



Operating Manual

NOVOS 7 KNX
NOVOS Touch KNX
thanos EVO KNX

novos
THE NEW ROOM SERIES BY THERMOKON®

Revision

Revision	Date	Description	Author
A	01.11.2023	•First Release	NL,JD
B	28.05.2024	•4.3.4 Scene menu correction, 6.1 Configuration parameter	JD
C	15.07.2024	•5.1 Flags	JD
D	20.05.2026	•Screensaver Display of sensor value description added	NL, JD
E	01.06.2026	•Correction 4.2	NL, JD

All information without guarantee for correctness and completeness. Subject to change.

Table of contents

1	General information and safety instructions	5
1.1	Intended use.....	5
1.2	Non-intended use.....	5
1.3	Limitation of liability.....	5
1.4	Support	5
2	Functional description.....	6
2.1	Device versions.....	6
3	Assembly and commissioning	7
3.1	Connection	7
3.1.1	KNX TP1 Installation	7
3.1.2	Electrical Connections.....	7
3.1.3	Digital Inputs / Temperature sensor input	7
3.2	Commissioning	7
3.3	Configuration.....	8
3.4	ETS Application-Software.....	9
4	Display and Operation.....	11
4.1	Display and operating elements.....	11
4.2	Home Screen	12
4.2.1	Status bar (Header).....	12
4.2.2	Alert / status messages / time and date.....	13
4.2.3	Individual logo	13
4.2.4	Room temperature, Setpoint and Sensor values	14
4.2.5	Favourite buttons.....	15
4.3	Main menu	16
4.3.1	Climate-Menu (Temperature Menu)	17
4.3.2	Lighting Menu	18
4.3.3	Shading menu.....	20
4.3.4	Scene Menu.....	21
4.3.5	Monitoring Menu.....	21
4.3.6	Configuration menu	22
5	Group objects.....	23
5.1	Flags	23
5.2	Group object description.....	24
5.2.1	Group objects „Operating display“	24
5.2.2	Group objects „Display“	24
5.2.3	Group objects „Datum & Uhrzeit“	24
5.2.4	Group objects „Warnung & Meldung“	24
5.2.5	Group objects „HVAC“	25
5.2.6	Group objects	26
5.2.7	Group objects „Beleuchtung“ (NOVOS Touch / thanos EVO).....	26
5.2.8	Group objects „Beleuchtung“ (NOVOS 7).....	27
5.2.9	Group objects „shading“	27
5.2.10	Group objects „ Scene control “.....	28
5.2.11	Group objects „Sensor“	28
5.2.12	Group objects „Inputs “	29

6	ETS- Configuration parameter.....	30
6.1	Configuration parameter „General“.....	30
6.2	„HVAC“ Configuration parameter	32
6.3	“Lighting” Configuration parameter.....	32
6.4	“Shading“ Configuration parameter.....	33
6.5	“Scenes“ Configuration parameter	33
6.6	“Sensor” configuration parameter.....	34
6.7	"Inputs" configuration parameter	35
7	Unicode Character set (UTF-16).....	36
8	KNX Specification.....	36

1 General information and safety instructions

A prerequisite for safe working is compliance with the specified safety instructions and handling instructions. The installation and assembly of electrical devices (modules) may only be carried out by an authorised electrician.

Bitte lesen Sie vor Inbetriebnahme des Geräts die Bedienungsanleitung sorgsam durch.

- The device may only be used for the purposes and applications described in this operating manual.
- No technical changes or unauthorized modifications may be conducted to/on the device.
- The device may only be used in the specified ambient conditions (temperature, humidity etc.).
- The device should only be cleaned with a damp cloth. Do not use aggressive or solvent-based cleaning liquids. Failure to observe the safety instructions may result in damage to the device and harm to the user.
Detailed information can be found in the document *Care_instructions_for_room_operating_units_en.pdf*.
→ [Link PDF - Care instructions for room operating units](#)
- A faulty connection can lead to destruction of the device or even the whole building system.
- Additionally the instructions in the applicable data sheet are to be observed.

1.1 Intended use

- The device is intended for the use in a KNX-network and can be commissioned with the ETSS or newer.
- The room control unit is intended for use in offices, meeting or conference rooms, hotels, reception/lobby areas, nursing homes and hospitals, and generally in commercial and residential buildings. The room control unit is used for local room control for lighting, blinds, scenes and HVAC applications.
- The device may only be used and operated in a proper environment and according the corresponding specifications.

1.2 Non-intended use

- The room operating units must not be used for or be part of medical devices, which maintain, control or otherwise impact human life or physical health.
- The device must not be used in hazardous areas.
- The device must not be used in an atmosphere in which a chemically active substance is present.
- Any use other than that described in these instructions or any use beyond that described here is considered improper and is prohibited.

1.3 Limitation of liability

All information and notes in this manual have been compiled in accordance with the applicable standards and regulations, the state of the art and our extensive knowledge and experience. The manufacturer's warranty conditions apply.

The manufacturer accepts no liability for damage due to

- Non-compliance with these instructions or applicable documents
- Unintended/improper use
- Installations conducted by non-professional persons
- Unauthorized technical modifications

The actual scope of delivery may deviate from the explanations and illustrations described here in the case of special designs, additional product options or latest technical changes.

1.4 Support

Our support team is available for technical information.

Information about the responsible contact person can be obtained at any time by telephone or e-mail. You may also visit our website for contact details: See <https://www.thermokon.de/en-gb/contact/contact-persons>

We appreciate your contributions, feedback and user experiences in order to constantly improve our products!

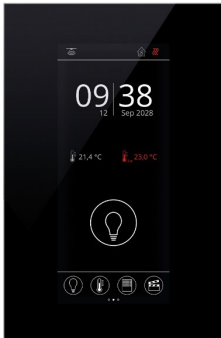
2 Functional description

The Thermokon room control units (NOVOS family and thanos EVO) combine all relevant room functionalities for an intelligent room control in one device, such as temperature setting or control of fans, luminaires, blinds or screens as well as scenes. Additionally, depending on the device configuration, up to four sensors can be integrated (CO2, VOC, temperature, humidity) to maintain a comfortable room climate throughout. The measured values can be clearly displayed with configurable colour indication (traffic light function) in the monitoring menu or on the home screen.

The room control units offer the following main features:

- Integration of up to four different sensors (temperature, relative humidity, CO2 and VOC)
- Intuitive and comfortable control of room climate
- Setting ECO mode for energy-savings and a sustainable climate control ("Green Leaf")
- Control of fan coils and other ventilation devices
- Control of lighting fixtures with RGB(W) and colour-temperature and shades
- Call up and save individually definable scenes (e.g.: meeting, presentation, break, cinema, etc.)
- Displays status messages, other operating states such as "window open", room occupied/unoccupied, etc.
- Clear display of the measured values as a trend curve with traffic light function
- Digital inputs for external devices (e.g. window contacts, dew point monitors, etc.)
- Temperature sensor input (NTC10k) for temperature measurement (e.g.: outdoor temperature)

2.1 Device versions

NOVOS 7	NOVOS Touch	thanos EVO	thanos EVO Design
			

Illustrations similar, other colours and versions available.

NOVOS Touch and thanos EVO (design) are functionally identical and differ only in design.

3 Assembly and commissioning

Proper commissioning ensures a seamless and safe use of the devices. Please observe the instructions in the corresponding data sheet.

3.1 Connection

3.1.1 KNX TP1 Installation

In general, the country-specific installation regulations (e.g. VDE 0100, etc.) as well as the regulations of the KNX standard must be observed.

The room control units load the bus with a load of 3mA (according to KNX standard). Depending on the layout, up to 64 room control units can be operated on one line.

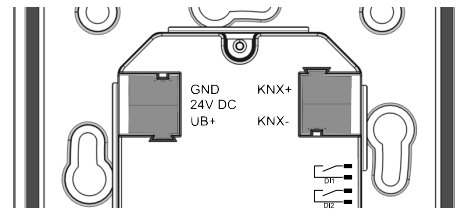
KNX does not support a ring connection!

For detailed information on commissioning and installation, please refer to the product data sheet of the unit.

3.1.2 Electrical Connections

The power supply and the KNX lines must be connected according to the following connection diagram. The power supply must come from sources that comply with the requirements for safety extra-low voltage (SELV) and the regulations of the KNX standard. After switching on the power supply, the unit starts.

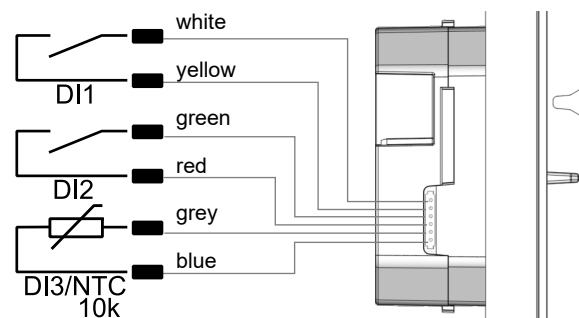
Further information is documented in the enclosed data sheet.



3.1.3 Digital Inputs / Temperature sensor input

The unit offers the possibility to parameterise up to three digital inputs (potential-free) or up to two digital inputs (potential-free) and one temperature sensor input (NTC10k).

The connector for the inputs is located on the rear of the unit, on the side of the bus coupler housing. The connection cable supplied can be connected to the connector in order to use the inputs according to the diagram shown.



3.2 Commissioning

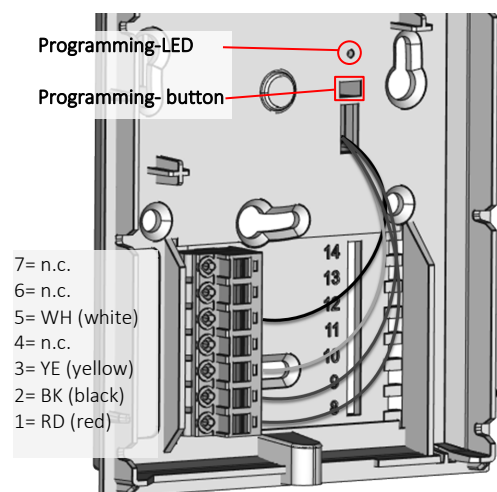
After connecting the unit, it can be put into operation.

To do this, proceed according to the following diagram:

- Connect the programming interface to the bus (e.g. USB interface KNX).
- Remove the application module (upper part of the unit with display).
- Switch on the bus and auxiliary power supply.
- Set the physical address and configure the application program using the ETS
- Press programming button (programming LED lights up red)
- Programming the physical address and the application program
- Plug in the application module (directly after starting programming)

Attention! Do not pinch the cable!

- Checking the configured functions (e.g.: using the ETS)



3.3 Configuration

The first section of this document provides a basic overview of the functions and parameterization options of the device. The ETS is available for Configuration.

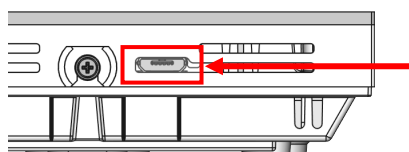
Certain parameters (sensor correction values/offset, maintenance and calibration monitoring, date and time, etc.) can be changed via NOVOSapp for mobile devices or our desktop configuration interface uConfig.

