SIEMENS



5WG1205-2AB12, 5WG1205-2AB22

Touch control TC5

Application Guide

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1 Functions

The touch control TC5 (hereinafter referred to as TC5) is a KNX S-Mode multi-functional touch panel for display, operation and control. The device offers a 5-inch color capacitive touch screen at a resolution of 480×854 .

The device is powered over KNX and DC 24...30 V auxiliary supply voltage.

It is operated directly via touch screen and provides a total of 15 function pages and 5 home pages that are configured via ETS (ETS5.7 or later).

The device can be horizontally and vertically mounted and operated.

Functions:

• Home page (navigation)

TC5 can set up multiple function pages for control and operation. Max. 5 home pages with max. 8 icons allow easy navigation to the desired function page. The navigation function can be enabled/disabled, but if disabled, the device goes to the first configured function page.

- Multi-function page for lighting, solar protection, scene control, send value and display value or text
 - Lighting control includes switching and dimming.
 - Brightness + color temperature: Brightness dimming and color temperature control
 - Solar protection covers curtain open/close, roller shutter up/down and venetian blinds with louver angle adjustment.
 - Scene control by short pressing the scene icon to recall or long pressing to save.
 - Send value: Tap any icon to send the telegram to the bus.
 - Display values including freely configurable unit text.
- HVAC control covers several applications:
 - General temperature control for multiple room heating/cooling applications such as FCU, chilled ceiling with 2-point or PI control. Room temperature control via setpoint (absolute or relative), heating/cooling selection, fan operation (2 options: Not visible when fan operation is disabled; 5 types of fan speeds: 3speed, Off and Auto when enabled), operating mode changes (4 modes: Comfort, Standby, Economy and Protection).
 - VRF (variable refrigerant flow) interface allowing the TC5 to act as user interface to operate VRF or VRV (variable refrigerant volume) air conditioning devices with a KNX to VRF gateway.
 - Enhanced floor heating control and scene functions as well as on-screen indication of heating valve on/off and timer operation.
 - Ventilation control with manual 3-speed fan changeover as well as auto control (demand-based ventilation) via PM2.5 or CO₂ values. Support of opening/closing heat recovery, filter life count, alarm to change filter and reset filter life.

Max. 10 pages can be configured as HVAC control.

- Display air quality value from bus Page displaying various sensor readings such as temperature, relative humidity, PM2.5, PM10, CO₂, VOC, AQI, brightness, wind speed and rain. Max. 4 parameters can be displayed per page and a total of 10 pages can be configured as display page.
- Display energy metering value from bus Max. 8 meters can be displayed on one page and a total of 10 pages can be configured.
- Timer (schedule) function
 Max. 16 schedules can be set: Daily or weekly and can be configured via ETS and HMI.
- Scene control Max. 8 sets of scene groups can be set. Max. 8 output telegrams can be triggered via the scene number and each output has 5 different data types.
- Logic functions Max. 8 inputs can be configured with different logic operations: AND, OR, XOR, gate forwarding, threshold comparator, format convert and max. value.
- RGB, RGBW and RGBW+color temperature adjustment TC5 can set up a dimming control page for 3 types of color lights, which are 3-color RGB light, 4-color RGBW light, 4-color RGBW light optional with color temperature adjustment.
- Display of time, date, temperature, humidity/CO2 on home page.
- Proximity sensor, adjustment of screen brightness, touch volume and vibration

- Password function Configurable. Max. 3 passwords available.
- Lock function page via bus The whole device or selected function pages can be locked to disable user screen operation.

 Multi-usage color strip The color strip is designed not only as a decoration, but also for multiple types of indications, such as KNX programming mode and alarm.

- Display alarm Max. 5 alarms can be indicated visually as well as acoustically. The alarm display duration and repeat time are configurable.
- Human-centric lighting (HCL)
 Brightness and color temperature can be controlled via HCL function.
 Max. 10 settings to send brightness and color temperature to the bus as per the specific time of day
- On-site customization possible for wallpaper, screensaver, and configurable icons

2 UI description

The device can be mounted vertically and horizontally (configurable via ETS), but note that vertical and horizontal versions do not always have the same displays. For example, the horizontal version uses its limited space for more icons compared to vertical one.

Two screen styles are available: Dark screen and light screen. The screen style is set via parameter "Screen style" or via setting ⁽²⁾ on HMI.

Vertical

Dark





Horizontal

Dark



Light



2.1 Home Page (Navigation function)

Homepages are configurable via ETS: Max. five pages, with max. eight icons per page.

- The icons are associated with either pages or individual functions.
- Home page without ETS configuration

Vertical





 Icons associated with pages direct the end users to the desired pages. The associated pages can be multifunction pages for lighting, solar protection, scenes, value send or single function pages such as Air conditioner pages.

Horizontal

Vertical

Home page



Lighting page



Ceiling light



Air conditioner

Auto

Medium

Fan speed



Fan speed

(¹)

..

Low

High



Function page, e.g., Air



Horizontal











2

ធ

 Icons associated with individual functions provide easy access to frequently used operations, such as Occupied/Unoccupied.

Disable home page

The home page navigation function is configurable via ETS.

The first configured function page displays if home pages are disabled.

Examples:

• Picture on the left: Max. five home pages are configured in ETS.

• Picture on the right: Home page is disabled, and the first configured function page displays.

Vertical













Number	Description	
1	Page setting icon. See Settings [\rightarrow 33], for more information.	
2	Date (mm-dd) and time; modified on the setting page, or via object.	
3	 Icon can be configured using a micro SD card. See Home page icons [→ 152], for more details. 	
	• The icon name is defined via ETS (free text input). Max. 12 Latin characters are displayed, but only 5 characters for Chinese or 7 characters for Russian/Greek.	
4	Name of the home page defined via ETS.	
5	External temperature, humidity or CO ₂ value, selectable via ETS	
6	Internal or external temperature value (defined via ETS): Temperature unit (Celsius ($^{\circ}$ C) or Fahrenheit ($^{\circ}$ F)) can be configured.	

2.2 Multifunction page

Multifunction page includes lighting, blinds, scene control, sending value and display. Multifunction page view is configurable via ETS.

Options

Big icons



Vertical



Horizontal

List view





Page layout: The number of icons per page can be configured via ETS.



3 icons per page



6 icons per page



Horizontal

4 icons per page



8 icons per page



2.2.1 Switch function

The status of the switch function

• Big Icons View:

There are 2 ways to indicate the light on status (configurable via ETS).

1. Only icon on (right picture) indicates the lamp is on and the icon off (left picture) means the lamp is off.





2. The block and icon both on (right figure) indicates the lamp is on, and the block and icon both off (left figure) means the lamp is off.





List View

Swiping the slider to the right indicates the function is on and to the left (shown in below figure) the function is off. It can be also updated and displayed as per the switch status for bus feedback.



2.2.2 Switch/Dim function

Long press the icon 500 ms to enter the dimming control page.





Horizontal

Number	Description	Number	Description
1	Home page	2	Return
3	Relative dimming up to 100 %	4	Relative dimming down to 0 % (off)
5	Dimming by sliding		

2.2.3 Send value function

Tap any icon to send the corresponding telegram to bus. If the icon shakes, it indicates the progress.

2.2.4 Blinds function

During adjusting curtain blinds, roller shutter (without slat):

- Short press (<0.5 s) open / close / up / down icon:
 - When moving, it stops after press.
 - When stationary, it moves one step per press.
- Long press (≥0.5 s) open / close / up / down icon means blinds move continuously.
- During adjusting venetian blinds (with slat):
- Short press (<0.5 s) up / down icon:
 - When moving, it stops after press.
 - When stationary, it adjusts the relative positioning of slat angle per press.
- Long press (≥ 0.5 s) up / down icon continuously moves the blinds.

3 kinds of blinds are available: Curtain blinds, Roller shutter (without slat) and Venetian blinds (with slat).

Curtain blinds with Open/Close/Stop or as a percentage



Number	Description	Number	Description
1	Simulation of curtain position	2	Sliding position as a percentage
3	Open	4	Close

Roller shutter (without slat)





Number	Description	Number	Description
1	Simulation of blinds position	2	Sliding position as a percentage
3	Up	4	Down

Venetian blinds (with slat)





Number	Description	Number	Description
1	Simulation of slat angle (blinds)	2	Simulation of blinds & louver

Number	Description	Number	Description
3	 Sliding position as a percentage 0%: blinds fully opened 100%: blinds fully closed 	(4)	 Louver angle as a percentage 0%: slats in horizontal position and no solar protection 100%: slats in vertical position and full solar protection
5	Up (Blinds & louver)	6	Down (Blinds & louver)

2.2.5 Scene recall and storage

Tap the assigned scene icon (e.g. iii) to send corresponding scene telegram to the bus.

- Short press scene icon to recall the scene.
- To change scene settings and save changes:
 - Change the scene setting as desired.
 - Long press the scene icon until icon shakes (horizontally) and the scene change is stored to bus.
 - Short press the scene icon to recall the saved scene.

2.2.6 Display values and text

3 kinds of display are available: Display 1bit value, Display value and Display text.

- Display 1bit value: Display on/off status
- Display value: Display multi-type value (optional with unit)
- Display text: Display string

Display 1bit value



Number	Description	Number	Description
1	Music	2	TV
3	Socket	4	Light

Display value





Number	Description	Number	Description
1	PM2.5 value	2	VOC value
3	Pressure value	4	CO ₂ value

Display text



Display Text

ណ

 Unlock!

Number	Description	Number	Description
1	Welcome	2	Door lock status: Unlock
3	PM2.5 value		

2.3 General temperature control page

General Temp. Control function can be configured for multiple heating and/or cooling applications, such as fan coil application, chilled ceiling and electric heating. It can manage the room temperature with setpoints (absolute or relative), heating / cooling selection, fan speed selection (3 speeds, Off and Auto), and operating mode changes (4 modes: Comfort, Standby, Economy and Protection).

Vertical



HVAC 73 73 5 etpoint - 77°, + 104 Heating Fan speed Mode Cooling Fan speed Medium > ()





Number	Description	Number	Description
1	Description, configured in ETS	2	Sliding setpoint
3	-, +: Setpoint change	4	Heating/cooling status
5	Fan speed change	6	Operating mode change
7	Power On/Off		

Fan speed change



Vertical

Operating mode change



Horizontal

Operating mode change



Fan speed change

HVAC		SAMALON .			ជ្
		Fan speed			
	Ś	Ś	ર્જુ		
	Auto	OFF	Low		
	S	s S High			
4 7		nign	_	ر	
		•••••	• • • • •		

2.4 VRF air conditioner

The device acts as the interface and operator unit for VRF air conditioners via a KNX to VRF gateway.



VRF page in °C



Horizontal



VRF page in °C





Number	Description	Number	Description
1	Fan direction adjustment	2	VRF Mode change
3	Fan speed adjustment		

Vertical



Air conditioner

Vertical



Horizontal



Low

දේශී High

)

Auto

ৰ্জ্য

Medium

~

쵔



2.5 Floor heating

- Floor heating control function with 2-point or PI control as per temperature setpoint
- Scene function



Floor heating in °C



Floor heating in °C





Floor heating in °F

Horizontal



Floor heating in °F

Number	Description
1	Heating valve Open/Close indication
	Note:
	When setpoint is higher than room temperature, the valve opens to increase room temperature and vice versa.

2.6 Ventilation system

Ventilation system controls:

• 3-speed fan setting, heat recovery open/close, filter life counting, alarm for filter change and filter life reset.

Vertical

- Auto control (demand-based ventilation control) via PM2.5 or CO₂ value
- Scene setting function.



Ventilation

Horizontal



Number	Description	Number	Description
1	Current fan speed	2	+/-: Fan speed change
3	Heat recovery On/Off	4	Filter lifetime status

The service life of the filter is set via ETS and switches to 0% once the filter usage reaches the set time. Touch the filter lifetime status icon to reset. Tap "Confirm" to reset the filter timer.

Demand-based ventilation



Auto control (Demand-based PM2.5)



Auto control (Demand-based PM2.5)

Vertical



Auto control (Demand-based CO₂)

Horizontal



Auto control (Demand-based CO₂)

2.7 RGB dimming

For RGB or RGBW LED dimming (absolute dimming): RGBW supports individual color temperature, color temperature and brightness adjustment.

3 types of RGB dimming are available and configurable via ETS:

- 1. RGB: RGB light control
- 2. RGBW: RGBW light control
- 3. RGBW + Color Temperature: for RGBW light, or RGB light and color temperature control







RGBW&CT (1)

RGBW+Color temperature

A6V13357199_en--_a







RGBW+Color temperature

Number	Description	Number	Description
1	Description	2	Color palette
3	Color temp. slider	4	Color selection
5	Brightness (white light)	6	Enter Color temp. control
7	On/Off button and status		

The following page displays for "Enter Color temp. control" 6.

Vertical



Color temperature control



Horizontal





Number	Description	Number	Description
1	Color temp. slider, 100K / step	2	Color Temp. up/down
3	Color temp. control triggers the page displays (1) & (2)	4	Brightness (white light)
	It is same as (6) in RGBW+Color temperature page above.		

2.8 Energy metering display

Energy metering display supports current, voltage, power and energy (electricity energy) displays. Values are received via the bus from actuators or the metering gateway.



Vertical

Horizontal

Energy		ជ
Voltage	220.0	v
Current	5.0	A
Power	1000.0	w
Energy	25.0	kW
	••••••	

Energy Metering Display interface: Current, voltage, power and energy consumption can be displayed when configured. Up to eight items can display on the screen. The data is updated via bus.

Data 🔿

Data 🔿

2.9 Air quality display

Temperature, humidity, PM2.5, PM10, VOC, CO₂, AQI, brightness, wind speed and rain displays can be set and received from the bus. Up to four items can be configured on one function page.









Horizontal



Number	Description	Number	Description
1	Selected range	2	Configured parameters

The values of the configurable parameters are shown below.

Parameter	Description	Parameter	Description
Temperature	-4040 °C	Humidity	0100 %
PM2.5	0999 µg/m³	PM10	0999 µg/m³
CO ₂	04000 ppm	VOC	09.99 mg/m ³
AQI	0500	Brightness	05000 lux
Wind speed	050 m/s	Rain	Rain/No Rain

2.10 Audio

Only works via the gateway which the converts audio control signal to KNX.





Number	Description	Number	Description
1	Play mode	2	Mute / Unmute
3	Volume + / -	4	Play / Pause
5	Previous / Next		

Volume control









Horizontal

Number	Description	Number	Description
1	Random	2	Sequential
3	Single request	4	Loop

2.11 Settings

Tap 0 on home page to go to the Settings page.

Settings



Language (default: English)

Vertical

General home page



Wallpaper (default: 1)

Settings Language	ណ
简体中文	
繁體中文	
Czech	
Dutch	
English	~
French	
German	
Greek	



Horizontal

Settings



Language (default: English)

< Settings Language	ស្
简体中文	
繁體中文	
Czech	
Dutch	
English	\checkmark
French	

Settings | General Theme Dark KNX programming



Wallpaper (default: 1)

General home page



Number	Description	Number	Description
1	Theme (Wallpaper) color	2	Physical address
3	Enable/disable button	4	Screen brightness
5	Keystroke volume		

Note

- Disable KNX programming unless configured via ETS by a qualified engineer.
- The settings on the "General" page are the default values.

1

Proximity sensor: The screen is activated when the sensor detects that someone is approaching.

Vertical Cleaning mode

- 1. Off
- 2. Normal: within 15 cm
- 3. Enhanced: within 30 cm

Enable screen-sliding:

- 1. Enabled: Swipe the screen or tap the icon to go to the appropriate page.
- 2. Disabled: Tap the icon.

Cleaning mode: The screen freezes for a set period.



15s Start





Date & time and system info

Date & time setting: Scroll date (Y, M or D) or time (H, M or S) to set

Vertical



Date & time settings



System info

	Date & Ti	me			ណ៍
	Date		Time		
2022 Y		22 D		43 M	33 S

Date & time settings

KNX SN 0001:00 59 6445 System version 0.1.10_20220906

System info
Timer function

Weekly timer

Daily and weekly timers can be configured via ETS.

Weekly timers can be changed via touch screen or bus if enabled in ETS.

The weekly timer is off during holidays.



Setting	s Time	ŕ	命
Holiday			>
Timer 1		20.0	
Timer 1		20.0	
	Tin	ner	
Mon. Tue.	Wed. Th	nu. Fri.	Sat. Sun.
	20 H		
Timer 6		23:	59 🔵
Timer 7		23:	59
Timer 8		23:	59

Timer settings:

- Tap icon O or to enable or disable weekday
- Tap icon > to check holiday



🕻 Settings T	imer	ជ
Holiday	Timer	>
Timer 1	Mon. Tue. Wed. Thu. Fri. Sat. Sun.	20:00
Timer 2		21:00
Timer 3	20 H 0 M	22:00
Timer 4		23:59

Horizontal

Vertical



Vertical

🕻 Settings H	olida	ý	(+)=	
Start Date		End Date		
2022-02-22		2022-02-22	>	
2022-02-22		2022-02-23	>	
2022-02-22		2022-02-24	>	
2022-02-22		2022-02-25	>=	-2
2022-02-22		2022-02-26	>	
2022-02-22		2022-02-27	>	
2022-02-22		2022-02-28	>	
2022-02-22		2022-03-01	>	
2022-02-22		2022-03-02	>	
2022-02-22		2022-03-03	>	
	\sim	·		-3
				-

No holiday set



Holiday list:

• Timer is off during holidays.

< Settings Holiday		\oplus
Start Date	End Date	
2022-02-22	2022-02-22	>
2022-02-22	2022-02-23	>
2022-02-22	2022-02-24	>
2022-02-22	2022-02-25	>
2022-02-22	2022-02-26	>
2022-02-22	2022-02-27	>

Horizontal

Number	Description	Number	Description
1	Add new holiday	2	Enter holiday details
3	Tap for more		

Vertical

Settings Holiday						
Start date	t.					
2021 1	21					
2022 Y 2 M	22 D					
2023 3	23					
End Date	2					
2021 1	22					
2022 Y 2 M	23 D					
2023 3 24						
Delete Confirm						

Settings Holiday						
s	Start date					
2022 Y	2 M	22 D				
	\triangle					
Set	ting conflic	t				
2022 Y	2 M	22 D				
2023 3 23						
Cancel		Confirm				

Conflict setting

Settings Holiday					
s	itart date				
2021					
2022 Y	2 M	22 D			
Delet	e this setti	ng?			
Cancel	c	onfirm			
2022 Y	2 M	23 D			
Delete		Confirm			

Delete holidays

Confirm new holiday

Horizontal

Settings	Holiday				_
	Start date		i	End Date	
2021					
2022 Y		22 D	2022 Y		22 D
2023					
	Cancel			Confirm	

Confirm new holiday



Conflict setting

✓ Settings | Holiday

 Start date
 End Date

 2021
 1

 2022 Y
 2

 2023
 3

 Cancel
 Confirm

 3
 23

Delete holidays

2.12 Screen

2.12.1 Screen saver

Screen savers are available via ETS:

Factory preloaded: a) Disable; b) Clock (default); c) Digital clock plus additional information; d) Album - 3 pictures (They are auto switched per 5 s when activated.); e) Album - 1 picture The default screen saver enable time is 10 s and the default backlight off time is 30 s.



Clock

Digital clock

Album 1

Horizontal

Album 2

Album 3



Clock



Album 1



Album 3





Album 2

• Customized pictures from Micro SD card. Insert Micro SD card with the following settings:

- 1. Create folder "picture" under the root directory of Micro SD card
- 2. Name the pictures in the folder as follows:
 - Vertical: "Album1_v", "Album2_v", "Album3_v"
 - Horizontal: "Album1_h", "Album2_h", "Album3_h"
- 3. Picture resolution must be 480 * 854 (vertical) or 854 * 480 (horizontal) and of the following file type: jpg, bmp, tjpg, png ("png" pictures must have an opaque background).





21:23 25.0°C 40% 🗐 02-22 Tue. 6 _ R Lighting 22.0°C Image updating **,**,,, Л **Floor** heating Ventilation Home 1 Home 2 Home 3 Home 4 21:26 40% 🔇 25.0°C 02-22 Tue. 6 = R Lighting \triangle Multifunction 22.0°C Update failed! Click to exit... **,,,** Л Ventilation Audio Air conditioner **Floor heating** Home 1 Home 2 Home 3 Home 4

Horizontal

Delete the customized pictures:

- 1. Create an empty folder "picture" on the Micro SD card.
- 2. When inserting the SD card, a pop-up window asks "Recover to initial status?", tap "Confirm" to delete the customized pictures
- 3. Reboot the device to recover the original album.



Note

- Supports only SDHC cards and FAT32 format.
- Supports Micro SD cards up to a max. capacity of 32 GB.
- The device picture storage size is approximate 4 MB. The message "Invalid image, please check!" displays once the total size of the valid pictures on the Micro SD card is greater than 3.8 MB.



Horizontal



2.12.2 Wallpaper

For home page

Three wallpapers are available for home page:

- Dark screen style: 1) Dark screen (default); 2) With Siemens logo; 3) Water droplets
- Light screen style: 1) Gray screen (default); 2) With Siemens logo; 3) Desert

The screen style can be selected in ETS or by the user on the screen setting page.

Wallpapers can also be customized via Micro SD card.

Dark screen style

Default

Vertical





Horizontal



Water droplets



Light screen style



Horizontal

Using SD card for customized wallpapers

Insert Micro SD card with the following settings:

- 1. Create folder "background" under the root directory of Micro SD card.
- 2. Name the pictures in the folder as follows:
 - Dark screen style in vertical: "main_bg1_v_D", "main_bg2_v_D", "main_bg3_v_D"
 - Dark screen style in horizontal: "main_bg1_h_D", "main_bg2_h_D", "main_bg3_h_D"
 - Light screen style in vertical: "main_bg1_v_L", "main_bg2_v_L", "main_bg3_v_L"
 - Light screen style in horizontal: "main_bg1_h_L", "main_bg2_h_L", "main_bg3_h_L"
- 3. Picture resolution must be 480 * 854 (vertical) or 854 * 480 (horizontal) and of the following file type: jpg, bmp, tjpg, png ("png" pictures must have an opaque background).

When inserting Micro SD card into the device, the following pop-up window displays if valid pictures are detected.

If upgrade fails, tap any area outside the pop-up window to exit.





Horizontal



Delete the customized pictures:

- 1. Create an empty folder "background" on the Micro SD card.
- 2. When inserting the SD card, a pop-up window asks "Recover to initial status?", tap "Confirm" to delete the customized pictures

Vertical

3. Reboot the device to recover the original album.





Horizontal

02-22 Tue.	21:	22 25.0°C	40% 📀	02-22 Tue.	21:	29 25.0%	c 40 % 🔅
- 🁾 Lighting	Recover to in	itial status?	Multifunction	۔ Lighting		Ω	Multifunction
22.0°C	Cancel Floor heating	Confirm • Ventilation	JJ Audio	22.0°C	Deleted. Ret	ooot please! Ventilation	J Audio
Home 1	Home 2	Home 3	Home 4	Home 1	Home 2	Home 3	Home 4

Note

- Supports only SDHC cards and FAT32 format.
- Supports Micro SD cards up to a max. capacity of 32 GB.
- The device picture storage size is approximate 4 MB. The message "Invalid image, please check!" displays once the total size of the valid pictures on the Micro SD card is greater than 3.8 MB.





Horizontal

2.13 Password

The password is disabled by default. A password function can be configured in ETS via parameter "Password function". For parameter details, see "Password" parameters [\rightarrow 63].

Password for Settings

When enabled, a 4-digit number password is required to check or edit information in the Settings page (no password required for cleaning mode and language). The password can be set via parameter "Set password 1 (4 digits)". For parameter details, see "Password" parameters [\rightarrow 63].

Settings are enabled as soon as setting icon is unlocked. It automatically locks again when you leave Settings by tapping the home icon $\hat{\Box}$.



Horizontal

Settings		ស្
		Ś
Cleaning mode	General	Date & Time
\oplus	6	
Language		Timer
Settings		ជ
Settings	能	्र (5)
Settings	General	ි උ Date & Time
Settings Cleaning mode	General	ි ි Date & Time



Password for screen saver

The password is disabled by default. If enabled, screen operation requires the password after the screen saver is on or the screen is off. The password is a 4-digit number.

Three passwords are available and can be set via parameters "Set password 1 (4 digits)", "Set password 2 (4 digits)" and "Set password 3 (4 digits)". For parameter details, see "Password" parameters [\rightarrow 63].



Horizontal

2.14 Lock function via bus

This command is sent from the bus. It can lock the entire panel (left picture) or just individual functions (right picture).

- Lock entire panel: Once the panel is locked, a user cannot perform any operation on device while still
 receiving telegrams from bus. Object "Dis./En. screen operation, All pages" locks screen operation. For
 object details, see "General" communication objects [→ 56].
- Lock individual functions: The locked page is not operational, while still receiving telegrams from bus. Object "Lock" locks the functions. For object details, see "Function page" [→ 68].



Entire page



Individual functions



Vertical

2.15 Alarm

All active alarms are displayed on the screen during defined duration. A maximum of 5 alarms can be displayed as well as notified acoustically. The alarm display duration and repeat time are configurable in ETS.

User can press \checkmark to confirm the alarm; it is not displayed within 5 minutes (repeat time).

For alarm details, see "Alarm" [\rightarrow 128].



 ▲
 Ex-Air over limit
 ✓

 ▲
 Air-Pre over limit
 ✓

 ▲
 VOC over limit
 ✓

 ▲
 PM2.5 over limit
 ✓

 ▲
 CO2 over limit
 ✓

 ▲
 CO2 over limit
 ✓

 ▲
 HOME 2
 HOME 3

2.16 Other pages

KNX Connect Failure: Displays in red when communication to the bus is interrupted.

ETS configuration loading: After the application downloads or the device power recovers, the device initializes and loads the parameter configuration for ETS.

Vertical



KNX connect failure



ETS configuration loading

				Horizontal
02-22 Tue.	KNX Conne	ect Failure 5.0 °C	40% 🔅	
پ		\wp	B	
Lighting	Solar Protect	Eco	Multifunction	
22.0°C	22.0%	Ş	1	
Air conditioner	Floor heating	Ventilation	Audio	
Home 1	Home 2	Home 3	Home 4	

KNX connect failure

18:53	27.1°C 🔘
ETS configuration loading .	
	18:53 ETS configuration loading .

ETS configuration loading

3 Parameter and communication objects

This chapter introduces how ETS configures the device by setting the parameters. It also introduces the associated communication objects.

Communication objects communicate with other devices via bus:

- Max. communication objects: 987
- Max. group addresses: 2000
- Max. associations: 2000

The number and kind of visible objects vary. At no time, all objects are simultaneously available.

Note

In "Flag" column for communication objects:

- "C": Enables communications on the object
- "W": Writes value of object from the bus
- "R": Other devices can read the value of the object
- "T": The object can transmit
- "U": Updates the value of the object

Entering programming mode:

- Tap the setting icon ^(Q) in home page;
- Go to "General";
- Enable "KNX programming", the strip turns red, and the device can be configured in ETS.

Note

Only professional engineers can operate the KNX programming function. Ensure that it is disabled during daily operation and if enabled:

- The device can operate normally.
- The color strip is constant red, and this impacts the strip life span.

Physical address exception:

Physical address 15.15.254 is reserved for product manufacture testing and cannot be on an actual project.

Display language:

			NOT	TICE			
!		The device s Spanish, Ital "Codepage"	upports multip ian, French, e to "Unicode (l	ble languages i tc. To properly JTF-8)".	ncluding En display the	glish, Germ desired lang	an, Chinese, guage, set
est Project Touc	ch Control 9895	501		Import Date: 8/6/2020 1:3	0 PM Last Modifie	d:	
Details	Security	Project Log	Project Files				
Name			Password				
Test Project Touch C	Control 989501				Set Password		
Project Number			BCU Key				
					Set Key		
Contract Number			Codepage				
			Unicode (UTF-8)		•		
Start Date			Group Address Styl	e			
Select a date		11	O Free				
End Date			O Two Level				
Select a date		11	O Three Level				

Compatibility

Hide extended group address range for plug-ins

Use slowed bus communication

Status

Unknown

Comment

3.1 "General"

3.1.1 "General setting" parameters

"General setting" configures language, temperature unit, screen saver, panel lock, background, etc.

