NV Comfort®
User guide

Congratulations with your new NV Comfort®, which will ensure a healthy and comfortable indoor climate with focus on low energy consumption and minimal impact on the environment.

NV Comfort® Standard / Plus controls roof and facade windows' opening and the heating and NV Comfort® Plus also controls hybrid ventilation, light and sun screening.

The control is automatically and based on individually configured settings and operating parameters for room temperature, CO2-level and the relative humidity. The control occurs by taking into account measurements of outdoor temperatures, rain and wind speed.

The control is programmed to ensure optimal comfort. E.g. windows will open completely if there is no wind, but will open less if there is a fresh wind. The windows will close when there is rain or strong wind etc.

The overall operation of the system occurs via a touch-screen. Here you will find menus for daily operation, both at building level and at room level, and menus for configuring the operating parameters.

It is recommended that individual operating keypads are always fitted in all the connected rooms/zones so that the users can always open or close the windows if more or less fresh air is required. The system will, after a pre-defined set period of time, return to automatic operation.

NV Comfort® uses a number of standard algorithms and strategies that are based on WindowMaster's many years of experience ensuring optimal indoor climate with natural Ventilation. Control is adapted to the individual room and building using a number of parameters that are easily configured on the touch-screen. For further description please see "NV Comfort®, Installation instruction".

1 Building level

On this screen the functions are common for all zones / rooms

1 **Building modes**

- **In use:** The building is in normal use.

- **In use, secured:** The building is in use, but special restrictions on the opening of windows in individual rooms may be active (depends on the parameter settings).

- **Not in use:** There are no people in the building. Special restrictions on the opening of windows in individual rooms may be active. During the summer period, effective night-time ventilation may require that windows are kept open, even when there are no people in the building.

Switching between building modes occurs either by pressing on the screen or may be system-specified through connection of a burglar alarm. Parameters can be configured so that "In use" is only active outside a given time period.

2 **Keep windows closed**
If this function is activated, windows will be closed and kept closed. The function remains active until it is deactivated.

3 **Discontinue automation**
If this function is activated, the automatic control of the windows will be discontinued. However, the safety functions in the event of rain and strong wind will continue to be active. The function remains active until it is deactivated.

4 **Latest event**
Information is provided here on the latest significant events:

- KNX communications error Problems communicating with the KNX bus.

- All data missing
NV Comfort® has not received all necessary data from the sensors (room sensors and weather station).

- Weather data missing
NV Comfort® has not received all weather data.

- Room data missing
NV Comfort® has not received data from the connected sensors.

- Secured period started
See item 1.

- Secure period ended
See item 1.

- Closed, bad weather
The windows are closed and cannot be opened due to bad weather.

- Closed, low indoor temperature
The windows are closed and cannot be opened due to low room temperature.

- Everything OK
Information that everything is OK.

We recommend checking the installation if one of these events occurs repeatedly. Contact the installer if necessary.

5 **Weather information**
Current wind speed and outdoor temperature are displayed here together with an icon for either rain, wind, cold, warm or unknown (no icon displayed)

6 Activates menu for configuring parameters.
The access can be PIN code protected.

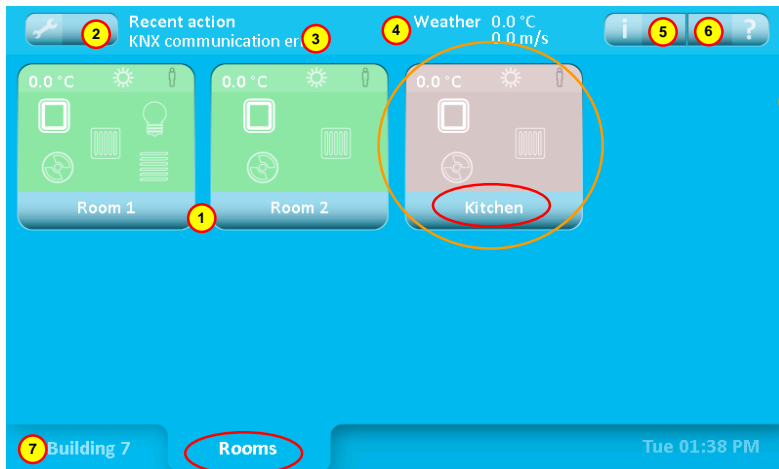7 Activates the menu for information about:
- Weather data
About (NV Comfort® software version and copyright)
- Latest event
- Other (NV Comfort® memory status)
- Remote log

8 Explains the functions on this screen display.

9 Switches to the overview of all the connected rooms.

2 Room level - overview

This screen shows all the rooms that are connected to the NV Comfort®

The colour of the room image can be changed in the parameter configuration.

The names may change in the parameter configuration.

1 **Pictures of the connected room**
Overview image for each room.
See section 3 for symbol description.

Press a particular room to activate the detailed menu for this room. See section 4.

2 **Parameter configuration**
Activates the menu for parameter configuration.
This access can be locked with a PIN.

3 **Latest event**
See section 1.