The following options are available to configure the device:

- Parameterisation via desktop PC/laptop with the ETS software, and the USB Interface KNX
- Parameterisation of *certain parameters* via desktop PC/laptop with the uConfig software, and the Thermokon USB-Interface (Item-No.: 597838)
- Parameterisation of *certain parameters* with mobile devices via Bluetooth and NOVOSapp. A Bluetooth dongle (accessory) is required. Bluetooth dongle item no.: 668262
The NOVOSapp for Android or Apple mobile devices is available at the Google Play Store or Apple AppStore

Connection to device	KNX TP1	Micro-USB	Micro-USB
Configuration-adapter	USB-interface KNX	Thermokon USB-interface	USB-Bluetooth dongle
Configuration-software	PC/Notebook with ETS software Configuration via Desktop PC/Notebook with ETS software and USB-interface KNX (Item no. #806190)	PC/Notebook with uConfig software Partly configuration with Thermokon software uConfig, via Thermokon USB-interface (Item no. #597838)	Smartphone/tablet with NOVOS app Configuration with mobil device via bluetooth and NOVOSapp. Separat available bluetooth dongle* required. (Item no. #668262)

* Commercially available Bluetooth dongles or USB to Micro-USB adapter cables are not compatible. You need a mobile device that supports at least Bluetooth version 4.1. The configuration app with the corresponding instructions can be downloaded from the Google Play Store or the Apple App Store.



Position of the micro USB port, see bottom of the device, for configuration with Bluetooth dongle or Thermokon USB-interface

3.4 ETS Application-Software

The configuration or parameterization is carried out via ETS - as is typical for KNX.



When parameterizing /configuring the devices, always proceed "from top to bottom" in the menu.

An application program is available for this purpose, which combines the unit-specific settings in an intuitive user interface. The user interface of the application program is divided into the menu area and the respective parameter pages.

1.1.1 NOVOS KNX > General

Description	Parameter
+ General	Device name: NOVOS KNX
+ HVAC	Device type: ☒ NOVOS 7 ☐ NOVOS Touch / thanos EVO
+ Lighting	Temperature sensor: ☒
+ Shading	Humidity sensor: ☒
+ Scenes	VOC sensor: ☒
+ Sensors	CO2 sensor: ☒
+ Inputs	Radio interace: ☒ Disabled ☐ EnOcean

In the menu area the tabs are divided into menu items, which open the respective parameter pages by clicking on them. On the parameter pages, the device functions can be set according to the application and requirements using the corresponding parameters (i.e.: *General > Display > Display brightness: 100%*).

1.1.1 NOVOS KNX > General > Display

Description	Value	Unit
Display brightness	100	%
Standby brightness	30	%
Night mode brightness	10	%
Standby / Screen saver after	120	s
Home screen after [0 = disabled]	60	s
Show menu for "Display off" and "cleaning mode"	☒ Disabled ☐ Enabled	

Menu-options: General, Identification, Basic settings, **Display**, Date & time, Favourite buttons, Maintenance & calibration

The reference of the respective parameter to the parameter page/menu item, as well as to the tab, is shown in this document as follows:

- **Tab > Parameter page/menu item > Parameter: Selection** (e.g.: General > Date & Time > Date/time synchronisation via bus: Enabled)

Dynamic structure

The menu of the application program is dynamically structured. This means: if certain functions are activated, functions, parameters or group objects dependent on this function are also activated.

Example:

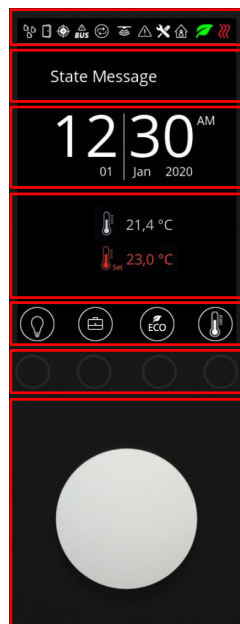
If the parameter "*General > Display > Font colour*" is set to "*User-defined*", the parameter "*General > Display > Font colour selection*" appears so that the desired font colour can be transferred during programming.

4 Display and Operation

4.1 Display and operating elements

The NOVOS 7 has an intuitive user interface using a rotary/press encoder and four capacitive keys below the screen. NOVOS Touch and thanos EVO have a high-resolution full-touch display, which is used for operating and navigating through the menus. Both devices use a structured and language-neutral graphical user interface.

Novos 7



Header (display of various icons)

Status messages (text messages (max. 24 characters) can be displayed on the main screen or lock screen)

Date / time (display of the configured time and date)

Sensor values (sensors installed in the unit, as well as set points can be displayed)

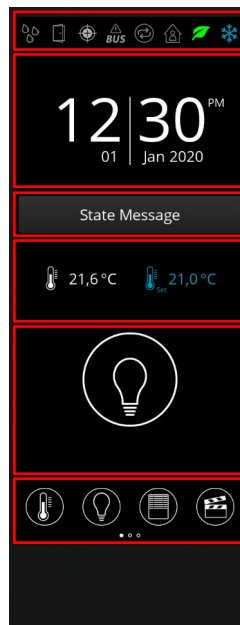
Favourites symbols (freely parametrizable favourites functions, control via favourites keys)

Favourite keys (control of freely configured favourite functions)

Rotary / push buttons

(navigation through the extensive submenus (carousel), can also be configured as favourite key 1)

NOVOS Touch / thanos EVO



Header (display of various icons)

Date / time (display of the configured time and date)

Status messages (text messages (max. 24 characters) can be displayed on the main screen or lock screen)

Sensor values (sensors installed in the unit, as well as set points can be displayed)

Favourite key area

(Quick access to configurable functions, up to 4 favourite buttons possible)

Navigation bar (customisable, can be moved by swiping sideways)

4.2 Home Screen

The display on the Home Screen of the NOVOS room operating unit can be configured:

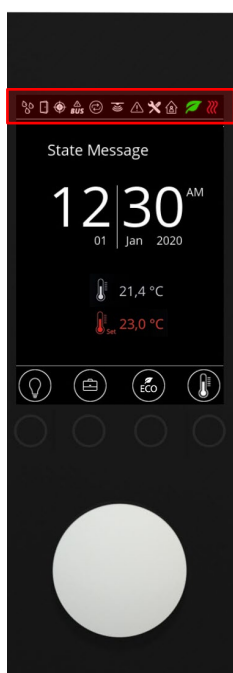
- Show/hide symbols (via group objects)
 - Show/hide notifications (via group objects)
 - Set point/actual value default (via group objects)
 - Display brightness in standby mode (dim/completely switch off)
 - Screen saver (standard 120 sec)
 - Screen lock (protection against unauthorised use)
- All functions described can be configured under "General > Display".

4.2.1 Status bar (Header)

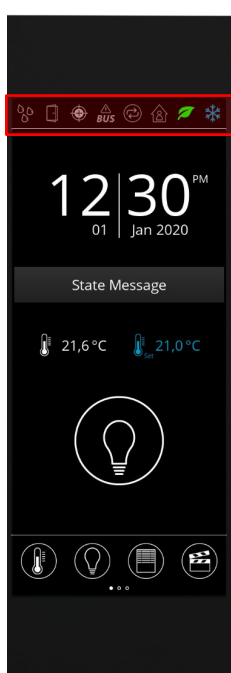
In the header of the main screen, various symbols can be shown or hidden as desired via a group object (GO) or a user interaction. The respective group objects for the symbols, their direction of action (input/output) and their object values are shown on the right.

(e.g.: Condensation; GO 76; Input; On = 1 | Off = 0)

The communication symbols "Communication error" and "USB communication mode active" are only linked to an internal logic and cannot be activated via a group object.



NOVOS 7



NOVOS Touch / thanos EVO

- **Condensation** (Icon ON/OFF)
- **Window open** (Icon ON/OFF)
- **Calibration due** (Icon ON/OFF with logic)
In conjunction with the calibration countdown (General > Maintenance & Calibration), the symbol is automatically displayed after expiry. In order for the symbol to appear, the parameter "Calibration monitoring cycle time" must be set. After the countdown has expired and calibration has been completed, the countdown can be reset and the symbol disappears.
- **Communication error BUS** (Logic)
If no valid device-internal BUS communication is detected within 30 seconds, the symbol is automatically displayed. Does not refer to KNX communication.
- **USB Communications mode active** (logic)
When the USB connection via the MicroUSB port on the bottom of the unit is active, the symbol is automatically displayed.
- **Room occupancy occupied/unoccupied** (Icon (ON/OFF) / User interaction)
The room occupancy is switched on the unit via a toggle switch.
- **ECO-function** (Icon (ON/OFF) / User interaction)
The room occupancy and ECO function are triggered on the device via toggle button.
NOVOS 7: Depending on the configuration, switching to ECO mode is conducted either in the respective submenu (carousel), in the temperature menu or through a favourite button.
NOVOS Touch/thanos EVO: Select ECO in the temperature menu or - if configured - also via a favourite key.
- **Heating mode** (Icon ON/OFF)
The heating and cooling symbols can be displayed in colour or in font colour (General > Display > Colour heating/cooling symbols). The set point in the Home Screen is displayed in the same colour.
- **Cooling mode** (Icon ON/OFF)
For additional settings, see "Heating mode".
- **PIR active** (Icon ON/OFF)
- **Warning** (Icon ON/OFF)
- **Maintenance due**
In connection with the maintenance countdown (General > Maintenance & Calibration), the icon is automatically displayed after the maintenance countdown has elapsed. In order to have the icon appear, the parameter "Maintenance monitoring cycle time" must be set. After the countdown has expired and maintenance has been carried out, the countdown can be reset and the symbol switches off.

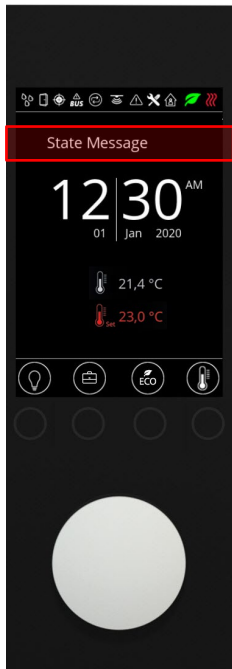
Header symbols

- **Condensation**
GO 28 (Input)
On = 1 | Off = 0
 - **Window open**
GO 29
On = 1 | Off = 0
 - **Calibration due**
GO 3 (Output)
On = 1 | Off = 0
 - **Communication error**
 - **USB Communication mode active**
 - **Heating mode**
GO 56 (Input)
On = 1 | Off = 0
 - **Cooling mode**
GO 57 (Input)
On = 1 | Off = 0
 - **PIR**
GO 19 (Input)
On = 1 | Off = 0
 - **Warning**
GO 18
On = 1 | Off = 0
 - **Maintenance due**
GO 2 (Output)
On = 1 | Off = 0
-
- **Room occupancy**
GO 23 (Input), 22 (Output)
unoccupied = 0 | occupied = 1
 - **ECO-function**
GO 25 (Input), 24 (Output)
ECO disabled = 0 | ECO enabled = 1
-
- Symbols / Setpoint**
(Heating/ Cooling) displayed in color (red/blue):
☐ General > Display > Colour heating / Cooling symbol

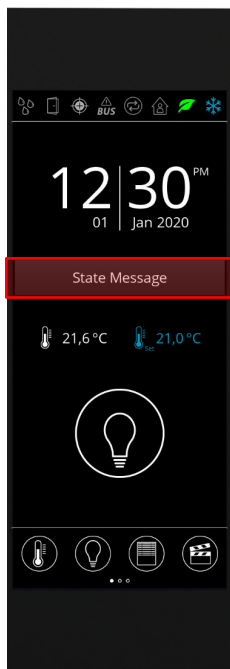
Configuration parameter

„Maintenance & Calibration“:
☐ General > Maintenance & Calibration

4.2.2 Alert / status messages / time and date



NOVOS 7



NOVOS Touch / thanos EVO

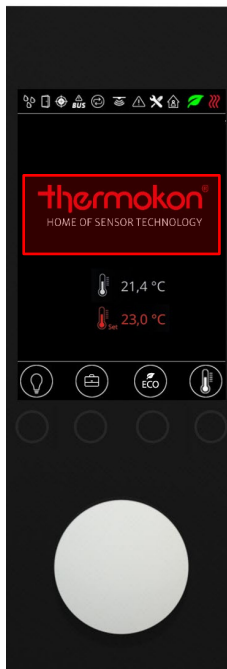
During operation, up to eight text messages ETS (max. 24 characters), room designations, status messages and any other notification, e.g. warnings, can be displayed on the main screen (*General > Alert and status messages*). Only one message can be activated at a time. The Unicode character set (see Chapter 8) is used to display characters, letters and numbers. Furthermore, a Alert can be set up, which can be activated via group object (*General > Alert & Status Message > Frequency/Duration Alert group object*).

