

Quick configuration guide

Access software 4.0-1-04 to 4.6-1-00

GB

Document in original language | 157618 · A008



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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 or Systemair Configurator 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 > Functions > Function activation

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

2.3 Configuration

Configuration > Functions

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 How to use the configuration wizard

The configuration wizard is a menu that simplify the procedure to **Activate** and **Configure** common accessories and functions and **Allocate** it's in- and outputs. The wizard makes necessary configurations automatically and guide the user through limited options.

Access the configuration wizard via  in the navigation bar or via the configuration menu.



Note:

The wizard's availability and content depend on the air handling unit's model and controller software version.

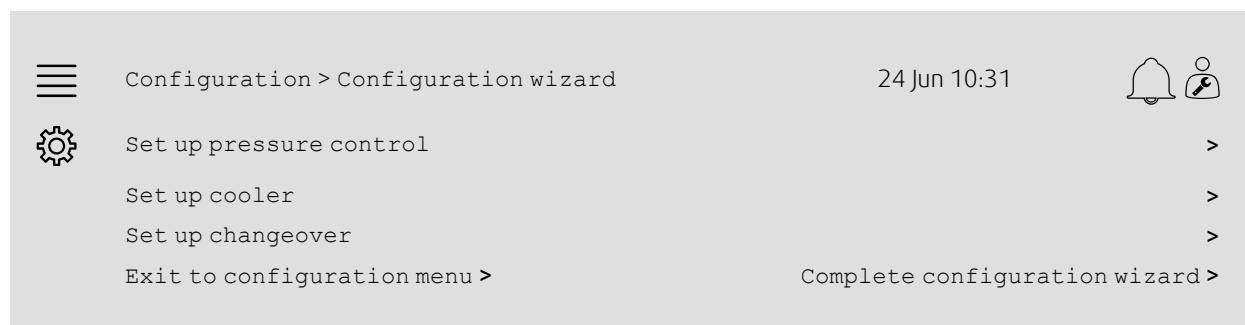
If the configuration wizard does not cover the desired accessory or function it can still be configured via the configuration menu.

3.1 Set up an accessory or function with the configuration wizard

3.1.1 Activation

Configuration > Configuration wizard

Select the type of accessory or function you wish to set up. E.g. if you have installed a water coil for cooling as accessory, select Set up cooler.



3.1.2 Configuration

Configuration > Configuration wizard < Set up "function"

Specify the details of the accessory or function you wish to set up. E.g. If the cooler you wish to set up is of type water and that the circulation pump is with an alarm feedback signal.






Note:


The amount of steps between different setups may vary. E.g. when configuring pressure control the wizard makes the necessary configuration steps automatically and only require confirmation of in- and output allocation and settings.

3.1.3 Allocation

Configuration > Configuration wizard > Set up "function" > In-/Outputs

Confirm the in-/output allocation of the connected signals and sensors. Configure in-/output settings (sensor measuring range, polarity, edit name of sensor/signal etc.) as necessary. Complete the setup by pressing Confirm In-/Outputs and complete setup.




 Configuration > ... > Set cooler > In-/Outputs
 24 Jun 10:31




|  | Analog outputs | Range output | Device | Position |
|---|---------------------------------|----------------------|-------------------|------------|
| | Cooling (SEQ-C) | 0-10V | Controller | A02 |
| | Digital outputs | Contact function | Device | Position |
| | Cooling pump (SEQ-C) | Normally open | Controller | D03 |
| | Digital Inputs | Contact function | Device | Position |
| | Feedback cooling (SEQ-C) | Normally open | Controller | DI5 |

Confirm In-/Outputs and complete setup >

3.1.4 Completing the configuration wizard

A completed setup is listed as Configured in the configuration wizard menu. To make changes to an already configured function, rerun the wizard or use the configuration menus described in chapter 5.

 Configuration > Configuration wizard
 24 Jun 10:31



| | | | |
|---|--|---|-------------|
|  | Set up pressure control | | > |
| | Set up cooler | Configured | > |
| | Set up changeover | | > |
| | Exit to configuration menu > | Complete configuration wizard > | |

Select Complete configuration wizard once the desired setups have been completed. The configuration wizard is still accessible from the configuration menu.

3.1.5 Operation settings

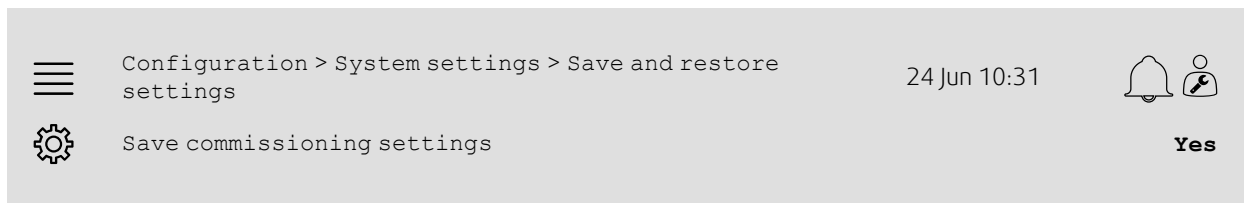
Note that functions configured via the wizard still require adaptation of its operation settings. These settings are found in the functions submenu of Data & Settings as described in chapter 5.