- General	Display mode	O Vertical O Horizontal
General setting	Display operator language	English
Coordinates location setting	Language changeable via bus	v
Summer time setting	• Note: To properly display the desired (UTF-8)" in the ETS project.	l language, the codepage must be set to "Unicode
Color Strip Proximity sensor	Cycle time for sending status "In operation" [0240, 0=disabled]	0 + Seconds
Password	Display temperature in	Ø degree Celsius degree Fahrenheit
Advanced setting	Date and time changeable via bus	✓
t Home page	Date display format	MM-DD DD-MM
Function page	Send daytime/nighttime status	According to sunrise & sunset
+ Function page	Day & Night configuration	
Temperature Sensor	Switch to nighttime after sunset in [-128127]	0 + Minute
	Switch to daytime after sunrise in [-128127]	0 Å Minute
	Color strip function	v
	Proximity sensor response function	✓
	Screen brightness changeable via bus	\checkmark
	Screen style	O Dark screen
	Page style for multifunction page	Big Icons List
	Indicate the control status through	Icon only O Both Icon and Block
	Screen saver	Clock
	Activate screen saver after [5255]	10 🗘 Seconds
	Turn off backlight after [0255] (0 = backlight never off)	30 🗘 Second
	Password function	\checkmark
	Auto return to homepage from function page if no operation in [0255, 0=disabled]	60 + Seconds
	Send status objects after restart	v
	Delay for sending status objects after voltage recovery [015]	5 📩 Seconds
	Note: Page title up to 12 chars., or 5	Chinese chars. or 7 Russian, Greek chars.
Group Objects Channels	Parameter	
General	Display mode	O Vertical O Horizontal
General setting	Display operator language	Other
Coordinates location setting	Language name	Input name

Language changeable via bus

Name	Description	Range
Display mode	Sets screen display mode.	Vertical (default)
		Horizontal

~

Summer time setting

"General"

Name	Description	Range
Display operator language	Selects the interface language on function pages, such as the page for HVAC control, system info. etc.	Chinese (Simplified) Chinese (Traditional) Czech Dutch English (default) French German Greek Hungarian Italian Polish Portuguese Russian Spanish Turkish Others
The following parameter displays if "Other	s" is selected.	
Language name	The required language can be typed as "Language name". English displays if the language type is unavailable. Important : The updated database must be downloaded to the device, set "Display operator language" can display on TC5.	Input name
Language changeable via bus	Determines whether the language can be changed via bus.	No Yes (default)
Cycle time for sending status "In operation"[0240, 0=disabled]	 Sets the time interval for sending telegrams to bus to indicate the module is operational. If: "0" is selected, the object "In operation" does not send telegrams. (0= inactive) None-zero (1240s) is selected, the object "In operation" sends a telegram, according to the set interval and with value "1" to the bus. Increasing the interval reduces bus load. 	0240 s (default: 0)
Display temperature in	Sets temperature unit. Applies to the temperature displayed on homepage, HVAC and Air conditioning function pages.	Degree Celsius (default) Degree Fahrenheit
Date and time changeable via bus	Determines whether the display of "date/time" on home or cover page can be modified from bus. If "Yes" is selected, objects "Date" and "Time" display and both can be modified.	No Yes (default)
Date display format	Determines date display format.	MM-DD (default) DD-MM
Send daytime/nighttime status	 Determines how the "day/night" status is defined. A telegram is sent via object "Day/Night" if the status changes. Options: No: Do not send telegram and objects According to user specified time: Switch the 	No (default) According to user specified time According to sunrise & sunset
	 day/night based on the configured time. For example, switch Economy mode @18:30P.M. to Day mode @6:30A.M. According to sunrise & sunset: Switch the day/night status based on sunrise and sunset for a specific location. The geographical coordinates point of the location must be entered. 	

nd communication objects otor a

Farameter and communication objects	
"General"	

Name		Description	Range	
The fol	lowing parameters display when "A	ccording to user specified time" is selected.		
ſ	Time for switch to night at: Hour [023]	Switches day to night at specified hour.	023 h (default: 18)	
	Time for switch to night at: Minute [059]	Switches day to night at specified minute.	059 min (default: 0)	
	Time for switch to day at: Hour [023]	Switches night to day at specified hour.	023 h (default: 6)	
	Time for switch to day at: Minute [059]	Switches night to day at specified minute.	059 min (default: 0)	
The following parameters display when "Ac		ccording to sunrise & sunset" is selected.		
ſ	Day & Night configuration	Sets the time delay of the night/day switching moment of the location configured.	-	
{	Switch to nighttime after sunset in [-128127]	Sets the time delay of the night switching moment of the location configured.	-128127 min (default: 0)	
	Switch to daytime after sunrise in [-128127]	Sets the time delay of the day switching moment of the location configured.	-128127 min (default: 0)	
Color s	trip function	Enables or disables color strip function. When enabled, a separate setting page displays under General. Refer to "Color strip" parameters [\rightarrow 61].	Disable (default) Enable	
Proximity sensor response function		Enables or disables the proximity sensor. When enabled, a separate setting page displays under General. Refer to "Proximity sensor" parameters [→ 62].	Disable Enable (default)	
Screen brightness changeable via bus		Defines whether the screen brightness can be changed via bus.	No Yes (default)	
Screen	style	Sets the screen style.	Dark screen (default) Light screen	
Page style for multifunction page		Selects the page style for multifunction pages. Big Icons Advanced Ceiling Light Ceiling Light Ceiling Ceiling Ceiling Ceiling Ceiling Some	Big Icons (default) List	
$\left(\right)$	Indicate the control status	Indicates the control status via icon only or both icon and block icon	Icon only (default) Both icon and block	
	linough	Icon only	Both con and block	
		Lamp Both Icon and block		
		Lamp		

"General"

Name		Description	Range		
Screen saver		Selects screen saver. Refer to Screen saver in Screen [→ 40]	Disable Clock (default) Digital clock plus additional information Album - 3 pictures Album - 1 picture		
Activat	e screen saver after [5255]	Time delay set in seconds from the last operation of screen to enter screen saving mode.	5255 s (default: 10 s)		
The fol	lowing parameter display when "Cl	ock" or "Album - 3 pictures" is selected.			
$\left\{ \begin{array}{c} \\ \end{array} \right.$	Turn off backlight after [0255] (0 = backlight never off)	The time delay in seconds from the start of screen saving mode to turn off the screen backlight. Note : "0" means the backlight is never off. It is only recommended for demonstration purpose. It shortens the product lifetime dramatically if the backlight is never off.	0255 s (default: 30 s)		
The fol	lowing parameter displays when "D	Disable", "Digital clock plus additional information" or "Album –	1 picture" is selected		
Turn off backlight after [5255]		The time delay in seconds from the start of screen saving mode to turn off the screen backlight.	5255 s (default: 30 s)		
Passw	ord function	 Enables or disables password. There are two types of passwords: Setting page password: Determines if the password is required to check or edit information on setting page. When enabled, a separate page displays under General for password settings. Refer to "Password" parameters [→ 63]. Screen saver password: Determines if the password is required during daily operation after the screen saver is on or the screen is off. When enabled, a separate page displays under General for password settings. Refer to "Password settings. Refer to "Password" parameters [→ 63]. 	Disable (default) Enable		
Auto re page if 0=disa	eturn to homepage from function no operation in [0255, bled]	The time delay in seconds from function page automatically back to homepage.	0255 s (default: 60 s)		
Send s	tatus objects after restart	Defines if a status request telegram is sent once the device is restarted.	Disable Enable (default)		
The fol	lowing parameter displays when "S	end status objects after restart" is enabled.			
{	Delay for sending status objects after voltage recovery [015]	Time delay set in seconds for sending status object after voltage recovery.	015 s (default: 5 s)		

3.1.2 "General" communication objects

Numb	per * Name	Object Function	Description	Group Address	Length	С	R	w	т	U	Data Type	Priority
■ ‡ 918	General	Dis./En. screen operation, - All pages			1 bit	С	-	W	-	-	enable	Low
∎≵ 919	General	In operation			1 bit	С	R	-	Т	-	switch	Low
■之 920	General	Date			3 bytes	С	-	W	-	-	date	Low
2 921	General	Time			3 bytes	С	-	W	-	-	time of day	Low
■之 922	General	Day/Night			1 bit	С	-	W	-	-	day/night	Low
2 923	General	Screen backlight brightness			1 byte	С	-	W	-	-	percentage (0100%)	Low
■ ₽ 926	General	Proximity sensor, 1bit			1 bit	С	-	W	Т	-	switch	Low
■之 927	General	Password trigger, 1bit			1 bit	С	-	-	Т	-	switch	Low
2 928	General	Summer time, status			1 bit	С	R	-	Т	-	enable	Low
■2 949	General	Interface language			14 bytes	С	-	W	-	-	Character String (ISO 8859-1)	Low
■之 950	General	Color strip 1 trigger			1 bit	С	-	W	-	-	trigger	Low
2 951	General	Color strip 2 trigger			1 bit	С	-	W	-	-	trigger	Low
■2 952	General	Color strip 3 trigger			1 bit	С	-	W	-	-	trigger	Low

No.	Name	Object function	Length	Flag	Data type
918	General	Dis./En. screen operation, - All pages	1 bit	CW	1.003 enable

3

No.	Name	Object function	Length	Flag	Data type
Locks	the panel fu	nction via bus. The panel does not respond	when locked, still	receives th	ne bus telegram. See Lock function via bus
[→ 49] for details.	Telegram value			
1: Loc	оск xk				
919	General	In operation	1 bit	CRT	1 001 switch
Derier	diaally aanda	a talagram "4" to the bus to indicate that th		north	
Period	lically serios		e device works pro	peny.	
920	General	Date	3 bytes	CW	11.001 date
Modifi	es the displa	y date on the screen via bus.			
921	General	Time	3 bytes	CW	10.001 time of day
Modifi	es the displa	y time on the screen via bus.			
922	General	Day/Night	1 bit	СТ	1.024 day/night
				CW	, ,
Sends	s day/night st	atus to the bus.			
The d	ay/night state	e can be switched by time, sunrise and suns	set, or the telegram	n value sw	itched via bus. Telegram value:
0: Day 1: Nig	/ ht				
Note:	When param	neter " Send davtime/nighttime status" is se	t as "No". the flag i	s CW: for	"According to sunrise & sunset". the flag is CT.
023	General	Scroon backlight brightness	1 byto	CW	5 001 perceptage (0, 100 %)
923	General		T byte		5.00 1 percentage (0 100 %)
Modifi	es the backli	ght brightness of the screen. Brightness our	tput range: 1010	0 %	neve when the nerometer "Coreen brightness
chang	legram value leable via bus	s" is set as "Yes".	% brightness. This	object dis	plays when the parameter Screen brightness
926	General	Proximity sensor 1bit value	1 bit	CWT	1 001 switch
020	Conora	Proximity sensor 1byte value	1 byte	0	17.001 scene number
		Proximity sensor, scene NO.	1 byte		5.010 counter pulses (0255) / 5.001
			-		percentage (0100 %)
Displa	ays when para	ameter "Proximity sensor response functior	n" is enabled and re	eadable wi	hen value is sent.
It send on sel	ds a telegram lected data ty	n value to the bus when a person is detecte /pe.	d approaching or le	eaving ser	nsor detection range. The value range is based
927	General	Password trigger,1bit value	1 bit	СТ	1.001 switch
		Password trigger, 1byte value	1 byte		17.001 scene number
		Password trigger, scene NO.	1 byte		5.010 counter pulses (0255) / 5.001
					percentage (0100 %)
Displa	ays when para	ameter "Password function" is enabled and	readable when va	lue is sent	
It sen	ds the telegra	am value to the bus. The value range is bas	sed on selected dat	a type.	
928	General	Summer time status	1 bit	СТ	1.003 enable
Sends	s telegram va	lue of summer time status via bus. Telegra	m value:		
0: Not 1: Sur	summer time	e			
949	General	Interface language	14 bytes	CW	16.001 character string (ISO 8859-1)
Displa	ays when para	ameter "Language changeable via bus" is e	enabled.	I	•
950	General	Color strip 1 trigger	1 bit	CW	1 017 trigger
951	Conordi	Color strip 2 trigger	, Dit		
952		Color strip 3 trigger			
Triage	are color strip	via bus. They display when perometer "Co	lor strip function" is	onablad	<u> </u>
ngge	a sun sun	wa bus. They display when parameter Co	nor surpraneuorn is	s chabled.	

3.1.3 "Coordinates location setting" parameters

"Coordinates location setting" configures latitude and longitude.

— General	Latitude longitude location setting	Berlin, Germany		
General setting	Latitude	North South		
Coordinates location setting	Latitude in degrees [090]	52	*	۰
Summer time setting	Latitude in minutes [059]	31	÷	•
Proximity sensor	Longitude	East West		
Advanced setting	Longitude in degrees [0180]	13	÷	۰
+ Home page	Longitude in minutes [059]	24	÷	•
· · · · · · · · · · · · · · · · · · ·	Time difference from Universal Time	(UTC +01:00) Amsterdam, Berlin, Bern, Rome,		
+ Function page		vienna		
Temperature Sensor				

Name		Description	Range	
Latitude longitude setting location		Sets the reference point for sunrise and	-	
		sunset		
Latituda		Sets latitude	North (default)	
Lallude			South	
Į	Latitude in degrees [0°90°]	Sets latitude in degrees	090° (default: 52)	
l	Latitude in minutes [0'59']	Sets latitude in minutes	059' (default: 31)	
Longitude		Sets longitude	East (default) West	
Į	Longitude in degrees [0°180°]	Sets longitude in degrees	0180° (default: 13)	
l	Longitude in minutes [0'59']	Sets longitude in minutes	059' (default: 24)	
Time d [UTC+	ifference from Universal Time]	Sets the time difference from universal time	 (UTC -12:00) International Date Line West; (UTC -11:00) Samoa; (UTC -10:00) Hawaii; (UTC -09:00) Alaska; (UTC -07:00) Arizona, Denver, Calgary; (UTC -07:00) Arizona, Denver, Calgary; (UTC -06:00) Chicago, Dallas, Mexico City; (UTC -05:00) New York, Miami, Atlanta, Detroit; (UTC -04:30) Caracas; (UTC -04:00) Atlantic (Canada), Manaus, Santiago; (UTC -03:00) Brasilia, Buenos Aires, Greenland; (UTC -03:00) Brasilia, Buenos Aires, Greenland; (UTC -01:00) Azores, Cape Verde Islands; (UTC -01:00) Azores, Cape Verde Islands; (UTC +01:00) Amsterdam, Berlin, Bern, Rome, Vienna; (default) (UTC +02:00) Athens, Istanbul, Kiev, Sofia, Cairo; (UTC +03:00) Baghdad, Moscow, St.Petersburg; (UTC +03:00) Baghdad, Karachi, Tashkent; (UTC +05:30) Chennai, Kolkata, Mumbai, New Delhi; (UTC +05:45) Kathmandu; (UTC +06:00) Astana, Dakka, Novosibirsk; (UTC +06:00) Singapore, Beijing, Hong Kong, Taipei; (UTC +09:00) Osaka, Sapporo, Tokyo, Seoul; (UTC +09:00) Median, Solomon Islands, New Caledonia; (UTC +11:00) Magadan, Solomon Islands, New Caledonia; 	

3.1.4 "Screensaver display setting" parameters

"Screensaver display setting" configures screen saver display format. The interface displays when parameter "Digital clock plus additional information" is enabled.

– General	Value 1	Int. temperature
General setting	Value 2	None
Coordinates location setting	Polling interval for external sensor [5255]	10 * Minutes
Screensaver display setting		Value in ug/m3 (DPT_7.001)
Summer time setting	Object datatype of PM2.5	Float value in ug/m3 (DPT_9.030)
Color Strip	Object datatype of PM10	Value in ug/m3 (DPT_7.001)
Proximity sensor		Float value in ug/m3 (DPT_9.030)
Password	Object datatype of CO2	 Value in ppm (DPT_7.001) Float value in ppm (DPT_9.008)
Advanced setting	Object datatype of VOC	Value in ug/m3 (DPT_7.001)
+ Home page	Object datatype of Brightness	Value in lux (DPT_7.013) Float value in lux (DPT_9.004)
+ Function page	Object datatype of Windspeed	Float value in m/s (DPT_9.005)
Temperature Sensor		 Float value in km/h (DPT_9.028)

Name	Description	Range
Value 14	Defines what value is displayed on screen saver. A total of 4 values can be displayed on screen.	None Int. temperature (default) Ext. temperature Humidity PM2.5 PM10 CO ₂ VOC Brightness Windspeed
Polling interval for external sensor [5255]	Defines the period after which a read request is sent to get external value.	5255 minutes (default: 10 minutes)
Object datatype of PM2.5	Defines PM2.5 object data type displayed on screen saver.	Value in ug/m³ (DPT_7.001) (default) Float value in ug/m³ (DPT_9.030)
Object datatype of PM10	Defines PM10 object data type displayed on screen saver.	Value in ug/m ³ (DPT_7.001) (default) Float value in ug/m ³ (DPT_9.030)
Object datatype of CO2	Defines CO ₂ object data type displayed on screen saver.	Value in ppm (DPT_7.001) Float value in ppm (DPT_9.008) (default)
Object datatype of VOC	Defines VOC object data type displayed on screen saver.	Value in ug/m³ (DPT_7.001) (default) Float value in ug/m³ (DPT_9.030) Float value in ppm (DPT_9.008)
Object datatype of Brightness	Defines screen saver brightness object data type.	Value in Iux (DPT_7.013) Float value in Iux (DPT_9.004) (default)
Object datatype of Windspeed	Defines windspeed object data type displayed on screen saver.	Float value in m/s (DPT_9.005) (default) Float value in km/h (DPT_9.028)

3.1.5 "Summer time setting" parameters

Summer time adjustment	Customized setting	•
Start at month	March	•
Start at week	The last week	•
Start at day	Sunday	•
Start at hour [023]	2	‡ h
Start at minute [059]	0	‡ mr
End at month	October	•
End at week	The last week	•
End at day	Sunday	•
End at hour [023]	3	‡ h
End at minute [0, 59]	0	* mr
	Summer time adjustment Start at month Start at week Start at day Start at hour [023] Start at minute [059] End at month End at week End at day End at hour [023] Start at hour [023] Start at hour [023]	Summer time adjustment Customized setting Start at month March Start at week The last week Start at day Sunday Start at hour [023] 2 Start at minute [059] 0 End at month October End at week The last week End at week Sunday End at hour [023] 3 Sunday Sunday

Name			Description	Range
Summer time adjustment		er time adjustment	 Sets summer time (Daylight Saving Time), options: No: Summer time not used Always: Summer time always used Customized setting: User customized setting for start and end summer time 	No (default) Always Customized setting
The	e fol	lowing parameters display when "C	ustomized setting" is selected.	
(Start at month	The month that summer time starts	JanuaryDecember (default: March)
		Start at week	The week that summer time starts	The first week The second week The third week The fourth week The last week (default)
		Start at day	The day that summer time starts	MondaySunday (default: Sunday)
		Start at hour [023]	The hour that summer time starts	023 h (default: 2 h)
		Start at minute [059]	The minute that summer time starts	059 min (default: 0 min)
$ \rangle$		End at month	The month that summer time ends	JanuaryDecember (default: October)
		End at week	The week that summer time ends	The first week; The second week; The third week; The fourth week; The last week (default)
		End at day	The day that summer time ends	MondaySunday (default: Sunday)
		End at hour [023]	The hour that summer time ends	023 h (default: 3 h)
		End at minute [059]	The minute that summer time ends	059 min (default: 0 min)

Note

If the end time is set earlier than start time by mistake, end time applies to next year. For example:

- "Start at month": May
- "End at month": March

So that summer time starts in May of this year and ends in March of next year.

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3

3.1.6 "Color strip" parameters

- General	Color strip working mode	Always active Only active when backlight is off
General setting	Color strip working mode, when active	Permanent on Slowly flashing
Coordinates location setting Summer time setting	Brightness level at daytime [Level1 - darkest; Level5 - brightest]	Level 1 👻
Color Strip	Brightness level at nighttime	OFF •
Proximity sensor	Color 1 setting	White
Advanced setting	Color 2 setting	Red 👻
+ Home page	Color 3 setting	Green 💌
+ Function page	Note: If the strip is always on, it may affect the precision of internal temperature measurement. The average of total on-time should not be more than 8 hours per day, otherwise it may affect	
Temperature Sensor	the lifetime of RGB led.	

Name	Description	Range
Color strip working mode	Sets operating mode of color strip	Always active Only active when backlight is off (default)
Color strip working mode, when active	Sets operating mode of color strip for strip active.	Permanent on Slowly flashing (default)
	Note : Color strip "permanent on" impacts the internal temp. sensor measurement. The average of "Switch On" time should not exceed 8 hours a day because it significantly affects the lifetime of the strip.	
Brightness level at daytime [Level1- darkest; Level5 - brightest]	Sets the brightness level of color strip during the day Note: Level1 - darkest; Level5 – brightest	Level 1 (default)Level 5
Brightness level at nighttime	Sets the brightness level of color strip during the night Note: Level1 - darkest; Level5 – brightest	OFF (default), Level 1Level 5
Color 1 setting Color 2 setting Color 3 setting	Sets the color of color strip	Red (default for color 2); Green (default for color 3); Blue; White (default for color 1); Yellow; Cyan; Purple; Orange; Cyan blue

3.1.7 "Proximity sensor" parameters

Detects people approaching or moving out of sensor detection range and sends a telegram value to bus.

— General	Data type of output value	1bit [On/Off]
General setting	Action when people approaching	No action 🔘 Send a value
Coordinates location setting	Output value [On/Off]	Off On
Summer time setting	Send value after [0255]	0 Seconds
Proximity sensor		
Advanced setting	Action when people leaving	No action Send a value
+ Home page	Output value [On/Off]	Off On
+ Function page	Send value after [5255]	10 🔹 Seconds
Temperature Sensor		

Name Description Range Data type of output value The data type of telegram sent to bus 1bit [On/Off] (default) 1byte [scene control] 1byte [0...255] 1byte [0...100 %] Defines whether the telegram is sent or not when someone Action when people approaching No action is approaching. Send a value (default) Note: Touch operation only is recognized as approaching. The following parameters display when "Send value" is selected and is based on the selected "Data type of output value". Off Output value [On/Off] The data type and related range value sent to bus On (default) Output scene No. [1...64] The data type and related range value sent to bus 1...64 (default: 1) Output value [0...255] The data type and related range value sent to bus 0...255 (default: 255) Output value [0...100%] The data type and related range value sent to bus 0...100 (default: 100) Send value after [0...255] The delay time of sending telegram 0...255 s (default: 0) Defines whether the telegram is sent or not when someone No action (default) Action when people leaving Send a value is leaving. The following parameters display when "Send value" is selected and is based on the selected "Data type of output value". Output value [On/Off] The data type and related range value sent to bus Off (default) On Output scene No. [1...64] The data type and related range value sent to bus 1...64 (default: 2) Output value [0...255] The data type and related range value sent to bus 0...255 (default: 0) Output value [0...100%] The data type and related range value sent to bus 0...100 (default: 0) Send value after [0...255] The delay time of sending telegram 0...255 s (default: 10)

3.1.8 "Password" parameters

Sets password and data type sent to bus. It is enabled/disabled in General via parameter "Password function". A total of 3 passwords are allowed.

- General	Data type of output value 1bit [On/Off]
General setting Coordinates location setting Summer time setting Color Strip	Set password 1 (4 digits) 1 2 3 4 4 Description for password 1 Password 1 Password 1 Password 1 applies to Wake-up the screen Action after being unlocked No action Send a value
Proximity sensor Password Advanced setting	Password 2 - Wake-up the screen Set password 2 (4 digits) 2 * 3 * 4 * 5
+ Home page	Description for password 2 Password 2 Action after being unlocked No action Send a value
Temperature Sensor	Password 3 - Wake-up the screen
Human Centric Lighting + Timer function	Description for password 3 Password 3 Action after being unlocked Image: Constraint of the second s

Name		Description	Range
Data type of output value		The data type of telegram sent to bus	1bit [On/Off] (default) 1byte [scene control] 1byte [0255] 1byte [0100%]
Set password 1 (4 digits)		Sets 4-digit password for entering Setting page or waking up the screen.	4byte text (default: 1234)
Descri	ption for password 1	Description of password, max. 40 characters	40 characters (default: Password 1, 2 or 3)
Password 1 applies to		Defines the use of password 1.	Access setting page Wake-up the screen (default) Both access setting page and wake-up the screen
Action	after being unlocked	Whether telegrams are sent to bus after device is unlocked.	No action (default) Send a value
The fo	llowing parameters display when "	Send a value" is selected.	
ſ	Output value [On/Off]	Only one "Output" type displays, determined by the selection of parameter "Data type of output value".	Off On (default)
	Output scene No. [164]	Determines the value sent to bus after the screen is unlocked.	Scene No.1Scene No.64 (default: 1)
	Output value [0255]		0255 (default: 255)
	Output value [0100%]		0100 (default: 100)
	Send value after [0255]	The delay time of sending telegram	0255 s (default: 0 s)
Password 2 - Wake-up the screen		 Enables or disables the 2nd password. If enabled: Set password: 4byte text (default: 2345) Description: Max. 40 characters Action after being unlocked: Same options as "Action after being unlocked" of "Set password 1 (4 digits)" 	Enable Disable (default)

"General"

Name	Description	Range
Password 3 - Wake-up the screen	 Enables or disables the 3rd password. If enabled: Set password: 4byte text (default: 3456) Description: Max. 40 characters Action after being unlocked: Same options as "Action after being unlocked" of "Set password 1 (4 digits)" 	Enable Disable (default)

3.1.9 Advanced setting

- General	Human Centric Lighting (HCL)	✓
	Timer function	\checkmark
General setting	Alarm	\checkmark
Coordinates location setting	Logic function	\checkmark
Summer time setting	Scene control	~
Proximity sensor		
Advanced setting	1	
+ Home page		
+ Function page		
Temperature Sensor		
Human Centric Lighting		
+ Timer function		
Alarm		
Logic operations		
+ Scene Control		

The following interfaces can be displayed if enabled (default is disabled) in "Advanced setting":

- "Human centric lighting" [→ 123]
- "Timer function" [→ 125]
- "Alarm" [→ 128]
- "Logic operations" [→ 132]
- "Scene control" [→ 143]

2

3.2 "Home page"

Parameters

Sets home page number and selects the shown items on home page.

+	General	Home page 1	✓				
-	Home page	Home page 2					
	Home page	Selection of items shown on home pa	age				
		Show item 1	Ext. temperature				
	Home page 1	Automatic switch between internal and					
+	Function page	external temperature on display					
	- unction page	Show item 2	Humidity				
	Temperature Sensor						
		Cycle time for polling of external temperature value (0, 255)	10 🌲 Minutes				
	Human Centric Lighting	temperature value [0255]					
	Human Centric Lighting	Send read request for external temperature	✓				

Name		Description	Range		
Home page 15		Enables or disables home page.	Disable Enable		
Selecti	ion of items shown on home page				
Show item 1		Defines display item on home page.	Disable Internal temperature (default) External temperature		
The pa	arameters display when "External te	mperature" is selected.			
	Automatic switch between internal and external temperature on display	When external temperature sensor is selected, internal and external temperature are displayed on home page in 5 s interval.	No (default) Yes		
	Cycle time for polling of external temperature value [0255]	Defines the period after which a read request is sent to retrieve an external value. Note : The last received temperature value displays if external temperature sensor fails.	0255 minutes (default: 10 minutes)		
	Send read request for external temperature	Defines sending read request for external temperature value.	No Yes (default)		
Show item 2		Defines display item on home page. Note : Value "External temperature" cannot be selected if set for "Show item 1".	Disable External temperature Humidity (default) CO ₂		

Communication objects

Humber Hume Object Function Description Group Address Length C R W T O Data Type	Priority
■2 915 Home page External temperature value 2 bytes C - W T U temperature (*C)	Low
■Ž 916 Home page External CO2 value 2 bytes C - W T U parts/million (ppm)	Low
■之1917 Home page External humidity value 2 bytes C - W T U humidity (%)	Low

No.	Name	Object function	Length	Flag	Data type	
915	Home page	External temperature value	2 bytes	CWTU	9.001 temperature	
Receives the external temperature value from bus.						
916	Home page	External CO2 value	2 bytes	CWTU	9.008 parts/million (ppm)	
Receives external CO ₂ value from bus.						
917	Home page	External humidity value	2 bytes	CWTU	9.007 humidity	
Receives external humidity value from bus.						

3.2.1 "Home page x" parameters

Home page is navigation:

- Maximum five home pages allowed
- Maximum eight icons allowed per page

When navigation is enabled, the icons can be linked to a defined function page. The first configured function page displays if navigation function for all pages is disabled.

Examples:

- Picture on the left: Max. five homepages are configured.
- Picture on the right: Function page instead of home page.





Horizontal





ured.

+ General	Description/ Headline of the page			
 Home page 	Page layout - icons per page	4 🔹		
Home page	Icon 1 - navigation function	✓		
Home page 1	Link to	Page 1 🔹		
+ Function page	Select page icon	🗄 Multifunction 👻		
Temperature Sensor	Icon 2 - navigation function	✓		
Temperature Sensor	Link to	Page 2 🗸		
	Select page icon	Hultifunction 👻		
	Icon 3 - navigation function	✓		
	Link to	Page 3 👻		
	Select page icon	Hultifunction 👻		
	lcon 4 - navigation function	v		
	Link to	Page 4 👻		
	Select page icon	🗄 Multifunction 👻		

Name		Description	Range		
Descrip	otion/Headline of the page	Sets the name of the home page shown on screen. Note :	Max. 15byte text		
		 Supports multiple languages. To display properly on screen, set "Codepage" to "Unicode (UTF-8)". Refer to Language in display in Parameter and communication objects [→ 52]. 			
		 Approximately 12 characters can be displayed. It depends on the width of the single character as the space is limited on the display. 			
Page L	ayout - icons per page	Determines how many icons are on one homepage.	3 / 4 (default) / 6 / 8		
		 For an idea about how the page looks with different numbers of icons, refer to Multifunction page [→ 12] 			
		 After configuration, user can directly tap one of the icons to go to the selected function page or operate the function. 			
Icon x	- navigation function	Enables or disables the navigation function for ICON x. x=3 / $4 / 6 / 8$	Disable Enable (default)		
The fol	lowing parameters display when "lo	on x - navigation function" is enabled.			
	Link to	Defines function page or icon on multifunction page linked to navigation ICON x.	Page 1 (default)Page 15 Icon in page 1Icon in page 15		
		 Page 1Page 15: Link to function page selected 			
		 Icon in page 1Icon in page 15: Link to the selected icon in the specified multifunction page 			
		Note : Configure all target (function pages or icons) links or the links become invalid.			
	Select page icon	Displays only when "Link to" is configured as "Page x". This parameter defines the Navigation icon.	Multifunction (default) Lighting Scenario Percention		
	loon number econoisted	Displays only when "Link to" is configured as "less in page	1 0		
		X".	10		

3.3 "Function page"

Parameters

+ General	Function page 1	✓
	Function page 2	
+ Home page	Function page 3	
+ Function page	Function page 4	
	Function page 5	
Temperature Sensor	Function page 6	
	Function page 7	
	Function page 8	
	Function page 9	
	Function page 10	
	Function page 11	
	Function page 12	
	Function page 13	
	Function page 14	
	Function page 15	
	Note: Special functions are only availa	ble at function page 6 and following pages.

Name	Description	Range
Function page 1Function page 15	Enables or disables function page x. A total of 15 pages can be configured. When "Function page x" is enabled, parameter "Page x" displays and the Page x (x=115) can be configured.	Disable Enable
	Note : The first 5 pages are multifunction pages only, pages 6 and on can be configured as either multifunction or single function pages such as Ventilation system, Air quality display, etc.	