Time and Date

Time and date can be shown or hidden independently of each other (*ETS menu: General > Date & Time*). The date formats DD.MM.YYYY or MM.DD.YYYY and the time formats 24h or 12h (AM/PM) are available.

4.2.3 Individual logo

With uConfig, an individual graphic can be loaded into the room control unit. This graphic can be used as a logo for the boot screen, instead of the time and date on the home screen or as a screensaver.



NOVOS 7



NOVOS Touch / thanos EVO

NOVOS 7

Resolution: 320x210 px
Colour depth 32-bit, 24-bit
Picture format: bmp

NOVOS Touch/ thanos EVO

Resolution: 480x210 px
Colour depth 32-bit, 24-bit
Picture format: bmp

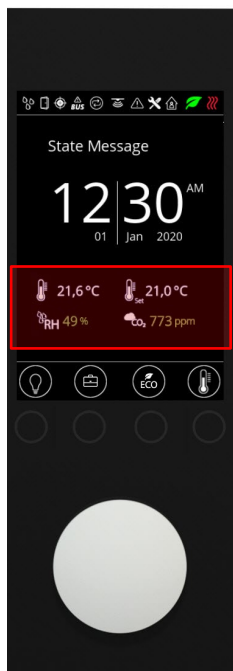
Group objects

- **Alert**
 - GO 14 (Input)
 - ON = 1 | Aus = 0
- **Status message**
 - GO 15 (Input)
 - Aus = 0 | 1-8 = Message number
 - GO 16 & 17 (Input)
 - ON = 1 | Aus = 0
- **Date synchronisation**
 - GO 12 (Input)
- **Time synchronisation**
 - GO 13 (Input)

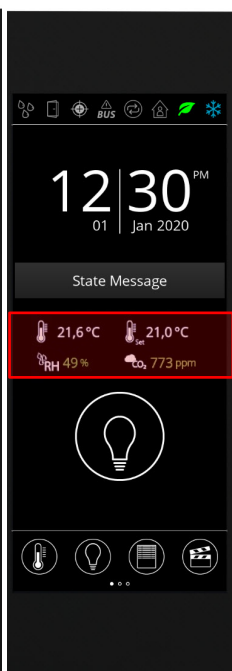
Configuration parameter „Date & Time“

- **Date format**
 - General > Date & Time > Show Date (Format)
 - Disabled
 - TT.MM.JJJJ
 - MM.TT.JJJJ
- **Time Format**
 - General > Date & Time > Show Time (Format)
 - Display Off
 - 12h (AM/PM)
 - 24h
- **Time setting**
 - General > Date & Time > Transfer time via ETS: Active
 - General > Date & Time > Set time
- **Date setting**
 - General > Date & Time > Transfer date via ETS: Active
 - General > Date & Time > Set date
- **Screen saver**
 - General > Display > Screen saver

4.2.4 Room temperature, Setpoint and Sensor values



NOVOS 7



NOVOS Touch / thanos EVO

Room temperature and setpoint can be shown or hidden independently of each other (*General > Display > Show Room Temperature / Setpoint (Home Screen)*). The setpoint can be displayed as an absolute or relative value (*HVAC > Set point > Set point format*). Room temperature and setpoint can be overwritten at any time during operation via a group object.

In the delivery state, the room temperature and setpoint displays are active and the setpoint is displayed as an absolute value. The adjustment range of the setpoint (*HVAC > Setpoint > range setpoint*) in the delivery state is $\pm 3\text{K}$ and the step width of the adjustment is $\pm 0.5\text{K}$ (*HVAC > Setpoint > Setpoint increment*).

In conjunction with the heating and cooling symbols in the header, the setpoint is also displayed in colour (*General > Display > Colour symbols heating/cooling*).

It is also possible to show a 3rd and 4th sensor measured value in the Home Screen (*General > Display > Show 3rd / 4th measured value (Home Screen)*).

For this, the respective sensors must be activated accordingly (*General > Identification > [Sensor]*) and configured (*Sensors > [Measured value]*).

The displayed measured values can also be provided with the traffic light function TLF (*General > Display > 3rd / 4th measured value TLF: **Enabled***).

The configured colours and threshold values are used for this (*Sensors > [Measured value]*).

Group objects

- **Set point**
 - GO 31 & 32 (Output)
 - GO 33 & 34 (Input)
- **Room temperature**
 - GO 233 (Output)
 - GO 230 (Input)

Configuration parameter „Setpoint“

- **Setpoint format**
 - HVAC > Setpoint > Setpoint format
- **Base setpoint**
 - HVAC > Setpoint > Base setpoint
- **Adjustment range setpoint**
 - HVAC > Setpoint > Adjustment range setpoint
- **Step size setpoint**
 - HVAC > Setpoint > Step Setpoint

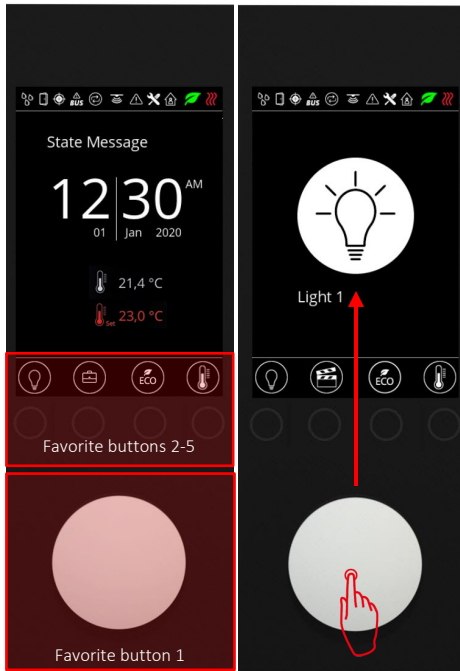
Configuration parameters „Sensor values“

- **Show sensor values**
 - General > display > 3. / 4. show measured value (Home Screen)
- **Activate sensors**
 - General > identification > [sensor]
- **Measured value TLF**
 - General > display > 3. / 4. Measured value TLF: active
- **Measured value TLF Parameter**
 - Sensors > [Measured Value]

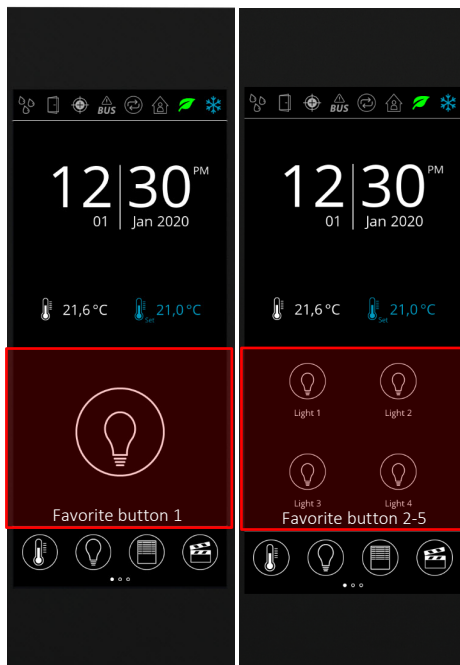
4.2.5 Favourite buttons

The favourite buttons can be freely assigned from the range of functions. The names of the individual lights or scenes can be defined individually. In addition to up to eight lightings/lighting groups or scenes, functions such as presence (present/absent), ECO (ON/OFF) and the menus Climate, Lighting, Shading, Scenes and Monitoring can be defined as favourite buttons (*General > Favourite buttons*).

NOTE: The assigned functions of the favourite buttons must be activated in the respective menu item. (e.g.: Favourite key 1 should switch scene 7 → Scenes > Scenes general > Number of scenes: at least 7), otherwise the function is not executed or not output on the respective group object.



NOVOS 7



NOVOS Touch / thanos EVO

Favourite keys NOVOS 7

There are four configurable capacitive keys below the edge of the screen. The corresponding symbols are displayed in the footer of the main screen. These keys correspond to the parameters of favourite key 2 to 5. The press function of the rotary/push encoder corresponds to favourite key 1. If favourite key 1 is pressed in standby or Home Screen, the respective function is triggered and the associated symbol is displayed for approx. 3 seconds in the Home Screen.

Favourite keys NOVOS Touch / thanos EVO

If only one favourite key is required on the Home Screen, the parameter "Favourite key 1 (central)" must be defined according to the desired function. If several favourite keys are required (two to a maximum of four), the parameter "Favourite key 1 (central)" must be set to "Disabled / 4 keys". The additional parameters for the favourite keys 2 to 5 appear.)

Configuration parameter „Favorite buttons“

- **Favorite button 1**
 - NOVOS Touch/thanos EVO: Center
 - NOVOS 7: Encoder
- **Favoriten button 2**
 - NOVOS Touch/thanos EVO: top left
 - NOVOS 7: left
- **Favoriten button 3**
 - NOVOS Touch/thanos EVO: top right
 - NOVOS 7: center left
- **Favoriten button 4**
 - NOVOS Touch/thanos EVO: bottom left
 - NOVOS 7: center right
- **Favoriten button 5**
 - NOVOS Touch/thanos EVO: bottom right
 - NOVOS 7: right

■ Selections

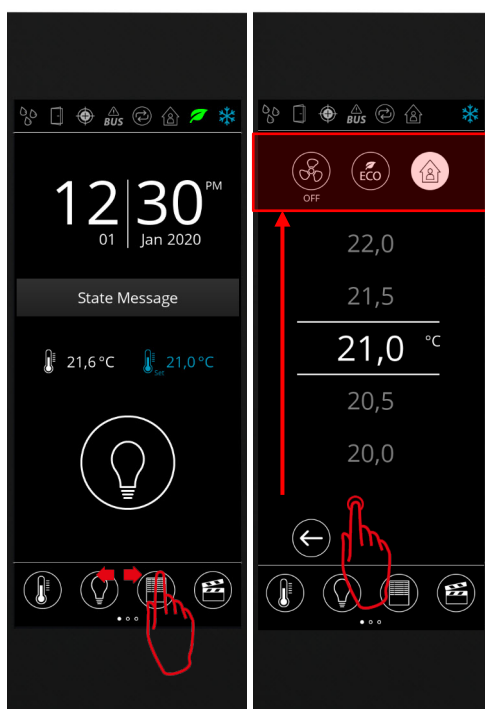
Disabled / 4 buttons

- Light 1
- Light 2
- Light 3
- Light 4
- Light 5
- Light 6
- Light 7
- Light 8
- Shading 1
- Shading 2
- Shading 3
- Shading 4
- Shading 5
- Shading 6
- Shading 7
- Shading 8
- Scene 1
- Scene 2
- Scene 3
- Scene 4
- Scene 5
- Scene 6
- Scene 7
- Scene 8
- Präsenz
- Eco
- Climate menu
- Light menu
- Shading menu
- Scene menu
- Monitoring menu
- Fan menu (NOVOS 7)

4.3 Main menu



NOVOS 7



NOVOS Touch / thanos EVO

NOVOS 7 Device menu (*carousel*)

By turning the encoder, the unit switches to the main menu (*carousel*). Menu navigation continues via the rotary/push encoder. All functions, (except for the settings menu), can be activated or deactivated individually in the parameter menu of the ETS. In the delivery state, all menu items are active.

NOVOS Touch / thanos EVO device menu (*navigation bar*)

In the footer area of the touch display you will find the (equivalent to the carousel of the NOVOS 7) is the device menu. You can scroll between the menu pages in the menu bar with a swipe movement. All menu items are displayed as buttons in the menu bar.