4 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 commissioning settings in the Configuration > System settings > Save and restore settings menu.

Overview:



Step by step:

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

5 Quick configuration guides

5.1 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.

5.1.1 Air handling unit naming

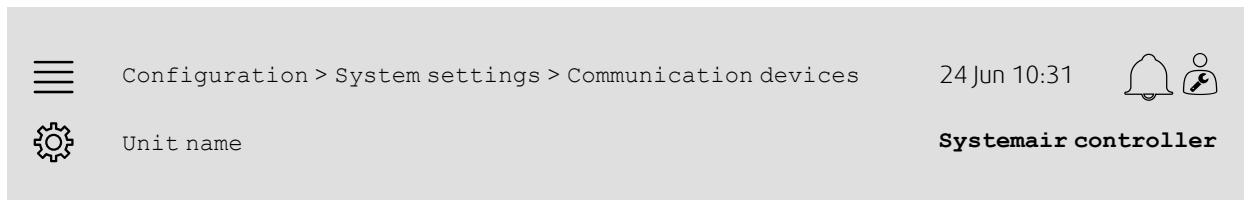
The air handling unit's name is shown in the top-right of the "Home" screen. Edit the name by changing the menu row Unit name found in the Configuration > System settings > Communications devices menu.




Note:

From version 4.3-1-00 air handling unit's name and description can be edited from  System information > System information setup menu.

Overview:



Step by step:

1.  Select Configuration from the navigation icons
2. Select System settings
3. Select Communication devices
4. Edit the name of the air handling unit by selecting Unit name.

**Note:**

Default Unit name is either Systemair controller or the unit model name, for example Topvex TR03 HW CAV.

5.1.2 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 | 24 Jun 10:31 | | |
| | Analog inputs | Device | Position | |
| | Supply air temperature | Controller | AI1 | |

| | | | | |
|--|---|-------------------------------|--|--|
| | Configuration >... > Analog inputs > Supply air temperature | 24 Jun 10:31 | | |
| | 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.


5.1.3 Sequence naming

Change the name of a heating/cooling sequence by selecting the desired sequence in the Configuration > Functions > Function activation > Heating/Cooling sequence setup menu and changing the menu row Name.

| | | | | | | | | |
|--|--|---------|---------|---------------|---------------|------------------|---|--|
| | Configuration > ... > ... > Heating/Cooling sequence setup | | | | | 24 Jun 10:31 | | |
| | Position | Heating | Cooling | Start Heating | Start Cooling | Name | | |
| | SEQ-H | Off | 3 | 0 % | 0 % | Cooling 2 | > | |

| | | | | | | | | |
|--|---|--|--|--|--|------------------|--|--|
| | Configuration >... > Heating/Cooling sequence setup > Cooling 2 | | | | | 24 Jun 10:31 | | |
| | Name | | | | | Cooling 2 | | |
| | Original name | | | | | Cooling 2 | | |

Step by step:

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

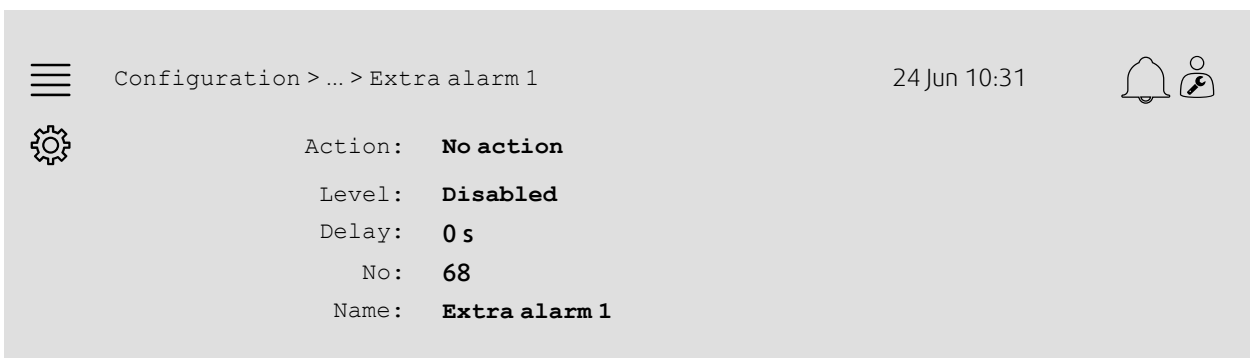
5.1.4 Alarm naming

How to edit alarm names is described in chapter 5.2.