Communication objects

Number	* Name	Object Function	Description	Group Address	Length	С	R	w	т	U	Data Type	Priority
4 9	Page 1-	Lock			1 bit	С	-	W	-	-	enable	Low
₽2 973	Page 1-	Recall function page			1 bit	С	2	W	2	-	trigger	Low

No.	Name	Object function	Length	Flag	Data type			
49	Page x-	Lock	1 bit	CW	1.003 enable			
Locks or unlocks icon function on page x. A total of 15 pages can be configured. Telegram value: 0: Lock 1: Unlock								
973	973 Page x- Recall function page 1 bit CW 1.017 trigger							
Recalls the selected function page. Telegram: 1								

3.3.1 "Page x - Multifunction (Lighting/Blinds/Scene/Send value/Display)" parameters and communication objects

Parameters

General	Description/ Headline of the page	
Home page	Page function	Multifunction (Lighting/Blind/Scene/Send value/ Display)
Function page	Number of icons	4
Page 1-	lcon 1	\checkmark
Temperatura Sensor	Select icon	👻 Light
Temperature Sensor	Description of icon 1	
	Function of icon 1	Switch
	lcon 2	v
	Select icon	🏶 Light
	Description of icon 2	
	Function of icon 2	Switch
	Icon 3	✓
	Select icon	👻 Light
	Description of icon 3	
	Function of icon 3	Switch
	lcon 4	✓
	Select icon	🖤 Light
	Description of icon 4	
	Eurotion of icon 4	Switch

Name	Description	Range
Description/Headline of the page	Names the "Function page x". Note :	15byte text
	 Supports multiple languages. To display properly on screen, set "Codepage" to "Unicode (UTF-8)". Refer to Language in display in Parameter and communication objects [→ 52]. 	
	 Approximately 12 characters can be displayed. It depends on the width of the single character as the space is limited on the display. 	
Page function	Configures the type of function page. Note: Pages 1 5 multifunction only: pages 6 15 can be either	Multifunction (Lighting/Blind/Scene/Send value/Display)
	multifunction or single functions.	
Number of icons	Determines the page layout on this multifunction page.	3 / 4 (default) / 6 / 8
	 For an idea about how the page looks with different numbers of icons, refer to Multifunction page [→ 12] 	
	 After configuration, user can directly tap one of the icons to go to the selected function page or operate the function. 	
Icon x	Enables or disables the function of Icon x. x=3 / 4 / 6 / 8	Disable Enable (default)

"Function page"

Nam	e	Description	Range
The f	ollowing parameters display	when Icon x is enabled.	
	Select icon	 Determines which icon is used in display. Note: No icon, only text: Displays with text only (no icon) The text is the name defined in parameter "Description of Icon x". For info on icons, see Functional page icons [→ 146] 	No icon, only text Ceiling light Power
	Description of Icon x	Sets the name of the Icon x. Maximum display on screen: 10 characters/letters but only 4 for Chinese, 6 for Russian or Greek.	12byte text
	Function of icon 1	 Sets the function of Icon x. Switch: Light switch on/off Bell function: Press/release switch Switch/dim: Light dimming and on/off Send value: Sends defined value to bus Brightness + Color temperature: Brightness and color temperature control Curtain blind: Open/close/stop and sliding 0100 % Note: When curtain blind function is used, the device should be connected to the actuator of kind "shutter". Roller shutter: Up/down/stop and sliding 0100 %, no slats Venetian blind: Up/down/stop and sliding 0100 %, with slats Curtain step/move: Open/close/stop curtains Roller blind step/move: Up/down/stop roller shutters Scene: Short press to recall scene; long press to save scene Display 1bit value: Display on/off status of device Display text: Display string 	Switch Bell function Switch/ dim Send value Brightness + Color temperature Curtain blind Roller shutter Venetian blind Curtain step/move Roller blind step/move Scene Display 1bit value Display value Display text
	The following parameter dis Operation mode	plays when "Bell function" is selected. Sets bell operation mode.	Press - ON / Release - OFF (default) Press - OFF / Release - ON
	The following parameters di	splay when "Send value" is selected	
	Data type	Sets data type of object used for value sending.	1bit [On/Off] 2bit [03] 4bit [015] 1byte value (default) 2byte [065535] 2byte [-3276832767] 4byte [04294967295] 4byte float value
	Send value when short press	Sets the output value sent by object when short pressing the icon. The value range is based on selected data type.	On Off (default)
	Long press operation	Determines whether long operation is enabled or disabled.	Disable (default) Enable
	Send value when long press	Sets the output value sent by object when long pressing the icon. The value range is based on selected data type.	On (default) Off
ļ		vvnen "Long press operation" is enabled, this parameter displays. (Long press is longer than 0.5 seconds)	

3

ne		Description	Range								
The	e following parameters di	splay when "Brightness + Color temperature" is selected.									
ſ	Reaction on "off "operation	Sets related action when "off" operation is enabled.	Send switch object value off (default) Send RGBW objects value off								
	Min. color temperature [20007000]	Defines minimum color temperature.	20007000 K (default: 2700 K)								
	Max. color temperature [20007000]	Defines maximum color temperature.	20007000 K (default: 6500 K)								
The	following parameters dis	splay when "Scene" is selected.	-								
\int	Scene number for short press	Determines the Scene No. sent when short pressing the icon. Scenes No.164 correspond to telegram values 063.	Scene No. 1 (default)Scene No.64								
$\left \right\rangle$	Long press for scene storage	Configures enable scene storage via long press operation. (Long press means pressing longer than 0.5 second)	Disable (default) Enable								
	Status active	 Defines if enable or disable scene icon on function page. Enable: Selected scene icon is on. Disable: No changes to selected scene icons. 	Disable Enable (default)								
The	The following parameters display when "Display value" is selected.										
	Data type	Sets data type of object used for displaying value.	1byte unsigned value (DPT 5.010) (default)1byte percentage value (DPT 5.001) 2byte unsigned value (DPT 7.001) 2byte signed value (DPT 8.001) 2byte float value (DPT 9.x)Temperature value (DPT 9.001) Pressure value (DPT 9.006) Humidity value (DPT 9.007) CO2 value (DPT 9.008) Air flow (DPT 9.009) Concentration (DPT 9.030) 4byte unsigned value (DPT 14.x)								
	Factor (Display=value x factor x 0.1)	Defines the factor used for value display.	1100 (default: 10) Integer: 01 (default: 0) Float: 02 (default: 1)								
	Decimal places	Defines decimal place. This parameter displays when 2byte values are selected.									
	Unit text	Defines display unit.	5byte text								

Communication objects

Note

Page number x range: 1...15, Icon number y range: 1...8 **Switch**

	Number '	Name	Object Function	Description	Group Address	Length	С	R	w	т	U	Data Type	Priority
1		Page 1-lcon 1	Switching			1 bit	С	-	-	Т		switch	Low
;	3	Page 1-lcon 1	Status switching			1 bit	С	-	W	Т	U	switch	Low

No.	Name	Object function	Length	Flag	Data type						
1	Page x-lcon y	Switching	1 bit	СТ	1.001 switch						
Sends 0: Off 1: On	Sends on/off telegrams to bus and controls the on /off of the lamp. Telegram value: 0: Off 1: On										
3	Page x-lcon y	Status switching	1 bit	CWTU	1.001 switch						
Receives on/off status from other bus devices such as dimmers and switch actuators											

Bell function

	Number	* Name	Object Function	Description	Group Address	Length	C R	ΨТ	U	Data Type	Priority
;	1	Page 1-lcon 1	Bell function			1 bit	с -	- T	- :	switch	Low

No.	Name	Object function	Length	Flag	Data type
1	Page x-lcon y	Bell function	1 bit	СТ	1.001 switch
Sends 0: Off 1: On	on/off telegram to bu	us and controls the on/off of the bell. Telegra	m value:		

Switch/dim

Nu	umber *	Name	Object Function	Description	Group Address	Length	C	R	W	/ Т	U	Data Type	Priority
∎‡ 1		Page 1-lcon 1	Switching			1 bit	С	-	-	т	-	switch	Low
∎‡ 2		Page 1-lcon 1	Dim value			1 byte	С	-	-	Т	-	percentage (0100%)	Low
■ ‡ 3		Page 1-lcon 1	Status switching			1 bit	С	÷	W	Т	U	switch	Low
∎‡ 4		Page 1-lcon 1	Dimming			4 bit	С	-	W	Т	-	dimming control	Low
∎‡ 5		Page 1-lcon 1	Status dim value			1 byte	С	-	W	т	U	percentage (0100%)	Low

No.	Name	Object function	Length	Flag	Data type						
1	Page x-lcon y	Switching	1 bit	СТ	1.001 switch						
Sends on/off telegram to bus and controls the on/off of the lamp. Telegram value: 0: Off 1: On											
2	Page x-lcon y	Dim value	1 byte	СТ	5.001 percentage (0100 %)						
Sends dimming telegram to the bus, i.e., to send brightness values. Telegram: 0100 %											
3	Page x-lcon y	Status switching	1 bit	CWTU	1.001 switch						
Receiv	es on/off status from	other bus devices, such as dimmers and sw	vitch actuators								
4	Page x-lcon y	Dimming	4 bits	CWT	3.007 dimming control						
Sends	the relative dimming	telegram to bus, such as brighter, darker, o	r stop-dimming	g telegram	L						
5	Page x-lcon y	Status dim value	1 byte	CWTU	5.001 percentage (0100 %)						
Receiv	es the brightness sta	atus of the light in response to the dimmer. T	elegram: 01	00 %							

Send value

Number	r * Name	Object Function	Description	Group Address	Length	С	R	w	т	U	Data Type	Priority
■ #1	Page 1-lcon 1	Send 1bit value			1 bit	C	-	-	Т	-	switch	Low
■2 2	Page 1-lcon 1	Send 1bit value, long			1 bit	C	-	-	Т	-	switch	Low

No.	Name	Object function	Length	Flag	Data type
1	Page x-Icon y	Send 1bit/2bit/4bit value Send 1byte /2byte unsigned value Send 1byte percent value Send 2byte signed value Send 4byte unsigned value Send 4byte float value	1bit on/off 2bit 03 4bit 015 1byte value 2byte 065535 2byte -3276832767 4byte [04294967295] 4byte float value	СТ	1.001 switch 2.001 switch control 3.007 dimming control 5.010 counter pulses (0255) 5.001 percentage (0100%) 7.001 pulses 8.001 pulses difference 12.001 counter pulses 14.x float value
Sends	the preset output	value of the parameter. The object type an	d value range are based o	n the data	type set by the parameter.
2	Page x-Icon y	Send 1bit/2bit/4bit value, long Send 1byte /2byte unsigned value, long Send 1byte percent value, long Send 2byte signed value, long	1bit on/off 2bit 03 4bit 015 1byte value 2byte 065535 2byte -3276832767	СТ	1.001 switch 2.001 switch control 3.007 dimming control 5.010 counter pulses (0255) 5.001 percentage (0100%) 7.001 pulses 8.001 pulses difference
No.	Name	Object function	Length	Flag	Data type
-------	--------------------	---	-------------------------------	----------	--------------------------------------
Sanda	the preset outputs	value of the perspector. It displays when "Is	and process operation" is one	blad and	only for conding the output value of

Sends the preset output value of the parameter. It displays when "long press operation" is enabled and only for sending the output value of long press operation. The object type and value range are based on data type set by the parameter.

Brightness + Color temperature

Numbe	er * Name	Object Function	Description	Group Address	Length	С	R	w	Т	U	Data Type	Priority
■ ‡ 1	Page 1-Icon 1	Switching			1 bit	С	-	-	Т	-	switch	Low
■2 2	Page 1-lcon 1	Dim value			1 byte	C	-	-	Т	-	percentage (0100%)	Low
■2 3	Page 1-lcon 1	Status switching			1 bit	C	-	W	Т	U	switch	Low
∎‡ 4	Page 1-lcon 1	Color temperature value			2 bytes	С	-	-	Т	-	absolute colour temperature (K)	Low
■2 5	Page 1-Icon 1	Status dim value			1 byte	С	-	W	T.	U	percentage (0100%)	Low
■\$ 6	Page 1-lcon 1	Status color temperature value			2 bytes	C	-	W	Т	U	absolute colour temperature (K)	Low

No.	Name	Object function	Length	Flag	Data type							
1	Page x-lcon y	Switching	1 bit	СТ	1.001 switch							
Sends 0: Off 1: On	the on/off telegram t	o bus and controls the on/off of the lamp. Te	legram value:	1								
2	Page x-lcon y	Dim value	1 byte	СТ	5.001 percentage (0100 %)							
Sends	Sends dimming telegram to the bus, i.e., to send brightness values. Telegram: 0100 %											
3	Page x-lcon y	Status switching	1 bit	CWTU	1.001 switch							
Receiv	es the on/off status f	from other bus devices, such as Dimmer and	Switch actua	tor.								
4	Page x-lcon y	Color temperature value	2 bytes	СТ	7.600 absolute color temperature							
Sends Telegra	the color temperatur am value: 2000700	re value to bus. 00 K										
5	Page x-lcon y	Status dim value	1 byte	CWTU	5.001 percentage (0100 %)							
Receiv	es the brightness sta	atus of the light in response to the dimmer. T	elegram: 0…1	00 %								
6	Page x-lcon y	Status color temperature value	2 bytes	CWTU	7.600 absolute color temperature							
Receiv Telegra	es color temperature am value: 2000700	e value status. 00 K	•									

Curtain blind

	Number	* Name	Object Function	Description	Group Address	Length	С	R	W	/ Т	U	Data Type	Priority
. ‡	1	Page 1-lcon 1	Open / Close			1 bit	С	-	W	т	-	open/close	Low
. ‡	2	Page 1-lcon 1	Stop			1 bit	С	-	-	т	-	step	Low
. ;	3	Page 1-lcon 1	Curtain position			1 byte	С	-	-	т	-	percentage (0100%)	Low
. ;	5	Page 1-lcon 1	Status curtain position			1 byte	С	-	W	т	U	percentage (0100%)	Low

No.	Name	Object function	Length	Flag	Data type						
1	Page x-lcon y	Open / Close	1 bit	CWT	1.009 open/close						
Sends 0: Oper 1: Clos	the open/close teleg n the curtain e the curtain	ram to bus. Telegram value:									
2	Page x-lcon y	Stop	1 bit	СТ	1.007 step						
Sends 0&1: St	a telegram for stopp top	ing the curtain movement to bus. Telegram v	/alue:								
3	Page x-lcon y	Curtain position	1 byte	СТ	5.001 percentage (0100 %)						
Sends	a telegram to contro	I the position of the curtain to bus. Telegram	value: 0100	%							
5	Page x-lcon y	Status curtain position	1 byte	CWTU	5.001 percentage (0100 %)						
Receiv	Receives a curtain position status in response to the window curtain actuator on bus. Telegram value: 0100 %										

3

Roller shutter

	Number 4	Name	Object Function	Description	Group Address	Length	С	R	W	/ т	U	Data Type	Priority
∎ ‡ 1		Page 1-lcon 1	Up / Down			1 bit	С	-	W	т	-	up/down	Low
■# 2		Page 1-lcon 1	Stop			1 bit	С	-	-	т	-	step	Low
■2 3		Page 1-lcon 1	Blind position			1 byte	С	-	-	т	-	percentage (0100%)	Low
∎ ‡ 5		Page 1-lcon 1	Status blind position			1 byte	C	-	W	Т	U	percentage (0100%)	Low

No.	Name	Object function	Length	Flag	Data type							
1	Page x-lcon y	Up / Down	1 bit	CWT	1.008 up/down							
Sends	Sends a telegram value to bus to control the opening/closing of the Roller shutter. Telegram value:											
0: Mov	0: Move up											
1: Mov	1: Move down											
2	2 Page x-Icon y Stop 1 bit CT 1.007 step											
Sends	a telegram for stopp	ing the roller shutter movement to bus. Teleo	gram value:									
0&1: St	top											
3	Page x-lcon y	Blind position	1 byte	СТ	5.001 percentage (0100 %)							
Sends	a telegram to contro	I the position of the roller shutter to bus. Tele	gram value: 0	100 %								
5	Page x-lcon y	Status blind position	1 byte	CWTU	5.001 percentage (0100 %)							
Receives a roller shutter position status in response to the roller shutter actuator on bus. Telegram value: 0100 %												

Venetian blind

Number	* Name	Object Function	Description	Group Address	Length	С	R	w	т	U	Data Type	Priority
■ ‡ 1	Page 1-lcon 1	Up / Down			1 bit	С	-	w	Т	-	up/down	Low
■ ‡ 2	Page 1-lcon 1	Stop / Slat adj.			1 bit	С	-	-	Т	-	step	Low
■ ≱ 3	Page 1-lcon 1	Blind position			1 byte	C	-	-	Т	-	percentage (0100%)	Low
■之 4	Page 1-lcon 1	Slat position			1 byte	C	-	-	Т	-	percentage (0100%)	Low
■ \$ 5	Page 1-lcon 1	Status blind position			1 byte	C	-	W	Т	U	percentage (0100%)	Low
■2 6	Page 1-lcon 1	Status slat position			1 byte	C	-	W	Т	U	percentage (0100%)	Low

No.	Name	Object function	Length	Flag	Data type						
1	Page x-lcon y	Up / Down	1 bit	CWT	1.008 up/down						
Sends	a telegram value to l	bus to control the opening/closing of the ven	etian blinds. T	elegram v	alue:						
0: Mov	0: Move up										
1: Move down											
2	Page x-lcon y	Stop / Slat adj.	1 bit	СТ	1.007 step						
Sends 0: Stop 1: Stop	Sends a telegram to bus to stop the movement of the venetian blinds or adjust the slat angle. Telegram value: 0: Stop/Slat adj. Up 1: Stop/Slat adj. Down										
3	Page x-lcon y	Blind position	1 byte	СТ	5.001 percentage (0100 %)						
Sends	a telegram to contro	I the position of the venetian blinds to bus. T	elegram value	: 0100 %	6						
4	Page x-lcon y	Slat position	1 byte	СТ	5.001 percentage (0100 %)						
Receiv	es a venetian blind p	position status in response to the venetian bli	ind actuator or	n bus. Tele	egram value: 0100 %						
5	Page x-lcon y	Status blind position	1 byte	CWTU	5.001 percentage (0100 %)						
Sends	a telegram to contro	I the angle position of the slats to bus. Teleg	ram value: 0	.100 %							
6	Page x-lcon y	Status slat position	1 byte	CWTU	5.001 percentage (0100 %)						
Receiv	Receives the slat angle position state from bus. Telegram value: 0100 %										

Curtain step/move

	Number 4	Name	Object Function	Description	Group Address	Length	С	R	w	т	U	Data Type	Priority
;	1	Page 1-lcon 1	Open / Close			1 bit	С	-	W	т -		open/close	Low
;	2	Page 1-lcon 1	Stop			1 bit	C	-	-	т -	-	step	Low

No.	Name	Object function	Length	Flag	Data type					
1	Page x-lcon y	Open / Close	1 bit	CWT	1.009 open/close					
Sends the open/close telegram to bus. Telegram value: 0: Open the curtain 1: Close the curtain										
2	Page x-lcon y	Stop	1 bit	СТ	1.007 step					
Sends 0&1: St	a telegram to stop m top	novement of blinds. Telegram value:								

Roller blind step/move

	Number	* Name	Object Function	Description	Group Address	Length	с	R	w	т	U	Data Type	Priority
∎‡ 1		Page 1-Icon 1	Up / Down			1 bit	C	-	w	T -		up/down	Low
∎≵ 2	2	Page 1-lcon 1	Stop			1 bit	C	-	-	т·	-	step	Low

No.	Name	Object function	Length	Flag	Data type		
1	1 Page x-lcon y Up / Down 1 bit CWT 1.008 up/down						
Sends 0: Mov 1: Mov	a telegram value to e up e down	bus to control the opening/closing of the Roll	er shutter. Tel	egram val	ue:		
2	Page x-lcon y	Stop	1 bit	СТ	1.007 step		
Sends 0&1: S	a telegram to stop m top	novement of blinds to bus. Telegram value:					

Scene

Number	* Name	Object Function	Description Gr	oup Address	Length	C R W T U	U Data Type		Priority
∎ ‡ 1	1 Page 1-Icon 1 Recall / Save scene			1	byte	C - W T -	scene contr	ol	Low
No.	No. Name Object function					Length	h	Flag	Data type
1	Page x-lcon v	Recall / Save sce	ne			1 byte		CWT	18 001 scene control
	r age x leen y								

Display 1bit value

Number	* Name	Object Function	Description	Group Address	Length	CRWT	U Data Ty	be	Priority	
■\$ 3	Page 1-Icon 1 Display 1bit value		1 bit			:- W T U	switch		Low	
No.	Name	Object function				Lengt	า	Flag	Data type	
3	Page x-lcon y	Display 1bit value)			1 bit		CWTU	1.001 switch	
Sends a telegram of 1 bit value display.										

Display value

Implication Display 1byte unsigned value 1 byte C - W T U counter pulses (0.255) Low	Number '	Name	Object Function	Description	Group Address	Length	С	R	W	Т	U	Data Type	Priority
	3	Page 1-lcon 1	Display 1byte unsigned value			1 byte	С	-	W	Т	U	counter pulses (0255)	Low

No.	Name	Object function	Length	Flag	Data type
3	Page x-lcon y	Display 1byte unsigned value	1byte unsigned value (DPT 5.010)	CWTU	5.010 counter pulses (0255)
		Display 1byte percentage value	1byte percentage value (DPT 5.001)		5.001 percentage value
		Display 2byte unsigned value	2byte unsigned value (DPT 7.001)		7.001 pulse
		Display 2byte signed value	2byte signed value (DPT 8.001)		8.001 pulse difference
		Display 2byte float value	2byte float value (DPT 9.x)		9.x float value
		Display temperature value	Temperature value (DPT 9.001)		9.001 Temperature
		Display pressure value	Pressure value (DPT 9.006)		9.006 Pressure (pa)
		Display humidity value	Humidity value (DPT 9.007)		9.007 Humidity
		Display CO2 value	CO2 value (DPT 9.008)		9.008 parts/million (ppm)
		Display air flow value	Air flow (DPT 9.009)		9.009 Air flow (m ³ /h)
		Display concentration value	Concentration (DPT 9.030)		9.030 concentration (ug/m ³)
		Display 4byte unsigned value	4byte unsigned value (DPT 12.001)		12.001 counter pulses
		Display 4byte float value	4byte float value (DPT 14.x)		14.x float value

Sends telegrams of value display.

Display text

Number	* Name	Object Function	Description	Group Address	Length	С	R	W	Т	U	Data Type	Priority
■‡ 3	Page 1-lcon 1	Display text			14 bytes	С	-	W	-	-	Character String (ISO 8859-1)	Low

No.	Name	Object function	Length	Flag	Data type
3	Page x-lcon y	Display text	14 bytes	CW	16.001 character string (ISO 8859-1)
Sends	a telegram of text di	splay.			

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3.3.2 "Page x - General temperature control" parameters and communication objects

Parameters

Assign "Page x" as a single function –"General Temp. Control" page. General temperature control manages the following:

- Heating / Cooling separately or Heating and Cooling for 2-pipe/4-pipe systems
- Temperature setpoint adjustment (absolute or relative)
- 4 operating modes (Comfort, Economy, Standby, Protection)
- PI loop with selectable PWM and modulating (continuous) control
- With or without fan speed control

The device can be configured for a number of heating and/or cooling applications, such as fan coil application, chilled ceiling, electric heating.

+ General	Description/ Headline of the page	
+ Home page	Page function	General temperature control 🔹
- Eurotion page	Operation mode	Single 👻
	Temperature value from	External sensor 👻
Page 1-	Cycle time for polling of external	5 [*] Minutes
- Page 6-	Read external sensor after restart	
Fan Setpoint	Control value after temp. error [0100] (For 2-level control, the value '0'=0%, value '>0'=100%)	0 * %
Heating control	Device behavior after download	Off On
Temperature Sensor	Device behavior after voltage recovery	As before voltage failure 💌
	Minimal possible setpoint value [540]	5 • C
	Maximal possible setpoint value [540]	40 ~ °C
	Data type of fan speed	Disable 🔘 1byte
	Room temperature control mode	Heating 👻
	Room operation mode	
	Object type of operating mode	1Byte
	Room operation mode after download	Comfort mode 🔹
	Room operation mode after voltage recovery	As before voltage failure 👻
	Duration for extended comfort mode [0255, 0=disabled]	0 * Minutes
	Window contact input	
	Delay for window contact[065535]	15 🔹 Seconds
	Room operation mode for open window	C Economy mode O Protection mode
	Presence detector input	✓
	Protect device against user operation	
	ON/OFF protection	✓
	Operation mode protection	✓
	Setpoint protection	✓
	Fan protection	✓

Name		Description	Range
Descrij	otion/Headline of the page	 Names the "Function page x". Note: Supports multiple languages. To display properly on screen, set "Codepage" to "Unicode (UTF-8)". Refer to Language in display in Parameter and communication objects [→ 52]. Approximately 12 characters can be displayed. It depends on the width of the single character as the space is limited on the display. 	15byte text
Page f	unction	Configures the type of function page. Note : Pages 15 multifunction only; pages 615 can be either multifunction or single functions.	Multifunction (Lighting/Blind/Scene/Send value/Display) General temperature control Enhanced floor heating VRF Interface & Operation Ventilation System Air Quality display Energy Metering display Color and color temperature control Audio control
Operat	ion mode	 Sets operation mode. Single: Device is set to single control using a temperature control algorithm and direct actuator control. Manager: Device is set to multi-control with temperature control algorithm and as main output device for temperature control. Upon restarts, current status of switch, temperature setpoint, control mode, operating mode and fan speed read requests are sent to bus. Subordinate: Device is set to subordinate temperature control. It can only be used for touch control and display. When device restarts, read request of switch, temperature setpoint, control mode, operating mode and fan speed is sent to bus. 	Single (default) Manager Subordinate
Tempe	rature value from	 Sets the resource of the temperature reference. Internal sensor: Built-in temperature sensor. The configuration refers to "Temperature sensor" [→ 122] External sensor: Temperature value over bus Internal and external sensor weighted: Using calculated value 	Internal sensor (default) External sensor Internal and external sensor weighted
The fol	lowing parameters only display whe	en "Internal and external sensor weighted" is selected.	
	Weighting of internal and external value	Defines the exact weighting as a percentage.	10% internal, 90% external; 20% internal, 80% external; 30% internal, 70% external; 40% internal, 60% external; 50% internal, 50% external; 60% internal, 40% external; 70% internal, 30% external; 80% internal, 20% external; 90% internal, 10% external
	Change of actual temperature value for automatic sending	Defines automatic telegram sending when temperature changes.	Disable 0.5 K 1.0 K (default) 1.5 K 10 K
	Cycle time for automatic sending of the actual temperature value [0255, 0=disabled]	Defines automatic telegram sending cycle.	0255 minutes (default: 0)

Name		Description	Range
The fol	lowing parameters display when "E	xternal sensor" or "Internal and external sensor weighted"	is selected.
ſ	Cycle time for polling of external temperature sensor [0255]	Defines the period after which a read request is sent to get external value.	0255 min (default: 5)
	Read external sensor after restart	After the device is reset or programmed, a read request is sent or not.	No Yes (default)
The fol	lowing parameters display when "S	ingle" or "Manager" is selected.	
	Control value after temp. error [0100%] (For 2-level control, the value '0'=0%, value '>0'=100%)	0100 % (default: 0)	
	Device behavior after download	Indicates whether the controlled HVAC device or system is powered on/off after download.	Off On (default)
	Device behavior after voltage recovery	Indicates whether the controlled HVAC device or system is powered on/off after voltage recovery.	On Off As before voltage failure (default)
Minima	al possible setpoint value [540]*	Configures the allowed minimum temperature setpoint.	540 °C (default: 5 °C)
Maxim	al possible setpoint value [540]*	Configures the allowed maximum temperature setpoint.	540 °C (default: 40 °C)
Data ty	rpe of fan speed	 Sets control type of fan speed. Disable: No fan operation 1bit: With fan speed operation Note: "1 bit" only displays if "Operation mode" is set as "Manager". 1byte: With fan speed operation and a separate page for configuration 	Disable (default) 1bit 1byte
The fol	lowing parameters display when "M	lanager" and "1bit" are selected.	
Ş	1 bit object for fan speed off	Sets whether to enable fan speed off 1bit object.	Disable (default) Enable
	Auto Operation (demand based ventilation)	Sets whether to enable auto operation of fan speed.	Disable (default) Enable
Room	temperature control mode	Sets control mode.	Heating (default) Cooling Heating and cooling
The fol	lowing parameters display when "H	leating and cooling" and "Manager" / "Single" are selected.	
	Heating/Cooling switchover	Sets heating/cooling switchover.	Only via screen Only via object Via both screen and object (default) Automatic changeover
	Control mode after download	Sets the control mode after download.	Heating (default) Cooling
	Control mode after voltage recovery	Sets the heating/cooling status after voltage recovery.	Heating Cooling As before voltage failure (default)
	Room temperature control system	Sets the type of HVAC control system, i.e., pipe types for fan coil water inlet/outlet.	2 pipes system 4 pipes system (default)
Room	operation mode	Sets whether to enable HVAC operation mode.	Disable Enable (default)

Na	me			Description	Range
Op	tion	: En	able	The following parameters display when "Room operation	mode" is enabled.
	Ob	oject	type of operating mode	Defines the object type of operation mode. Note : Values 4×1Bit and 4×1Bit & 1byte display only when "Operation mode" is set as "Manager".	4×1Bit 1 Byte 4×1Bit & 1byte
				en Single of Manager is selected.	
		Ro dov	om operation mode after vnload	Sets the room operating mode after download.	Comfort mode (default) Standby mode Economy mode
		Ro volt	om operation mode after tage recovery	Sets the room operating mode after voltage recovery.	Comfort mode Standby mode Economy mode As before voltage failure (default)
		Dui mo	ration for extended comfort de [0255, 0=disabled]	 Sets the time delay in minutes for comfort mode automatically returning to Economy mode. 0=disabled, means "Comfort mode" does not 	0…255 min (default: 0 min)
1				automatically go to "Economy mode".	
		Wir	ndow contact input	Enable or disable window contact input.	Disable (default) Enable
		Wh	en "Window contact input" is e	enabled, the following parameters display.	1
		ļ	Delay for window contact [065535]	 Sets the delay time for window contact detection. Window open does not detect if window is opened within the set period. 	065535 s (default: 15 s)
		$ \rangle$		• Otherwise, window open is detected.	
			Room operation mode for open window	Economy mode Protection mode (default)	
		Pre	esence detector input	Enable or disable presence detector input. Note : Displays only when "Operation mode" is set as "Manager" or "Single".	Disable (default) Enable
Ter	npe	ratu	re setpoint is configured in a s	eparate page. Refer to "Setpoint" parameters [\rightarrow 84]	
Op	tion	: Dis	sable	The following parameter displays when "Room operation	mode" is disabled.
{		Ва	se setpoint (°C)	Sets initial temperature setpoint.	10.0 / 10.5 /11.0 / 11.5 / / 34.0 / 34.5 / 35.0 °C (default: 20 °C)
Pro	tec	t dev	vice against user operation: W	hen enabled, users cannot change items via HMI.	
ON	/OF	Fp	rotection	Enable or disable on/off protection.	Disable (default) Enable
Op	erat	ion	mode protection	Enable or disable operating mode protection. Note : Only displays when "Room operation mode" is enabled.	Disable (default) Enable
Set	poi	nt pr	rotection	Enable or disable setpoint protection.	Disable (default) Enable
The	e fol	lowi	ng parameter displays when "	Data type of fan speed" is enabled.	
{	_	Fa	n protection	Enable or disable fan protection.	Disable (default) Enable

Note

* Minimum and maximum setpoint value:

The minimum set point value cannot exceed the maximum value. The output is limited to the upper/lower limit value in this case.