The activation of the ECO mode or switching the room occupancy and the submenu for fan control, if activated, are arranged in the Climate menu, unlike the NOVOS 7. To activate or deactivate the ECO mode and to switch the room occupancy, simply touch the button.

Configuration of the device menu
(via ETS)



- **Monitoring Menu**
 - Sensors > Monitoring > Monitoring (Traffic Light Function)



- **Standby-button-menu**
 - General > Display > Menu for „Display off“ and cleaning mode...



- **Climate menu**
 - HVAC > HVAC general > Appearance Climate menu



- **ECO-button**
 - HVAC > HVAC general > show ECO-button in climate menu/ carousel



- **Occupancy button**
 - HVAC > HVAC general > show occupancy button in climate menu/ carousel



- **Fan menu**
 - HVAC > Lüfter > show fan menu



- **Lighting menu**
 - Lighting > lighting general > Number of lighting channels / display of lighting menu



- **Shading menu**
 - Shading > Shading general > Number of shading channels / Shading menu display



- **Scene menu**
 - Scenes > Scenes general > Number of scenes / display of scene menu

4.3.1 Climate-Menu (Temperature Menu)

The setpoint and fan control as well as the ECO and presence functions are in the climate menu. The setpoint can be displayed as a relative or absolute value. When ECO mode is active, it is not possible for the operator to adjust the setpoint and the fan speed. All functions described in 4.3.1 can be parameterised under "HVAC".



NOVOS 7

NOVOS 7 Climate-Menu

The operation is intuitive with the help of the rotary encoder. The buttons for ECO, room occupancy and fan control can also be optionally displayed in the temperature menu. In the delivery state, these buttons are not active in the climate menu, the setpoint display is defined with 21°C as the absolute value and the setpoint adjustment is carried out with 0.5K in the range of $\pm 3K$. If the fan function is activated in the climate menu, the adjustment can be made directly via the button.

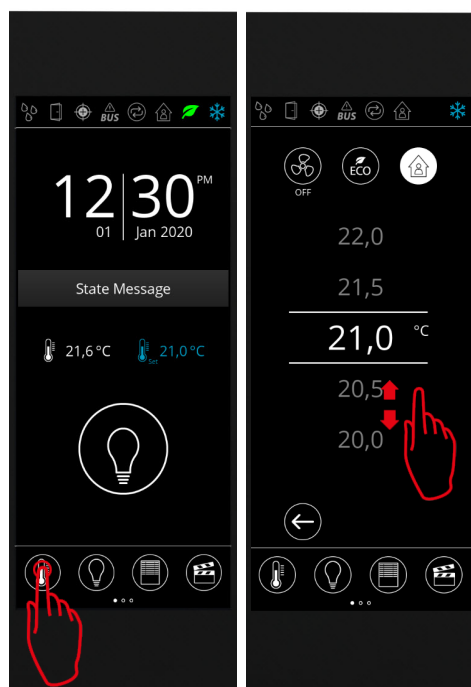
Example



ECO-Mode „disabled“ ► „active“



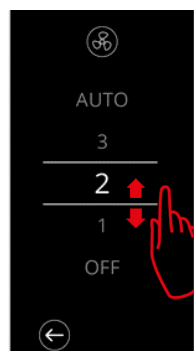
Room Occupancy „vacant“ ► „occupied“



NOVOS Touch / thanos EVO

NOVOS Touch / thanos EVO Climate Menu

The buttons for fan adjustment, ECO mode and room occupancy are an integral part of the air-conditioning menu. ECO mode and room assignment are activated or deactivated directly via the toggle button. When the button for the fan function is pressed, the menu for fan control is called up. Here, the fan level can be adjusted with a toggle movement (up or down). If ECO mode is active, neither the setpoint nor the fan speed can be changed.



Configuration parameter
„Setpoint“

- **Setpoint format**
 - HVAC > Setpoint > setpoint format
- **Base setpoint**
 - HVAC > setpoint > Base setpoint
- **Setpoint adjustment range**
 - HVAC > setpoint > Setpoint range
- **Setpoint step size**
 - HVAC > setpoint > Setpoint increment

Configuration parameter „Fan“

- **Fan function**
 - HVAC > Fan > display fan menu
- **Number of Fanstages**
 - HVAC > Fan > number of fanstages
- **Fan stage AUTO available**
 - HVAC > Fan > Fan stage AUTO
- **Lowest possible fan stage**
 - HVAC > Fan > minimal fan stage
- **Fan stage after Reset**
 - HVAC > Fan > Fan stage after reset
- **Group objects fan stage**
 - HVAC > Fan > 1 Bit GO per fan stage
 - HVAC > Fan > 1 Byte GO [%]
 - HVAC > Fan > 1 Byte GO [number]

4.3.2 Lighting Menu

In the lighting menu, it is possible to manage up to eight lighting channels. Depending on the technical conditions, the individual channels can be switched or dimmed individually.



NOVOS 7

NOVOS 7 lighting groups

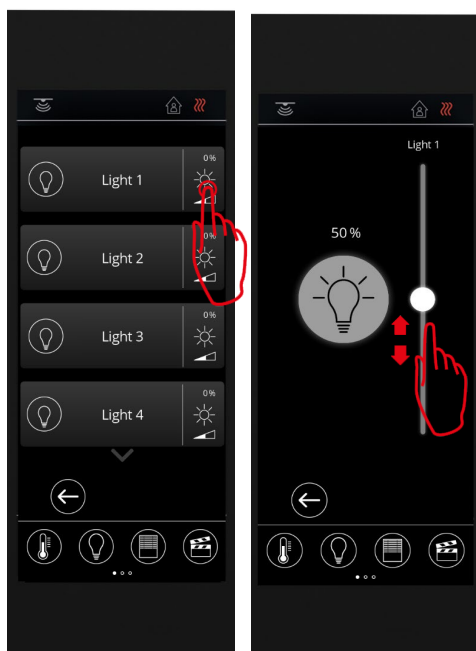
Four different symbols and max. 12 characters are available for the designation.

If a lighting channel is dimmable (Lighting > Lighting X > Dimmable), this is indicated in the button with the dimming symbol. If the dimming adjustment is parameterised as a "slider" (Lighting > Lighting X > Control element: Slider), the percentage dimming value is also displayed. The dimming value can be set by the operator with the rotary encoder in the respective submenu of the lighting channel. In push-button mode, the percentage display is omitted and the dimming adjustment is carried out with 2 push-button commands (+) and (-).

Non-dimmable illuminations are switched on or off directly with the button.

Example

Light 1 „inactive“ ► „active“



NOVOS Touch / thanos EVO

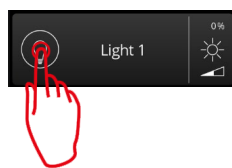
Lighting groups NOVOS Touch / thanos EVO

Equivalent to NOVOS 7, up to eight different lighting channels can also be controlled with NOVOS Touch and thanos EVO.

Four different symbols and a maximum of 12 characters are available for the designation.

If a lighting channel is dimmable (Lighting > Lighting X > Dimmable), this is indicated in the button of the respective lighting channel with the dimming symbol. If the dimming adjustment is parameterised as a "slider" (Lighting > Lighting X > Control element: Slider), the percentage dimming value is also displayed. The dimming value can be set by the operator with a "swipe" gesture in the respective submenu of the lighting channel.

With a click on the button, the lighting channel can be switched off directly and switched on again. In this case, the last set dimming value is assumed.



In push-button mode (Lighting > Lighting X > Control element: Push-button), the percentage display is omitted and dimming is adjusted via 2 push-button commands (+) and (-).

Non-dimmable lighting is switched on or off directly with the button.

Configuration parameter „Lighting“

- **Number of lighting channels**
 - Lighting > lighting general > number of lighting channels
- **Display of the Lighting menu**
 - Lighting > lighting general > display lighting menu
 - Listing
 - Room plan
 - Listing and room plan
- **Lighting control element**
 - Lighting > Lighting X > Control element:
 - Slider
 - Button operation
 - ...
- **Lighting Symbol Selection**
 - Lighting > Lighting X > Symbol



Universal bulb



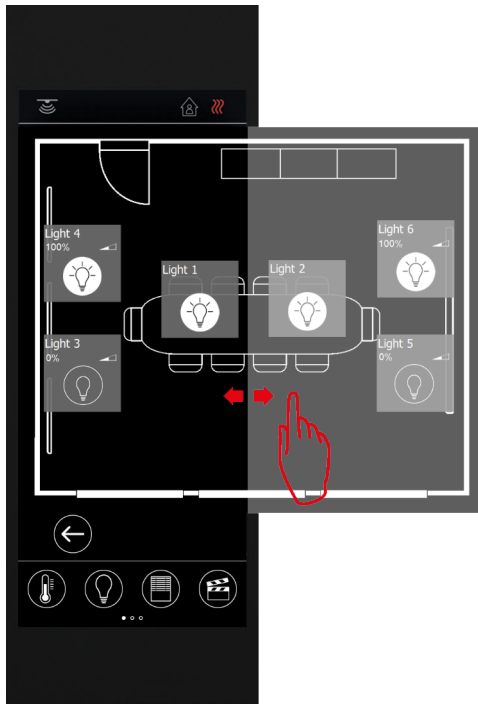
Spot



Light cassette



Floor lamp



NOVOS Touch / thanos EVO

2D Room plan display

As an alternative or in addition to the list display, a room can be graphically visualised two-dimensionally with NOVOS Touch or thanos EVO. The luminaires are displayed in the plan via buttons. Precise positioning of the buttons is possible via a coordinate system. For this purpose, a floor plan (1-bit colour depth, black/white) of a room, for example, can be uploaded to the unit.

The upload is done with the help of the uConfig software.

Care must be taken that the image size corresponds to 960x800 pixels. If a lighting channel can be dimmed, the respective button in the room plan display must be pressed for longer than 2 seconds to access the subordinate dimming menu.

Buttons in automatic mode (lock for the user)

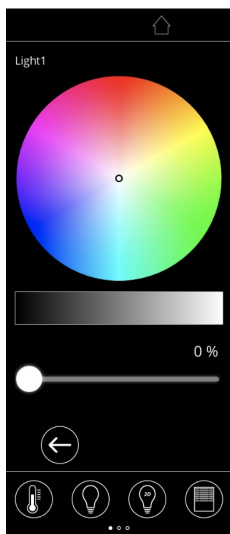
The buttons of the individual lighting channels can be locked for NOVOS 7, Touch and thanos EVO independently of the display via group objects (*Lighting > Lighting X > Automatic mode (GO for locking the HMI:) Active*). All locked buttons of the respective lighting channel are displayed greyed out in the entire user interface and can no longer be operated by the user. The automatic mode becomes effective when the respective group object has been activated and after the unit has returned to the Home Screen once. During the active automatic mode, switching and dimming of the blocked lighting channels is only possible via other means, but not via the room control unit.

RGB(W) colour picker (colour mixer)

Whether classic RGB or RGBW lighting, the colour picker makes it easy to select any colour and then use it for the lighting in question. NOVOS Touch captures the colour value of a selected point on the colour wheel and displays it in RGB(W) format. Up to 16 million different light colours are thus possible. In addition, a slider is available for the dimming level for the respective lighting circuit.

Colour temperature picker

As an alternative to the colour picker, a colour temperature picker can be configured (*Lighting > Lighting X > Control element: colour temperature*). Whether bright daylight or a warm lighting scenario, any light colour is possible with the colour temperature picker. Limit values (lower and upper limit) for the colour temperature values can be configured (*Lighting > Lighting X > Colour temperature minimum / maximum*).