5.2 Alarm configuration

Configure any alarm available in the controller in the Configuration > Alarms menu.


Overview:



Configuration > ... > Extra alarm 1 24 Jun 10:31

 Action: **No action**
 Level: **Disabled**
 Delay: **0 s**
 No: **68**
 Name: **Extra alarm 1**

Step by step:

1.  Select Configuration from the navigation icons
2. Select Alarms
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 Name.

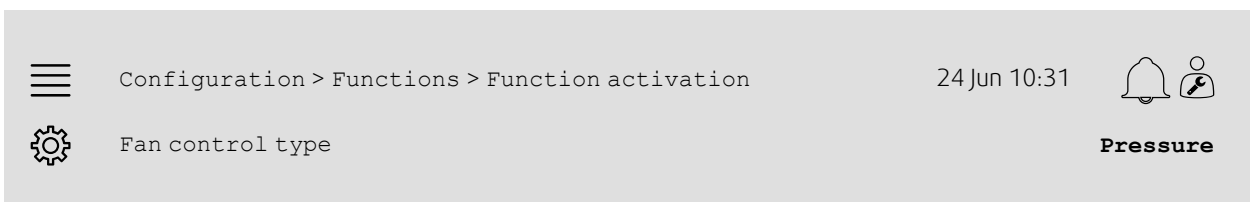
5.3 Fan control type (Pressure)

5.3.1 Activation


Activate pressure control.

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


Overview:



Configuration > Functions > Function activation 24 Jun 10:31

 Fan control type **Pressure**

Step by step:

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

5.3.2 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 | 24 Jun 10:31 |   |
|  | Analog inputs | Device | Position |
| | Pressure supply air | Controller | UI2 |
| | Pressure extract air | Controller | UI1 |

| | | | |
|---|---|--------------|---|
|  | Configuration > ... > Analog inputs > Pressure supply air | 24 Jun 10:31 |   |
|  | Min volt input (Vmin) | | 0.0 V |
| | Max volt input (Vmax) | | 10.0 V |
| | Sensor value at Vmin | | 0.0 |
| | Sensor value at Vmax | | 500.0 |





Step by step:

1.  Select Configuration from the navigation icons
2. Select I/O allocation settings
3. Select Analog inputs
4. Select the input connected to the sensor (e.g. UI2) as position for Pressure supply air
5. Select the input connected to the sensor (e.g. UI1) as position for Pressure extract air
6. Select Pressure supply air
7. Set Sensor at Vmin the same as the start point of the sensor's selected measuring range
8. Set Sensor at Vmax the same as the end point of the sensor's selected measuring range
9. Set Min volt input (Vmin) and Max volt input (Vmax) to values corresponding to the sensor's signal type (e.g. 0...10V, 2...10V etc.)
10. Go back to Analog inputs (use the navigation path Configuration > I/O allocation settings > Analog inputs)
11. Select Pressure extract air and repeat steps 7 through 9.


5.3.3 Operation settings

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

Overview:

| | | | |
|---|---|--------------|---|
|  | Data & Settings > Fan control > Fan setpoints | 24 Jun 10:31 |   |
|  | 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:

1.  Select Data & Settings from the navigation icons
2. Select Fan control
3. Select Fan setpoints
4. Select and adjust setpoints for the available fan speed levels.





5.4 Temperature control type (Room)

5.4.1 Activation


Activate room temperature control.

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

Overview:

| | | | |
|---|---|--------------|---|
|  | Configuration > Functions > Function activation | 24 Jun 10:31 |   |
|  | Temperature control type | | Room cascade |





Step by step:

1.  Select Configuration from the navigation icons
2. Select Functions
3. Select Function activation
4. Select Room cascade as Temperature control type.


5.4.2 Configuration

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

Overview:

| | | | |
|---|---|--------------|---|
|  | Configuration > Functions > Temperature control | 24 Jun 10:31 |   |
|  | Room temperature sensor | | 2 |
| | Calculation mode room temperature | | Average |





Step by step:

1.  Select Configuration from the navigation icons
2. Select Functions
3. Select Temperature control
4. Select number of connected Room temperature sensors
5. Select Calculation mode room temperature (more than one room temperature sensor)


5.4.3 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 | 24 Jun 10:31 |   |
|  | Analog inputs | Device | Position |
| | Room temperature 1 | Controller | Select I/O |
| | Room temperature 2 | Controller | Select I/O |
| | Room temperature 3 | Controller | Select I/O |
| | Room temperature 4 | Controller | Select I/O |


Step by step:

1.  Select Configuration from the navigation icons
2. Select I/O allocation settings
3. Select Analog inputs
4. Select the input connected to the sensor (e.g. UI1) as position for Room temperature 1/2/3/4
5. Repeat step 4 for any remaining room temperature sensors.