Communication objects

	Number *	Name	Object Function	Description	Group Address	Length	С	R	w	т	U	Data Type	Priority
17	246	Page 6- (receive/send)	External temperature			2 bytes	С	-	W	Т	U	temperature (°C)	Low
∎2	247	Page 6- (receive)	Setpoint (°C), base or absolute			2 bytes	С	-	W	-	U	temperature (°C)	Low
‡	248	Page 6- (receive)	Control mode (0 = Cooling / 1 = Heating)			1 bit	С	-	W	-	U	cooling/heating	Low
‡	249	Page 6- (receive)	Comfort mode			1 bit	С	-	W	-	U	enable	Low
7	250	Page 6- (receive)	Standby mode			1 bit	С	-	W	-	U	enable	Low
;	251	Page 6- (receive)	Economy mode			1 bit	С	-	W	-	U	enable	Low
- 7	252	Page 6- (receive)	Protection mode			1 bit	С	-	W	-	U	enable	Low
;	253	Page 6- (receive)	Fan speed low			1 bit	С	-	W	Т	U	switch	Low
∎7	254	Page 6- (receive)	Fan speed medium			1 bit	С	-	W	Т	U	switch	Low
∎7	255	Page 6- (receive)	Fan speed high			1 bit	С	-	W	Т	U	switch	Low
- 7	256	Page 6- (receive)	Fan speed off			1 bit	С	-	W	Т	U	switch	Low
;	257	Page 6- (receive)	Fan speed auto			1 bit	С	-	W	Т	U	enable	Low
∎7	258	Page 6- (send)	Effective setpoint			2 bytes	С	R	-	Т	-	temperature (°C)	Low
■7	259	Page 6- (send)	Control mode (0 = Cooling / 1 = Heating)			1 bit	С	R	-	Т	-	cooling/heating	Low
- 7	260	Page 6- (send)	Comfort mode			1 bit	С	R	-	Т	-	enable	Low
1	261	Page 6- (send)	Standby mode			1 bit	С	R	-	Т	-	enable	Low
∎7	262	Page 6- (send)	Economy mode			1 bit	С	R	-	Т	-	enable	Low
■7	263	Page 6- (send)	Protection mode			1 bit	С	R	-	Т	-	enable	Low
;	264	Page 6- (send)	Heating control value			1 bit	С	-	-	Т	-	switch	Low
∎7	265	Page 6- (send)	Cooling control value			1 bit	С	-	-	Т	-	switch	Low
■7	266	Page 6- (send)	Fan speed low			1 bit	С	-	-	Т	-	switch	Low
■7	267	Page 6- (send)	Fan speed medium			1 bit	С	-	-	Т	-	switch	Low
■7	268	Page 6- (send)	Fan speed high			1 bit	С	-	-	Т	-	switch	Low
-2	269	Page 6- (send)	Fan speed off			1 bit	С	-	-	Т	-	switch	Low
‡	270	Page 6- (send)	Fan speed auto			1 bit	С	R	-	Т	-	enable	Low
‡	271	Page 6- (send)	Power On/Off			1 bit	С	R	-	Т	-	switch	Low
∎7	272	Page 6- (send)	Base setpoint (°C)			2 bytes	С	-	-	Т	-	temperature (°C)	Low
■7	273	Page 6- (send)	Actual temperature			2 bytes	С	R	-	Т	-	temperature (°C)	Low
‡	274	Page 6- (receive)	Power On/Off			1 bit	С	-	W	-	U	switch	Low
7	275	Page 6- (receive)	Operation mode			1 byte	С	-	W	-	U	HVAC mode	Low
-2	276	Page 6- (send)	Operation mode			1 byte	С	R	-	Т	-	HVAC mode	Low
-7	277	Page 6- (receive)	Fan speed			1 byte	С	-	W	Т	U	percentage (0100%)	Low
17	278	Page 6- (send)	Fan speed			1 byte	С	R	-	Т	-	percentage (0100%)	Low
17	279	Page 6- (receive/send)	Window contact			1 bit	С	-	W	Т	U	window/door	Low
-7	280	Page 6- (receive/send)	Presence detector			1 bit	С	-	W	Т	U	occupancy	Low
=7	294	Page 6- (receive)	Lock			1 bit	С	-	W	-	-	enable	Low

Note

Page number x range: 1...15

No.	Name	Object function	Length	Flag	Data type		
246	Page x- (receive/send)	External temperature	2 bytes	CWTU	9.001 temperature (°C)		
Receives a tempera	Receives a temperature measurement value sent from a temperature sensor on bus or sends read requests to bus. Range: -5099.8 °C						
247	Page x- (receive)	Setpoint (°C), base or absolute	2 bytes	Manager: CWU Subordinate: CWTU	9.001 temperature (°C)		
Changes base temp relative shift.	Changes base temperature setpoint, i.e., Comfort temperature setpoint. Standby and Economy temperature setpoints are changed using a relative shift.						
The communication screen" or "Automa	object does not disp tic changeover".	lay when "Single" is selected	and parame	eter "Heating/Cooling sv	vitchover" is set as "Only via		
248	Page x- (receive)	Control mode (0 = Cooling / 1 = Heating)	1 bit	Manager & Single: CWU	1.100 cooling/heating		
				Subordinate: CWTU			
Receives the status value. The telegram 0: Cooling 1: Heating	feedback from heati value is as follows:	ng and cooling on the bus, ar	nd the icon d	lisplay is updated on sc	reen to receive the telegram		
249	Page x- (receive)	Comfort mode	1 bit	CWU	1.003 enable		
250		Standby mode					
251		Economy mode					
252		Protection mode					
Receives status fee	dback from operating	g mode control. Telegram "1"	activates the	e related operating mod	le.		
The communication	objects display whe	n "Manager" is selected and _l	oarameter 'C	peration mode" is enab	bled.		
253	Page x- (receive)	Fan speed low	1 bit	CWTU	1.001 switch		
254		Fan speed medium					
255		Fan speed high					
256		Fan speed off					

3

No.	Name	Object function	Lenath	Flag	Data type
Receives status fee	dback from fan spee	d control Telegram "1" activa	tes related f	fan speed	
If "1bit off" is not en	abled fan speed off i	is displayed when telegram "()" is received	d Otherwise "0" has n	o effect
The communication	objects are only visi	ble when "Manager" is select	ed.	- , -	
257	Page x- (receive)	Fan speed auto	1 bit	CWTU	1.003 enable
Receives status fee 0: Cancel automatic 1: Enable automatic	dback from automati	c fan speed control. Telegrar	n value:		
The communication enabled.	object only displays	when "Manager" is selected	and parame	ter "Auto Operation (de	mand based ventilation)" is
258	Page x- (send)	Effective setpoint	2 bytes	Manager: CRT Subordinate: CT	9.001 temperature (°C)
Sends current temp	erature setpoint to b	us.			
The communication	object does not disp	lay when "Single" is selected	•		
259	Page x- (send)	Control mode (0 = Cooling / 1 = Heating)	1 bit	Manager: CRT Subordinate: CT	1.100 cooling/heating
Sends the telegram 0: Cooling 1: Heating	of heating and cooli	ng changeover to bus. The te	legram value	e is as follows:	
The communication	object does not disp	blay when "Single" is selected	•	I	
260	Page x- (send)	Comfort mode	1 bit	CRT	1.003 enable
261		Standby mode			
262		Economy mode			
263		Protection mode			
Sends status of ope The communication set to "1byte".	erating mode state to objects only display	bus. The related object "1" to when "Manager" is selected.	bus if activation bus if activation bus if activation but the bus in the bus	ated. display if "Auto Operati	on (demand based ventilation)" is
264	Page x- (send)	Heating control value	1 bit 1 byte	СТ	1.001 switch / 5.001 percentage (0100 %)
Sends the heating of Send telegram valu Send telegram valu Send telegram valu	ontrol value to switcl e (On/Off - two level e (PWM - PI control s e (Modulating - PI co	h HVAC and adjust the indoo control): on/off switching (1 bit)): on/off ontrol continuous (8 bit)): 01	r temperatur 00%	e.	
The communication	object does not disp	olay when "Subordinate" is se	lected.		
265	Page x- (send)	Cooling control value	1 bit 1 byte	СТ	1.001 switch 5.001 percentage (0100 %)
Sends the cooling c Send telegram valu Send telegram valu Send telegram valu	ontrol value to switch e (On/Off - two level e (PWM - PI control s e (Modulating - PI co	HVAC and adjust the indoor control): On/Off switching (1 bit)): On/Off ontrol continuous (8 bit)): 01	temperature	e.	
266		Ean anoad low	1 hit	CT	1.001 owitch
200	Fage X- (Send)		T DIL		1.00 T SWITCH
207		Fan apood high			
269		Fan speed off			
Sends the state of fan speed control. If telegram "1" is received, related fan speed is activated.					
These communicati	on objects only displ	ay when "Manager" is selecte	ed and paran	neter "Data type of fan	speed" is set as "1bit".
270	Page x- (send)	Fan speed auto	1 bit	Manager: CRT Subordinate & Single: CT	1.003 enable
Sends an automatic 0: Cancel automatic 1: Automatic	control telegram of	the fan speed to bus. Telegra	m value:		1

No.	Name	Object function	Length	Flag	Data type
271	Page x- (send)	Power On/Off	1 bit	Manager: CRT	1.001 switch
Canda tharmastat a	witch state to hus			Subordinate. CT	
The communication	object does not disc	blav when "Single" is selected	1.		
272	Page x- (send)	Base setpoint (°C)	2 hvtes	СТ	9 001 temperature (°C)
Sends current base	temperature setpoin	t to bus	2 0 9 100	01	
The communication	object only displays	when "Manager" is selected.			
273	Page x- (send)	Actual temperature	2 bytes	CRT	9.001 temperature (°C)
Sends the combine	d actual temperature	value to bus	2 2 3 100		
The communication	The communication object only displays when parameter "Temperature value from" is set as "Internal and external sensor weighted".				
274	Page x- (receive)	Power On/Off	1 bit	Manager: CWU	1.001 switch
				Subordinate: CWTU	
Receives the status	feedback of thermos	stat switch from bus.			
The communication	object does not disp	blay when "Single" is selected	I.		
275	Page x- (receive)	Operation mode	1 byte	Manager & Single:	20.102 HVAC mode
	5 ()		,	CWU	
				Subordinate: CWTU	
Room operation mo	ode receives feedbac	k via 1byte object (Operation	mode).		
1 byte: The relation Economy mode; 4:	ship between input v Protection mode; 5	alue and operating mode is a .255: Reserved, unused.	s follows: 0:	Reserved; 1: Comfort I	mode; 2: Standby mode; 3:
276	Page x- (send)	Operation mode	1 byte	Manager: CRT	20.102 DPT_HVAC Mode
				Subordinate &	
				Single: CT	
Sends the telegram When object type is	of the room operatir "1byte", different tel	ng mode to bus. egrams mean different opera	ting modes:	0: Reserved 1: Comfor	t mode; 2: Standby mode; 3:
Economy mode; 4:	Protection mode; 5	.255: Reserved, not used			
277	Page x- (receive)	Fan speed	1 byte	CWTU	5.001 percentage (0100 %)
1byte: The corresponse screen, and the obj	onding telegram valu ect receives the corre	e of each fan speed is define esponding telegram value of	d by the par the fan spee	ameter. Activate the cone of from bus.	rresponding fan speed on the
278	Page x- (send)	Fan speed	1 byte	Manager: CRT	5.001 percentage (0100 %)
				Subordinate &	
				Single: CT	
Fan speed sends co 1byte: The correspondence and abject 278 con	ontrol telegrams for f onding telegram valu	an speed to bus via 1byte ob e of each fan speed is define	ject "Fan sp d by the par	eed". ameter. Activate the co	rresponding fan speed on screen,
270		Window contact		CWTH	1.010 Window/door
279	(receive/send)		1 DIL	CWIU	
Receives the windo 1: Open 0: Close	w contact telegram f	rom bus or sends read reque	st to bus. Te	elegram value:	
The communication	object does not disp	olay when "Subordinate" is se	lected.		
280	Page x- (receive/send)	Presence detector	1 bit	CWTU	1.018 occupancy
Receives the prese 0: Unoccupied 1: Occupied	nce detector telegrar	n from bus or sends read req	uest to bus.	Telegram value:	
The communication	object does not disp	blay when "Subordinate" is se	lected.		
294	Page x- (receive)	Lock	1 bit	CW	1.003 enable
Receives the telegr 0: Lock	am of lock from bus.	Telegram value:			
Note: During lock, t	he telegram can still	be received.			
	5				

3.3.2.1 "Fan" parameters

+ General	Data type of Fan speed	Percentage (DPT_5.001)	
+ Home page	Predefined value for Fan speed	Fan stage (DP1_5.100)	
 Function page 	Fan speed - Switching point	10	\$ %
Page 1-	Fan speed - Low	33	÷ %
— Page 6-	Fan speed - Medium	67	\$ %
Fan	Fan speed - High	100	÷ %
Setpoint	Auto Operation (demand based ventilation)	✓	
Heating/Cooling control			
Temperature Sensor			

Note: The following parameters display when "Data type of fan speed" is set as "1byte".

Name		Description	Range
Data type of fan speed		Sets the fan speed data type.	Percentage (DPT_5.001) (default) Fan stage (DPT_5.100)
Predef	ined value for Fan speed		
The fol	lowing parameters display when "P	ercentage (DPT_5.001)" is enabled.	
ſ	Fan speed - Switching point	Defines the value for start-up fan speed.	0100 % (default: 10)
Į	Fan speed - Low	Defines the value for Fan speed - Low.	0100 % (default: 33)
	Fan speed - Medium	Defines the value for Fan speed - Medium.	0100 % (default: 67)
	Fan speed - High	Defines the value for Fan speed - High.	0100 % (default: 100%)
The fol	lowing parameters display when "F	an stage (DPT_5.100)" is enabled.	
ſ	Fan speed - Switching point	Defines the value for start-up fan speed.	0255 (default: 1)
ļ	Fan speed - Low	Defines the value for Fan speed - Low.	0255 (default: 1)
	Fan speed - Medium	Defines the value for Fan speed - Medium.	0255 (default: 2)
	Fan speed - High	Defines the value for Fan speed - High.	0255 (default: 3)
Auto O ventilat	peration (demand based tion)	Sets whether to enable automatic operation of fan speed.	Disable (default) Enable

3.3.2.2 "Setpoint" parameters

Basic setpoint + setpoint shifting

+ General	Setpoint configuration by	Base setpoint + setpoint shifting Absolute setpoints	
+ Home page	Base setpoint	22.0	▼ °C
- Function page	Automatic H/C mode changeover (only for comfort mode)	dead zone	
Page 1-	Upper dead zone	2.0	▼ K
— Page 6-	Lower dead zone	2.0	▼ K
Fan	Heating		
Setpoint	Standby mode: Setpoint shifting	2	▼ K
Heating/Cooling control	Fconomy mode: Setpoint shifting		
Temperature Sensor	heating [010]	4	▼ K
Human Centric Lighting	Protection mode: Setpoint heating [510]	7	▼ °C
d. Transformtion	Cooling		
- Interfunction	Standby mode: Setpoint shifting cooling [010]	2	▼ K
+ Alarm	Economy mode: Setpoint shifting	4	• K
+ Logic operations	cooling [010]	7	K
+ Scene Control	[3040]	35	* °C

Absolute setpoints

+	General	Setpoint configuration by	 Base setpoint + setpoint shifting Absolute setpoints 		
+	Home page	Heating			
-	Function page	Comfort mode: Setpoint heating [540]	22	•	°C
	Page 1-	Standby mode: Setpoint heating [540]	20	•	°C
-	· Page 6-	Economy mode: Setpoint heating [540]	18	•	°C
	Fan	Protection mode: Setpoint heating [540]	7	•	°C
	Setpoint	Cooling			
	Heating/Cooling control	Comfort mode: Setpoint cooling [540]	22	•	°C
	Temperature Sensor	Standby mode: Setpoint cooling [540]	24	•	°C
	Human Centric Lighting	Economy mode: Setpoint cooling [540]	26	•	°C
		Protection mode: Setpoint cooling [3040]	35	•	°C
+	Timer function	Automatic H/C mode changeover mi	nimum zone		
+	Alarm	(only for comfort mode)			
+	Logic operations	Minimum zone between heating and cooling setpoint	2.0	•	К

Note: The page displays when "Room operation mode" is enabled and "Operation mode" is set to Single or Manager. Only the corresponding part of the above page displays if "Room temperature control mode" is set to "Heating" or "Cooling".

Important: All selected setpoints must be in the range configured by the parameters "Minimal possible setpoint value [5...40]" and "Maximal possible setpoint value [5...40]" on the "General Temp. Control" page (see "Page x - General temperature control" parameters and communication objects [\rightarrow 76]).

-	General	Setpoint configuration by O Absolute setpoints		
	General setting	Heating		
	Coordinates location setting	Comfort mode: Setpoint heating [540] 22	•	°C
	Screensaver display setting	O The setpoint is greater than maximum, so maximum will be regarded as setpoint in fact		
	Color Strip	Standby mode: Setpoint heating [540] 20	•	°C
	Proximity sensor	O The setpoint is greater than maximum, so maximum will be regarded as setpoint in fact		
	Password	Economy mode: Setpoint heating [540] 18	•	°C
	Advanced setting	8 The setpoint is greater than maximum, so maximum will be regarded as setpoint in fact		
	Home page	Protection mode: Setpoint heating 7 (5, 40) 7	•	°C
	Home page Home page 1	Cooling		
_	Function page	Comfort mode: Setpoint cooling [540] 22	•	°C
	runction page	O The setpoint is greater than maximum, so maximum will be regarded as setpoint in fact		
	Page 1-	Standby mode: Setpoint cooling [540] 24	•	°C
	Setpoint	The setpoint is greater than maximum, so maximum will be regarded as setpoint in fact		
	Heating/Cooling control	Economy mode: Setpoint cooling [540] 26	•	۰C
	Temperature Sensor	O The setpoint is greater than maximum, so maximum will be regarded as setpoint in fact		
	Human Centric Lighting	Protection mode: Setpoint cooling [3040] 35	•	°C
+	Timer function	O The setpoint is greater than maximum, so maximum will be regarded as setpoint in fact		
+	Alarm	Note: The heating retroint must be always lars than the cooling retroint		
+	Logic operations	 Note: The reading serpoint must be always less than the cooling serpoint. 		
+	Scene Control			

Note: Warnings display if the selected setpoints are outside the range as defined on the general temperature parameter page ("Page x - General temperature control" parameters and communication objects [\rightarrow 76]).

Name)	Description	Range			
Setpoint configuration by		This parameter displays when Room operating mode is enabled to set the adjust method of the temperature setpoint.	Base setpoint + setpoint shifting (default) Absolute setpoints			
The fo	bllowing parameters display when "B	ase setpoint + setpoint shifting" is selected.				
$\left \right $	Base setpoint (°C)	Sets the reference value of the set temperature, which provides the temperature setpoint of Comfort mode.	10.0 / 10.5 /11.0 / 11.5 / / 34.0 / 34.5 /35.0 °C (default: 22 °C)			
	Automatic Heating/Cooling mode selected for the parameter "Heating	Automatic Heating/Cooling mode changeover dead zone (only for comfort mode) - Only displays if "Automatic changeover" is selected for the parameter "Heating/Cooling switchover".				
<	Upper dead zone	In heating mode, when actual temperature is higher or equal to setpoint plus upper dead zone value, mode changes from heating to cooling.	0.5 1.0 1.5 2.0 (default) 10.0			
	Lower dead zone	In cooling mode, when actual temperature is lower or equal to setpoint minus lower dead zone value, mode changes from cooling to heating.	0.5 1.0 1.5 2.0 (default) 10.0			

Name		Description	Range			
	Heating - Only displays if "Room te	emperature control mode" is set to "Heating" or "Heating and C	cooling".			
	Standby mode: Setpoint shifting heating [010]	Sets the setpoint of Standby mode The setpoint of Standby mode is the base setpoint minus this value.	010 K (default: 2)			
	Economy mode: Setpoint shifting heating [010]	Sets the setpoint of Economy mode The setpoint of Economy mode is the base setpoint minus this value.	010 K (default: 4)			
	Protection mode: Setpoint heating [510]	Sets the absolute setpoint of Protection mode Under frost protection, a heating control On value is sent when ambient temperature is lower than this setpoint.	510 °C (default: 7 °C)			
	Cooling - Only displays if "Room te	emperature control mode" is set to "Cooling" or "Heating and C	ooling".			
	Standby mode: Setpoint shifting cooling [010]	Sets the setpoint of Standby mode The setpoint of Standby mode is the base setpoint plus this value.	010 K (default: 2)			
	Economy mode: Setpoint shifting cooling [010]	Sets the setpoint of Economy mode The setpoint of Economy mode is the base setpoint plus this value.	010 K (default: 4)			
	Protection mode: Setpoint cooling [3040]	Sets the absolute setpoint of Protection mode Under the heat protection, a cooling control on demand is sent when the ambient temperature is upper than setpoint.	3040 °C (default: 35 °C)			
The fol	lowing parameters display when "A	bsolute setpoints" are selected.				
1	Heating - Only displays if "Room to	leating - Only displays if "Room temperature control mode" is set to "Heating" or "Heating and Cooling".				
	Comfort mode: Setpoint heating [540]	Sets the setpoint of Comfort mode	540 °C (default: 22 °C)			
	Standby mode: Setpoint heating [540]	Sets the setpoint of Standby mode	540 °C (default: 20 °C)			
	Economy mode: Setpoint heating [540]	Sets the setpoint of Economy mode	540 °C (default: 18 °C)			
/	Protection mode: Setpoint heating [540]	Sets the setpoint of Protection mode	540 °C (default: 7 °C)			
	Cooling - Only displays if "Room te	emperature control mode" is set to "Cooling" or "Heating and C	ooling".			
	Comfort mode: Setpoint cooling [540]	Sets the setpoint of Comfort mode	540 °C (default: 22 °C)			
	Standby mode: Setpoint cooling [540]	Sets the setpoint of Standby mode	540 °C (default: 24 °C)			
	Economy mode: Setpoint cooling [540]	Sets the setpoint of Economy mode	540 °C (default: 26 °C)			
	Protection mode: Setpoint cooling [540]	Sets the setpoint of Protection mode	540 °C (default: 35 °C)			

3.3.2.3 "Heating/Cooling control" parameters

"Room temperature control mode" determines how the heating, cooling, or heating/cooling control page displays.

+ General	Heating			
+ Home page	Command Type	On/Off - two level control		•
- Function page	Invert control value	✓ 		1
~	Lower Hysteresis [0200]	20	*	*0.1K
Page 1-	Upper Hysteresis [0200]	20	* *	*0.1K
- Page 6-	Cooling			
Fan	Command Type	On/Off - two level control		•
Setpoint	Invert control value			
Heating/Cooling control	Lower Hysteresis [0200]	20	÷	*0.1K
Temperature Sensor	Upper Hysteresis [0200]	20	* *	*0.1K
Human Centric Lighting	Send control value cyclically [0255]	0 🗍 Minutes		

Name		Description	Range	
Heating	g			
Command Type		Sets the control logic/method for heating application.	On/Off - two level control (default) PWM - PI control switching (1 bit) Modulating - PI control continuous (8 bits)	
Invert o	control value	Sets whether to invert the control value to meet the requirement of different type of valves.	No (default) Yes	
The fol	lowing two parameters display whe	n "On/Off - two level control" is selected.		
$\left(\right)$	Lower Hysteresis [0200]	Sets the lower hysteresis temperature in HVAC Heating.	0200*0.1 K (default: 20)	
	Upper Hysteresis [0200]	Sets the upper hysteresis temperature in HVAC Heating.	0200*0.1 K (default: 20)	
 Note: Under heating control: When the actual temperature (T) is > the temperature setpoint + the upper hysteresis, device stops heating When the actual temperature(T) is < the temperature setpoint - the lower hysteresis, device starts heating. For example, the lower hysteresis is 1 K, the upper hysteresis is 2 K, the temperature setpoint is 22°C, if T > 24°C, heating starts; if T is between 2124°C, it maintains the previous status. 				
The fol	lowing parameter displays when "P	WM - PI control switching (1 bit)" is selected.		
	Pulse width modulation period time [1255]	Sets the frequency for sending the switch on/off value. The object sends the switch on/off value according to the duty cycle of the control value. For example, if the cycle time is set to 10 minutes and the control value is 80%, the object sends an "ON" telegram and 8 minutes later sends an "OFF" telegram. Two minutes later, the object resends an "ON" telegram and 8 minutes later an "OFF" telegram and repeatedly sends the telegrams at the defined interval.	1255 min (default: 15)	
The fol	lowing parameter displays when "N	lodulating - PI control continuous (8 bits)" is selected.		
	Send value on change of control value by [0…100, 0=disabled]	Defines minimum change value, i.e., the control value is sent to bus if the value change reaches this value.	0100 % (default: 4)	

Name		Description	Range
The fol	llowing parameter displays when "P	WM - PI control switching (1 bit)" or "Modulating - PI control co	ontinuous (8 bits)" is selected.
	Heating Loop	Sets the responding speed of heating controller.	Hot water heating (5K/150min) (default) Floor heating (5K/240min) Electrical heating (4K/100min) Split unit / Fan coil (4K/90min) User defined
The fol	llowing parameters display when "U	lser defined" is selected.	
ſ	Proportional range [10100]	Customizes the P value.	10100 *0.1K (default: 50)
1	Integration time [0255]	Customizes the I value.	0255 min (default: 240)
Cooling	g		
Comm	and Type	Sets the control logic/method for cooling application.	On/Off - two level control (default) PWM - PI control switching (1 bit) Modulating - PI control continuous (8 bits)
Invert o	control value	Sets whether to invert control value to meet the requirement of different type of values.	No (default) Yes
The fol	llowing two parameters display whe	n "On/Off - two level control" is selected.	
(Lower Hysteresis [0200]	Sets the lower hysteresis temperature in HVAC Cooling.	0200*0.1 K (default: 15)
	Upper Hysteresis [0200]	Sets the upper hysteresis temperature in HVAC Cooling.	0200*0.1 K (default: 20)
 When the actual temperature (T) is < the temperature setpoint -the lower hysteresis, device stops cooling. When the actual temperature (T) is > the temperature setpoint +the upper hysteresis, device starts cooling. For example, the lower hysteresis is 1 K, the upper hysteresis is 2 K, the temperature setpoint is 26 °C, if T < 25 °C, coolir if T > 28 °C, cooling starts; if T is between 25 28 °C, it maintains the previous state. 			
The fol	llowing parameter displays when "P	WM - PI control switching (1 bit)" is selected.	
	Pulse width modulation period time [1255]	Sets the frequency for sending the switch on/off value. The object sends the switch on/off value according to the duty cycle of the control value. For example, if the cycle time is set to 10 min and the control value is 80%, the object sends an "ON" telegram and 8 minutes later sends an "OFF" telegram. Two minutes later, the object resends an "ON" telegram and 8 minutes later an "OFF" telegram and repeatedly sends the telegrams at the defined interval.	1255 min (default: 15)
The fol	llowing parameter displays when "N	Iodulating - PI control continuous (8 bits)" is selected.	
{	Send value on change of control value by [0100, 0=disabled]	Defines minimum change value, i.e., the control value is sent to bus if the value change reaches this parameter value.	0100 % (default: 4)
The fol	llowing parameter displays when "P	WM - PI control switching (1 bit)" or "Modulating - PI control co	ontinuous (8 bits)" is selected.
	Cooling Loop	Sets the response speed of the cooling controller.	Chilled ceiling (5K/240min) (default) Split unit (4K/90min) Fan coil unit (4K/90min) User defined
The fol	llowing parameters display when "L	lser defined" is selected.	
{	Proportional range [10100]	Customizes the P value.	10100 *0.1K (default: 40*0.1K)
l	Integration time [0255]	Customizes the I value.	0255 min (default: 150)
Send c	control value cyclically [0255]	Sets the period for cyclically sending the control value to bus. Note: Value "0" equals disable.	0…255 min (default: 0)

3.3.3 "Page x - Enhanced floor heating" parameters and communication objects

Parameters

Assign "Page x" as single function – "Enhanced floor heating" page for floor heating application.

