select Support control
- Adjust the minimum run time in support control as Minimum time for support control
- Adjust the start and stop temperatures for support heating as Start heating at room temperature, Stop heating at room temperature
- Adjust the start and stop temperatures for support cooling as Start cooling at room temperature, Stop cooling at room temperature



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