5.4.4 Operation settings

| | | | |
|---|--|--------------|---|
|  | Data & Settings > Temp Control > Supply air controller | 24 Jun 10:31 |   |
|  | Min limit supply air | | 14.0 °C |
| | Max limit supply air | | 30.0 °C |

Step by step:





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

5.5 Extended operation


5.5.1 Activation

Select Yes ON Extended operation in the Configuration > Functions > Function activation menu.

Overview:

| | | | |
|---|---|--------------|---|
|  | Configuration > Functions > Function activation | 24 Jun 10:31 |   |
|  | Extended operation | | Yes |





Step by step:

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


5.5.2 Configuration

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

Overview:

| | | | |
|---|--|--------------|---|
|  | Configuration > Functions > Extended operation | 24 Jun 10:31 |   |
|  | Extended operation low speed | | No |
| | Extended operation normal speed | | Yes |
| | Extended operation high speed | | Yes |





Step by step:

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


5.5.3 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 | 24 Jun 10:31 |   |
|  | Digital inputs | Device | Position |
| | Extended operation low speed | Controller | Select I/O |
| | Extended operation normal speed | Controller | DI4 |
| | Extended operation high speed | Controller | Select I/O |





Step by step:

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


5.5.4 Operation settings

Adjust extended operation time to the desired stop delay in the Time settings menu.

Overview:

| | | | |
|---|-------------------------------|--------------|---|
|  | Time settings | 24 Jun 10:31 |   |
|  | Extended operation stop delay | | 0 min |

Step by step:





1.  Select Time settings from the navigation icons
2. Set the desired stop delay as Extended operation stop delay

5.6 Fan compensation


5.6.1 Activation

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

Overview:

| | | | |
|---|---|--------------|---|
|  | Configuration > Functions > Function activation | 24 Jun 10:31 |   |
|  | Fan compensation curves | | Yes |





Step by step:





-  Select Configuration from the navigation icons
- Select Functions
- Select Function activation
- Set Yes ON Fan compensation curves

5.6.2 Configuration


Select and configure a fan compensation curve in the Configuration > Functions > Fan compensation curves menu.

Overview:

| | | | |
|---|---|--------------|---|
|  | Configuration > Functions > Fan compensation curves | 24 Jun 10:31 |   |
|  | Fan compensation curve 1 | | > |
| | Fan compensation curve 2 | | > |
| | Fan compensation curve 3 | | > |

| | | | |
|---|--|--------------|---|
|  | Configuration > ... > Fan compensation curve 1 | 24 Jun 10:31 |   |
|  | Fan level | | All levels |
| | Mode | | Inactive |
| | Fan | | Supply air fan + Exhaust air fan |
| | Sensor | | Select I/O |


Step by step:




1.  Select Configuration from the navigation icons
2. Select Functions
3. Select Fan compensation curve 1/2/3
4. Select which fan level(s) the compensation curve should apply to as Fan level
5. Select when the compensation curve is active as Mode
6. Select which fan the compensation curve applies to as Fan
7. Select which of the available sensors to use for compensation.

5.6.3 Operation settings


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

Overview:

| | | | |
|---|---|--------------|---|
|  | Data & Settings > Fan control > Fan compensation curves | 24 Jun 10:31 |   |
|  | Fan compensation curve 1 | | > |
| | Fan compensation curve 2 | | > |
| | Fan compensation curve 3 | | > |

| | | | |
|---|--|--------------|---|
|  | Data & Settings > ... > Fan compensation curves > Fan compensation curve 2 | 24 Jun 10:31 |   |
|  | Compensation curve | Sensor value | Compensation |
| | Lowest sensor value | 15.0 °C | 0.0 Pa |
| | Middle sensor value | 20.0 °C | 0.0 Pa |
| | Highest sensor value | 25.0 °C | 0.0 Pa |

Step by step:





1.  Select Data & Settings from the navigation icons
2. Select Fan control
3. Select Fan compensation curves
4. Select Fan compensation curve 1/2/3
5. Set up Lowest sensor value
 - a. Set the lowest sensor value for compensation as Sensor value
 - b. Set the desired fan setpoint compensation at that sensor value as Compensation
6. Set up Middle sensor value
 - a. Set a middle sensor value for compensation as Sensor value
 - b. Set the desired fan setpoint compensation at that sensor value as Compensation
7. Set up Highest sensor value
 - a. Set the highest sensor value for compensation as Sensor value
 - b. Set the desired fan setpoint compensation at that sensor value as Compensation

5.7 Air quality control (Fan start/stop)


5.7.1 Activation

Activate the Fan start/stop function for Air quality control from the list of available functions in the Configuration > Functions > Function activation menu.