+ General	Description/ Headline of the page	
+ Home page	Page function	Enhanced floor heating
 Function page 	Operation mode	Single 👻
Page 1-	Temperature value from	External sensor 🔹
- Page 6-	temperature value [0255]	5 🗘 Minutes
	Read external sensor after restart	~
Scene	Control value after temp. error [0100]	
Temperature Sensor	(For 2-level control, the value '0'=0%, value '>0'=100%)	0 7
	Device behavior after download	Off On
	D · · · · · · · ·	
	Device behavior after voltage recovery	As before voltage failure
	Default temperature setpoint [1632]	22 • °C
	Minimal possible setpoint value [1632]	16 🔹 °C
	Maximal possible setpoint value [1632]	32 • C
	Command Type	On/Off - two level control
	Object value of Heating on/off	Heat on=1, Heat off=0 Heat on=0, Heat off=1
	Lower Hysteresis [0200]	20 *0.1K
	Upper Hysteresis [0200]	20 *0.1K
	Send control value cyclically [0255]	15 Thinutes
	Scene control	✓

Name	Description	Range
Description/Headline of the page	 Names the "Function page x". Note: Supports multiple languages. To display properly on screen, set "Codepage" to "Unicode (UTF-8)". Refer to Language in display in Parameter and communication objects [→ 52]. Approximately 12 characters can be displayed. It depends on the width of the single character as the space is limited on the display. 	15byte text
Page function	Configures the type of function page. Note: Pages 15 multifunction only; pages 615 can be either multifunction or single functions.	Multifunction (Lighting/Blind/Scene/Send value/Display) General temperature control Enhanced floor heating VRF Interface & Operation Ventilation System Air Quality display Energy Metering display Color and color temperature control Audio control

Na	me	Description	Range
Op	eration mode	Sets operating mode.	Single (default)
		 Single: Device is set to single control using a temperature control algorithm and direct actuator control. 	Manager Subordinate
		• Manager: Device is set to main controller for multiple floor heating devices with temperature control algorithm. When device restarts, the state is sent to bus including power on/off, setpoints, etc.	
		• Subordinate: Without temperature control algorithm, device reads state from bus at restart, e.g., power on/off, setpoint, etc.	
Те	mperature value from	Sets the resource for the temperature reference.	Internal sensor (default)
		 Internal sensor, built-in temperature sensor. The configuration refers to "Temperature sensor" [→ 122] 	External sensor Internal and external sensor weighted
		• External sensor, temperature value over bus	
		Internal and external sensor weighted: Using a calculated value	
Th	e following parameters display when "In	ternal and external sensor weighted" is selected.	
	Weighting of internal and external value	Defines the exact weighting as a percentage.	10% internal, 90% external; 20% internal, 80% external; 30% internal, 70% external; 40% internal, 60% external; 50% internal, 50% external; (default) 60% internal, 40% external; 70% internal, 30% external; 80% internal, 20% external; 90% internal, 10% external
	Change of actual temperature value for automatic sending	Defines sending an automatic telegram when temperature changes.	Disable 0.5 K 1.0 K (default) 1.5 K 10 K
	Cycle time for automatic sending of the actual temperature value [0255, 0=disabled]	Defines sending cycle of automatic telegrams.	0255 minutes (default: 0)
Th	e following parameters display when "E	xternal sensor" or "Internal and external sensor weighted" is se	elected.
Į	Cycle time for polling of external temperature sensor [0255]	Defines the period after which a read request is sent to retrieve an external value.	0255 min (default: 5)
	Read external sensor after restart	Whether a read request is sent after the bus is reset or programmed.	No Yes (default)
Th	e following parameters display when "S	ingle" or "Manager" is selected.	
(Control value after temp. error	Sets the control value for a temperature error occurs.	0100 % (default: 0)
	[0100%] (For 2-level control, the value '0'=0%, value '>0'=100%)	For 2-point control: Parameter value 0 sets the control value to 0 %; parameter value greater than 0 sets the control value to 100 %.	
\langle	Device behavior after download	Sets whether floor heating is switched on/off after application download.	Off On (default)
	Device behavior after voltage recovery	Sets whether floor heating is switched on/off once power returns.	On Off As before voltage failure (default)
	Default Temp. Setpoint [1632]	Default temperature setpoint for floor heating.	1632 ℃ (default: 22 ℃)
Mi	nimal possible setpoint value [1632]*	Configures the allowed minimum temperature setpoint.	1632 °C (default: 16 °C)
Ма [16	iximal possible setpoint value 32]*	Configures the allowed maximum temperature setpoint.	1632 °C (default: 32 °C)

"Function page"

N	ame)	Description	Range	
Tł	ne fo	ollowing parameters display when "S	ingle" or "Manager" is selected.		
	C	ommand Type	Sets the temperature control logic / method.	On/Off - two level control (default) PWM - PI control switching (1 bit) Modulating - PI control continuous (8 bits)	
	T۲	he following parameters display whe	n "On/Off - two level control" is selected.		
		, Object value of Heating on/off	Defines how the value is interpreted for floor heating on/off.	Heat on=1, Heat off=0 (default) Heat on=0, Heat off=1	
	K	Lower Hysteresis [0200]	Sets the lower hysteresis temperature setpoint for floor heating.	0200 *0.1 K (default: 20*0.1 K)	
		Upper Hysteresis [0200]	Sets the upper hysteresis temperature setpoint for floor heating.	0200 *0.1 K (default: 20*0.1 K)	
	N(Ui •	ote: nder the heating control: When the actual temperature (T) When the actual temperature(T) i	is > the temperature setpoint + the upper hysteresis, device st s < the temperature setpoint - the lower hysteresis, device star	ops heating ts heating.	
/	Fc < [or example, the lower hysteresis is 1 21 °C, heating starts; if T is between	K, the upper hysteresis is 2 K, the temperature setpoint is 22 $^\circ$ 2124 $^\circ\!\mathrm{C},$ it maintains the previous status.	°C, if T > 24 °C, heating stops; if T	
	T۲	he following parameter displays whe	n "PWM - PI control switching (1 bit)" is selected.		
		Pulse width modulation period time [1255]	Sets the frequency for sending the switch on/off value. The object sends the switch on/off value according to the duty cycle of the control value. For example, if the cycle time is set to 10 minutes and the control value is 80%, the object sends an "ON" telegram and 8 minutes later sends an "OFF" telegram. Two minutes later, the object resends an "ON" telegram and 8 minutes later an "OFF" telegram and repeatedly sends the telegrams at the defined interval.	1255 min (default: 15)	
	T۲	he following parameters display whe	n "PWM - PI control switching (1 bit)" or "Modulating - PI contro	ol continuous (8 bits)" is selected.	
		Invert control value	Sets whether to invert control value to meet the requirement of different type of valves.	No (default) Yes	
Heating Loop		Heating Loop	Sets the response speed of the heating PI controller.	Hot water heating (5K/150min) (default) Floor heating (5K/240min) Electrical heating (4K/100min) User defined	
		The following parameters display w	vhen "User defined" is selected.		
		<pre> Proportional range [10100] </pre>	Customizes the P value.	10100 *0.1K (default: 50*0.1K)	
		Integration time [0255]	Customizes the I value.	0255 min (default: 240)	
	Se	end control value cyclically [0255]	Sets the cycle for sending a control value to the bus.	0255 min (default: 15 min)	
	So	cene control	Enables or disables scene control function.	Disable (default) Enable	

* Minimum and maximum setpoint value:

The minimum set point value cannot exceed the maximum value. The output is limited to the upper/lower limit value in this case.

Communication objects

Nu	umber 4	Name	Object Function	Description	Group Address	Length	С	R	w	т	J Data Type	Priority
■246	5	Page 6- (receive/send)	External temperature			2 bytes	С	-	W 1	ι,	temperature (°C)	Low
■247	7	Page 6- (send)	Power On/Off			1 bit	С	R	- 1	· -	switch	Low
248	В	Page 6- (send)	Heating On/Off			1 bit	С	-	- 1	-	switch	Low
■249	9	Page 6- (receive)	Setpoint (°C)			2 bytes	С	-	w -	U	temperature (°C)	Low
∎₽ 250	0	Page 6- (receive)	Power On/Off			1 bit	С	-	w -	L	switch	Low
251	1	Page 6- (receive)	Scene			1 byte	С	-	w -	-	scene control	Low
■ ‡ 258	В	Page 6- (send)	Effective setpoint			2 bytes	С	R	- 1		temperature (°C)	Low
273	3	Page 6- (send)	Actual temperature			2 bytes	С	R	- 1	•	temperature (°C)	Low
294	4	Page 6- (receive)	Lock			1 bit	С	-	w -	-	enable	Low

Note

Page number x range: 1...15

No.	Name	Object function	Length	Flag	Data type			
246	Page x- (receive/send)	External temperature	2 bytes	CWTU	9.001 temperature (°C)			
The communication Receives the tempe	The communication object displays when the external sensor is set as the reference. Receives the temperature measurement value sent by the temperature sensor on the bus. Range: -5099.8 °C							
247	Page x- (send)	Power On/Off	1 bit	Manager: CRT Subordinate: CT	1.001 switch			
Sends floor heating 0: Off 1: On	Sends floor heating control switch state to bus. Telegram: 0: Off 1: On							
Note: In the Off stat	te, all icons on scree	n are disabled except On/O	ff icon.					
The communication	object does not dis	play when "Single" is selecte	ed.	Ι				
248	Page x- (send)	Heating on/off Heating control value	1 bit 1 byte	СТ	1.001 switch 5.001 percentage (0100 %)			
Sends floor heating Send telegram valu Send telegram valu Send telegram valu	Sends floor heating control value to switch the floor heating valve. Send telegram value (On/Off - two level control): On/Off Send telegram value (PWM - PI control switching (1 bit)): On/Off Send telegram value (Modulating - PI control continuous (8 bits)): 0100%							
The two communica	ation objects do not o	display when "Subordinate" i	s selected.	I	Γ			
249	Page x- (receive)	Setpoint (°C)	2 bytes	Manager: CWU Subordinate: CWTU	9.001 temperature (°C)			
Receives current te	mperature setpoint f	rom bus. Range: 540 °C						
The communication	object does not dis	play when "Single" is selecte	ed.					
250	Page x- (receive)	Power On/Off	1 bit	Manager: CWU Subordinate: CWTU	1.001 switch			
Receives feedback The communication	on floor heating con object does not dis	trol switch from bus. play when "Single" is selecte	ed.					
251	Page x- (receive)	Scene	1 byte	CW	18.001 scene control			
Recalls or saves the value is 063.	e floor heating scene	e control from bus. The para	meter is set to	scene No.164 and the	e actual corresponding telegram			
258	Page x- (send)	Effective setpoint	2 bytes	Manager: CRT Subordinate: CT	9.001 temperature (°C)			
Sends current temp	erature setpoint to b	ous.						
The communication	object does not dis	play when "Single" is selecte	ed.					
273	Page x- (send)	Actual temperature	2 bytes	CRT	9.001 temperature (°C)			
Sends actual combi	ned temperature to	bus.						
The communication	object only displays	when parameter "Tempera	ture value fror	n" is set as "Internal and	external sensor weighted".			
294	Page x- (receive)	Lock	1 bit	CW	1.003 enable			
Receives the telegram of lock from bus. Telegram value: 0: Lock 1: Unlock Note : During lock, the telegram can still be received.								

3.3.3.1 "Scene" parameters

Setting for floor heating scenes; a total of 5 scenes are available.

+ General	1: Assign scene No.[064, 0=inactive]	0	▲ ▼
+ Home page	Floor heating state for a scene	Off On	
- Function page	Temp. Setpoint [1632]	20	
	2: Assign scene No.[064, 0=inactive]	0	* *
Page 1-	Floor heating state for a scene	Off On	
— Page 6-	Temp. Setpoint [1632]	20	▼ °C
Scene	3: Assign scene No.[064, 0=inactive]	0	▲ ▼
Temperature Sensor	Floor heating state for a scene	Off On	
	Temp. Setpoint [1632]	20	▼ °C
	4: Assign scene No.[064, 0=inactive]	0	* *
	Floor heating state for a scene	Off On	
	Temp. Setpoint [1632]	20	▼ °C
	5: Assign scene No.[064, 0=inactive]	0	* *
	Floor heating state for a scene	Off On	
	Temp. Setpoint [1632]	20	▼ °C

Name	Description	Range
x: Assign scene No. [064, 0=inactive]	Sets scene number. x=15	064 (default: 0)
Floor heating state for a scene	Sets the power on/off state for the floor heating interface of scene x.	Off On (default)
Temp. Setpoint [1632]	Sets the temperature setpoint of scene x.	1632 °C (default: 20 °C)

3.3.4 "Page x - VRF Interface & Operation" parameters and communication objects

Parameters

Assign "Page x" as a single function –"VRF Interface & Operation" page. It acts as the interface & Operation unit for VRF air conditioning system (VRF refers to variable Refrigerant Flow HVAC technology). Connect the unit via a gateway to operate with a VRF device.

+ General	Description/ Headline of the page			
+ Home page	Page function	VRF Interface & Operation	٠	
 Function page 	Temperature value from	Internal sensor External sensor		
Page 1-	Control type	VRV/VRF gateway Value in °C (DPT_5.010) O Float value in °C (DPT_9.001)		
- Page 6-	Data type of setpoint			
Mode	Minimal possible setpoint value [1632]	16	°C	
ran Vanes swing	Maximal possible setpoint value [1632]	32	°C	
Temperature Sensor	Vanes swing	✓		
·	Vanes position	\checkmark		
	Protect device against user oper	ation		
	ON/OFF protection	\checkmark		
	Setpoint protection	\checkmark		
	Mode protection	\checkmark		
	Fan protection	\checkmark		
	Vanes swing protection	✓		

Name	Description	Range
Description/Headline of the page	 Names the "Function page x". Note: Supports multiple languages. To display properly on screen, set "Codepage" to "Unicode (UTF-8)". Refer to Language in display in Parameter and communication objects [→ 52]. 	15byte text
	 Approximately 12 characters can be displayed. It depends on the width of the single character as the space is limited on the display. 	
Page function	Configures the type of function page. Note: Pages 15 multifunction only; pages 615 can be either multifunction or single functions.	Multifunction (Lighting/Blind/Scene/Send value/Display) General temperature control Enhanced floor heating VRF Interface & Operation Ventilation System Air Quality display Energy Metering display Color and color temperature control Audio control
Temperature value from	Sets the resource of the temperature reference.	Internal sensor (default) External sensor

"Function page"

Name		Description	Range	
The fo	llowing two parameters display whe	en "External sensor" is selected.		
Cycle time for polling of external temperature value [0255]		Defines the period after which a read request is sent to retrieve an external value.	0255 min (default: 5)	
	Read external sensor after restart	Whether a read request is sent after the bus is reset or programmed.	No Yes (default)	
Contro	l type	Defines control type. (Nothing to select).	VRV/VRF gateway	
Data type of setpoint		Sets the setpoint data type.	Value in °C (DPT_5.010) Float value in °C (DPT_9.001) (default)	
Minim	al possible setpoint value [1632]*	Configures the allowed minimum temperature setpoint.	1632 ℃ (default: 16 ℃)	
Maximal possible setpoint value [1632]*		Configures the allowed maximum temperature setpoint.	1632 ℃ (default: 32 ℃)	
Vanes swing		Enables or disables control of vanes swing.	Disable (default) Enable	
The fo	llowing parameter displays when "\	/anes swing" is enabled.		
{	Vanes position	Enables or disables control of vanes position.	Disable (default) Enable	
Protec	t device against user operation - If	protection is enabled, users cannot change item via HMI.		
ON/OF	FF protection	Enables or disables On/Off protection.	Disable (default) Enable	
Setpoi	nt protection	Enables or disables setpoint protection.	Disable (default) Enable	
Mode protection		Enables or disables mode protection.	Disable (default) Enable	
Fan pr	otection	Enables or disables fan protection.	Disable (default) Enable	
Vanes	swing protection	Enables or disables vanes swing protection.	Disable (default) Enable	

* Minimum and maximum setpoint value:

The minimum set point value cannot exceed the maximum value. The output is limited to the upper/lower limit value in this case.

Communication objects

Numbe	r * Name	Object Function	Description	Group Address	Length	С	R	w	т	U Data Type	Priority
246	Page 6- (receive/send)	External temperature			2 bytes	C	-	W	Т	U temperature (°C)	Low
247	Page 6- (send)	Power On/Off			1 bit	С	-	-	Т	- switch	Low
248	Page 6- (receive)	Power On/Off			1 bit	С	-	W	Т	U switch	Low
249	Page 6- (send)	Control mode			1 byte	С	-	-	Т	HVAC control mode	Low
■2 250	Page 6- (receive)	Control mode			1 byte	С	-	W	Т	U HVAC control mode	Low
254	Page 6- (send)	Fan speed			1 byte	С	-	-	Т	- percentage (0100%)	Low
255	Page 6- (receive)	Fan speed			1 byte	С	-	W	Т	U percentage (0100%)	Low
257	Page 6- (send)	Vanes swing (1-swing,0-stop)			1 bit	С	-	-	Т	- start/stop	Low
258	Page 6- (receive)	Vanes swing (1-swing,0-stop)			1 bit	С	-	W	Т	U start/stop	Low
259	Page 6- (send)	Vanes position 15			1 byte	С	-	-	Т	- counter pulses (0255)	Low
■2 260	Page 6- (receive)	Vanes position 15			1 byte	С	-	W	Т	U counter pulses (0255)	Low
261	Page 6- (send)	Current setpoint adjustment			2 bytes	С	-	-	Т	- temperature (°C)	Low
■262	Page 6- (receive/send)	Current setpoint adjustment			2 bytes	C	-	W	Т	U temperature (°C)	Low
294	Page 6- (receive)	Lock			1 bit	С	-	W	-	- enable	Low

Note

Page number x range: 1...15

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No.	Name	Object function	Length	Flag	Data type
246	Page x- (receive/send)	External temperature	2 bytes	CWTU	9.001 temperature (°C)
Receives the temperature measurement value sent by the external temperature sensor on the bus and displays it on screen.					

It displays when "External sensor" is selected.

No.	Name	Object function	Length	Flag	Data type		
247	Page x- (send)	Power On/Off	1 bit	СТ	1.001 switch		
Sends air conditioni	ng switch telegrams.	I	<u> </u>				
248	Page x- (receive)	Power On/Off	1 bit	CWTU	1.001 switch		
Receives feedback from the status of the air-conditioning switch. Telegram: 0: Off 1: On							
249	Page x- (send)	Control mode	1 byte	СТ	20.105 HVAC control mode		
Sends the control te 0: Auto, 1: Heating,	legram for each mod 3: Cooling, 9: Ventila	e of air conditioning. Telegr tion, 14: Dehumidification	am:				
250	Page x- (receive)	Control mode	1 byte	CWTU	20.105 HVAC control mode		
Receives status fee Telegram: 0: Auto, 1: Heating,	dback of air conditior 3: Cooling, 9: Ventila	tion, 14: Dehumidification					
254	Page x- (send)	Fan speed	1 byte	СТ	5.001 percentage (0100 %) 5.100 fan stage		
Sends the control te	legram of each fan s	peed. Telegram value depe	nds on selected data	type.			
255	Page x- (receive)	Fan speed	1 byte	CWTU	5.001 percentage (0100 %) 5.100 fan stage		
Receives the status	feedback telegram o	f each fan speed. Telegran	n value depends on s	elected data typ	e.		
257	Page x- (send)	Vanes swing (1-swing,0- stop)	1 bit	СТ	1.010 start/stop		
Sends vanes swing	control telegram.						
258	Page x- (receive)	Vanes swing (1-swing,0- stop)	1 bit	CWTU	1.010 start/stop		
Receives vanes swi	ng status feedback.						
259	Page x- (send)	Vanes position 15	1 byte	СТ	5.010 counter pulses (0255)		
Sends the control te Users can define as	legram of the vanes desired.	position 15.					
260	Page x- (receive)	Vanes position 15	1 byte	CWTU	5.010 counter pulses (0255)		
Receives the status	feedback telegram o	f the vanes position 15.	L				
261	Page x- (send)	Current setpoint adjustment	1 byte 2 bytes	СТ	5.010 counter pulses (0255) 9.001 temperature		
 Sends current setpoint adjustment telegram. Note: The object type is set by parameters. 2byte is suitable for KNX standard. 1byte is KNX non-standard, usually suitable for user customization, the telegram value is the actual temperature value, such as 17 °C message value is 17 (decimal number). 							
262	Page x- (receive/send)	Current setpoint adjustment	1 byte 2 bytes	CWTU	5.010 counter pulses (0255) 9.001 temperature		
Sends and receives	the temperature setp	point of the air conditioner.					
294	Page x- (receive)	Lock	1 bit	CW	1.003 enable		
Receives the telegram of lock from bus. Telegram value: 0: Lock 1: Unlock Note: During lock, the telegram can still be received.							

3.3.4.1 "Mode" parameters

Defines the received and sent values for the following objects.

+ General	Control mode setting	
+ Home page	Auto mode	\checkmark
	Predefined value for Auto	0 *
 Function page 	Status value for Auto	0 *
Page 1-	Heating mode	✓
— Page 6-	Predefined value for Heating	1
Mode	Status value for Heating	1 *
Fan	Cooling mode	\checkmark
Vanes swing	Predefined value for Cooling	3
varies swing	Status value for Cooling	3
Temperature Sensor	Fan mode	✓
	Predefined value for Fan	9
	Status value for Fan	9 ‡
	Dehumidification mode	
	Predefined value for Dehumidification	14 +
	Status value for Dehumidification	14 *

Name		Description	Range				
Contro	Control mode setting						
Auto m	lode	Enables or disables auto mode.	Disable Enable (default)				
The fol	lowing parameters display when "A	uto mode" is enabled.					
ſ	Predefined value for Auto	Defines value for Auto mode.	0255 (default: 0)				
l	Status value for Auto	Feedback on Auto mode.	0255 (default: 0)				
Heatin	g mode	Enables or disables Heating mode.	Disable Enable (default)				
The fol	lowing parameters display when "H	leating mode" is enabled.					
ſ	Predefined value for Heating	Defines value for Heating mode.	0255 (default: 1)				
l	Status value for Heating	Feedback on Heating mode.	0255 (default: 1)				
Cooling mode		Enables or disables Cooling mode.	Disable Enable (default)				
The fol	lowing parameters display when "C	cooling mode" is enabled.					
Į	Predefined value for Cooling	Defines value for Cooling mode.	0255 (default: 3)				
l	Status value for Cooling	Feedback on Cooling mode.	0255 (default: 3)				
Fan mo	ode	Enables or disables Fan mode.	Disable Enable (default)				
The fol	lowing parameters display when "F	an mode" is enabled.					
ſ	Predefined value for Fan	Defines value for Fan mode.	0255 (default: 9)				
l	Status value for Fan	Feedback on Fan mode.	0255 (default: 9)				
Dehumidification mode		Enables or disables Dehumidification mode.	Disable Enable (default)				
The fol	lowing parameters display when "D	ehumidification mode" is enabled.					
{	Predefined value for Dehumidification	Defines value for Dehumidification mode.	0255 (default: 14)				
l	Status value for Dehumidification	Feedback on Dehumidification mode.	0255 (default: 14)				

3.3.4.2 "Fan" parameters

+ General	Data type of fan speed	Percentage (DPT_5.001) Fan stage (DPT_5.100)
+ Home page	Predefined value for Fan speed	
 Function page 	Predefined value for Fan speed auto	0
Page 1-	Predefined value for Fan speed low	33
— Page 6-	Predefined value for Fan speed medium	67
Mode	Predefined value for Fan speed high	100
Fan		
Vanes swing		
Temperature Sensor		

0	2 %
	*
33	- %
67	\$ %
100	
100	- 74

Name	I.	Description	Range
Data type of fan speed		Sets the data type for fan speed.	Percentage (DPT_5.001) (default) Fan stage (DPT_5.100)
The fo	llowing parameters display when "F	Fan stage (DPT_5.100)" is selected.	
ſ	Predefined value for Fan speed auto	Defines value for fan speed auto.	0255 (default: 0)
	Predefined value for Fan speed low	Defines value for fan speed low.	0255 (default: 1)
	Predefined value for Fan speed medium	Defines value for fan speed medium.	0255 (default: 2)
	Predefined value for Fan speed high	Defines value for fan speed high.	0255 (default: 3)
The fo	llowing parameters display when "F	Percentage (DPT_5.001) " is selected.	
\int	Predefined value for Fan speed auto	Defines value for fan speed auto.	0100 % (default: 0 %)
	Predefined value for Fan speed low	Defines value for fan speed low.	0100 % (default: 33 %)
	Predefined value for Fan speed medium	Defines value for fan speed medium.	0100 % (default: 67 %)
	Predefined value for Fan speed high	Defines value for fan speed high.	0100 % (default: 100 %)

3.3.4.3 "Vanes swing" parameters

The parameters display when "Vanes position" is enabled.

+ General	Predefined value for Vanes positi	on	
+ Home page	Predefined value for position 1	1	* *
= Eurotion page	Predefined value for position 2	2	*
	Predefined value for position 3	3	* *
Page 1-	Predefined value for position 4	4	▲ ▼
— Page 6-	Predefined value for position 5	5	▲ ▼
Mode			
Fan			
Vanes swing			
Temperature Sensor			

Name		Description	Range
Prede	fined value for Vanes position		
	Predefined value for position 1	Defines the corresponding control value for vanes position 1.	0255 (default: 1)
	Predefined value for position 2	Defines the corresponding control value for vanes position 2.	0255 (default: 2)
	Predefined value for position 3	Defines the corresponding control value for vanes position 3.	0255 (default: 3)
	Predefined value for position 4	Defines the corresponding control value for vanes position 4.	0255 (default: 4)
	Predefined value for position 5	Defines the corresponding control value for vanes position 5.	0255 (default: 5)

3.3.5 "Page x - Ventilation System" parameters and communication objects

Parameters

Assign "Page x" as a single function –"Ventilation System" page.

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Name	Description	Range
Description/Headline of the page	 Names the "Function page x". Note: Supports multiple languages. To display properly on screen, set "Codepage" to "Unicode (UTF-8)". Refer to Language in display in Parameter and communication objects [→ 52]. Approximately 12 characters can be displayed. It depends on the width of the single character as the space is limited on the display. 	15byte text
Page function	Configures the type of function page. Note: Pages 15 multifunction only; pages 615 can be either multifunction or single functions.	Multifunction (Lighting/Blind/Scene/Send value/Display) General temperature control Enhanced floor heating VRF Interface & Operation Ventilation System Air Quality display Energy Metering display Color and color temperature control Audio control
Behavior ventilation after download	Sets whether Ventilation system is powered on/off after the application is downloaded	Off On (default)
Behavior ventilation after voltage recovery	Sets whether Ventilation system is powered on/off after power returns.	Off (default) On As before voltage failure
Default fan speed after ventilation on	Sets the default fan speed after power on.	Low (default) Medium High
Heat Recovery function	Sets whether to enable heat recovery function. If disable=0/enable=1 or disable=1/enable=0 is selected, the heat recovery function is enabled by default, in other words, when the device is powered on, the function is enabled. Disable means heat recovery cannot be controlled.	Disable Disable=0/Enable=1 (default) Disable=1/Enable=0

"Function page"

Name		Description	Range
Filter lifetime counting		Sets whether to enable the filter timer function.	Enable
			Disable (default)
	Filter life time [10010000]	Displays only if Enable is selected for Filter lifetime counting.	10010000 (default: 1000)
		lifetime counts down to 0. It informs the operator to change or clean the filter. "Filter timer counter" provides the value.	
		The counter can be reset via bus through object "Filter timer reset" or via user operation on screen.	
Auto Operation (Demand based		Sets whether the demand-based Ventilation function is	Enable
ventila	tion)	enabled. When this option is enabled, ventilation is operated automatically by the air quality state and the defined setpoint.	Disable (default)
Scene control		Sets whether to enable the scene function. Five scenes can	Enable
		be set if enabled.	Disable (default)

Communication objects

	Number 4	Name	Object Function	Description	Group Address	Length	С	R	w	τι	U Data Type	Priority
. ;	246	Page 6- (send)	Power On/Off			1 bit	С	-	- 1	т -	switch	Low
;	247	Page 6- (receive)	Power On/Off			1 bit	С	-	W	τι	J switch	Low
1	248	Page 6- (receive)	En./Dis. Heat recovery			1 bit	C	-	W		enable	Low
12	249	Page 6- (send)	Heat recovery			1 bit	C	-	- 1	т -	switch	Low
1 2	250	Page 6- (receive)	Filter timer reset			1 bit	C	-	W		reset	Low
z	251	Page 6- (receive/send)	Filter timer counter			2 bytes	С	-	W	τι	J time (h)	Low
■ ‡	252	Page 6- (send)	Filter alarm			1 bit	С	-	- 1	т -	alarm	Low
;	253	Page 6- (receive/send)	Fan Speed No.1 1Bit			1 bit	С	-	W	τι	J switch	Low
1	254	Page 6- (receive/send)	Fan Speed No.2 1Bit			1 bit	C	-	W	τι	J switch	Low
1 2	255	Page 6- (receive/send)	Fan Speed No.3 1Bit			1 bit	C	-	W	τι	J switch	Low
1 2	256	Page 6- (receive/send)	Automatic function			1 bit	C	-	W	τι	l enable	Low
 2	257	Page 6- (receive/send)	CO2 value			2 bytes	С	-	W	τι	J parts/million (ppm)	Low
‡	258	Page 6- (receive/send)	PM2.5 value			2 bytes	C	-	W	τu	J pulses	Low
1	259	Page 6- (receive)	Scene			1 byte	C	-	W		scene control	Low
1	260	Page 6- (send)	Fan speed			1 byte	C	-	- 1	т -	percentage (0100%)	Low
1	261	Page 6- (receive)	Fan speed			1 byte	C	-	W	тι	J percentage (0100%)	Low
■7	262	Page 6- (receive)	Heat recovery			1 bit	С	-	W	τu	J switch	Low
■ ‡	294	Page 6- (receive)	Lock			1 bit	С	-	W		enable	Low

Note

Page number x range: 1...15

No.	Name	Object function	Length	Flag	Data type		
246	Page x- (send)	Power On/Off	1 bit	СТ	1.001 switch		
Sends a ventilation s 0: The ventilation sy 1: The ventilation sy	Sends a ventilation system control switch telegram. Telegram value: 0: The ventilation system control interface is off and the interface is not operational 1: The ventilation system control interface is on and the interface is operational						
247	Page x- (receive)	Power On/Off	1 bit	CWTU	1.001 switch		
Receives the feedback on the ventilation system control status. Telegram value: 0: The ventilation system control interface is off and the interface is not operational 1: The ventilation system control interface is on and the interface is operational							
248	Page x- (receive)	En./Dis. Heat recovery	1 bit	CW	1.003 enable		
Disables/enables he When disabled, hea	eat recovery in the ve t recovery is turned c	ntilation system. The disabl ff and cannot be controlled.	ed/enabled telegram	value is specifio	cally defined by the parameter.		
249	Page x- (send)	Heat recovery	1 bit	СТ	1.001 switch		
Sends the control command on/off ventilation system heat recovery, and receives the feedback value. Telegram value: 0: Off 1: On							
250	Page x- (receive)	Filter timer reset	1 bit	CW	1.015 reset		
Resets the filter time, and after the filter is reset and starts a new count after reset. Telegram value: 1: Reset							
251	Page x- (receive/send)	Filter timer counter	2 bytes	CWTU	7.007 time(h)		

No.	Name	Object function	Length	Flag	Data type
Counts the lifetime The filter time count	of the filter. When the ter unit is hours.	e count value changes, it ca	n be sent to the bus,	and the time ca	n also be modified over the bus.
252	Page x- (send)	Filter alarm	1 bit	СТ	1.005 alarm
Once the set value 1: Alarm	is reached, the comm	nunication object issues an	alarm to remind the ι	user to replace t	he filter. Telegram value:
253 254 255	Page x- (receive/send)	Fan Speed No.1 1Bit Fan Speed No.2 1Bit Fan Speed No.3 1Bit	1 bit	CWTU	1.001 switch
The communication and the specific tele feedback value also	objects can view wh egram value correspo o needs to correspond	en the fan speed type is "1t nding to each fan speed is d to the defined parameter v	bit", the fan speed is d defined by the param value to update the di	controlled by the neters. Feedbac isplay on the sc	e three objects at the same time, k can be received, but the reen.
256	Page x- (receive/send)	Automatic function	1 bit	CWTU	1.003 enable
Enables the automa default. Turning off	atic operation of venti the device, manual a	lation system. After the devi djustment of the fan speed	ice is reset or progra and calling a scene c	mmed, the auto an disable the a	matic operation is not enabled by automatic operation.
257	Page x- (receive/send)	CO2 value	2 bytes	CWTU	9.008 parts/million (ppm) 7.001 pulses
Receives the input of ppm If the control va according to the cor	of the CO_2 value and alue of the automatic ncentration of CO_2 . T	get the corresponding value operation is CO ₂ , the ventil he data type of the object is	e from the bus to upd ation system can be set by the paramete	late the value or set to automatic r.	n display in ppm. Range: 04000 cally adjust the fan speed
258	Page x- (receive/send)	PM2.5 value	2 bytes	CWTU	9.030 concentration (ug/m³) 7.001 pulses
Receives the input of ug/m ³ If the control according to the cor	of PM2.5 value and g value of the automati ncentration of PM2.5.	et the corresponding value c operation is PM2.5, the ve The data type of the object	from the bus to upda entilation system can t is set by the parame	te the value on be set to autom eter.	display in ug/m³. Range: 0999 natically adjust the fan speed
259	Page x- (receive)	Scene	1 byte	CW	18.001 scene control
Recalls the scene c	ontrol of the ventilation	on system. The parameter is	s set to 164, and th	e actual corresp	oonding telegram value is 063.
260	Page x- (send)	Fan speed	1 byte	СТ	5.010 percentage (0100 %)
Fan speed (send): T fan speed. The spe	The communication o cific telegram value c	bject displays when the fan orresponding to each fan st	speed type is "1byte beed is defined by the	and sends a to e parameters.	elegram to the bus to control the
261	Page x- (receive)	Fan speed	1 byte	CWTU	5.010 percentage (0100 %) 5.100 percentage (0100 %)
Status fan speed (re fan speed. The spe	eceive): The commun cific telegram value c	ication object displays whe orresponding to each fan sr	n the fan speed type beed is defined by the	is "1byte" and r e parameter.	eceives the status feedback of the
262	Page x- (receive)	Heat recovery	1 bit	CWTU	1.001 switch
Receives the ventila 0: Off 1: On	ation system heat rec	overy status feedback value	e. Telegram value:		
294	Page x- (receive)	Lock	1 bit	CW	1.003 enable
Receives the telegram of lock from bus. Telegram value: 0: Lock 1: Unlock Note: During lock, the telegram can still be received.					