4 **Weather information**
See section 1.

5 **Information**
Activates the menu for information about:
   - Status of the rooms
   - Latest event in the rooms
   - Sun shade status

1 Switch between the tabs here

2 Return to the overview image showing all the rooms

6 **Explanation**
Explains the functions on this screen display.

7 **Show building**
Switches to the overview image of the building.

3 Room level

Viewing the individual rooms - how much information is displayed depends on which sensors are connected

Room 1

1 **Room temperature**
Current room temperature

2 **Summer/winter mode**
Switching between summer and winter mode occurs automatically based on the requirement for heating in the room or based on outdoor temperature.

 Summer   Winter

3 **Presence**
The icon displayed depends on whether a CO_2 sensor, a PIR sensor or both are connected at the same time.

- low CO_2 level (CO_2 sensor)
- no people in the room (PIR detector)

- average CO_2 level (CO_2 sensor)
- people in the room (PIR detector)

- high CO_2 level (CO_2 sensor)
- many people in the room (both PIR detector and CO_2 sensor)

4 **Status of the window**
Only shown if the window in the room is connected.

 Window open

 Window closed

 Window in secured mode

5 **Mechanical ventilation (NV Comfort® Plus)**
Only shown if the mechanical ventilation in the room is connected.

 Turned on   Turned off

6 **Heating**
Only displayed if there is heating control connected in the room.

 Turned on   Turned off

7 **Lighting (NV Comfort® Plus)**
Only displayed if there is PIR sensor connected in the room.

 Turned on   Turned off

8 **Sun screening (NV Comfort® Plus)**
Only displayed if there is a sun screening controller connected in the room.
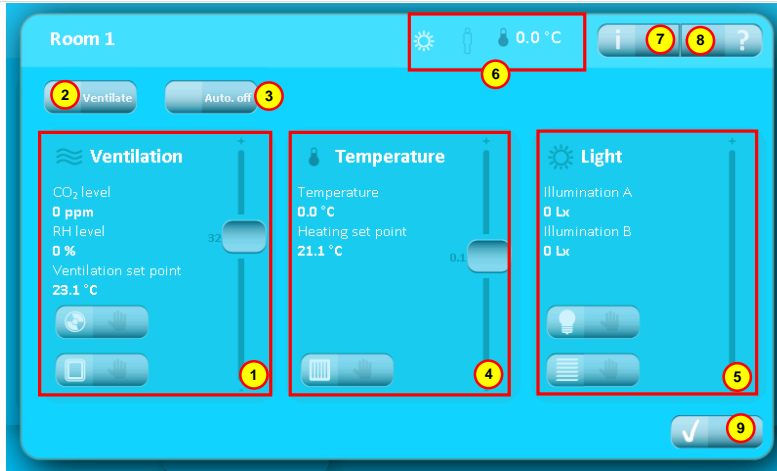
 Open   Closed

4 Room level - details

The room's functions can be controlled/overridden on this screen display and details are displayed for the room

1   **Ventilation**
    See section 5 for further information.

2   **Ventilate**
    This button activates one ventilation pulse.
    The length of the airing is defined in the parameter setup.

3   **Auto. Off**
    This button turns off the automatic control of the ventilation and the light in the room.

4   **Temperature**
    See section 5 for further information.

5   **Light (NV Comfort® Plus)**
    See section 5 for further information

6   **Room status**
    Shows the status of the room.
    See section 3 section 1 + 2 + 3 for further information.

       the room temperature

7   **Information**
    Activates the menu for information about:
    - Indoor climate
    - Recent action
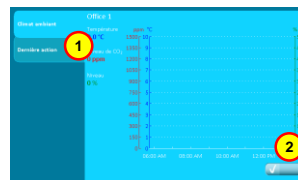
8   **Information**
    Explains the functions on this screenshot

9   **Show room level**
    Switch to the overview of the room level
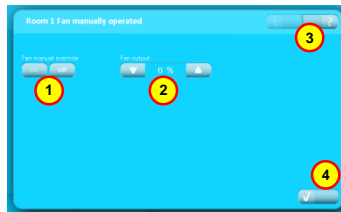

1   Switch between the tabs here

2   Return to the overview of the room

5 Override

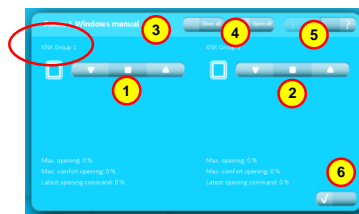The mechanical ventilation can be overridden on these buttons (Plus version)
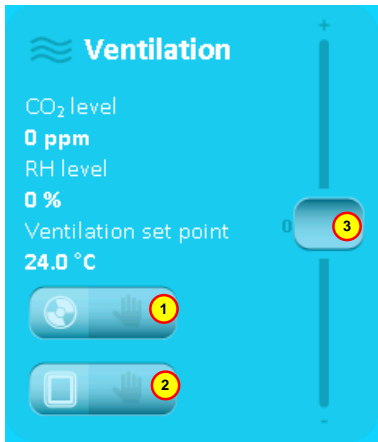
1 **Fan - manual operation**
   Activates the menu for manual override of the fan