NOVOS Touch / thanos EVO

“Lighting” Configuration parameter

■ Display of the lighting menu

- Lighting > Lighting general > Display of the lighting menu

Listing
Room plan
Listing & Room plan

■ Lighting control element

- Lighting > Lighting X > Control element:

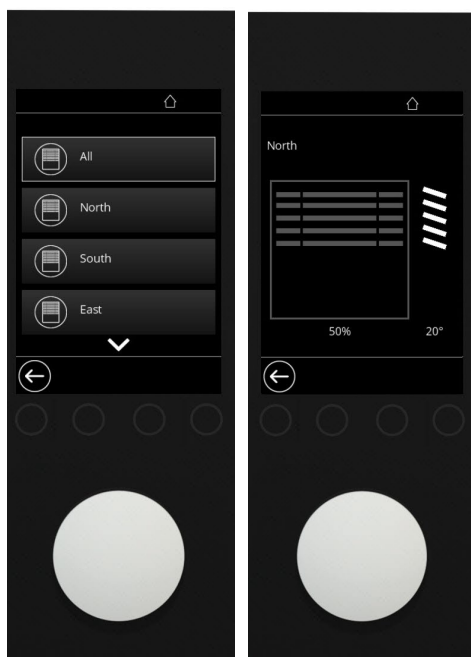
...
RGBW-Color picker
Color temperature picker

■ Colour temperature picker limits

- Lighting > Lighting X > Control element:
Colour temperature

Colour temperature min. 1000-6600K
Colour temperature max. 6600-15000K

4.3.3 Shading menu



NOVOS 7

Shading groups

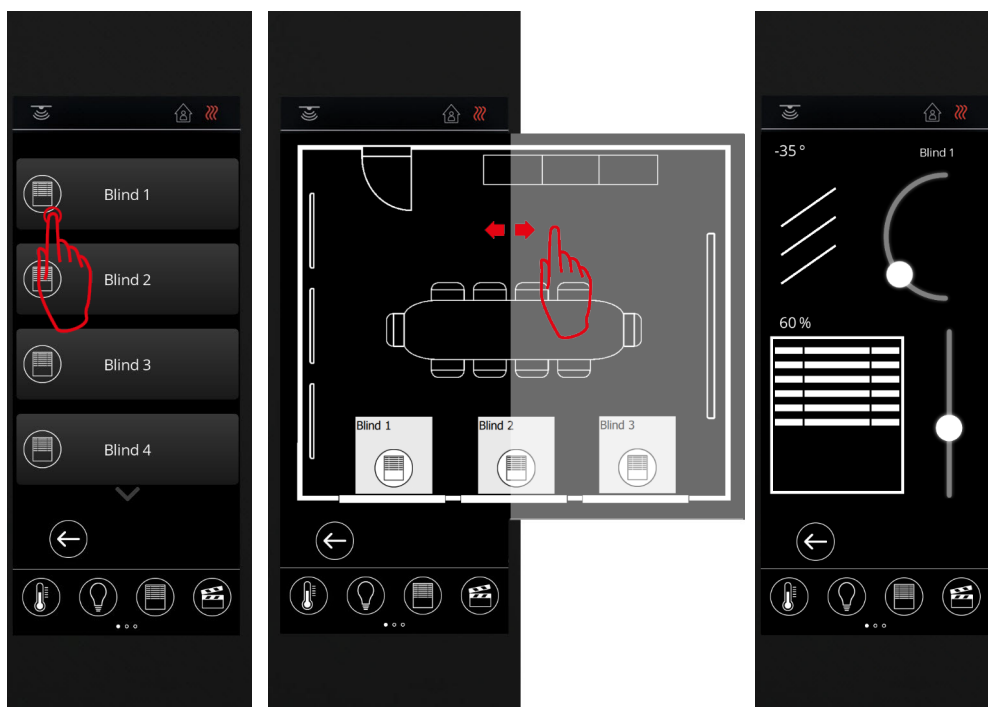
Just like the lighting groups, up to eight shading circuits can be controlled. The shading menu is available in the NOVOS 7, NOVOS Touch as well as thanos EVO.

Depending on the application, shutters or blinds can be configured with or without angle adjustment.

The user interface concept is identical to the lighting circuits (see chapter 4.3.2).

User key lock (AUTO mode)

The buttons of the individual shading channels can be locked for NOVOS 7, Touch and thanos EVO independently of the display via group objects (*Shading > Shading X > Automatic mode (GO for locking the HMI:) Active*). All locked buttons of the respective shading channels are displayed greyed out in the entire user interface and can no longer be operated by the user. The automatic mode becomes effective when the respective group object has been activated, as well as after the unit has returned to the Home Screen once. During the active automatic mode, switching and moving blocked shading channels is only possible via other means, but not via the room control unit.



NOVOS Touch / thanos EVO

“shading” Configuration parameter

■ Number of shading groups

- Shading > shading general > number of shading groups

■ Display of the shading menu

- Shading > shading general > display of the shading menu

Listing

Room plan

Listing & Room plan

■ Shading Symbol Selection

- shading > shading X > Symbol:



Shutter



Shutter group



Roller shutter



Roller shutter group



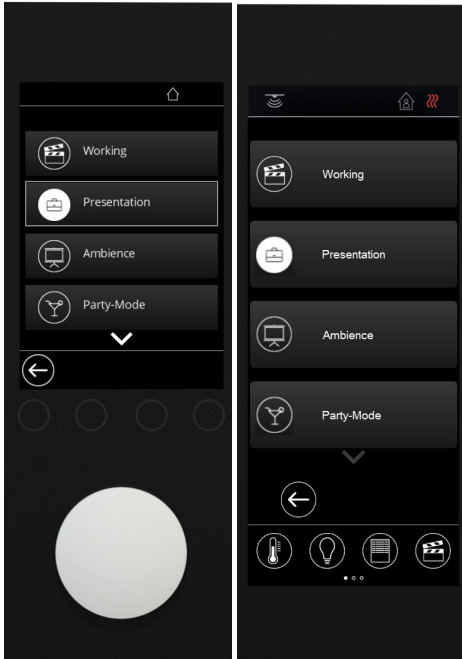
Curtain



Curtain group

4.3.4 Scene Menu

In the Scenes menu, up to eight scene circles are available for individual scenes (*Scenes > Scenes general > Number of scenes*). The scenes can be activated via buttons on the display. It is also possible to teach in current states as scenes by pressing and holding the button (*Scenes > Scenes general > Learn scenes*). The unit then sends a scene learning telegram to the linked actuators. In addition, the successful learning process is acknowledged with an acoustic feedback.



NOVOS 7

NOVOS Touch / thanos EVO

Scenes

For quick adaptation of the room situation or the room state, buttons for up to eight different scenes can be created. The names of the individual scenes (*Scenes > Scene X > Name*) can be freely assigned (max. 12 characters). For individualisation, you can choose from nine different scene symbols (*Scenes > Scene X > Symbol*).

The scenes are activated exclusively. This means that - typical for KNX - only one scene is active at a time. Via the parameter *Scenes > Scene X > Switch scene* (1 bit GO), a group object can be activated per scene, which outputs the scene status (On = 1 | Off = 0).

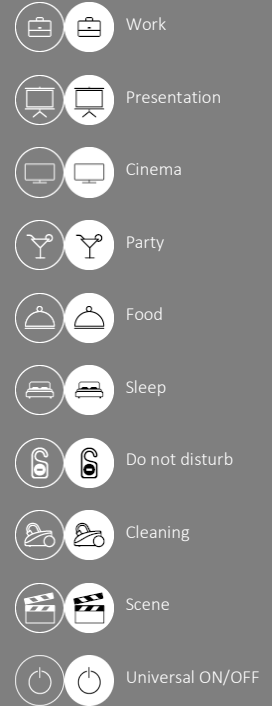
"Scene" Configuration Parameter

■ Number of scenes

- *Scenes > Scenes general > number of scenes*

■ Scene symbol selection

- *Scenes > Scene X > Symbol*



4.3.5 Monitoring Menu



NOVOS 7

NOVOS Touch / thanos EVO

Measured value monitoring

In the Monitoring menu you get an overall view of the measured values of the unit (*Sensors > Monitoring > Monitoring* (Traffic Light Function): Enabled).

Traffic Light Function

The Traffic Light Function (TLF) is used for visual indication of the measured values (*Sensors > [Measured Value] > Monitoring - Traffic Light Function* (TLF): TLF xxx / HTLF xxx).

Threshold values

Using freely selectable threshold values, the individual measured values can be clearly highlighted with freely definable colours. (*Sensors > [Measured Value] > Monitoring - Traffic Light Function* (TLF): TLF xxx / HTLF xxx).

Line diagram

In the background of the button, a line diagram can be used to visually illustrate the measured value trend of the last 60 minutes (*Sensors > [Measured Value] > Monitoring - Traffic Light Function* (TLF): xxx Trend).

Possible sensor values: Temperature, relative humidity, absolute humidity, enthalpy, dew point, CO₂, CO₂/VOC Mix, VOC

This menu is for viewing only and does not contain any additional control elements. Depending on the application, the entire menu or individual measured variables can be shown or hidden.

Monitoring Menu

■ Display Monitoring Menu

- *Sensors > Monitoring > Monitoring* (Traffic Light Function)
- Active | Inactive

Traffic Light Function (TLF)

■ Messwert TLF

- *Sensors > [Measuring value] > Monitoring - Traffic Light Function* (TLF): TLF xxx / HTLF xxx

■ Threshold value

- *Sensors > [Measuring value] > TLF range X / TLF Threshold value range X*

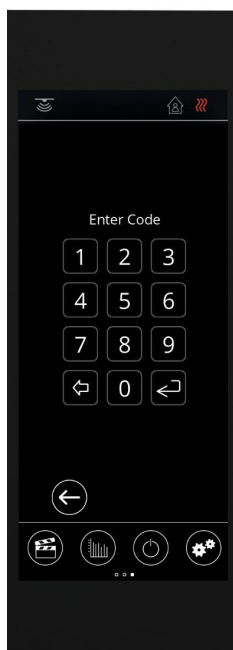
■ Line chart

- *Sensors > [Measuring value] > Monitoring - Traffic Light Function* (TLF): xxx Trend

4.3.6 Configuration menu



NOVOS 7



NOVOS Touch / thanos EVO

The configuration menu offers the possibility to change the date and time as well as offsets of the existing measured variables.

Additional information such as hardware or software-specific versions can also be called up via the configuration menu. Furthermore, the configuration menu can be hidden automatically after a predefined time after switching on the power supply. Once the configuration menu is hidden, it is only available again after a power reset for the predefined time. *[General > Basic Settings > Hide Configuration Menu]*

In the delivery state, the password for NOVOS 7 / Touch and thanos EVO is: **2030**. It is possible to change the access password via the app and ETS.

We recommend assigning your own password at the end of project planning to prevent unauthorised changes. Be sure to keep the new password!

5 Group objects

The group object structure of all T2x KNX devices is uniform. Depending on the version and configuration, certain group objects are hidden or not available. In the following, the group objects are structured according to their function and described accordingly.

5.1 Flags

The communication behaviour of the individual objects is determined by the so-called flags.

FLAG	DESCRIPTION
C-Flag	Activate / deactivate communication of objects.
R-Flag	Object reacts to a GroupValueRead telegram coming from the bus and sends a GroupValueResponse telegram to the bus. (set flag)
W-Flag	Object reacts to a GroupValueWrite telegram coming from the bus and overwrites the previous object value. (set flag)
T-Flag	Object outputs each updated value: it sends a GroupValueWrite telegram to the bus. (set flag)
U-Flag	The device will respond to a GroupValueResponse telegram coming from the bus for this object, so it overwrites the object value. For a switching actuator, for example, this means that a relay representing this object is opened or closed. (set flag)
I-Flag	Object sends a GroupValueRead telegram after resetting the device to retrieve the object value via a GroupValueResponse. The cause of the reset of the device could be a power failure, an explicit reset of the bus or an explicit request to reset the device via a telegram. (set flag)

5.2 Group object description

The description contains the identification number (ID), the name, as well as the object function, the data point type, the direction of action (IN = receive / OUT = transmit), the validity for the respective device type (NOVOS 7, NOVOS Touch / thanos EVO), a description of the function, as well as parameter-specific dependencies.