3.3.5.1 "Fan" parameters

1bit

+ General	Data type of fan speed	1bit 1byte	
+ Home page	Object value: Fan speed - Off	No.1=0, No.2=0, No.3=0	•
- Function page	Object value: Fan speed - Low	No.1=1, No.2=0, No.3=0	•
~	Object value: Fan speed - Medium	No.1=0, No.2=1, No.3=0	•
Page 1-	Object value: Fan speed - High	No.1=0, No.2=0, No.3=1	•
— Page 6-	Time delay between fan speed switching	10	€ *50m
Fan	[0100]		•

1byte

+ General	Data type of fan speed	🔵 1bit 🔘 1byte		
+ Home page	Datatype of fan speed 1byte	 Percentage (DPT_5.001) Fan stage (DPT_5.100) 		
 Function page 	Predefined value for fan speed			
Page 1-	Fan speed - Switching point	10	* *	%
— Page 6-	Fan speed - Low	33	* *	%
Fan	Fan speed - Medium	67	* *	%
Scene	Fan speed - High	100	÷ •	%
Temperature Sensor	1			

Name		Description	Range
Data ty	vpe of fan speed	Sets the fan speed data type.	1 bit
			1 byte (default)
1bit			
(Object value: Fan speed - Off	Defines the value sent to switch each fan	No.1=0, No.2=0, No.3=0 (default for off)
	Object value: Fan speed - Low	speed (three 1bit objects at the same time).	No.1=1, No.2=0, No.3=0 (default for low)
	Object value: Fan speed -	of fan speed"	No.1=0, No.2=1, No.3=0 (default for medium)
(Medium	No.	No.1=1, No.2=1, No.3=0
	Object value: Ean apood High	-	No.1=0, No.2=0, No.3=1 (default for high)
	Object value. Fail speed - High		No.1=1, No.2=0, No.3=1
			No.1=0, No.2=1, No.3=1
			No.1=1, No.2=1, No.3=1
Time delay between fan speed switching [0100]		Determines the time delay for switching in milliseconds. The setting should also consider the fans technical specifications.	[0100] * 50ms (default: 10*50ms)
		For a value of 1100 is chosen, the following occurs when switching the fan speed from A to B:	
		1. Switched off	
		2. Pause (time delay defined)	
		3. Switches to new speed	
		4. Sends the telegram to bus.	
		The fan speed switches directly from A to B for a value of "0".	

Name		Description	Range			
1byte						
Datatype of fan speed 1byte		Sets the data type of 1byte fan speed.	Percentage (DPT_5.001) (default) Fan stage (DPT_5.100)			
Predef	Predefined value for Fan speed					
The fol	lowing parameters display when "Pe	rcentage (DPT_5.001)" is selected.				
(Fan speed - Switching point	Defines the value for start-up fan speed.	0100 % (default: 10 %)			
Į	Fan speed - Low	Defines the value for Fan speed - Low.	0100 % (default: 33 %)			
	Fan speed - Medium	Defines the value for Fan speed - Medium.	0100 % (default: 67 %)			
	Fan speed - High	Defines the value for Fan speed - High.	0100 % (default: 100 %)			
The fol	lowing parameters display when "Fa	n stage (DPT_5.100)" is selected.				
(Fan speed - Switching point	Defines the value for start-up fan speed.	0255 (default: 1)			
J	Fan speed - Low	Defines the value forFan speed - Low.	0255 (default: 1)			
	Fan speed - Medium	Defines the value for Fan speed - Medium.	0255 (default: 2)			
	Fan speed - High	Defines the value for Fan speed - High.	0255 (default: 3)			

3.3.5.2 "Scene" parameters

+ General	1: Assign scene No.[064, 0=inactive]	0	▲ ▼
+ Home page	Fan speed for scene	Off	*
- Function page	2: Assign scene No.[064, 0=inactive]	0	▲ ▼
	Fan speed for scene	Low	•
Page 1-	Heat Recovery	🔵 Off 🔘 On	
— Page 6-	3: Assign scene No.[064, 0=inactive]	0	* *
Fan	Fan speed for scene	Medium	•
Scene	Heat Recovery	Off On	
Fan Auto Operation	4: Assign scene No.[064, 0=inactive]	0	▲ ▼
Temperature Sensor	Fan speed for scene	High	•
	Heat Recovery	Off On	
	5: Assign scene No.[064, 0=inactive]	0	▲ ▼
	Fan speed for scene	Off	•

Note

When parameter "Scene control" is enabled, the following parameters display.

Name	Description	Range
1: Assign scene No. [064, 0=inactive]	Sets the scene number. x=15	064, 0=inactive (default: 0)
Fan speed for scene	Fan speed state for a specific scene	Off
		Low
		Medium
		High
Heat Recovery	Heat recovery speed for a specific scene	On (default) Off

3

3.3.5.3 "Fan Auto Operation" parameters

\mathbf{CO}_2

+ General	Object value - activate/exit auto operation	0=activated/1=exit 0 1=activated/0=exit	
+ Home page	Control via	○ PM2.5 ◎ CO2	
 Function page 	Cycle time for polling of external value [0255]	2 Å Minutes	
Page 1-	Default speed when remote sensor error	Off	•
— Page 6-	Data type of CO2	 Value in ppm (DPT_7.001) Float value in ppm (DPT_9.008) 	
Fan	Threshold for fan speed: from Off to Low	800	ppm
Scene	Threshold for fan speed: from Low to Medium	1500	ppm
Fan Auto Operation	Threshold for fan speed: from Medium to	2000	ppm
Temperature Sensor	High	200	
	Min_runing time before fan speed switching	10 * Seconds	hhu

PM2.5

+	General	Object value - activate/exit auto operation	O=activated/1=exit O 1=activated/0=exit	
+	Home page	Control via	PM2.5 CO2	
-	Function page	Cycle time for polling of external value [0255]	2 Å Minutes	
	Page 1-	Default speed when remote sensor error	Off	•
	- Page 6-	Data type of PM2.5	 Value in ug/m3 (DPT_7.001) Float value in ug/m3 (DPT_9.030) 	
	Fan	Threshold for fan speed: from Off to Low	35 ‡ ug	g/m3
	Scene	Threshold for fan speed: from Low to Medium	75 🌲 ug	g/m3
	Fan Auto Operation	Threshold for fan sneed: from Medium to	*	
	Temperature Sensor	High	115 vg	g/m3
		Hysteresis of threshold value in +/-[1030]	10 🌲 ug	g/m3
	Human Centric Lighting	Min. runing time before fan speed switching	10 ÷ Seconds	

Note

The following parameters display when "Auto Operation (Demand based ventilation)" is enabled.

Name	Description	Range
Object value - activate/exit auto operation	Sets the telegram value to activate automatic operation.	0=Activated/1=exit 1=Activated/0=exit (default)
Control via	The control value source to set the automatic operation.	PM2.5 CO ₂ (default)
Cycle time for polling of external value [0255]	Defines the period after which a read request is sent to retrieve an external value.	0255 min (default: 2)
Default speed when remote sensor error	Sets the default fan speed when read of remote sensor value fails. Note : No response is interpreted as a sensor failure.	Off (default) Low Medium High

Description Name Range CO_2 Value in ppm (DPT_7.001) Determines data type of CO2. The selection is based on the Data type of CO2 Float value in ppm (DPT 9.008) connected CO₂ sensor data type. (default) If the control value is greater than or equal to the threshold Threshold for fan speed: from Off 1...4000 ppm (default: 800 ppm) set by this parameter, fan speed is set to Low; if the remote to Low sensor value is less than the threshold, the fan is turned off. Threshold for fan speed: from If the control value is greater than or equal to the threshold 1...4000 ppm (default: 1500 ppm) Low to Medium set by this parameter, then fan speed is set to Medium. Threshold for fan speed: from If the control value is greater than or equal to the threshold 1...4000 ppm (default: 2000 ppm) Medium to High set by this parameter, the fan speed is set to High. The controller evaluates the threshold in ascending order. It first checks OFF to low fan speed threshold \rightarrow low fan speed to medium fan speed threshold \rightarrow medium fan speed to high fan speed threshold. The correctness of functional execution is guaranteed only in this case: The threshold of OFF to low fan speed is lower than that of low fan speed to medium fan speed, and the threshold of low fan speed to medium fan speed is lower than that of medium fan speed to high fan speed. Hysteresis of threshold value in Sets the hysteresis value (dead band) for the threshold to 100...400 ppm (default: 200 ppm) +/- [100...400] avoid unnecessary action of the fan when the control value fluctuates near the threshold. * PM2.5 Determines the data type of PM2.5. The selection is based Value in ug/m³ (DPT_7.001) Data type of PM2.5 on the connected PM2.5 sensor data type. (default) Float value in ug/m³ (DPT 9.030) Threshold for fan speed: from Off If the control value is greater than or equal to the threshold 1...999 µg/m³ (default: 35) to Low set by this parameter, the fan speed is set to Low; if the remote sensor value is less than the threshold, the fan is turned off. Threshold for fan speed: from If the control value is greater than or equal to the threshold 1...999 µg/m³ (default: 75) Low to Medium set by this parameter, then the fan speed is set to Medium. Threshold for fan speed: from If the control value is greater than or equal to the threshold 1...999 µg/m³ (default: 155) Medium to High set by this parameter, the fan speed is set to High. The controller evaluates the threshold in ascending order. First check OFF to low fan speed threshold \rightarrow low fan speed to medium fan speed threshold \rightarrow medium fan speed to high fan speed threshold. The correctness of functional execution is guaranteed only in this case: The threshold of OFF to low fan speed is lower than that of low fan speed to medium fan speed, and the threshold of low fan speed to medium fan speed is lower than that of medium fan speed to high fan speed. Hysteresis of threshold value in Sets the hysteresis value (dead band) of the threshold to 10...30 µg/m³ (default: 10) avoid unnecessary action of the fan when the control value +/- [10...30] fluctuates near the threshold. * Min. running time before fan speed Defines the residence time of the fan from the current fan 0...65535 s (default: 10) switching [s] speed to a higher fan speed or lower fan speed, that is, the minimum time for a fan speed operation. If user needs to switch to another fan speed, you need to wait for this period before switching. If the current fan speed has been running long enough, the fan speed can be changed quickly.

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* For example, the fan is controlled via PM2.5. The hysteresis is 10 μ g/m³ and the threshold is 35 μ g/m³, then the upper limit threshold is 45 μ g/m³ (Threshold value + Hysteresis value) and the lower limit threshold is 25 μ g/m³ (Threshold value - Hysteresis value). When the control value (PM 2.5 concentration in this example) is between 25 ...45 μ g/m³, the action of the fan is not activated, and the previous state is maintained. Only if the PM2.5 concentration is lower than 25 μ g/m³ or higher than or equal to 45 μ g/m³, the fan speed is changed as shown in the following figure:



Note: When hysteresis is enabled, if the threshold overlap occurs, the fan's action is specified as follows:

1) Hysteresis determines the control point where Fan speed conversion occurs;

2) If fan speed conversion occurs, the new fan speed is determined by the control value and the threshold value, irrespective of hysteresis.

Example 1

Take PM2.5 as an example:

- OFF to Low fan speed threshold value is 35 µg/m³.
- Low fan speed to Medium fan speed threshold value is 55 µg/m³.
- Medium fan speed to High fan speed threshold value is 75 µg/m³.
- Hysteresis value is 25 µg/m³.

The fan speed of the fan turbine increases from OFF: The fan OFF state changes at a control value of $60 \ \mu g/m^3$ ($\geq 25 \ \mu g/m^3 + 35 \ \mu g/m^3$), and the new fan speed is Medium (because $60 \ \mu g/m^3$ is between $55 \ \mu g/m^3$ and $75 \ \mu g/m^3$, irrespective of hysteresis), so the low fan speed is ignored.

The behavior of the fan speed when descending from fan speed High: The fan speed changes at a control value of 50 μ g/m³ (<75 μ g/m³ - 25 μ g/m³), and the new fan speed is Low (because 50 μ g/m³ is between 35 μ g/m³ and 55 μ g/m³, irrespective of hysteresis), so the fan speed Medium is ignored.

Example 2

Take PM2.5 as an example

- OFF to Low fan speed threshold value is 20 µg/m³.
- Low fan speed to Medium fan speed threshold value is 40 µg/m³.
- Medium fan speed to High fan speed threshold value is 70 µg/m³.
- Hysteresis value is 10 µg/m³.

When fan speed is increasing from OFF: The fan speed Low is turned on when the control value is $30 \ \mu g/m^3$ ($\geq 20 \ \mu g/m^3 + 10 \ \mu g/m^3$). When the control value $41 \ \mu g/m^3$ is received, the new speed is set to Medium (because $41 \ \mu g/m^3$ is between $40 \ \mu g/m^3$ and $70 \ \mu g/m^3$, irrespective of hysteresis), therefore fan speed Low is ignored. When the control value $39 \ \mu g/m^3$ is received, the new speed is set to Low (because $39 \ \mu g/m^3$ is between $20 \ \mu g/m^3$ and $40 \ \mu g/m^3$, irrespective of hysteresis).

When fan speed descending from fan speed High: When the control value $39 \ \mu g/m^3$ is received, the new fan speed is Low (because $39 \ \mu g/m^3$ is between $20 \ \mu g/m^3$ and $40 \ \mu g/m^3$), therefore the fan speed Medium is ignored.

3) When the control value is 0, the fan is off at any circumstances.

3.3.6 "Page x - Air Quality display" parameters and communication objects

Parameters

Assign "Page x" as a single function –"Air Quality display" page.

+ General	Description/ Headline of the page	
+ Home page	Page function	Air Quality display 👻
- Function page	Function of item 1 in display list	Temperature 🔻
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	Description	
Page 1-	Function of item 2 in display list	Humidity
Page 6-	Description	
Temperature Sensor	Function of item 3 in display list	PM2.5 -
	Description	
	Function of item 4 in display list	VOC 👻
	Description	
	Cycle time for polling of external value [5255]	5 $\stackrel{*}{_{\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!$
	Datatype of PM2.5	<ul> <li>Value in ug/m3 (DPT_7.001)</li> <li>Float value in ug/m3 (DPT_9.030)</li> </ul>
	Datatype of PM10	<ul> <li>Value in ug/m3 (DPT_7.001)</li> <li>Float value in ug/m3 (DPT_9.030)</li> </ul>
	Datatype of CO2	Value in ppm (DPT_7.001) Float value in ppm (DPT_9.008)
	Datatype of VOC	Value in ug/m3 (DPT_7.001)
	Datatype of Brightness	Value in lux (DPT_7.013) Float value in lux (DPT_9.004)
	Datatype of Windspeed	<ul> <li>Float value in m/s (DPT_9.005)</li> <li>Float value in km/h (DPT_9.028)</li> </ul>
	Note: Air Quality display description up to 12 chars., or 6 Chinese char, or 9 Russian, Greek chars.	

Name	Description	Range
Description/Headline of the page	<ul> <li>Names the "Function page x".</li> <li>Note:</li> <li>Supports multiple languages. To display properly on screen, set "Codepage" to "Unicode (UTF-8)". Refer to Language in display in Parameter and communication objects [→ 52].</li> <li>Approximately 12 characters can be displayed. It depends on the width of the single character as the space is limited on the display.</li> </ul>	15byte text
Page function	Configures the type of function page. Note: Pages 15 multifunction only; pages 615 can be either multifunction or single functions.	Multifunction (Lighting/Blind/Scene/Send value/Display) General temperature control Enhanced floor heating VRF Interface & Operation Ventilation System Air Quality display Energy Metering display Color and color temperature control Audio control
#### Name Description Range Function of item 1 in display Selects up to 4 items for display out of the list. All values are Disable list...Function of item 4 in from bus. Temperature (default for item 1) display list Humidity (default for item 2) PM2.5 (default for item 3) PM10 CO2 VOC (default for item 4) AQI Brightness Windspeed Rain Description (available for four Names the function of item x in display list. 18byte text selected items) Cycle time for polling of Defines the period after which a read request is sent to get 5...255 (default: 5) external value [5...255] external value. Datatype of PM2.5 Sets the data type of PM2.5. Value in ug/m³ (DPT_7.001) (default) Float value in ug/m³ (DPT_9.030) Datatype of PM10 Sets the data type of PM10. Value in ug/m³ (DPT_7.001) (default) Float value in ug/m³ (DPT_9.030) Datatype of CO2 Sets the data type of CO₂. Value in ppm (DPT_7.001) Float value in ppm (DPT_9.008) (default) Datatype of VOC Sets the data type of VOC Value in ug/m³ (DPT_7.001) (default) Float value in ug/m³ (DPT_9.030) Float value in ppm (DPT 9.008) Value in lux (DPT_7.013) Datatype of Brightness Sets the data type of brightness. Float value in lux (DPT_9.004) (default) Datatype of Windspeed Sets the data type of windspeed. Float value in m/s (DPT 9.005) (default) Float value in km/h (DPT_9.028)

# **Communication objects**

N	lumber 4	Name	Object Function	n	Description	Group Address	Length	С	R	w	т	U	Data Type	Priority
∎‡ 24	6	Page6-Items 1	Temperature				2 bytes	С	-	W	Т	Ut	temperature (°C)	Low
■7 24	7	Page6-Items 2	Humidity				2 bytes	С	-	W	Т	Uł	humidity (%)	Low
∎‡ 24	8	Page6-Items 3	PM2.5				2 bytes	С	-	W	Т	Up	pulses	Low
<b>1</b> 24	9	Page6-Items 4	VOC				2 bytes	С	-	W	Т	Up	pulses	Low
<b>2</b> 46	5	Page6-Items 1	PM10				2 bytes	с	-	w	т	U	pulses	Low
247	7	Page6-Items 2	CO2				2 bytes	С	-	W	Т	U	pulses	Low
■248	В	Page6-Items 3	AQI				2 bytes	С	-	W	Т	U	pulses	Low
249	9	Page6-Items 4	Brightness				2 bytes	С	-	W	Т	UI	brightness (lux)	Low
∎‡ 240	6	Page6-Items 1	Windspeed				2 bytes	C	-	W	Т	Us	speed (m/s)	Low
■247	7	Page6-Items 2	Rain				1 bit	C	-	W	Т	U s	switch	Low

#### Note

Page number x range: 1...15

Object function depends on the value of parameters "Function of item 1 in display list"..."Function of item 4 in display list".

No.	Name	Object function	Length	Flag	Data type			
246	Pagex-Items 1	Temperature	2 bytes	CWTU	9.001 temperature (°C)			
247	Pagex-Items 2							
248	Pagex-Items 3							
249	Pagex-Items 4							
Receives temperature measurements sent from the temperature sensor on the bus Range: -40 40 °C								

3

No.	Name	Object function	Length	Flag	Data type
246	Pagex-Items 1	Humidity	2 bytes	CWTU	9 007 humidity (%)
240	Pagex-Items 2	Tarmany	2 59100	01110	
248	Pagex-Items 3				
249	Pagex-Items 4				
Receives a humidity	/ measurement sent	from a humidity sensor on a	⊥ a bus. Range: 01(	00 %	
246	Pagey-Items 1	PM2.5	2 hvtes	CWTU	7 001 pulses
240	Pagex-Items 2	1 112.5	2 bytes	0010	9.030 concentration(ug/m ³ )
248	Pagex-Items 3				
249	Pagex-Items 4				
Receives the input of the data type of the	of PM2.5 value and g object is set by the p	⊔ get the corresponding value parameter.	from the bus to be u	pdated to display in	ug/m ³ . Range: 0999ug/m ³ ,
246	Pagey_Items 1	PM10	2 bytes	CWTU	7 001 pulses
240	Pagey-Items 2		2 Dytes	CWIO	9.030 concentration(ug/m ³ )
247	Pagey-Items 3				
240	Pagex-Items 4				
Bossives the input	of DM10 volue, got th		ata ta diaplay from b	ue the unit is ug/m ³	Panga: 0, 000 ug/m ³ tha
data type of the obje	ect is set by the para	meter.		us, the unit is µg/m°.	Range.o999 ug/m ^e , the
246	Pagex-Items 1	CO2	2 bytes	CWTU	7.001 pulses
247	Pagex-Items 2				9.008 parts/million (ppm)
248	Pagex-Items 3				
249	Pagex-Items 4				
Receives the input of ppm	of the CO ₂ value and	get the corresponding valu	e from the bus to be	updated to the displa	ay in ppm. Range:04000
246	Pagex-Items 1	VOC	2 bytes	CWTU	7.001 pulses
247	Pagex-Items 2				9.008 parts/million (ppm)
248	Pagex-Items 3				9.030 concentration (ug/m ³ )
249	Pagex-Items 4				
Receives the input of 09.99 mg/m ³ , the	of the VOC value and data type of the obje	d get the corresponding values of the parameter.	ue from the bus to be When the object data	e updated to the displ a type is selected for	ay in mg/m ³ .Range: 7.001 pulses, the percentile
	Deney Heres 1				
246	Pagex-Items 1	AQI	2 bytes	CWIU	7.001 puises
247	Pagex-items 2				
248	Pagex-items 3				
249	Pagex-items 4				
Receives the input of	of AQI value and upc	late the corresponding valu	e from the bus to dis	play. Range: 0500	
246	Pagex-Items 1	Brightness	2 bytes	CWTU	7.013 brightness (lux)
247	Pagex-Items 2				9.004 lux
248	Pagex-Items 3				
249	Pagex-Items 4				
Receives the input of Range:05000 lux.	of the brightness valu The data type of the	ue and get the correspondir object is set by the parame	ng value from the bus eter.	to be updated to the	e display in lux.
246	Pagex-Items 1	Windspeed	2 bytes	CWTU	9.005 speed (m/s)
247	Pagex-Items 2				9.028 wind speed
248	Pagex-Items 3				
249	Pagex-Items 4				
Receives the input of m/s	of the wind speed va	lue and get the correspond	ng value from the bu	is to be updated to th	e display in m/s. Range:050
246	Pagex-Items 1	Rain	1 bit	CWTU	1.001 switch
247	Pagex-Items 2				
248	Pagex-Items 3				
249	Pagex-Items 4				
Receives the input of	of the rain display an	d get the corresponding val	ue from the bus to b	e updated to the disc	lav
Telegram: Rain; No	rain				

# 3.3.7 "Page x - Energy Metering display" parameters and communication objects

# Parameters

Assign "Page x" as a single function –"Energy Metering display" page.

+ General	Description/ Headline of the page	
+ Home page	Page function	Energy Metering display 🔹
<ul> <li>Function page</li> </ul>	Number of energy meters used	4 🗸
Page 1-	Energy Meter 1	
Page 6-	Description	
Temperature Sensor	Data type of display value	Value in mA (DPT 7.012) 👻
	Energy Meter 2	
	Description	
	Data type of display value	Value in mA (DPT 7.012)
	Energy Meter 3	
	Description	
	Data type of display value	Value in mA (DPT 7.012)
	Energy Meter 4	
	Description	
	Data type of display value	Value in mA (DPT 7.012) 👻
	Cycle time for polling of external value [5255]	10 🔹 Minutes
	Note: Energy Meter description up to	o 12 chars., or 6 Chinese chars., or 9 Russian, Greek chars.

Name	Description	Range
Description/Headline of the page	<ul> <li>Names the "Function page x".</li> <li>Note:</li> <li>Supports multiple languages. To display properly on screen, set "Codepage" to "Unicode (UTF-8)". Refer to Language in display in Parameter and communication objects [→ 52].</li> <li>Approximately 12 characters can be displayed. It depends on the width of the single character as the space is limited on the display.</li> </ul>	15byte text
Page function	Configures the type of function page. <b>Note:</b> Pages 15 multifunction only; pages 615 can be either multifunction or single functions.	Multifunction (Lighting/Blind/Scene/Send value/Display) General temperature control Enhanced floor heating VRF Interface & Operation Ventilation System Air Quality display Energy Metering display Color and color temperature control Audio control
Number of energy meters used	Sets the number of energy metering.	18 (default: 4)
Energy Meter 1Energy Meter 8	Energy Meter name	-
Description	Description of the energy display item. <b>Note</b> : Approximately 1415 characters can be displayed. It depends on the width of the single character as the space is limited on the display.	18byte text

Name	Description	Range
Data type of display value	Sets the data type of energy metering display.	Value in mA (DPT 7.012) (default)
		Float value in mA (DPT 9.021)
		Float value in A (DPT 14.019)
		Float value in mV (DPT 9.020)
		Float value in V (DPT 14.027)
		Float value in W (DPT 14.056)
		Float value in kW (DPT 9.024)
		Value in Wh (DPT 13.010)
		Value in kWh (DPT 13.013)
Cycle time for polling of external value [5255]	Defines the period after which a read request is sent to get external value.	5255 (default: 10)

# **Communication objects**

Numb	er * Name	Object Function	Description	Group Address	Length	с	R	w	т	U	Data Type	Priority
■246	Page6-Energy Meter 1	Current in mA (DPT 7.012)			2 bytes	c	-	w	т	U	current (mA)	Low
247	Page6-Energy Meter 2	Current in mA (DPT 9.021)			2 bytes	С	-	W	Т	U	current (mA)	Low
248	Page6-Energy Meter 3	Current in A (DPT 14.019)			4 bytes	С	-	W	т	U	electric current (A)	Low
<b>2</b> 49	Page6-Energy Meter 4	Voltage in mV (DPT 9.020)			2 bytes	С	-	W	Т	U	voltage (mV)	Low
<b>■</b> 250	Page6-Energy Meter 5	Voltage in V (DPT 14.027)			4 bytes	С	-	W	Т	U	electric potential (V)	Low
251	Page6-Energy Meter 6	Power in W (DPT 14.056)			4 bytes	С	-	W	T.	U	power (W)	Low
252	Page6-Energy Meter 7	Power in kW (DPT 9.024)			2 bytes	С	-	W	Т	U	power (kW)	Low
253	Page6-Energy Meter 8	Active energy in Wh (DPT 13.010)			4 bytes	С	-	W	Т	U	active energy (Wh)	Low
295	Page7-Energy Meter 1	Active energy in kWh (DPT 13.013)			4 bytes	С	-	W	T.	U	active energy (kWh)	Low
295	Page7-Energy Meter 1	Active energy in kWh (DPT 13.013)			4 bytes	c	-	W	T	U	active energy (kWh)	

### Note

### Page number x range: 1...15, energy meter number range 1...8

No.	Name	Object function	Length	Flag	Data type						
246	Page x-Energy Meter 1	Current in mA (DPT 7.012)	2 bytes	CWTU	7.012 current (mA)						
Receives the current value from the bus and update it to the screen display. The display range is 065535 mA, and the resolution is 1 mA.											
247	Pagex-Energy Meter 2	Current in mA (DPT 9.021)	2 bytes	CWTU	9.021 current (mA)						
Receives the currer is 0.01 mA.	Receives the current value from the bus and update it to the screen display. The display range is -670760670760 mA, and the resolution is 0.01 mA.										
248	Pagex-Energy Meter 3	Current in A (DPT 14.019)	4 bytes	CWTU	14.019 electric current (A)						
Receives the currer resolution is 0.1 A.	nt value from the bus	and update it to the screen	display. The display	range is -999999999	99999999999999999999999999999999999						
249	Pagex-Energy Meter 4	Voltage in mV (DPT 9.020)	2 bytes	CWTU	9.020 voltage (mV)						
Receives voltage va resolution is 0.01 m	alues from the bus ar V.	nd update them to the scree	en display. The displa	ay range is -670760m	V670760 mV, and the						
250	Pagex-Energy Meter 5	Voltage in V (DPT 14.027)	4 bytes	CWTU	14.027 electric potential (V)						
Receives voltage va resolution is 0.1 V.	alues from the bus ar	nd update them to the scree	en display. The displa	ay range is: -999999	199.9999999999.9 V, and the						
251	Pagex-Energy Meter 6	Power in W (DPT 14.056)	4 bytes	CWTU	14.056 power (W)						
Receives the power the resolution is 0.1	r values from the bus W.	and update them to the sc	reen display. The dis	play range is-999999	999.9 99999999.9 W, and						
252	Pagex-Energy Meter 7	Power in kW (DPT 9.024)	2 bytes	CWTU	9.024 power (kW)						
Receives the power values from the bus and update them to the screen display. The display range is -670760670760 kW, and the resolution is 0.01 kW.											