1 Fan manual override.
   Press OFF to return the system to automatic mode.

2 Fan control

3 Explains the functions on this screen display

4 Switch to the overview of the room

2 **Window operation - manual**
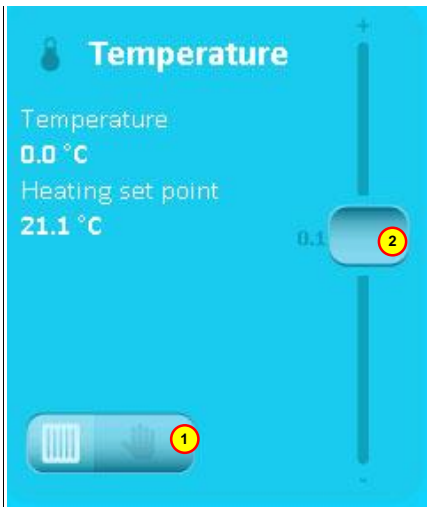   Activates the menu for manual override of the window.

1 Group 1

2 Group 2

3 Close all

4 Open all

5 Explains the functions on this screen display
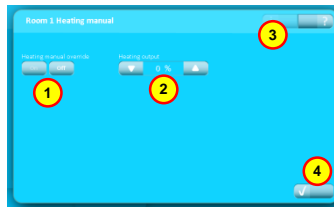
6 Switch to the overview of the room

   The names can be changed in the parameter set up.

3 **Fan set-point**
   Move the slider up for more ventilation
   Move the slider down for less ventilation

The automatic temperature control can be overridden on these buttons (Standard and Plus version)

1   **Heating – manual control**
    Activates the menu for manual
    override of the heating control.

1   Heating manual override.
    Press OFF to return the system to
    automatic mode.

2   Heating control

3   Explains the functions on this
    screen display.

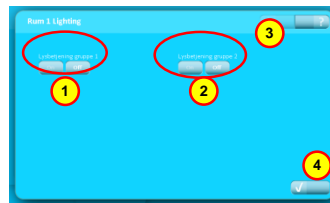4   Return to the overview of the
    room

2   **Temperature set-point**
    Move the slider up to increase the
    set-point for temperature regulation.
    Move the slider down to lower the
    set-point for temperature regulation.

    A reduction of the set-point during
    the summer will produce more
    ventilation in order to achieve the
    lower temperature.
    During the heating period, an
    increase of temperature will entail
    an increase in energy consumption.

The automatic light control and sun screening can be overridden on this button (Plus version)
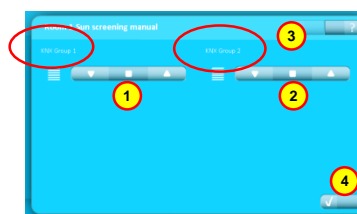

1 **Lighting**
Activates the menu for manual override of the lighting control.

1 Group 1

2 Group 2

3 Explains the functions on this screen display.

4 Return to the overview of the room

The names may change in the parameter configuration.

2 **Sun screening**
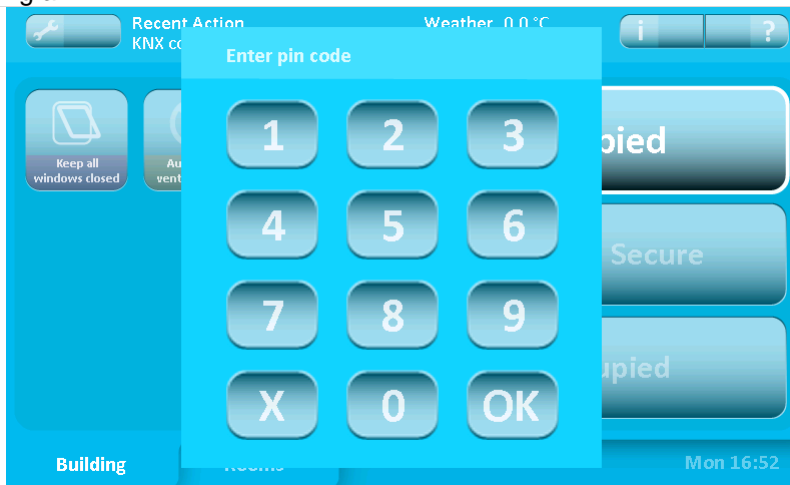Activates the menu for manual override of sun screening.

1 Group 1

2 Group 2

3 Explains the functions on this screen display.

4 Return to the overview of the room

The names may change in the parameter configuration.

6 PIN

Entering a PIN

The system can be protected with a PIN at two levels:
1. For access to the system configuration
2. For access to all operation

If the system is PIN protected, the image above will appear when attempting to enter a secured level.
To access the level - enter the PIN and press "OK".

The system will automatically return to the protected mode after the specified time period.

PIN at levels 1 and 2 and the time period are set in the parameter configuration.

The PIN code protection and the predefined set of period are chosen in the parameter set up.