Overview:

| | | | |
|---|---|--------------------------------|---|
|  | Configuration > Functions > Function activation | 24 Jun 10:31 |   |
|  | Air quality control | Fan start/stop function | |





Step by step:

-  Select Configuration from the navigation icons
- Select Functions
- Select Function activation
- Press Air quality control
- Select Fan start/stop function from drop down list.


5.7.2 Configuration

Select which fan speeds the unit should start/run on when Air quality control Fan start/Stop function is active in the Configuration > Functions > Air quality control menu.

Overview:

| | | | |
|---|---|---------------------|---|
|  | Configuration > Functions > Air quality control | 24 Jun 10:31 |   |
|  | Setpoint supply air fan when air quality control | Normal speed | |
| | Setpoint exhaust air fan when air quality control | Normal speed | |
| | Sensor type | CO2 | |

Step by step:

-  Select Configuration from the navigation icons
- Select Functions
- Select Air quality control
- Set the desired supply air fan speed for Fan start/stop function as Setpoint supply air fan when air quality control
- Set the desired extract air fan speed for Fan start/stop function as Setpoint extract air when air quality control.
- Set the desired sensor type.

5.7.3 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 | 24 Jun 10:31 |   |
|  | Analog inputs | Device | Position |
| | CO2 room/extract air | Controller | UI3 |

| | | | |
|---|--|--------------|---|
|  | Configuration > ... > Analog inputs > CO2 room/extract air | 24 Jun 10:31 |   |
|  | Min volt input (Vmin) | | 0.0 V |
| | Man volt input (Vmax) | | 10.0 V |
| | Sensor value at Vmin | | 0.0 |
| | Sensor value at Vmax | | 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. UI3) as position for CO2 room/extract air
- Select CO2 room/extract air
- Set Sensor value at Vmin the same as the start point of the sensor's selected measuring range
- Set Sensor value at Vmax the same as the end point of the sensor's selected measuring range
- Set Min volt input (Vmin) and Max volt input (Vmax) to values corresponding to the sensor's signal type (e.g. 0...10 V, 2...10 V etc.)

5.7.4 Operating settings

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

Overview:


| | | | |
|---|--|--------------|---|
|  | Data & Settings > Demand control > Air quality control | 24 Jun 10:31 |   |
|  | Start limit fan start/stop CO2 | | 800 ppm |
| | Stop hysteresis fan start/stop CO2 | | 160 ppm |
| | Min time for CO2 control | | 20 min |

Step by step:



Note:

Setpoint CO2 not active for this configuration. Setpoint CO2 is only used by CO2 function Mixing damper.





-  Select Data & Settings from the navigation icons
- Select Demand control
- Select Air quality control
- Set Start limit fan start/stop CO2 to the desired CO2 level to start the fan start/stop function
- Set Stop hysteresis fan start/stop CO2 to the desired amount that the CO2 level needs to decrease to end the fan start/stop function.

5.8 Fire/Smoke function (Fire)


5.8.1 Activation

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

Overview:

| | | | |
|---|---|--------------|---|
|  | Configuration > Functions > Function activation | 24 Jun 10:31 |   |
|  | Fire/Smoke | | Fire |





Step by step:





-  Select Configuration from the navigation icons
- Select Functions
- Select Function activation
- Select Fire as Fire/Smoke

5.8.2 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 > Functions > Fire/Smoke > Fire function submenus.

Overview:

| | | | |
|---|--|---|---|
|  | Configuration > ... > Fire/Smoke > Fire function | 24 Jun 10:31 |   |
|  | Operation mode when fire alarm | Continuous run | |
| | Supply air fan setpoint type when fire alarm | Manual output | |
| | Manual output | 75% | |
| | Extract air fan setpoint type when fire alarm | Manual output | |
| | Manual output | 75% | |
| | Outdoor air damper function when fire alarm | Normal function (follow the fan) | |
| | Exhaust air damper function when fire alarm | Normal function (follow the fan) | |

| | | | |
|--|---|-------------------|---|
|  | Configuration > ... > Fire function > Fire damper | 24 Jun 10:31 |   |
|  | Mode | Not active | |
| | Test | No test | |





Step by step:





-  Select Configuration from the navigation icons
- Select Functions
- Select Fire/Smoke
- Select Fire function
- 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
- Select the operation of the outdoor/exhaust air damper when fire alarm as Outdoor/Exhaust air damper when fire alarm
- 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.