No.	Name	Object function	Length	Flag	Data type				
253	Pagex-Energy Meter 8	Active energy in Wh (DPT 13.010)	4 bytes	СМТИ	13.010 active energy (Wh)				
Receives the electrical values from the bus and update them to the screen display. The display range is : -21474836482147483647 Wh, and the resolution is 1 Wh.									
295	Page x-Energy Meter 1	Active energy in kWh (DPT 13.013)	4 bytes	CWTU	13.013 active energy (kWh)				
Receives the electri kWh, and the resolu	ical values from the b ution is 1 kWh.	bus and update them to the	screen display. The	display range is : -21	474836482147483647				

# 3.3.8 "Page x - Color and color temperature control" parameters and communication objects

### **Parameters**

Assign "Page x" as a single function –"Color and color temperature control" page.

#### RGB

+ General	Description/ Headline of the page			
+ Home page	Page function	Color and color temperature control	•	
	Lighting type	RGB		
<ul> <li>Function page</li> </ul>		Send switch object value off		
Page 1-	Reaction on "off "operation	Send RGBW objects value off		
Page 6-	RGB data type	1x3byte 3x1byte		
Temperature Sensor				

#### RGBW

+ General	Description/ Headline of the page			
+ Home page	Page function	Color and color temperature control	•	
	Lighting type	RGBW	•	
- Function page		Send switch object value off		
Page 1-	Reaction on "off "operation	Send RGBW objects value off		
Page 6-	RGBW data type	1хбbyte	•	
Temperature Sensor				

#### **RGBW+Color Temperature**

+ General	Description/ Headline of the page					
+ Home page	Page function	Color and color temperature control	,			
E a dia ana	Lighting type	RGBW+Color Temperature				
Page 1-	Reaction on "off "operation	Send switch object value off Send RGBW objects value off				
Page 6-	RGB data type	1x3byte 3x1byte				
Temperature Sensor	Min. color temperature [20007000]	2700	+	k		
	Max. color temperature [20007000]	6500	÷	k		

Name		Description	Range
Descrij	otion/Headline of the page	<ul> <li>Names the "Function page x".</li> <li>Note:</li> <li>Supports multiple languages. To display properly on screen, set "Codepage" to "Unicode (UTF-8)". Refer to Language in display in Parameter and communication objects [→ 52].</li> <li>Approximately 12 characters can be displayed. It depends on the width of the single character as the space is limited on the display.</li> </ul>	15byte text
Page f	unction	Configures the type of function page. Note: Pages 15 multifunction only; pages 615 can be either multifunction or single functions.	Multifunction (Lighting/Blind/Scene/Send value/Display) General temperature control Enhanced floor heating VRF Interface & Operation Ventilation System Air Quality display Energy Metering display Color and color temperature control Audio control
Lightin	g type	Sets the RGB type	RGB (default) RGBW
		R: red; G: green; B: blue; W: white	RGBW+Color Temperature
Reaction	on on "off "operation	Defines the action during "off" operation.	Send switch object value off (default) Send RGBW objects value off
The fol	lowing parameter displays when "R	RGB" or "RGBW+Color Temperature" is selected.	
{	RGB data type	Sets the object type of RGB.	1X3byte (default) 3X1byte
The fol	lowing parameter displays when "F	RGBW" is selected.	
{	RGBW data type	Sets the object type of RGBW.	1X6byte (default) 4X1byte 3byte+1byte
The fol	lowing parameters display when "F	RGBW+Color Temperature" is selected.	
Ş	Min. color temperature [20007000]	Defines minimum color temperature value.	20007000 K (default: 2700)
	Max. color temperature [20007000]	Defines maximum color temperature value.	20007000 K (default: 6500)

# **Communication objects**

# Note

Page number x range: 1...15

# RGB_1x3byte

N	lumber *	Name	Object Function	Description	Group Address	Length	С	R	W	Т	U	Data Type	Priority
■‡ 24	46	Page 6-	RGB dimming value			3 bytes	С	-	-	Т	-	RGB value 3x(0255)	Low
■2 25	52	Page 6-	Status RGB brightness			3 bytes	С	-	W	Т	U	RGB value 3x(0255)	Low
∎‡ 25	58	Page 6-	Switching			1 bit	С	-	-	Т	-	switch	Low
■₹ 25	59	Page 6-	Status switching			1 bit	С	-	W	Т	U	switch	Low
■‡ 29	94	Page 6-	Lock			1 bit	С	-	W	-	-	enable	Low

### RGB_3x1byte

Number	* Name	Object Function	Description	Group Address	Length	С	R	w	т	U Data Type	Priority
■246	Page 6-	Red dimming value			1 byte	С	÷	-	Т	<ul> <li>percentage (0100%)</li> </ul>	Low
■2 247	Page 6-	Green dimming value			1 byte	С	-	-	Т	- percentage (0100%)	Low
■248	Page 6-	Blue dimming value			1 byte	С	-	-	Т	<ul> <li>percentage (0100%)</li> </ul>	Low
<b>■2</b> 52	Page 6-	Status red brightness			1 byte	С	-	W	Т	U percentage (0100%)	Low
<b>■2</b> 53	Page 6-	Status green brightness			1 byte	С		W	Т	U percentage (0100%)	Low
■254	Page 6-	Status blue brightness			1 byte	С	÷	W	Т	U percentage (0100%)	Low
■258	Page 6-	Switching			1 bit	С	-	-	Т	- switch	Low
■259	Page 6-	Status switching			1 bit	С	-	W	Т	U switch	Low
■2 294	Page 6-	Lock			1 bit	С	-	W	-	- enable	Low
■ <b>2</b> 259 ■ <b>2</b> 294	Page 6- Page 6-	Status switching Lock			1 bit 1 bit	C C	-	W	т -	U switch - enable	Low Low

# RGBW _1x6byte

				,									
	Number	Name	Object Function	Description	Group Address	Length	С	R	w	т	U	Data Type	Priority
<b>.</b>	246	Page 6-	RGBW dimming value			6 bytes	С	-	-	Т	-	RGBW value 4x(0100%)	Low
<b>.</b>	252	Page 6-	Status RGBW brightness			6 bytes	С	-	W	Т	U	RGBW value 4x(0100%)	Low
<b>.</b>	258	Page 6-	Switching			1 bit	С	-	-	Т	-	switch	Low
<b>1</b>	259	Page 6-	Status switching			1 bit	С	-	W	Т	U	switch	Low
<b>.</b>	294	Page 6-	Lock			1 bit	С	-	W	-	-	enable	Low

### RGBW _3byte+1byte

					,								
	Number	* Name	Object Function	Description	Group Address	Length	С	R	w	т	U	Data Type	Priority
<b>.</b>	246	Page 6-	RGB dimming value			3 bytes	С	-	-	Т	-	RGB value 3x(0255)	Low
<b>1</b>	249	Page 6-	White dimming value			1 byte	C	-	-	Т	-	percentage (0100%)	Low
<b>.</b>	252	Page 6-	Status RGB brightness			3 bytes	С	-	W	Т	U	RGB value 3x(0255)	Low
<b>.</b>	255	Page 6-	Status white brightness			1 byte	С	-	W	Т	U	percentage (0100%)	Low
<b>.</b>	258	Page 6-	Switching			1 bit	С	-	-	Т	-	switch	Low
<b>.</b> ⊉	259	Page 6-	Status switching			1 bit	C	-	W	Т	U	switch	Low
<b>.</b>	294	Page 6-	Lock			1 bit	С	-	W	-	-	enable	Low

### RGBW _4x1byte

Number	News	Oblect Function	Description	Corres Address	1	6		14/	<b>T</b>		Data Tura	Detector
Number	Name	Object Function	Description	Group Address	Length	C	ĸ	vv	1	U	Data Type	Priority
246	Page 6-	Red dimming value			1 byte	С	-	-	Т	- 1	percentage (0100%)	Low
247	Page 6-	Green dimming value			1 byte	С	-	-	Т	- 1	percentage (0100%)	Low
<b>■</b> 248	Page 6-	Blue dimming value			1 byte	С	-	-	Т	- 1	percentage (0100%)	Low
<b>2</b> 49	Page 6-	White dimming value			1 byte	С	-	-	Т	- 1	percentage (0100%)	Low
252	Page 6-	Status red brightness			1 byte	С	-	W	Т	U	percentage (0100%)	Low
253	Page 6-	Status green brightness			1 byte	С	-	w	Т	U	percentage (0100%)	Low
■254	Page 6-	Status blue brightness			1 byte	С	-	w	Т	U	percentage (0100%)	Low
■2 255	Page 6-	Status white brightness			1 byte	С	-	w	т	U	percentage (0100%)	Low
■258	Page 6-	Switching			1 bit	С	-	-	Т		switch	Low
<b>■2</b> 59	Page 6-	Status switching			1 bit	С	-	w	Т	U s	switch	Low
294	Page 6-	Lock			1 bit	С	-	w	-	- (	enable	Low

### RGBW+Color temperature_1x3byte

Number	* Name	Object Function	Description	Group Address	Length	с	R	w	т	U	Data Type	Priority
■2 246	Page 6-	RGB dimming value			3 bytes	С	-	-	Т	-	RGB value 3x(0255)	Low
<b>■2</b> 50	Page 6-	Brightness value			1 byte	С	-	-	т	-	percentage (0100%)	Low
251	Page 6-	Color temperature value			2 bytes	С	-	-	Т	- 3	absolute colour temperature (K	Low
■ <b>2</b> 252	Page 6-	Status RGB brightness			3 bytes	С	-	W	Т	U	RGB value 3x(0255)	Low
<b>■2</b> 56	Page 6-	Status brightness			1 byte	С	-	W	Т	U	percentage (0100%)	Low
257	Page 6-	Status color temperature value			2 bytes	С	-	W	т	U	absolute colour temperature (K	Low
■258	Page 6-	Switching			1 bit	С	-	-	Т	- :	switch	Low
259	Page 6-	Status switching			1 bit	С	-	W	Т	U :	switch	Low
<b>2</b> 94	Page 6-	Lock			1 bit	С	-	W	-		enable	Low

### RGBW+Color temperature_3x1byte

Number 4	Name	Object Function	Description	Group Address	Length	С	R	W	т	U	Data Type	Priority
246	Page 6-	Red dimming value			1 byte	С	-	-	Т	- 1	percentage (0100%)	Low
■247	Page 6-	Green dimming value			1 byte	С	-	-	Т	- 1	percentage (0100%)	Low
■248	Page 6-	Blue dimming value			1 byte	С	-	-	Т	- 1	percentage (0100%)	Low
<b>■‡</b> 250	Page 6-	Brightness value			1 byte	С	-	-	T.	- 1	percentage (0100%)	Low
<b>■2</b> 51	Page 6-	Color temperature value			2 bytes	С	-	-	Т	- a	absolute colour temperature (K)	Low
■252	Page 6-	Status red brightness			1 byte	С	-	W	Т	U	percentage (0100%)	Low
253	Page 6-	Status green brightness			1 byte	С	-	W	Т	U	percentage (0100%)	Low
254	Page 6-	Status blue brightness			1 byte	С	-	W	Т	U p	percentage (0100%)	Low
256	Page 6-	Status brightness			1 byte	С	-	W	Т	U	percentage (0100%)	Low
■257	Page 6-	Status color temperature value			2 bytes	С	-	W	Т	U a	absolute colour temperature (K)	Low
258	Page 6-	Switching			1 bit	С	-	-	Т	- 9	switch	Low
259	Page 6-	Status switching			1 bit	С	-	W	Т	U s	switch	Low
294	Page 6-	Lock			1 bit	С	-	W	-	- 6	enable	Low

No.	Name	Object function		Length	Flag	Data type
246	Page x-	RGB dimming val	lue	3 bytes	СТ	232.600 RGB value 3x
252		Status RGB brigh	ntness		CWTU	(0255)
Theses con or 1x3byte temperatur	mmunication objects display w is selected for RGBW+Color t re.	/hen 1x3byte is sel temperature object	lected for the t type. They c	RGB object type, 3b ontrol brightness of n	yte+1byte is sel nultiple-color la	ected for RGBW object type mps and adjust color
Objec	t 246 sends the brightness val	ue for the RGB thr	ree-color lamp	o to bus.		
Objec     Byte Cor	t 252 receives the brightness v	value of the RGB th	hree-color lar	np from bus.		
J-Dyle Col		2	0, as ionows.	2	1	]
		R R		G	B	
		υυυυυυυ		υυυυυυυ	υυυυυυυ	
R: red dim	ming value; G: green dimming	value; B: blue dim	nming value; N	MSB: most significant	t bit; LSB: least	significant bit.
246	Page x-	RGBW dimming v	value	6 bytes	СТ	251.600 RGBW value
252		Status RGBW brig	ghtness		CWTU	4x(0100 %)
The comm <ul> <li>Objec</li> <li>Objec</li> </ul>	unication objects display wher t 246 sends the brightness val t 252 receives the brightness v of the data type of the 6-byte F	n 1x6byte is selecte lue for the RGBW f value of the RGBW RGBW dimming obj	ed for the RG four-color lam V four-color la ject: U8 U8 U	BW object type. They up to bus. upp from bus. 8 U8 R8 R4 B4, as fo	y control brightr ollows:	ness of multiple <i>-</i> color lamps.
	6 _{мѕв}	5 4		3	2	1 _{LSB}
	R	G B		W	Reserve	rrrmRmGmBmW
		000000000000				0000BBBB
significant green dimr mW: Deter	bit; r: reserved; mR: determine ning value is valid, 0 = invalid, mines whether the white dimn	es whether the red 1 = valid; mB: deten ning value is valid,0	dimming value dimming value ermines whet 0 = invalid,1 =	e, B. blue dimining va ue is valid, 0 = invalid her the blue dimming valid.	, 1 = valid; mG: y value is valid,	determines whether the 0 = invalid, 1 = valid;
246	Page x-	Red dimming valu	ue	1 byte	СТ	5.001 percentage (0100%)
252		Status red brightn	ness		CWTU	
The comm 3x1byte is temperatur • Objec • Objec	unication objects display wher selected for RGBW+Color ten re. Telegram value: 0100 % t 246 sends the brightness val t 252 receives the brightness v	n 3x1byte is selecte nperature object typ lue of R (red) to bu value of R (red).	ed for the RG pe. They cont is.	B object type, 4x1byl trol brightness of mul	te is selected fo tiple-color lamp	r RGBW object type or s and adjust color
247	Page x-	Green dimming v	alue	1 byte	СТ	5.001 percentage (0100%)
253		Status green brig	htness		CWTU	
The comm 3x1byte is temperatur • Objec • Objec	unication objects display wher selected for RGBW+Color ten re. Telegram value: 0100 % t 247 sends the brightness val t 253 receives the brightness v	n 3x1byte is selecte nperature object typ ue of G (green) to value of G (green).	ed for the RG pe. They cont bus.	B object type, 4x1byl trol brightness of mul	te is selected fo tiple-color lamp	r RGBW object type or s and adjust color
248	Page X-	Blue dimming value		1 byte	CT	5,001 perceptage (0, 100%)
254		Status blue bright	tnoss	T byte	CWTU	0.001 percentage (0 10070)
Z04		Status blue blight	ad for the PC	Pablaat tuna dividud		r BCBW/ object type or
<ul> <li>ax1byte is temperatur</li> <li>Objec</li> </ul>	unication objects display when selected for RGBW+Color ten re. Telegram value: 0100 % t 248 sends the brightness val	n 3x1byte is selected nperature object typ ue of B (blue) to bu	ed for the RG pe. They conf us.	B object type, 4x1by	te is selected to tiple-color lamp	r RGBW object type or s and adjust color
240			alue	1 byte	СТ	5.001 perceptage (0 $1000$ )
249	гауе х-	Otatus until di Chatus		i byte		5.00 i percentage (0 100%)
255		Status white brigh	ntness		CWIU	
The comm multiple-co • Objec • Objec	unication objects display wher lor lamps. Telegram value: 0 t 249 sends the brightness val t 255 receives the brightness v	n 3byte+1byte or 43 .100 % lue of W (white) to value of W (white).	x1byte is sele	ected for the RGBW c	bbject type. The	y control brightness of

		<b></b>										
No.	Name	Object function	Length	Flag	Data type							
250	Page x-	Brightness value	1 byte	СТ	5.001 percentage (0100%)							
256		Status brightness		CWTU								
The comm lamps. Tel	unication objects display for th egram value: 0100 %	e RGBW+Color temperature ol	oject type. They cont	rol brightness of	f single-color and bi-color							
Objec	t 250 sends the brightness val	ue for the lamp to bus.										
Objec	t 256 receives the brightness	alue of the lamp from bus.										
251	Page x-	Color temperature value	2 bytes	СТ	7.600 absolute color							
257	-	Status color temperature value		CWTU	temperature (K)							
<ul><li>color lamp</li><li>Object</li><li>Object</li></ul>	<ul> <li>Object 251 sends the color temperature control value for the lamp from bus.</li> <li>Object 257 receives the color temperature control value of the lamp from bus.</li> </ul>											
258	Page x-	Switching	1 bit	СТ	1.001 switch							
259		Status switching	-	CWTU								
Controls li 0: Off 1: On • Object	ght switch. Telegram value: t 258 sends on/off control tele	gram for light to bus.										
Object	t 259 receives status feedbacl	of on/off control from bus.										
294	Page x-	Lock	1 bit	CW	1.003 enable							
Receives t 0: Lock 1: Unlock <b>Note</b> : Duri	he telegram of lock from bus.	Telegram value:										

# 3.3.9 "Page x - Audio control" parameters and communication objects

### **Parameters**

Assign "Page x" as a single function –"Audio control" page.

When function is enabled, the objects for audio control are visible, such as Off/On, play/pause, volume, previous song/next song, play mode, album name, track name, artist name, etc. The music could be sourced from USB/SD/AUX/FM/BT. For some of the music sources, a gateway is needed.

+ General	Description/ Headline of the page	
+ Home page	Page function	Audio control
= Eunction page	Power on/off	<b>~</b>
- Function page	Device behavior after download	Off On
Page 1-	Device behavior after voltage recovery	As before voltage failure
Page 6-	Number of objects for play/pause control	
Temperature Sensor	Number of objects for next/previous track	
	control	O One object Two objects
	Control mode of volume adjustment	1Bit (relative control)     1Byte (absolute control)
	Mute	
	Track name	✓
	Artist name	$\checkmark$
	Album name	✓
	Play mode	✓
	Predefined value for Play mode	
	Predefined value for single cycle	0
	Predefined value for random play	1
	Predefined value for playlist cycle	2
	Predefined value for play in order	3

Name	Description	Range
Description/Headline of the page	<ul> <li>Names the "Function page x".</li> <li>Note:</li> <li>Supports multiple languages. To display properly on screen, set "Codepage" to "Unicode (UTF-8)". Refer to Language in display in Parameter and communication objects [→ 52].</li> <li>Approximately 12 characters can be displayed. It depends on the width of the single character as the space is limited on the display.</li> </ul>	15byte text
Page function	Configures the type of function page. <b>Note:</b> Pages 15 multifunction only; pages 615 can be either multifunction or single functions.	Multifunction (Lighting/Blind/Scene/Send value/Display) General temperature control Enhanced floor heating VRF Interface & Operation Ventilation System Air Quality display Energy Metering display Color and color temperature control Audio control
Power On/Off	Selects power on or off.	Disable Enable (default)

"Function page"

Name		Description	Range					
The fol	lowing parameters display when "P	ower On/Off" is enabled.						
ſ	Device behavior after download	Sets on/off status of audio function after the application is	Off					
J		downloaded	On (default)					
	Device behavior after voltage	Sets if the device is powered on/off after voltage recovery.	Off					
	lecovery		On					
Ni una ha a			As before voltage failure (default)					
Number of objects for play/pause control		Sets object number for play and pause control.	Two objects					
Number of objects for next/previous track control		Sets object number for next/previous control.	One object (default) Two objects					
Contro	I mode of volume adjustment	Sets control mode of volume adjustment.	1Bit (relative control) (default) 1Byte (absolute control)					
The fol	lowing parameters display when "1	Bit (relative control)" is selected.						
ſ	Mute	Iute Enables or disables mute function.						
Į	The following parameters display when "1Byte (absolute control)" is selected.							
	Object datatype	Sets object data type.	Percentage (DPT_5.001) Percentage (DPT_5.004)					
	Max. volume value [10100]	Sets maximum volume.	10100 % (default: 100 %)					
Track ı	name	Enables or disables track name function.	Disable (default) Enable					
Artist n	ame	Enables or disables artist name function.	Disable (default) Enable					
Album	name	Enables or disables Album name function.	Disable (default) Enable					
Play m	ode	Enables or disables play mode function.	Disable Enable (default)					
The fol	lowing parameters display when "P	lay mode" is enabled.						
$\left( \right)$	Predefined value for Play mode							
	Predefined value for single cycle	Defines predefined value for single cycle.	0255 (default: 0)					
2	Predefined value for random play	Defines predefined value for random play.	0255 (default: 1)					
	Predefined value for playlist cycle	Defines predefined value for play list cycle.	0255 (default: 2)					
	Predefined value for play in order	Defines predefined value for play in order.	0255 (default: 3)					

# Communication objects

Nu	mber * Name	Object Function	Description	Group Address	Length	c	R	W	Т	U	Data Type	Priority
246	Page 6- (send)	Power On/Off			1 bit	С	-	-	Т	-	switch	Low
249	Page 6- (send)	Absolute volume			1 byte	С	-	÷	Т	-	percentage (0100%)	Low
250	Page 6- (send)	Play mode			1 byte	С	-	-	Т	-	counter pulses (0255)	Low
251	Page 6- (receive)	Play mode			1 byte	С	-	W	Т	U	counter pulses (0255)	Low
253	Page 6- (receive)	Power On/Off			1 bit	С	-	W	Т	U	switch	Low
255	Page 6- (receive)	Absolute volume			1 byte	С	-	W	Т	U	percentage (0100%)	Low
258	Page 6- (receive/send)	Track name			14 bytes	С	-	W	Т	U	Character String (ISO 8859-1)	Low
259	Page 6- (receive/send)	Album name			14 bytes	С	-	W	Т	U	Character String (ISO 8859-1)	Low
260	Page 6- (receive/send)	Artist name			14 bytes	С	-	W	Т	U	Character String (ISO 8859-1)	Low
261	Page 6- (send)	Play			1 bit	С	-	-	Т	-	trigger	Low
262	Page 6- (send)	Pause			1 bit	С	-	-	Т	-	trigger	Low
263	Page 6- (receive)	Play			1 bit	С	-	W	Т	U	trigger	Low
264	Page 6- (receive)	Pause			1 bit	С	-	W	Т	U	trigger	Low
265	Page 6- (send)	Next track			1 bit	С	-	÷	Т	-	trigger	Low
266	Page 6- (send)	Previous track			1 bit	C	-	1	Т	-	trigger	Low
247	Page 6- (send)	Play=1/Pause=0			1 bit	С	-	-	т	-	start/stop	Low
∎₽ 248	Page 6- (send)	Next track=1/Previous track=0			1 bit	С	-	-	Т	-	step	Low
<b>1</b> 252	Page 6- (send)	Volume+=1/Volume-=0			1 bit	С	-	-	Т	-	step	Low
254	Page 6- (receive)	Play=1/Pause=0			1 bit	С	-	W	Т	U	start/stop	Low
256	Page 6- (send)	Mute			1 bit	С	-	-	Т	-	enable	Low
257	Page 6- (receive)	Mute			1 bit	C	÷	W	Т	U	enable	Low

### Page number x range: 1...15

No.	Name	Object function	Length	Flag	Data type						
246	Page x- (send)	Power On/Off	1 bit	СТ	1.001 switch						
Sends the backgroun 0: Off 1: On	nd music on/off contro	olling telegram to the bus, to	control the power of	the audio module. Te	legram value:						
247	Page x- (send)	Play=1/Pause=0	1 bit	СТ	1.010 start/stop						
Displays when "One Plays/stops the mus 0: Pause playing mu 1: Play music	Displays when "One object" is selected. Plays/stops the music in the audio module. Telegram value: 0: Pause playing music 1: Play music										
248	Page x- (send)	Next track=1/Previous track=0	1 bit	СТ	1.007 step						
Displays when "One	object" is selected.										
Switches the audio r 0: Play the previous 1: Play the next song	nodule to previous so song J	ng/next song. Telegram val	ue:								
249	Page x- (send)	Absolute volume	1 byte	СТ	5.001 percentage 5.004 percentage						
Displays when parar Adjusts the audio vo	neter "Control mode lume. Telegram value	of volume adjustment" is set is based on different data t	to "1Byte (absolute o ype: 0100 % / 02	control)". 55.							
250	Page x- (send)	Play mode	1 byte	СТ	5.010 counter pulses (0255)						
Sends the control te	Sends the control telegram of the background music playing mode, the telegram value of the different modes is preset by parameter.										
251	Page x- (receive)	Play mode	1 byte	CWTU	5.010 counter pulses						
Receives feedback of	of play mode from bus	s. The received telegram mu	ist be defined by para	meters.							
252	Page x- (send)	Volume+=1/Volume-=0	1 bit	СТ	1.007 step						
Displays when parar	neter "Control mode	of volume adjustment" is set	as "1Bit (relative cor	itrol)".							
Adjusts the audio vo 0: Decrease volume 1: Increase volume	lume. Telegram value	): 									
253	Page x- (receive)	Power On/Off	1 bit	CWTU	1.001 switch						
Receives feedback f 0: Off 1: On	rom the switch status	of the audio on the bus. Te	legram value:								
254	Page x- (receive)	Play=1/Pause=0	1 bit	CWTU	1.010 start/stop						
Displays when "One Receives feedback o 0: Pause playing mu 1: Play music	object" is selected. of play/stop music in t sic	he audio module. Telegram	value:								
255	Page x- (receive)	Absolute volume	1 byte	CWTU	5.001 percentage 5.004 percentage						
Displays when parar	neter "Control mode	of volume adjustment" is set	as "1Byte (absolute	control)".							
Receives feedback of	on audio volume. Tele	egram value depends on diff	erent data type: 01	00 % / 0255.							
256	Page x- (send)	Mute	1 bit	СТ	1.003 enable						
Displays when parar Sends audio mute re	neter "Control mode e equest to bus.	of volume adjustment" is set	as "1Bit (relative cor	trol)" and mute is ena	abled.						
257	Page x- (receive)	Mute	1 bit	CWTU	1.003 enable						
Displays when parameter "Control mode of volume adjustment" is set as "1Bit (relative control)" and mute is enabled. Receives feedback of audio mute.											

3

No.	Name	Object function	Length	Flag	Data type				
258	Page x- (receive/send)	Track name	14 bytes	СМТИ	16.001 character string (ISO 8859-1)				
Receives track name	e from bus and displa	ys on HMI.							
259	Page x- (receive/send)	Album name	14 bytes	СМТИ	16.001 character string (ISO 8859-1)				
Receives album nan	ne from bus and displ	ays on HMI.							
260	Page x- (receive/send)	Artist name	14 bytes	СМТИ	16.001 character string (ISO 8859-1)				
Receives artist name	e from bus and displa	ys on HMI.							
261	Page x- (send)	Play	1 bit	СТ	1.003 enable				
Displays when "Two objects" is selected. Plays music in the audio module. Telegram value: 1: Play									
262	Page x- (send)	Pause	1 bit	СТ	1.003 enable				
Displays when "Two Stops music in the a 1: Stop	objects" is selected. udio module. Telegra	ım value:							
263	Page x- (receive)	Play	1 bit	CWTU	1.003 enable				
Displays when "Two Receives feedback o 1: Play	objects" is selected. of audio play. Telegra	m value:							
264	Page x- (receive)	Pause	1 bit	CWTU	1.003 enable				
Displays when "Two Receives feedback o 1: Stop	objects" is selected. of audio pause. Teleg	ram value:							
265	Page x- (send)	Next track	1 bit	СТ	1.003 enable				
Displays when "Two Switches to next sor 1: Next	objects" is selected. ng. Telegram value:								
266	Page x- (send)	Previous track	1 bit	СТ	1.003 enable				
Displays when "Two Switches to previous 1: Previous	objects" is selected. song. Telegram valu	le:							

# 3.4 "Temperature sensor"

### **Sensor parameters**

Sensor parameters configure the internal sensor (built-in temperature sensor). Built-in temperature sensor:

- NTC 100K
- The sensor is located at the bottom of the device inside the metal frame.