5.2.1 Group objects „Operating display“

NO.	NAME	OBJEKT FUNCTION	DPT	IN / OUT	DESCRIPTION	DEPENDENCIES
1	Operating display	Send in operation	1.001	OUT	Object value = 1 cyclically, if device function is faultless.	General > Basic settings > Heartbeat operation indicator
2	Operating display	Maintenance monitoring	1.002	OUT	Object value = 1 after the maintenance monitoring cycle time has elapsed. Reset via ETS, or NOVOSapp	General > Maintenance & Calibration > Maintenance monitoring
3	Operating display	Calibration monitoring	1.002	OUT	Object value = 1 after the calibration monitoring cycle time has elapsed. Reset via ETS, or NOVOSapp	General > Maintenance & Calibration > Calibration monitoring
4	Operating display	Sensor error	1.002	OUT	Object value = 1: Sensor error, further information can be retrieved via NOVOSapp.	GO always activated.

5.2.2 Group objects „Display“

NR.	NAME	OBJECT FUNCTION	DPT	IN / OUT	DESCRIPTION	DEPENDENCIES
5	Display	Display off	1.001	IN	Object value = 1: display off until next touch. GO is reset after execution.	GO always activated.
6	Display	Interaction with HMI	1.002	OUT	Object value = 1: after display touch for 10 seconds	GO always activated.
7	Display	Display brightness	5.001	IN	Object value = Percentage adjustment of display brightness (overwrites ETS parameters)	GO always activated. General > Display > Display brightness
8	Display	Display brightness standby	5.001	IN	Object value = Percentage adjustment of display brightness (overwrites ETS parameters)	GO always activated. General > Display > Standby brightness
10	Display	Forced device reboot (Softwarereset)	1.003	IN	Object value = 1: Softwarereset in the application module (display). GO is reset after execution.	GO always activated.
11	Display	Night mode (Adjustment of display brightness)	1.024	IN	Object value = 1: Night mode (Night mode brightness active), Object value = 0: Day mode (display brightness active)	General > Display > Display brightness / Night mode brightness

5.2.3 Group objects „Datum & Uhrzeit“

NR.	NAME	OBJECT FUNCTION	DPT	IN / OUT	DESCRIPTION	DEPENDENCIES
12	Date	Date synch	11.001	IN	Date is set via CO.	General > Date & Time > Date and Time synch via BUS: Enabled
13	Time	Time synch	10.001	IN	Time is set via CO.	General > Date & Time > Date and Time Bus synch via BUS: Enabled

5.2.4 Group objects „Warnung & Meldung“

NR.	NAME	OBJECT FUNCTION	DPT	IN / OUT	DESCRIPTION	DEPENDENCIES
14	Warning & Message	Activate Alert	1.001	IN	Object value = 1: Alert is activated. GO is reset after execution.	General > Warning & status message > frequency / Time Alert GO
15	Warning & Message	Activate status message	5.010	IN	Object value > 0: Statusmessagesnummer activated. Object value = 0: no status message activated	General > Warning & status message > number of status messages / status message x
16	Warning & Message	Activate status message 1	1.001	IN	Object value = 1: status message 1 activated	General > Warning & status message > number of status messages: >=1
17	Warning & Message	Activate status message 2	1.001	IN	Object value = 1: status message 2 activated	General > Warning & status message > number of status messages: > 1
18	Warning & Message	Activate warning symbol	1.002	IN	Object value = 1: warning symbol in status line activated	GO always activated.
19	Warning & Message	Activate PIR-Symbol	1.011	IN	Object value = 1: PIR symbol in status line activated	GO always activated.

5.2.5 Group objects „HVAC“

NR.	NAME	OBJECT FUNCTION	DPT	IN / OUT	DESCRIPTION	DEPENDENCIES
20	Room operation mode	HVAC-Mode	20.102	OUT	Object value = active Room operation mode. No multiple selection possible	HVAC > HVAC General > Output Room operation mode (HVAC-Mode): 1 Byte GO / 1 Bit GO & 1 Byte GO
21	Room operation mode	Default HVAC-Mode	20.102	IN	Object value = active Room operation mode. No multiple selection possible	HVAC > HVAC General > Output Room operation mode (HVAC-Mode): 1 Byte GO / 1 Bit GO & 1 Byte GO
22	Room operation mode	Switching Presence /Standby	1.011	OUT	Object value = 1: Room operation mode active. Symbol in status bar active. Multiple selection possible, if only 1 bit GO active.	HVAC > HVAC General > Output Room operation mode (HVAC-Mode): 1 Bit GO / 1 Bit GO & 1 Byte GO
23	Room operation mode	Default Changeover Presence /Standby	1.011	IN	Object value = 1: Room operation mode active. symbol in status bar active. Multiple selection possible, if only 1 bit GO active.	HVAC > HVAC General > Output Room operation mode (HVAC-Mode): 1 Bit GO / 1 Bit GO & 1 Byte GO
24	Room operation mode	ECO-Mode	1.011	OUT	Object value = 1: Room operation mode active symbol in status bar active. Multiple selection possible, if only 1 bit GO active.	HVAC > HVAC General > Output Room operation mode (HVAC-Mode): 1 Bit GO / 1 Bit GO & 1 Byte GO
25	Room operation mode	Default ECO-Mode	1.011	IN	Object value = 1: Room operation mode active symbol in status bar active. Multiple selection possible, if only 1 bit GO active.	HVAC > HVAC General > Output Room operation mode (HVAC-Mode): 1 Bit GO / 1 Bit GO & 1 Byte GO
26	Room operation mode	Frost / heat protection	1.011	OUT	Object value = 1: Room operation mode active symbol in status bar active. Multiple selection possible, if only 1 bit GO active.	HVAC > HVAC General > Output Room operation mode (HVAC-Mode): 1 Bit GO / 1 Bit GO & 1 Byte GO
27	Room operation mode	Default Frost / heat protection	1.011	IN	Object value = 1: Room operation mode active symbol in status bar active. Multiple selection possible, if only 1 bit GO active.	HVAC > HVAC General > Output Room operation mode (HVAC-Mode): 1 Bit GO / 1 Bit GO & 1 Byte GO
28	Energylock	Condensation	1.011	IN	Object value = 1: Condensation-symbol in status bar active Controller active: additional energy block	GO always activated.
29	Energylock	Window contact	1.019	IN	Object value = 1: window-open-symbol in status bar active Regler active: additional energylock	GO always activated.
31	Setpoint	Output Setpoint (absolute)	9.001	OUT	Object value = absolute setpoint set on the unit (e.g.: 23°C)	HVAC > Setpoint > format Setpoint: Setpoint absolut
32	Setpoint	Output Setpoint (relative)	9.002	OUT	Object value = relative setpoint set on the unit (setpoint shift to the basic setpoint e.g.: +2K)	HVAC > Setpoint > format Setpoint: Setpoint offset
33	Setpoint	Default Setpoint (absolute)	9.001	IN	Object value = absolute setpoint (e.g.: 23°C)	HVAC > Setpoint > format Setpoint: Setpoint absolut
34	Setpoint	Default Setpoint (relative)	9.002	IN	Object value = relative setpoint (setpoint shift to the base setpoint e.g.: +2K)	HVAC > Setpoint > format Setpoint: Setpoint offset
36	Fancontrol	Output fan stage [%]	5.001	OUT	Object value = Fan stage percentage scaled to the configured number of fan stages (2 fan stages: LS0 = 0%, LS1 = 50%, LS2 = 100%)	HVAC > Fan > number of fan stages (value > 0) / 1 Byte GO [%]: active
37	Fancontrol	Default external fan stage [%]	5.001	IN	Object value = Fan stage percentage scaled to the configured number of fan stages (2 fan stages: LS0 = 0%, LS1 = 50%, LS2 = 100%)	HVAC > Fan > number of Fan stages (value > 0) / 1 Byte GO [%]: active
38	Fancontrol	Output Fan stage counter value	5.100	OUT	Object value = Counter value of the active fan stage (2 LS: LS0 = 0, LS1 = 1, LS2 = 2)	HVAC > Fan > Number of Fan stages (Value > 0) / 1 Byte GO [counter value]: active
39	Fancontrol	Default external fan stage	5.100	IN	Object value = Counter value of the active fan stage (2 LS: LS0 = 0, LS1 = 1, LS2 = 2)	HVAC > Fan > Number of Fan stages (Value > 0) / 1 Byte GO [counter value]: active
40	Fancontrol	Fan stage 1 active	1.001	OUT	Object value = 1, if fan stage active, 0 if inactive	HVAC > Fan > Number of Fan stages: (Value = 1) / 1 Bit GO per Fan stage: active
41	Fancontrol	Fan stage 2 active	1.001	OUT	Object value = 1, if fan stage active, 0 if inactive	HVAC > Fan > Number of Fan stages: (Value = 2) / 1 Bit GO per Fan stage: active

NR.	NAME	OBJECT FUNCTION	DPT	IN / OUT	DESCRIPTION	DEPENDENCIES
42	Fancontrol	Fan-stage 3 active	1.001	OUT	Object value = 1, if fan-stage active, 0 if deactivated	HVAC > Fan > Number of Fan stages: 3 / 1 Bit GO per Fan stage: Active
43	Fancontrol	Fan-stage 4 active	1.001	OUT	Object value = 1, if fan-stage active, 0 if deactivated	HVAC > Fan > Number of Fan stages: 4 / 1 Bit GO per Fan stage: Active
44	Fancontrol	Fan-stage 5 active	1.001	OUT	Object value = 1, if fan-stage active, 0 if deactivated	HVAC > Fan > Number of Fan stages: 5 / 1 Bit GO per Fan stage: Active
45	Fancontrol	Fan-stage AUTO active	1.001	OUT	Object value = 1, if fan-stage active, 0 if deactivated	HVAC > Fan > Number of Fan stage AUTO: Active

5.2.6 Group objects

NR.	NAME	OBJECT FUNCTION	DPT	IN / OUT	DESCRIPTION	DEPENDENCIES
46-58		RESERVED				

5.2.7 Group objects „Beleuchtung“ (NOVOS Touch / thanos EVO)

NR.	NAME	OBJECT FUNCTION	DPT	IN / OUT	DESCRIPTION	DEPENDENCIES
60	Light 1	Switching	1.001	OUT	Object value = Status of the control element (button) set on the unit	GO activated, if channel active
61	Light 1	Dim (steps)	3.007	OUT	Object value = Change of state of the control element (button)	Lighting > Lighting 1 > Control element: Button Dimable: Enabled
62	Light 1	Dim value (percentage)	5.001	OUT	Object value = Dimming value of the control element (slider) set on the unit	Lighting > Lighting 1 > Control element: Slider
63	Light 1	Status Switch	1.001	IN	Object value = Status of the control element (button)	GO activated, if channel active
64	Light 1	Status Dim value	5.001	IN	Object value = Dimming value of the control element (slider)	Lighting > Lighting 1 > Control element: Slider
65	Light 1	RGB Value	232.600	OUT	Object value = RGB value of the control element set on the unit (RGBW)	Lighting > Lighting 1 > Control element: RGBW
66	Light 1	RGBW Value	251.600	OUT	Object value = RGBW value of the control element set on the unit (RGBW)	Lighting > Lighting 1 > Control element: RGBW
67	Light 1	Status RGB Value	232.600	IN	Object value = RGB value of the control element (RGBW)	Lighting > Lighting 1 > Control element: RGBW
68	Light 1	Status RGBW Value	251.600	IN	Object value = RGBW value of the control element (RGBW)	Lighting > Lighting 1 > Control element: RGBW
69	Light 1	Color temperature (K)	7.600	OUT	Object value = Colour temperature value set on the unit	Lighting > Lighting 1 > Control element: Colour temperature
70	Light 1	Status Color temperature (K)	7.600	IN	Object value = Color temperature value	Lighting > Lighting 1 > Control element: Colour temperature
71	Light 1	Automatic-mode (HMI lock)	1.003	IN	Object value = 1: blocks interaction via HMI on this channel	Lighting > Lighting 1 > Automatic-mode (GO for HMI lock): Enabled
72-83	Light 2	See Light 1 (GO Nb. + 12)				
84-95	Light 3	See Light 1 (GO Nb. + 24)				
96-107	Light 4	See Light 1 (GO Nb. + 36)				
108-119	Light 5	See Light 1 (GO Nb. + 48)				
120-131	Light 6	See Light 1 (GO Nb. + 60)				
132-143	Light 7	See Light 1 (GO Nb. + 72)				
144-155	Light 8	See Light 1 (GO Nb. + 84)				