5.8.3 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 | 24 Jun 10:31 |   |
|  | Digital inputs | Device | Position |
| | Fire alarm | Controller | DI5 |
| | Feedback fire damper | Controller | DI6 |

| | | | |
|---|---|--------------|---|
|  | Configuration > I/O allocation settings > Digital outputs | 24 Jun 10:31 |   |
|  | Digital outputs | Device | Position |
| | 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 position 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 position for Feedback fire damper
- 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 position for Fire damper.

5.8.4 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 | 24 Jun 10:31 | |
| | Run time fire damper | | 90 s |
| | Test interval fire damper | | 7 days |
| | Test hour fire damper | | 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 Run time fire damper
4. Set day interval between fire damper tests as Test interval fire damper
5. Select hour (1-24) for start of fire damper test as Test hour fire damper, e.g 15 means the fire damper test will initiate at 3 pm (15:00) on test day.

5.9 Free cooling

5.9.1 Activation

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

Overview:

| | | | |
|--|---|--------------|------------|
| | Configuration > Functions > Function activation | 24 Jun 10:31 | |
| | Free cooling | | Yes |





Step by step:

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


5.9.2 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 | 24 Jun 10:31 |   |
|  | 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 temperature check | 180 s | |
| | Fan-kick interval time | 60 min | |

Step by step:



-  Select **Data & Settings** from the navigation icons
- Select **Demand control**
- Select **Free cooling**
- Set day outdoor temperature min. limit to allow start of free cooling as **Running when day outdoor temperature >**
- Set outdoor temperature interval during night where free cooling is allowed as **Stop when night outdoor temperature >/<**
- Set Room/Extract air temperature min. limit to stop free cooling
- 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)
- Set the desired time to block heating output from the controller after free cooling
- Set the desired fan run time for checking the outdoor temperature with an intake temperature sensor
- Set the time delay between outdoor temperature checks with an intake temperature sensor.

5.10 External cooler (DX)

5.10.1 Activation

Select and activate an unused cooling sequence (C, H or J) in the Configuration > Functions > Function activation > Heating/Cooling sequence setup menu.

Overview:


| | | | | | | | |
|----|--|---------|---------|---------------|---------------|-----------------------------------|---|
| ☰ | Configuration > ... > ... > Heating/Cooling sequence setup | | | | | 24 Jun 10:31 |   |
| ⚙️ | Position | Heating | Cooling | Start Heating | Start Cooling | Name | |
| | SEQ-C | Off | 2 | 0 % | 0 % | Cooling | > |
| | SEQ-H | Off | 3 | 0 % | 0 % | Cooling 2 | > |
| | SEQ-J | Off | Off | 0 % | 0 % | External heating/cooling capacity | > |



Note:

Off = Sequence not activated. Sequence with lower number activates before sequence with higher number. In software version 4.0-1-05 the term "Off" is replaced with "No".





Step by step:

1.  Select Configuration from the navigation icons
2. Select Functions
3. Select Function activation
4. Select Heating/Cooling sequence setup
5. 5. Assign the activation order for the cooling sequence by selecting number (1-10) in column Cooling for SEQ-C, -H or -J


5.10.2 Configuration

Configure what type of cooler is connected in the Configuration > Functions > Function activation > Heating/Cooling sequence setup > Cooling menu.

Overview:

| | | | |
|---|--|--------------|---|
|  | Configuration > ... > Heating/Cooling sequence setup > Cooling | 24 Jun 10:31 |   |
|  | Type of sequence | | Cooling |
| | Type of cooler | | DX |
| | Type of feedback | | Alarm |
| | Digital start output | | Yes |
| | Run indication from DX-compressor | | Yes |





Step by step:





-  Select Configuration from the navigation icons
- Select Functions
- Select Heating/Cooling sequence setup
- Select Cooling (SEQ-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 feedback (e.g. Alarm or Run indication)
- Select Yes as Digital start output if the external cooler requires a digital start signal.
- Select Yes as Run indication from DX-compressor if available on external cooler.





5.10.3 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 inputs, Analog outputs and Digital outputs.

Overview:


| | | | |
|---|--|--------------|---|
|  | Configuration > I/O allocation settings > Digital inputs | 24 Jun 10:31 |   |
|  | Digital inputs | Device | Position |
| | Feedback cooling (SEQ-C) | Controller | UI4 |
| | Run indication DX-compressor (SEQ-C) | Controller | Select I/O |

| | | | |
|---|--|--------------|---|
|  | Configuration > I/O allocation settings > Analog outputs | 24 Jun 10:31 |   |
|  | Analog outputs | Device | Position |
| | Cooling (SEQ-C) | Controller | AO4 |

| | | | |
|---|---|--------------|---|
|  | Configuration >... > Analog outputs > Cooling (SEQ-C) | 24 Jun 10:31 |   |
|  | Range output | | 0-10 V |

| | | | |
|---|---|--------------|---|
|  | Configuration > I/O allocation settings > Digital outputs | 24 Jun 10:31 |   |
|  | Digital outputs | Device | Position |
| | Cooling start (SEQ-C) | 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. UI4) as position for Feedback cooling (SEQ-C)
- Select I/O for Run indication DX-compressor (SEQ-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 position for Cooling (SEQ-C)
- Select Cooling (SEQ-C)
- 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 position for Cooling start (SEQ-C).