5.2.8 Group objects „Beleuchtung“ (NOVOS 7)

NB.	NAME	OBJECT FUNCTION	DPT	IN / OUT	DESCRIPTION	DEPENDENCIES
60	Light 1	Switch	1.001	OUT	Object value = Status of the control element (button) set on the unit	GO activated, if channel active
61	Light 1	Dim (steps)	3.007	OUT	Object value = Change of state of the control element (button)	Lighting > Lighting 1 > Control element: Button Dimable: Enabled
62	Light 1	Dimm value (Percentage)	5.001	OUT	Object value = Dimming value of the control element (slider) set on the unit	Lighting > Lighting 1 > Control element: Slider
63	Light 1	Status switch	1.001	IN	Object value = Status of the control element (button)	GO activated, if channel active
64	Light 1	Status dim value	5.001	IN	Object value = Dimming value of the control element (slider)	Lighting > Lighting 1 > Control element: Slider
71	Light 1	Automatic-Mode (HMI Lock)	1.003	IN	Object value = 1 blocks interaction via HMI on this channel	Lighting > Lighting 1 > Automatic-Mode (GO for HMI lock): Enabled
72-83	Light 2	See Light 1 (GO Nb. + 12)				
84-95	Light 3	See Light 1 (GO Nb. + 24)				
96-107	Light 4	See Light 1 (GO Nb. + 36)				
108-119	Light 5	See Light 1 (GO Nb. + 48)				
120-131	Light 6	See Light 1 (GO Nb. + 60)				
132-143	Light 7	See Light 1 (GO Nb. + 72)				
144-155	Light 8	See Light 1 (GO Nb. + 84)				

5.2.9 Group objects “shading”

NB.	NAME	OBJECT FUNCTION	DPT	IN / OUT	DESCRIPTION	DEPENDENCIES
156	Shading 1	Move up / down (long keystroke)	1.008	OUT	object value = state according to operation of the control element (button)	Shading > Shading 1 > Control element: button
157	Shading 1	Slat adjustment / Stop (short keystroke)	1.009	OUT	object value = state according to operation of the control element (button)	Shading > Shading 1 > Control element: button
158	Shading 1	Up / down (step)	3.008	OUT	Object value = Dimming value of the control element set on the unit (Slider)	Shading > Shading 1 > Control element: Slider
159	Shading 1	Curtain length (percent)	5.001	OUT	Object value = State of the control element (Slider)	Shading > Shading 1 > Control element: Slider
160	Shading 1	Slat position (percent)	5.001	OUT	Object value = State of the control element (Slider)	Shading > Shading 1 > Control element: Slider / Slat adjustment: Enabled
161	Shading 1	Status curtain length (percent)	5.001	IN	Object value = State of the control element (Slider)	Shading > Shading 1 > Control element: Slider
162	Shading 1	Status slat position (percent)	5.001	IN	Object value = State of the control element (Slider)	Shading > Shading 1 > Control element: Slider / Slat adjustment: Enabled
163	Shading 1	Automatic-Mode (HMI lock)	1.003	IN	Object value = 1 blocks interaction via HMI on this channel	Shading > Shading 1 > Automatic-Mode (GO for HMI lock): Enabled
164-171	Shading 2	See Shading 1 (GO Nb. + 8)				
172-179	Shading 3	See Shading 1 (GO Nb. + 16)				
180-187	Shading 4	See Shading 1 (GO Nb. + 24)				
188-195	Shading 5	See Shading 1 (GO Nb. + 32)				
196-203	Shading 6	See Shading 1 (GO Nb. + 40)				
204-211	Shading 7	See Shading 1 (GO Nb. + 48)				
212-219	Shading 8	See Shading 1 (GO Nb. + 56)				

5.2.10 Group objects „Scene control“

NB.	NAME	OBJECT FUNCTION	DPT	IN / OUT	DESCRIPTION	DEPENDENCIES
220	Scene control	Scene	18.001	OUT	Object value = active Scene number	Scene > Scene General > Number of Scenes (Value > 0)
221	Scene control	Status Scene	18.001	IN	Object value = active Scene number	Scene > Scene General > Number of Scenes (Value > 0)
222	Scene control	Switch Scene 1	1.011	OUT	Object value 1 = Scene activated	Scene > Scene 1 > Switch scene (1 Bit CO): Active
223	Scene control	Switch Scene 2	1.011	OUT	Object value 1 = Scene activated	Scene > Scene 2 > Switch scene (1 Bit CO): Active
224	Scene control	Switch Scene 3	1.011	OUT	Object value 1 = Scene activated	Scene > Scene 3 > Switch scene (1 Bit CO): Active
225	Scene control	Switch Scene 4	1.011	OUT	Object value 1 = Scene activated	Scene > Scene 4 > Switch scene (1 Bit CO): Active
226	Scene control	Switch Scene 5	1.011	OUT	Object value 1 = Scene activated	Scene > Scene 5 > Switch scene (1 Bit CO): Active
227	Scene control	Switch Scene 6	1.011	OUT	Object value 1 = Scene activated	Scene > Scene 6 > Switch scene (1 Bit CO): Active
228	Scene control	Switch Scene 7	1.011	OUT	Object value 1 = Scene activated	Scene > Scene 7 > Switch scene (1 Bit CO): Active
229	Scene control	Switch Scene 8	1.011	OUT	Object value 1 = Scene activated	Scene > Scene 8 > Switch scene (1 Bit CO): Active

5.2.11 Group objects „Sensor“

NB.	NAME	OBJECT FUNCTION	DPT	IN / OUT	DESCRIPTION	DEPENDENCIES
230	Sensor	Temperatur-Sensorwert überschreiben	9.001	IN	Object value = -1: Function inactive. Object value > 0: Temperature sensor value is overwritten and shown in the display (Home Screen) when activated. Permitted object value:0..50,0°C	General > Identification > Temperature sensor: Active
233	Sensor	Temperatur	9.001	OUT	Object value = Measured value including Offset	General > Identification > Temperature sensor: Active Sensor > Temperature
234	Sensor	relative Feuchte	5.001	OUT	Object value = Measured value including Offset	General > Identification > Humidity sensor: Active Sensor > relative Humidity
235	Sensor	absolute Feuchte	9.029	OUT	Object value = Measured value	General > Identification > Humidity sensor: Active Sensor > absolute Humidity
236	Sensor	Enthalpie	9.001	OUT	Object value = Measured value	General > Identification > Temperature sensor: Active / Humidity sensor: Active Sensor > Enthalpy
237	Sensor	Taupunkt	9.001	OUT	Object value = Measured value	General > Identification > Temperature sensor: Active / Humidity sensor: Active Sensor > Dew point
238	Sensor	CO2	9.008	OUT	Object value = Measured value including Offset	General > Identification > CO2-Sensor: Active Sensor > CO2
239	Sensor	VOC	5.001	OUT	Object value = Measured value including Offset	General > Identification > VOC-Sensor: Active Sensor > VOC
240	Sensor	CO2/VOC Mix	5.001	OUT	Object value = Measured value	General > Identification > CO2-Sensor: Active / VOC Sensor: Active Sensor > CO2/VOC Mix

5.2.12 Group objects „Inputs“

NB.	NAME	OBJECT FUNCTION	DPT	IN / OUT	DESCRIPTION	DEPENDENCIES
246	Digital Input	Status Digital Input 1	1.001	OUT	Object value = Input Status	<i>Inputs > Input 1 > Contact type Digital Input 1 (DI): Normally open / Normally closed</i>
247	Digital Input	Status Digital Input 2	1.001	OUT	Object value = Input Status	<i>Inputs > Input 2 > Contact type Digital Input 2 (DI): Normally open / Normally closed</i>
248	Digital Input	Status Digital Input 3	1.001	OUT	Object value = Input Status	<i>Inputs > Input 3 > Type of input: Normally open / Normally closed</i>
249	Temperature-Sensor Input	Temperature value Input 3	9.001	OUT	Object value = measured value of the Input including Offset	<i>Inputs > Input 3 (Temperature/DI) > Input type: Temperature sensor</i>
250	Temperature-Sensor Input	Temperature limit Input 3 exceeded	1.001	OUT	Object value 1 = Temperature limit Input 3 exceeded	<i>Inputs > Input 3 (Temperature/DI) > Internal connection (Temperature sensor): Limiters</i>

6 ETS- Configuration parameter

6.1 Configuration parameter „General“

PARAMETER PAGE	PARAMETER	DESCRIPTION
Identification	Device name	Maximum 24 ASCII characters.
	Device selection	The device type is selected here: -NOVOS 7 -NOVOS Touch / thanos EVO
	Temperature sensor	Selection of active sensor parameters under the "Sensors" tab, as well as function-specific parameters.
	Humidity sensor	
	VOC Sensor	
	CO2 Sensor	
Basic settings	Display language	Sets the display language
	Transmission cycle Operating display	Activated Group object 1. The operating status is output via the object in the configured cycle.
	Reset via group object	Activated group object 10.
	Code Lock Configuration menu (4-digit PIN; 0 = disabled)	Defines the code for the configuration menu.
	Hide configuration menu	Hides the configuration menu after a configured time after device (re)start.
Display	Display brightness	Sets the display brightness.
	Standby brightness	Sets the display brightness in standby mode.
	Night mode brightness	Sets the display brightness in night mode. Activated via group object 11.
	Standby / Screensaver after [>1]	Sets the duration until switching to standby mode and screen saver.
	Home Screen after [0 = Disabled]	Sets the duration until switching to the Home Screen.
	Menu for "Display off" and "Cleaning mode"	Activates the menu for "Display off" and "Cleaning mode" in the menu bar of the device.
	Duration of cleaning mode [0 = Inactive]	Sets the duration of the cleaning mode.
	Long key press from	Defines the duration from which a key press is interpreted as a "long key press". Not valid for "Learn scenes".
	Display room temperature (Home Screen)	Activated the display for room temperature and setpoint in the Home Screen.
	Display setpoint (Home Screen)	Activated the display for room temperature and setpoint in the Home Screen.
	3. display measured value (Home Screen)	Activated the display of a 3rd measured value in the Home Screen.
	3. measured value TLF	Activated the traffic light function (TLF) of the 3rd measured value. The TLF parameters can be configured under "Sensors > [Measured value]".
	4. display measured value (Home Screen)	Activates the display of a 4th measured value in the Home Screen.
	4. measured value TLF	Activated the traffic light function (TLF) of the 4th measured value. The TLF parameters can be configured under "Sensors > [Measured value]".
	Screen saver	Sets the content of the screen saver. To display measured values and use the traffic light function, these options must be enabled in the respective sensor menu.
	Colour of display background	Sets the colour of the display background.
	Colour selection of display background	
	Font colour	Sets the font colour in the display.
	Font colour selection	
	Colour Symbols Heating/Cooling	Sets the colour of the heating/cooling symbols.
	Code Lock Standby (4-digit PIN; 0000 = deactivated)	Sets the code for unlocking the display.
Date & time	Show time	Activates the clock display and sets the display format.
	Show date	Activates the date display and sets the display format.
	Date & time synch	Activated Group objects 12 & 13.

PARAMETERPAGE	PARAMETER	DESCRIPTION
Favorite buttons	Favourite button 1	Sets the function of the favourite button.
	Favourite button 2	
	Favourite button 3	
	Favourite button 4	
	Favourite button 5	
Maintenance & Calibration	Maintenance Monitoring	Activates the group object for maintenance monitoring. The cycle time is output via group object 2. <i>Note: The cycle time must be configured via NOVOSapp or uConfig.</i>
	Calibration monitoring	Activates the group object for calibration monitoring. The cycle time is output via group object 3. <i>Note: The cycle time must be configured via NOVOSapp or uConfig.</i>
Alert & Status message	Frequency Alert group object	<i>Note: The cycle time must be configured via NOVOSapp or uConfig.</i>
	Duration of Alert	Defines the duration of the Alert.
	Number of status messages	Defines the number of status messages
	Status message 1	Defines the behaviour of the status message.
	Display status message in	Determines whether the status message is to be displayed in the lock screen or in the home screen. If "Lock screen" is selected, it is activated when the status message is activated.
	Status message text	Maximum 24 ASCII Zeichen.
	Hide status message 1	Defines how the status message is to be deactivated. Deactivation via group object is always possible.
	Status message 2	See Status message 1
	Status message 3	
	Status message 4	
	Status message 5	
	Status message 6	
	Status message 7	
	Status message 8	

6.2 „HVAC“ Configuration parameter

PARAMETERPAGE	PARAMETER	DESCRIPTION
HVAC general	Show climate menu	Activates the climate menu in the menu bar of the unit.
	Show ECO button in climate menu	Activates the ECO key in the climate menu.
	Show ECO button in carousel	Activates the ECO key in the menu carousel. <i>Function only available with NOVOS 7.</i>
	Colour ECO symbol in status bar	Sets the colour of the activated ECO symbol in the toolbar.
	Show room occupancy button in climate menu	Activates the ECO button in the climate menu.
	Show room occupancy button in carousel	Activates the ECO button in the menu carousel. <i>Function only available with NOVOS 7.</i>
	Output room operating mode (HVAC mode)	Determines how the room operating mode is to be output. <i>Note: If "1 bit GO" is selected, multiple selection is possible (e.g.: ECO & presence active simultaneously).</i>
Setpoint	Setpoint format	Defines the format of the setpoint.
	Setpoint step width	Defines the step size of the setpoint.
	Basic setpoint	
	Adjustment range Setpoint	
	Send setpoint cyclically	
	Transmission cycle Setpoint	
Fan	Show fan menu	Activates the fan menu in the climate menu.
	Show fan menu in carousel	Activates the fan menu in the menu carousel. <i>Function only available with NOVOS 7.</i>
	Number of fan speeds	
	Fan speed "AUTO"	
	Fan speed after reset	
	Minimum fan speed	
	1 bit GO per fan speed	
	1 byte GO [%]	
	1 byte GO [count value]	
	Send control value cyclically	
	Transmission cycle for control value	

6.3 “Lighting” Configuration parameter

PARAMETER PAGE	PARAMETER	DESCRIPTION
Lighting general	Number of lighting channels	Sets the number of lighting channels.
	Illustrations of lighting menu	Sets the appearance of the lighting menu. <i>Note: Selection "Room plan" only available with NOVOS Touch/thanos EVO and must be configured via "uConfig".</i>
Lighting 1	Label	Is displayed in the respective channel. Maximum 12 ASCII characters.
	Symbol	Defines the symbol for the lighting channel, which is displayed in the lighting menu and in the lighting channel.
	Control element	Sets the control element for the lighting channel. <i>Note: RGBW & colour temperature selection only available in NOVOS Touch/thanos EVO.</i>
	Minimum colour temperature	Sets the minimum colour temperature value that can be set on the unit for the "Colour temperature" control element.
	Maximum colour temperature	Defines the maximum colour temperature value for the "Colour temperature" control element that can be set on the device.
	Dimmable	For the "Push-button" control element, defines whether the lighting channel can be dimmed and activates group object DPT 3.007, Dimming (step). Dimming takes place via a long button press.
	Dimmer step width	Sets the step width for the Slider control element, RGBW and colour temperature.
	Automatic-mode (GO to lock the HMI)	Activates the group object for locking the channel.
Lighting 2		See Lighting 1
Lighting 3		
Lighting 4		
Lighting 5		
Lighting 6		
Lighting 7		
Lighting 8		

6.4 “Shading” Configuration parameter

PARAMETER PAGE	PARAMETER	DESCRIPTION
Shading general	Number of shading channels	Sets the number of shading channels
	Display shading menu	Sets the appearance of the shading menu. <i>Note: Selection "Room plan" only available with NOVOS Touch/thanos EVO and must be configured via "uConfig".</i>
Shading 1	Label	Is displayed in the respective channel. Maximum 12 ASCII characters.
	Shading type (symbol)	Defines the symbol for the shading channel, which is displayed in the shading menu and in the shading channel.
	Control element	Defines the control element for the shading channel.
	Slat adjustment	For the "Slider" control element, determines whether the shading channel has slat adjustment.
	Minimum slat angle	Defines the minimum slat angle that can be set on the unit for the "Slider" control element with active slat adjustment.
	Maximum slat angle	Sets the maximum slat angle that can be set on the unit for the "Slider" control element with active slat adjustment.
	Slat interval	Sets the step width for the "Slider" control element with active slat adjustment.
	Length interval	Sets the step width for the "Slider" control element.
	Automatic mode (GO for locking the HMI)	Activates the group object for locking the channel.
Shading 2		See Shading 1
Shading 3		
Shading 4		
Shading 5		
Shading 6		
Shading 7		
Shading 8		

6.5 “Scenes” Configuration parameter

PARAMETER PAGE	PARAMETER	DESCRIPTION
Scene (general)	Number of scenes	Defines the number of scenes
	Display of scene menu	Activates the scene menu.
Scene 1	Label	Displayed in the respective channel. Maximum 12 ASCII characters.
	Symbol	Defines the symbol for the scene, which is displayed in the scene menu.
	Output scene number	Defines which scene number is to be transmitted in the respective scene channel.
	Switch scene (1 Bit GO)	Activates a 1-bit group object with which further functions can be activated when the scene is active.
Scene 2		See Scene 1
Scene 3		
Scene 4		
Scene 5		
Scene 6		
Scene 7		
Scene 8		

6.6 “Sensor” configuration parameter

PARAMETERPAGE	PARAMETER	DESCRIPTION
Monitoring	Monitoring (Traffic Light Function)	Activates monitoring menu in the device menu. <i>Note: Measured values to be displayed as well as parameters for traffic light function (TLF) must be parameterized in the respective sensor menu item.</i>
	Label	Displayed in the respective channel. Maximum 12 ASCII characters.
Temperature	Transfer offset setting via ETS	Activates the transmission of the offset (sensor correction value) via ETS during pergramming.
	Offset	Defines the specific offset (sensor correction value).
	Send measured value	Determines whether the measured value is to be transmitted with a specific value change, cyclically, or in both cases.
	Value change Measured value greater than/equal to	Sets the value change when the measured value is to be transmitted.
	Transmission cycle Measured value	Defines the transmission cycle in which the measured value is to be transmitted.
	Monitoring - Traffic Light Function (TLF)	Activates the traffic light function in the monitoring menu and defines the display type. Must be enabled in order for the sensor value to be displayed as a screensaver.
	TLF Range 1 Colour	Defines the colour of area 1 of the traffic light function.
	TLF threshold range 1-2	Sets the threshold for the colour change between area 1 and area 2.
	TLF Range 2 Colour	Sets the colour of area 2 of the traffic light function.
	TLF threshold range 2-3	Sets the threshold value for the colour change between area 2 and area 3. <i>Note: The value of the parameter "TLF threshold range 2-3" must be greater than the value of the parameter "TLF threshold range 1-2".</i>
	TLF Range 3 Colour	Sets the colour of area 3 of the traffic light function.
	TLF threshold range 3-4	Defines the threshold value for the colour change between area 3 and area 4. <i>Note: The value of the parameter "TLF threshold range 3-4" must be greater than the value of the parameter "TLF threshold range 2-3".</i>
	TLF Range 4 Colour	Sets the colour of area 4 of the traffic light function.
	TLF threshold range 4-5	Defines the threshold value for the colour change between area 4 and area 5. <i>Note: The value of the parameter "TLF threshold range 4-5" must be greater than the value of the parameter "TLF threshold range 3-4".</i>
	TLF Range 5 Colour	Sets the colour of area 5 of the traffic light function.
Relative Humidity		See „Temperature“
Absolute Humidity		See „Temperature“ <i>Note: Calculated measured value. No parameters available for setting the offset.</i>
Enthalpy		See „Temperature“ <i>Note: Calculated measured value. No parameters available for setting the offset.</i>
Dew Point		See "Temperature" <i>Note: Calculated measured value. no parameters available for setting the offset.</i>
CO2		See "Temperature"
CO2/VOC Mix		See "Temperature" <i>Note: Calculated measured value. no parameters available for setting the offset.</i>
VOC		See "Temperature"

6.7 "Inputs" configuration parameter

PARAMETERPAGE	PARAMETER	DESCRIPTION
Input 1 (DI)	Contact type Digital input 1 (DI)	Enables the input and determines whether it is a closer (NO) or an opener (NC).
	Send condition (DI)	Defines whether the state is to be transmitted when the value changes, cyclically, or in both cases.
	Transmission cycle State (DI)	Defines the transmission cycle in which the status is to be transmitted.
	Internal link (DI)	Determines which internal device function the input is to control
Input 2 (DI)		See „Input 1 (DI)“
Input 3 (Temperature/DI)	Type of input	Enables the input and determines whether it is a closer (NO), an opener (NC), or a temperature sensor input.
	Transmit status(DI)	Defines whether the status is to be transmitted on value change, cyclically, or in both cases.
	Transmit cycle state(DI)	Defines the transmission cycle in which the status is to be transmitted.
	Internal link (DI)	Determines which internal device function the input controls.
	Transmit offset-settings via ETS	Activates the transmission of the offset (sensor correction value) via ETS during pergramming.
	Offset temperature sensor	Defines the specific offset (sensor correction value).
	Internal temperature sensor linkage	Determines which internal device function the input is to control.
	Measured value portion of the external temperature sensor.	Defines the portion of the external measured value that is output via group object 249.
	Temperature limit (controller energy block)	Defines the temperature limit at which group object 250 switches (hysteresis: 1K).
	Send measured value	Defines whether the measured value is to be transmitted with a specific value change, cyclically, or in both cases.
	Measured value change greater than/equal to	Defines the value change when the measured value is to be transmitted.
	measured value transmit cycle	Defines the transmission cycle in which the measured value is to be transmitted.

7 Unicode Character set (UTF-16)

Here you will find a list of the implemented Unicode characters.

NAME OF TABELLE	HEXADEZIMAL (IMPLEMENTED)	DEZIMAL (IMPLEMENTED)	ORIGINAL UNICODE
latin, base	(0x0020-0x007F)	20-127	unicode.org (PDF)
latin, addition	(0x0080-0x00FF)	128-255	unicode.org (PDF)
latin, addition A	0x010C-0x011B, 0x0147, 0x0148, 0x0158-0x016F, 0x017D, 0x017E	268-283, 327, 328, 344-367, 381, 382	unicode.org (PDF)
cyrillic	0x0400-0x04FF	1024-1279	unicode.org (PDF)

8 KNX Specification

The NOVOS KNX and thanos EVO KNX devices have been developed in compliance with the valid KNX specification v2.1.

Further information under:

<https://my.knx.org/>

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