5.10.4 Operation settings


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

Overview:

| | | | |
|---|---|--------------|---|
|  | Data & Settings > Temperature control > Cooling | 24 Jun 10:31 |   |
|  | Digital start output start point | | 10 % |
| | Digital start output stop point | | 1 % |
| | PID-delay after DX-compressor start | | 30 s |

| | | | |
|---|---|--------------|---|
|  | Data & Settings > Temperature control > Supply air controller | 24 Jun 10:31 |   |
|  | Min limit supply air | | 14 °C |
| | Max limit supply air | | 30 °C |
| | Reduction of min limit supply air if active DX-cooling | | 5 °C |
| | Min setpoint deviation to allow start of DX-cooling | | 2 °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 Digital start output start point
- Set the desired output % to deactivate the digital output as Digital start output stop point
- Set the desired time delay in PID-delay after DX-compressor start.
- 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 Reduction of min limit supply air if active DX-cooling.
- Set the desired value in Min setpoint deviation to allow start of DX-cooling.

5.11 External heater (Water)


5.11.1 Activation

Select and activate an unused heating sequence (A, G or J) in the Configuration > Functions > Function activation > Heating/Cooling sequence setup menu.

Overview:

| | | | | | | | |
|---|--|---------|---------|---------------|---------------|-----------------------------------|---|
|  | Configuration > ... > ... > Heating/Cooling sequence setup | | | | | 24 Jun 10:31 |   |
|  | Position | Heating | Cooling | Start Heating | Start Cooling | Name | |
| | SEQ-A | 2 | Off | 0 % | 0 % | Heating | > |
| | SEQ-G | 3 | Off | 0 % | 0 % | Heating 2 | > |
| | SEQ-J | Off | Off | 0 % | 0 % | External heating/cooling capacity | > |

Step by step:

-  Select Configuration from the navigation icons
- Select Functions
- Select Function activation
- Select Heating/Cooling sequence setup
5. Assign the activation order for the heating sequence by selecting number (1-10) in column Heating for SEQ-A, -G or -J





Note:

Off = Sequence not activated. Sequence with lower number activates before sequence with higher number. In software version 4.0-1-05 the term "Off" is replaced with "No".


5.11.2 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 > Functions > Function activation > Heating/Cooling sequence setup > Heating menu.

Overview:

| | | | |
|----|--|--|---|
| ☰ | Configuration > ... > Heating/Cooling sequence setup > Heating | 24 Jun 10:31 |   |
| ⚙️ | Type of sequence | Heating | |
| | Type of heater | Water | |
| | Type of freeze protection | Temperature sensor | |
| | Freeze protection sensor | Freeze protection temperature 1 | |
| | Airflow reduction during active freeze protection | No | |
| | Pump control | Yes | |
| | Pump running mode | Auto | |
| | Type of feedback | Alarm | |

Step by step:

-  Select Configuration from the navigation icons
- Select Functions
- Select Function activation
- Select Heating/Cooling sequence setup
- Select Heating (SEQ-A)
- Select Water as Type of heater
- Select Temperature sensor as Type of freeze protection
- Select an unused sensor (e.g. 1) as Freeze protection temperature sensor
- Optional, select Yes as Airflow reduction during active freeze protection
- Select Yes as Pump control
- Select the desired type of pump control (e.g. Auto) as Pump running mode
- Select the desired type of pump feedback (e.g. Alarm) as Type of feedback.

5.11.3 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 inputs, Analog outputs and Digital outputs.

Overview:


| | | | |
|---|--|--------------|---|
|  | Configuration > I/O allocation settings > Digital inputs | 24 Jun 10:31 |   |
|  | Digital inputs | Device | Position |
| | Feedback heating (SEQ-A) | Controller | UI4 |

| | | | |
|---|--|--------------|---|
|  | Configuration > I/O allocation settings > Analog outputs | 24 Jun 10:31 |   |
|  | Analog outputs | Device | Position |
| | Heating (SEQ-A) | Controller | AO4 |

| | | | |
|---|--|--------------|---|
|  | Configuration > ... > Analog outputs > Heating (SEQ-A) | 24 Jun 10:31 |   |
|  | Range output | | 0-10 V |

| | | | |
|---|---|--------------|---|
|  | Configuration > I/O allocation settings > Digital outputs | 24 Jun 10:31 |   |
|  | Digital outputs | Device | Position |
| | Heating pump (SEQ-A) | 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. UI4) as position for Feedback heating (SEQ-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 position for Heating (SEQ-A)
- Select Heating (SEQ-A)
- 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 the circulation pump (e.g. DO1) as position for Heating pump (SEQ-A).

5.11.4 Operation settings


Adjust the settings for pump control and freeze protection in the Data & Settings > Temperature control > Heating menu

Overview:

| | | | |
|---|---|--------------|---|
|  | Data & Settings > Temperature control > Heating | 24 Jun 10:31 |   |
|  | Pump stop delay | | 5 min |
| | Pump-kick hour | | 15 h |
| | Pump running when outdoor temperature < | | 10 °C |
| | Hysteresis to allow pump stop | | 1 °C |
| | Freeze protection 1 | | > |

| | | | |
|---|---|--------------|---|
|  | Data & Settings > ... > Heating > Freeze protection 1 | 24 Jun 10:31 |   |
|  | Alarm limit 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 running when outdoor temperature <
- Adjust the increase in the outdoor temperature to stop the pump as Hysteresis to allow pump stop
- Select Freeze protection 1
- Adjust the freeze protection alarm limit 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 limit running mode = 7 °C and P-band running mode = 5 °C the freeze protection will start overriding the actuator when the freeze protection temperature reaches 12 °C)
- Adjust the freeze protection function's setpoint for when the unit is stopped as Setpoint standby mode.

5.12 Changeover



Note:

To get a start signal for heating or cooling, use the corresponding sequence's digital start signal, see chapter 5.10.2.

5.12.1 Configuration

Select one heating sequence and one cooling sequence out of the configured sequences to use with the changeover function in the Configuration > Functions > Function activation > Heating/Cooling sequence setup > Changeover settings menu.

Overview:

| | | | |
|--|--|--------------|----------------|
| | Configuration > ... > Heating/Cooling sequence setup > Changeover settings | 24 Jun 10:31 | |
| | Changeover 1 | | |
| | Changeover sequence for heating | | Heating |
| | Changeover sequence for cooling | | Cooling |

Step by step:

- Select Configuration from the navigation icons
- Select Functions
- Select Function activation
- Select Heating/Cooling sequence setup
- Select Changeover settings
- 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.





5.12.2 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 inputs, Analog outputs and Digital outputs.


Overview:

| | | | |
|--|--|--------------|------------|
| | Configuration > I/O allocation settings > Digital inputs | 24 Jun 10:31 | |
| | Digital inputs | Device | Position |
| | Cooling/ (Heating) changeover 1 | Controller | DI4 |

| | | | |
|--|--|--------------|------------|
| | Configuration > I/O allocation settings > Analog outputs | 24 Jun 10:31 | |
| | Analog outputs | Device | Position |
| | Changeover 1 | Controller | AO4 |

| | | | |
|---|---|--------------|---|
|  | Configuration > ... > Analog outputs > Changeover 1 | 24 Jun 10:31 |   |
|  | 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. DI4) as position 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 position for Changeover 1
8. Select Changeover 1
9. Adjust Range output to the desired voltage range (e.g. 0-10 V).

5.13 External stop


5.13.1 Activation

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

Overview:

| | | | |
|---|---|--------------|---|
|  | Configuration > Functions > Function activation | 24 Jun 10:31 |   |
|  | External stop | | Yes |





Step by step:

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


5.13.2 Allocation

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

Overview:

| | | | |
|---|--|--------------|---|
|  | Configuration > I/O allocation settings > Digital inputs | 24 Jun 10:31 |   |
|  | Digital inputs | Device | Position |
| | 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 position for External stop.

5.14 Support control


5.14.1 Activation

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

Overview:

| | | | |
|---|---|--------------|---|
|  | Configuration > Functions > Function activation | 24 Jun 10:31 |   |
|  | Support control | | Yes |





Step by step:

1.  Select Configuration from the navigation icons
2. Select Functions
3. Select Function activation
4. Select Yes as Support control


5.14.2 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.

Overview:

| | | | |
|---|--|--------------|---|
|  | Data & Settings > Demand control > Support Control | 24 Jun 10:31 |   |
|  | Min time for support control | | 20 min |
| | Start heating room temperature | | 15 °C |
| | Stop heating room temperature | | 21 °C |
| | Start cooling room temperature | | 30 °C |
| | Stop cooling room temperature | | 28 °C |

Step by step:

1.  Select Data & Settings from the navigation icons
2. Select Demand control
3. Select Support control
4. Adjust the minimum run time in support control as Min time for support control
5. Adjust the start and stop temperatures for support heating as Start heating room temperature, Stop heating room temperature
6. Adjust the start and stop temperatures for support cooling as Start cooling room temperature, Stop cooling room temperature



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