+ General	Internal sensor	
+ Home page	Offset to measured value	0.0 👻 K
+ Function page	Change of actual temperature value for automatic sending [010]	1.0K <b>•</b>
Temperature Sensor	Cycle time for automatic sending of the actual temperature value [0255]	10 🗘 Minutes
	Send error status of internal sensor	<ul> <li>Send status on request</li> <li>Send status on change</li> </ul>
	Error status object meaning	0=no error/1=error     1=no error/0=error

Name	Description	Range
Internal sensor	Built-in temperature sensor configuration	
Offset to measured value	Permits on-site temperature adjustment to synchronize with reference.	-1010 K (default: 0 K)
Change of actual temperature value for automatic sending	Configures the temperature change, after which the device sends the current temperature value to bus.	1…10K (default: 1.0K) Disable
	The temperature is not sent for "Disable".	
Cycle time for automatic sending of the actual temperature value [0255]	Configures the time interval in minutes after which the device sends the internal temperature value to the bus. This action is independent of the "Change of actual temperature value for automatic sending" defined above. Automatic sending starts immediately after programming or reset.	0255 min (default: 10)
Send error status of internal sensor	Defines how the error status is reported when built-in sensor fails.	Send status on request Send status on change (default)
Error status object meaning	<ul> <li>Defines the meaning of the object value</li> <li>Built-in sensor failure definition: When the temperature value exceeds the range of -20 °C+ 60 °C, it's considered as sensor failure.</li> <li>Communication failure caused by built-in sensor hardware issue.</li> </ul>	0=no error/1=error (default) 1=no error/0=error

# **Communication objects**

Number	* Name	Object Function	Description	Group Address	Length	С	R	w	т	U	Data Type	Priority
<b>■2</b> 912	Internal sensor	Temperature value (°C)			2 bytes	С	R	-	Т	-	temperature (°C)	Low
<b>2</b> 913	Internal sensor	Temp.correction(-1010)K			2 bytes	С	-	W	-	-	temperature difference (K)	Low
■2 914	Internal sensor	Temp.error report			1 bit	C	R	-	Т	-	alarm	Low

No.	Name	Object function	Length	Flag	Data type				
912	Internal	Temperature value (°C)	2 bytes	CRT	9.001 temperature (°C)				
	sensor								
Transn	Transmits the temperature value detected by the built-in temperature sensor to bus. Range: -5099.8 $^{\circ}\mathrm{C}$								
913	Internal	Temp.correction (-1010) K	2 bytes	CW	9.002 temperature difference				
	sensor		-						
Correc	ts the tempera	ature measured value of the built-in temperature	sensor via bus	S.					
914	Internal	Temp. error report	1 bit	CRT	1.005 alarm				
	sensor								

Sends the error report of the built-in temperature sensor, and the object value is defined according to the parameter.

# 3.5 "Human centric lighting"

### Parameters

-	General	Daily switching time	O Absolute time C Relative to sunrise & sunset	t
	General setting	HCL behavior after voltage recovery	Stop running	•
	Coordinates location setting	HCL behavior when receiving switch control telegram "Off"	◎ Ignore, and keep runing ○ Stop running	
	Summer time setting	HCL behavior when receiving other control telegram from bus	Ignore, and keep runing	•
	Proximity sensor	Control brightness via HCL	✓	
	Addited setting	Time 1	$\checkmark$	
+	Home page	Absolute time	06:00	•
+	Function page	Color temperature [20007000]	2700	K
	Temperature Sensor	Brightness in	50 -	%
		Time 2	✓	
	Human Centric Lighting	Absolute time	08:00	•
+	Timer function	Color temperature [20007000]	4000	; <mark>к</mark>
	Alarm	Brightness in	100 -	%
		Time 3	✓	
	Logic operations	Absolute time	10:00	•
+	Scene Control	Color temperature [20007000]	5000	; <b>K</b>
		Brightness in	100 -	%
		Time 4	✓	
		Absolute time	12:00	•
		Color temperature [20007000]	6500	K
		Brightness in	100 -	%
		Time 5	✓	
		Absolute time	14:00	•
		Color temperature [20007000]	5000	; <b>K</b>
		Brightness in	100 -	%
		Time 6	✓	
		Absolute time	16:00	•
		Color temperature [20007000]	2700	; <b>K</b>
		Brightness in	100 -	%
		Time 7		

Name	Description	Range
Daily switching time	Defines method of daily time switching.	Absolute time (default) Relative to sunrise & sunset
HCL behavior after voltage recovery	Defines human centric lighting (HCL) behavior after power returns.	Start running Stop running (default) As before voltage failure
HCL behavior when receiving switch control telegram "Off"	Defines HCL behavior when switch control telegram "Off" is received.	lgnore, and keep running (default) Stop running
HCL behavior when receiving other control telegram from bus	Defines HCL behavior when other control telegram is received from bus.	Ignore, and keep running (default) Ignore, but stop running Update preset value, and keep running Update preset value, and stop running
Control brightness via HCL	Enables or disables brightness control via HCL.	Disable (default) Enable

"Human centric lighting"

Name		Description	Range	
Time x		Enables or disables time x. x = 110	Disable Enable (default)	
The fol	lowing parameter displays when "T	e time".		
	Absolute time	Defines time for changing the color temperature.	00:00 01:00 02:00  23:00	
The fol	lowing parameters display when "T	īme x" is enabled.		
(	Color temperature [20007000]	Defines color temperature.	20007000 K	
ł	Brightness in %	Defines preset brightness value. Only displays if "Control brightness via HCL" is enabled.	0 % 5 % 10 %  95 % 100 %	
The fol	lowing parameter displays when "T	ime x" is enabled and "Daily switching time" is set as "Relative	to sunrise & sunset".	
	Relative time	Defines time switching form.	Sunrise -5h Sunrise -4hSunrise -1h Sunrise -30min Sunrise +-0min Sunrise +30min Sunrise +1hSunrise +5h Sunset -5h Sunset -4hSunset -1h Sunset -4hSunset -1h Sunset +0min Sunset +-0min Sunset +1hSunset +5h	

# Communication objects

Number	* Name	Object Function	Description	Group Address	Length	С	R	W	Т	U	Data Type	Priority
<b>2</b> 938	Human Centric Lighting(HCL)	Start HCL			1 bit	С	-	W	÷	-	start/stop	Low
<b>2</b> 939	Human Centric Lighting(HCL)	Status HCL			1 bit	С	R	-	Т	-	state	Low
■之 940	Human Centric Lighting(HCL)	Brightness value			1 byte	C	-	-	Т	-	percentage (0100%)	Low
<b>■‡</b>  941	Human Centric Lighting(HCL)	Color temperature value			2 bytes	С	-	-	Т	-	absolute colour temperature (K)	Low
<b>4</b> 945	Human Centric Lighting(HCL)	Brightness control value			1 byte	С	-	W	-	-	percentage (0100%)	Low
■2 946	Human Centric Lighting(HCL)	Color temperature control value			2 bytes	С	-	W	-	-	absolute colour temperature (K)	Low

No.	Name	Object function	Length	Flag	Data type				
938	Human Centric Lighting (HCL)	Start HCL	1 bit	CW	1.010 start/stop				
Starts or stops human centric lighting (HCL) function. Telegram value: 0: Stop 1: Start									
939	Human Centric Lighting (HCL)	Status HCL	1 bit	CRT	1.011 state				
Sends HCL status to	o bus.								
940	Human Centric Lighting (HCL)	Brightness value	1 byte	СТ	5.001 percentage (0100%)				
Sends brightness va	alue to bus. Telegram	value: 0100 %							
941	Human Centric Lighting (HCL)	Color temperature value	2 bytes	СТ	7.600 absolute color temperature				
Sends color temper	ature value to bus. To	elegram value: 20007000	К						
944	Human Centric Lighting (HCL)	Switching control	1 bit	CW	1.001 switch				
Receives telegram '	'0" (Off) from bus to s	stop HCL.							
945	Human Centric Lighting (HCL)	Brightness control value	1 byte	CW	5.001 percentage (0100%)				
Receives brightness	s control value from b	ous. Telegram value: 0100	) %						
946	Human Centric Lighting (HCL)	Color temperature control value	2 bytes	CW	7.600 absolute color temperature				
Receives color temperature control value from bus. Telegram value: 20007000 K									

# 3.6 "Timer function"

#### Parameters

+	General	Timer 1	✓
+	Home page	Timer 2	
+	Function page		
	Temperature Sensor		
	Human Centric Lighting		
-	Timer function		
	Timer function 1		
	Alarm		
+	Logic operations		
+	Scene Control		

Name	Description	Range
Timer 1Timer 16	Displays a separate timer options page when enabled. You can set the timer function that is used for each specific timer.	Enable Disable

# 3.6.1 "Timer Function x" parameters and communication objects

# Parameters

+	General	Descriptio	Description of timer function							
+	Home page	Overwrite the timer function setting during download								
+	Function page	Data size o	Data size of timer function Data type			1byte				•
	Temperature Sensor	Data type				1byte un	•			
		Predefined value [0255]		127		÷				
	Human Centric Lighting	Timer disable function			Disable	•				
-	Timer function	Weekly time configuration								
	Timer function 1	Day	Monday	Tuesday	Wed	nesday	Thursday	Friday	Saturday	Sunday
	Alarm	Enable								
	Logic operations	Time				23:59		hh:mm		
	Serve Central									

"Timer function"

Name			Description	Range	
Description of timer function		ption of timer function	<ul> <li>Names the "Timer function x".</li> <li>Note:</li> <li>Supports multiple languages. To display properly on screen, set "Codepage" to "Unicode (UTF-8)". Refer to Language in display in Parameter and communication objects [→ 52].</li> <li>Maximum 12 characters displayed, but only 5 characters for Chinese, 7 characters for Russian or Greek.</li> </ul>	12byte text	
Ov dui	erw ing	rite the timer function setting download	Defines whether the timer function setting is overwritten after new database download.	No (default) Yes	
Da	ta si	ize of timer function	Selects the data size of the value sent when it reaches the trigger moment of timer x.	1bit [On/Off] 1byte (default) 2byte	
The	e tol	llowing parameter displays when "1	DIT [UN/UIT]" IS SEIECTED.		
{	Pro	edefined value: On / Off	Sets the telegram value sent when it reaches the trigger moment for timer x. The value range is based on the selected data type (previous parameter).	On Off (default)	
The	e fol	llowing parameter displays when "1	byte" or "2byte" is selected.		
1	"1ł	byte" is selected			
		Data type	Selects the value data type when it reaches the trigger moment for timer x.	1byte unsigned value (default) 1byte [scene] HVAC mode	
		Datatype: 1byte unsigned value Predefined value [0…255]	Sets the telegram value sent when it reaches the trigger moment for timer x. The value range is based on the selected Data type	0255 (default: 127)	
		Datatype: 1byte [scene] Predefined Scene No. [164]		Scene No.1 (default)Scene No.64	
		Datatype: HVAC mode Predefined value [HVAC mode]		Comfort mode (default) Standby mode Economy mode Protection mode	
	"2ł	byte" is selected			
	ſ	Data type	Selects the data type of the sent value when it reaches the trigger moment for timer x.	2byte unsigned value (default) Temperature value	
	ł	Datatype: 2byte unsigned value Predefined value [0…65535]	Sets the telegram value sent when it reaches the trigger moment for timer x. The value range is based on the selected Data type	065535 (default: 32767)	
		Datatype: Temperature value Predefined value [-545°C]		-545 °C (default: 25 °C)	
Timer disable function		disable function	Determines whether it is possible to enable or disable the timer function via object and the trigger value of enabling/disabling the function.	Disable (default) Disable=0/Enable=1 Disable=1/Enable=0	
We	ekly	y time configuration			
Мо	nda	aySunday	Configures the day of a week to enable timer x.	Enable Disable (default)	
Tin	ne		Configures the specific time of timer x.	00:00~23:59 hh:mm (default: 23:59)	

# Communication objects

Number	* Name	Object Function	Description	Group Address	Length	С	R	۳	U	Data Type	Priority
736	Timer 1	On/Off			1 bit	С	-	- т	-	switch	Low
737	Timer 1	Disable/Enable			1 bit	С	-	- W	-	enable	Low
738	Timer 2	1byte unsigned value			1 byte	С	-	- T	-	counter pulses (0255)	Low
739	Timer 2	Disable/Enable			1 bit	С	-	- W	-	enable	Low
740	Timer 3	Scene control			1 byte	С	-	- T	-	scene number	Low
741	Timer 3	Disable/Enable			1 bit	С	-	- W	-	enable	Low
742	Timer 4	HVAC mode			1 byte	С	-	- T	-	HVAC mode	Low
743	Timer 4	Disable/Enable			1 bit	С	-	- W	-	enable	Low
744	Timer 5	2byte unsigned value			2 bytes	С	-	- T	-	pulses	Low
745	Timer 5	Disable/Enable			1 bit	С	-	- W	-	enable	Low
746	Timer 6	Temperature value			2 bytes	С	-	- T	-	temperature (°C)	Low
747	Timer 6	Disable/Enable			1 bit	С	-	- W	-	enable	Low

No.	Name	Object function	Length	Flag	Data type			
736	Timer x	On/Off	1 bit	СТ	1.001 switch			
Sends the preset telegram value of the timer function to the bus. The timer function, default value and object type are set by the parameters. A total of 16 timers (x = 16) can be set.								
737	Timer x Disable/Enable 1 bit CW 1.003 enable							
739								
741								
743								
745								
747								
Disables/enables tir function is also disa	ner function x. The di bled.	sable/enable telegram valu	e is specifically defin	ed by the param	neter. When disabled, timer x			
738	Timer x	1byte unsigned value	1 byte	СТ	5.010 counter pulses (0255)			
Sends the preset te parameters. A total	legram value of the ti of 16 timers (x = 16)	mer function to the bus. The can be set.	e timer function, defa	ult value and ob	oject type are set by the			
740	Timer x	Scene control	1 byte	СТ	17.001 scene number			
Sends the preset te parameters. A total	legram value of the ti of 16 timers (x = 16)	mer function to the bus. The can be set.	e timer function, defa	ult value and ob	oject type are set by the			
742	Timer x	HVAC mode	1 byte	СТ	20.102 HVAC mode			
Sends the preset telegram value of the timer function to the bus. The timer function, default value and object type are set by the parameters. A total of 16 timers (x = 16) can be set.								
744	Timer x	2byte unsigned value	2 bytes	СТ	7.001 pulses			
Sends the preset telegram value of the timer function to the bus. The timer function, default value and object type are set by the parameters. A total of 16 timers (x = 16) can be set.								
746	Timer x	Temperature value	2 bytes	СТ	9.001 temperature			
Sends the preset telegram value of the timer function to the bus. The timer function, default value and object type are set by the parameters. A total of 16 timers (x = 16) can be set.								

# 3.7 "Alarm"

### Parameters

+	General	Alarm 1	
+	Home page	Max. duration of accoustic alarm signal	1min 👻
+	Function page	Alarm signal is repeated automatically after	5min 👻
	Temperature Sensor		
	Human Centric Lighting		
-	Timer function		
Ý	Time function 1		
	Alarm		
	Logic operations		
+	Scene Control		

Name	Description	Range
Alarm 1Alarm 5	If Alarm x is enabled, a separate page with alarm options displays. You can configure each specific alarm.	Enable Disable (default)
Max. duration of acoustic alarm signal	Defines the maximum duration of acoustic alarm signal.	Disable 10s 20s 30s 1min (default) 2min 3min 4min 5min 10min 15min 20min 25min 30min
Alarm signal is repeated automatically after	Defines the period the alarm signal is repeated. This parameter does not display if the parameter "Max. duration of acoustic alarm signal" is set to "Disable".	Disable 10s 20s 30s 1min 2min 3min 4min 5min (default) 10min 15min 20min 25min 30min

# 3.7.1 "Alarm x" parameters and communication objects Parameters

#### 1 bit value

	+ General	Description of alarm	
	+ Home page	Type for monitoring	1bit value (DPT 1.001) 👻
	+ Function page	When alarm active, warning message via	Fixed string 14 Bytes string from bus
		Warning text (max 30char.)	Alarm active!!!
	Temperature Sensor	Send acknowledge after confirm the alarm	<b>v</b>
	Human Centric Lighting	Object value of alarm acknowledge	🔵 Telegram 0 🔘 Telegram 1
	+ Timer function		
	– Alarm		
Г	Alarm 1		

#### One threshold

+ General	Description of alarm	
+ Home page	Type for monitoring	2byte float value (DPT 9.x) 💌
+ Function page	Number of thresholds	One threshold Two thresholds
Temperature Sensor	Alarm if value	Bigger than threshold Lower than threshold
	Threshold	1000
Human Centric Lighting	Time period for request monitoring value [0255]	5 Å Minutes
+ Timer function	When alarm active, warning message via	Fixed string 14 Bytes string from bus
— Alarm	Warning text (max 30char.)	Alarm active!!!
	Send acknowledge after confirm the alarm	$\checkmark$
Alarm 1	Objectively of slaves a dependence	Telegram 0
	Object value of alarm acknowledge	lelegram i
+ Logic operations	Send alarm status	<b>v</b>
+ Scene Control		

#### Two thresholds

+	General	Description of alarm	
+	Home page	Type for monitoring	2byte float value (DPT 9.x)
+	Function page	Number of thresholds	One threshold Two thresholds
	Temperature Sensor	Alarm if value	<ul> <li>Beyond or equal of thresholds</li> <li>Between or equal of thresholds</li> </ul>
	Human Centric Lighting	Upper threshold	1000
		Lower threshold	100
+	Timer function	Time period for request monitoring value	- •
		[0255]	5 The Minutes
	Alarm	When alarm active, warning message via	• Fixed string • 14 Bytes string from bus
	Alarm 1	Warning text (max 30char.)	Alarm active!!!
+	Logic operations	Send acknowledge after confirm the alarm	✓
		Object value of alarm acknowledge	🔵 Telegram 0 🔘 Telegram 1
+	Scene Control	Send alarm status	$\checkmark$

"Alarm"

Name		Description	Range		
Descri	otion of alarm	Names the "Alarm page x".	12byte text		
Type for monitoring		Defines the data type of the monitored value.	1bit value (DPT 1.001) (default) 2byte float value (DPT 9.x) Temperature value (DPT 9.001) Pressure value (DPT 9.006) Humidity value (DPT 9.007) CO2 value (DPT 9.008) Air flow (DPT 9.009) Concentration (DPT 9.030)		
The fol Humidi	lowing parameters display when "2 ty value (DPT 9.007) / CO2 value (	byte float value (DPT 9.x)/ Temperature value (DPT 9.001) / P DPT 9.008) / Air flow (DPT 9.009) / Concentration (DPT 9.030)	ressure value (DPT 9.006) / " is selected.		
ſ	Number of thresholds	Defines the number of thresholds.	One threshold (default) Two thresholds		
	Send alarm status	Defines if 1 bit telegram is sent to bus when alarm is activated or cancelled.	No (default) Yes		
The fol	lowing parameters display when "C	ne threshold" is selected.			
	Alarm if value	Defines alarm condition.	Bigger than threshold (default) Lower than threshold		
	Threshold	Defines threshold value.	-670760670760 The value range depends on the value of parameter "Type for monitoring".		
The fol	lowing parameters display when "T	wo thresholds" is selected.			
	Alarm if value	Defines alarm condition.	Beyond or equal of thresholds (default) Between or equal of thresholds		
	Upper threshold	Defines upper threshold value.	-670760670760 The value range depends on the value of parameter "Type for monitoring".		
	Lower threshold	Defines lower threshold value.	-670760670760 The value range depends on the value of parameter "Type for monitoring".		
Time p [025	eriod for request monitoring value 5]	Defines period for request of monitoring value. It does not display when "1bit value (DPT 1.001)" is selected.	0255 minutes (default: 5)		
When alarm active, warning message via		Defines the warning message format when alarm is active.	Fixed string (default) 14 Bytes string from bus		
The fol	lowing parameter displays when "F	ixed string" is selected.			
{	Warning text (max 30char.)	Defines warning text.	30 characters (default: Alarm active!!!)		
Send a alarm	cknowledge after confirm the	Defines whether acknowledge is sent after the alarm is confirmed.	No (default) Yes		
The fol	lowing parameter displays when "Y	es" is selected.			
{	Object value of alarm acknowledge	Defines telegram value of acknowledge.	Telegram 0 Telegram 1 (default)		

Ľ

Number	* Name	Object F	unction	Description	Group Address	Length	С	R	wт	U	Data Type	Priority
<b>1</b>	Alarm 1	Alarm mo	Alarm monitored value 2			2 bytes	С	- V	ΝT	U 2	2-byte float value	Low
<b>1</b>	Alarm 1	Alarm me	Alarm message 1			14 bytes	C	- V	Ν -	- (	Character String (ISO 8859-1)	Low
<b>■2</b> 955	Alarm 1	Alarm ack	Alarm acknowledge 1		1 bit	C		T	- a	acknowledge	Low	
<b>■‡</b> 956	Alarm 1	Status ala	rm			1 bit	C		T	- a	alarm	Low
<b>1</b> 953	Alarm 1	Alarm inpu	ut			1 bit	с -	W	VТ	U si	witch	Low
No.		Name	Object function	Lenç	jth	Flag	l			Data	ı type	
953 Alarm 15		Alarm input Alarm monitored valu	1 bit lue 2 bytes		CWTU				1.001 alarm 9.x float value 9.001 temperature 9.006 pressure (pa) 9.007 humidity 9.008 parts/million (ppm) 9.009 air flow (m ³ /h) 9.030 concentration (ug/m ³ )			
Receives	alarm trig	ger signal.										
"Alarm inp	put" displa	ys when "Type for m	onitoring" is selected a	s "1bit valu	e (DPT 1.001	)".						
954		Alarm 15	Alarm message	14 by	rtes	CW			16.001 character string (ISO 8859-1)		SO	
Receives	alarm me	ssage from bus.										
955 Alarm 15		Alarm acknowledge	e 1 bit		СТ			1.016 acknowledge				
Sends ac	knowledge	e telegram to bus wh	en alarm is confirmed.									
956		Alarm 15	Status alarm	1 bit		СТ				1.00	5 alarm	
Sends 1 b	oit telegrar	n to bus when alarm	is activated or cancelle	ed.								

### **Communication objects**

# 3.8 "Logic operations"

#### Parameters

+	General	Logic - No.1	~
+	Home page	Logic - No.2	
+	Function page		
	Temperature Sensor		
	Human Centric Lighting		
+	Timer function		
	Alarm		
-	Logic operations		
	Logic - No.1		
+	Scene Control		

Parameter setting "Logic operations" enables the logic calculation; a total of 8 logic functions can be configured.

+ General	Description of logic function		
+ Home page	Logic operation	Max. value	•
+ Function page	Data type for max. value function	AND OR	
Temperature Sensor	Send result when	XOR Gate forwarding	
Human Centric Lighting		Threshold comparator Format convert	
+ Timer function		Max. value	/
+ Alarm			
<ul> <li>Logic operations</li> </ul>			
Logic - No.1			

One of the following logic operations can be selected for each logic operation:

- AND, OR and XOR
- Gate forwarding, it can convert one input to another output or multiple outputs
- Threshold comparator
- Conversion between different data types
- Maximum value

Name	Description	Range
Logic - No.1Logic - No.8	Enables or disables the logic function.	Disable (default) Enable

# 3.8.1 "AND/OR/XOR" parameters and communication objects

# Parameters

+ General	Description of logic function	
+ Home page	Logic operation	AND
+ Function page	Input a	Disconnected 🔹
	Default value	0 0 1
Temperature Sensor	Input b	Disconnected 🔹
Human Centric Lighting	Default value	0 0 1
+ Timer function	Input c	Disconnected 🔹
Alarm	Default value	◎ 0 ○ 1
	Input d	Disconnected
- Logic operations	Default value	◎ 0 ○ 1
Logic - No.1	Input e	Disconnected 🔹
+ Scene Control	Default value	◎ 0 ○ 1
	Input f	Disconnected
	Default value	◎ 0 ○ 1
	Input g	Disconnected 🔹
	Default value	◎ 0 ○ 1
	Input h	Disconnected •
	Default value	◎ 0 ○ 1
	Invert logical output	
	Read input object value after bus recovery	
	Send result when	New input received Object value changes
	Time delay of sending: base [s]	None
	Time delay of sending: factor [1255]	1 *

Name	Description	Range
Description of logic function	Names the "Logic - No.x".	30byte text
Logic operation	Sets the logic operation AND/OR/XOR.	AND (default) OR XOR Gate forwarding Threshold comparator Format convert Max. value
Input aInput h	Sets whether input x participates in the calculation. If yes, it defines which format is used for the calculation.	Disconnected (default) Normal Inverted
Default value	Sets the default value of input x.	0 (default) 1
Invert logical output	Determines whether the logic calculation result is to be inverted.	No (default) Yes
Read input value after bus recovery	Sets whether to send the read request to the logic input object after bus recovery or application download.	No (default) Yes
Send result when	Configures the condition for sending the result. <b>Note</b> : For the first logic calculation, the result is sent even if it has no change.	New input received (default) Object value changes

"Logic operations"

Name	Description	Range
Time delay of sending: base [s]	Sets the time delay for sending the logic result to bus. Time delay=Base [s] * Factor There is no time delay if option "None" is selected.	None (default) 0.1s 1s 2s 5s 10s 25s
Time delay of sending: factor [1255]	Sets the time delay for sending the logic result to bus. Time delay=Base [s] * Factor	1255 (default: 1)

# **Communication objects**

Nun	nber * Name	Object Function	Description	Group Address	Length	С	R	W	Т	U Data Type	Priority
<b>2</b> 840	Logic NO.1	Input a			1 bit	С	-	W	т	U boolean	Low
■컱 841	Logic NO.1	Input b			1 bit	С	-	W	Т	U boolean	Low
<b>■2</b> 842	Logic NO.1	Input c			1 bit	С	-	W	Т	U boolean	Low
■2 843	Logic NO.1	Input d			1 bit	С	-	W	Т	U boolean	Low
■2 844	Logic NO.1	Input e			1 bit	С	-	W	Т	U boolean	Low
<b>4</b> 5	Logic NO.1	Input f			1 bit	С	-	W	Т	U boolean	Low
■\$ 846	Logic NO.1	Input g			1 bit	С	-	W	Т	U boolean	Low
2847	Logic NO.1	Input h			1 bit	С	-	W	Т	U boolean	Low
∎‡ 848	Logic NO.1	Logic result			1 bit	С	-	-	Т	- boolean	Low

No.	Name	Object function	Length	Flag	Data type			
840847	Logic NO.1Logic NO.8	Input aInput h	1 bit	CWTU	1.002 boolean			
Receives the value of logical input Input aInput h.								
848	Logic NO.1Logic NO.8	Logic result	1bit	СТ	1.002 boolean			
Sends the result of logical operation.								

# 3.8.2 "Gate forwarding" parameters and communication objects

### **Parameters**

+	General	Description of logic function		
+	Home page	Logic operation	Gate forwarding	•
+	Function page	Data type of Input/Output object	1bit	•
	Tomporatura Sansar	Scene No. to be forwarded at startup [064, 0=inactive]	0	*
	iemperature sensor	1: Gate trigger Scene No. [164, 0=inactive]	0	*
	Human Centric Lighting	Define Output for Input A	Output A	•
-	Timer function	Define Output for Input B	Output B	•
	Time function 1	Define Output for Input C	Output C	•
	Alarm	Define Output for Input D	Output D	•
	Alarm	2: Gate trigger Scene No. [164, 0=inactive]	0	*
-	Logic operations	Define Output for Input A	Output A	•
	Logic - No.1	Define Output for Input B	Output B	•
+	Scene Control	Define Output for Input C	Output C	•
		Define Output for Input D	Output D	•

Name	Description	Range
Description of logic function	Names the "Logic - No.x".	30byte text

Name	Description	Range
Logic operation	Sets the logic operation Gate forwarding	AND (default) OR XOR Gate forwarding Threshold comparator Format convert Max. value
Data type of Input/Output object	Sets the object type of input/output.	1bit (default) 4bit 1byte
Scene No. to be forwarded at startup [064, 0=inactive]	After the device is activated, by default, it triggers the initial scene/ scenario, which is forwarded by the logical gate. This is configured with parameters.	064 (default: 0)
1: Gate trigger scene No. [164, 0=inactive]	Configures scene number triggered by gate forwarding. Up to 8 numbers of scenes can be triggered for each logic gate.	064 (default: 0)
Define Output for Input A Define Output for Input B Define Output for Input C Define Output for Input D	Sets the output of the input X (X=A/B/C/D) after gate forwarding. According to the options, one input can be forwarded to one or more outputs. The output value equals to the input value.	Disable Output A (default for output a) Output B (default for output b) Output C (default for output c) Output D (default for output d) Output A,B Output A,C Output A,C Output A,B,C Output A,B,C Output A,B,C Output A,B,C,D Output A,B,C,D Output B,C Output B,C Output B,C,D

# Communication objects

Number	* Name	Object Function	Description	Group Address	Length	С	R	w	т	U	Data Type	Priority
<b>■‡</b>  840	Logic NO.1	Gate value select			1 byte	C	-	W	-	-	scene number	Low
■2 841	Logic NO.1	Input A			1 bit	С	-	W	-	-	switch	Low
<b>■2</b>  842	Logic NO.1	Input B			1 bit	С	-	W	-	-	switch	Low
<b>■‡</b>  843	Logic NO.1	Input C			1 bit	С	-	W	-	-	switch	Low
■2 844	Logic NO.1	Input D			1 bit	С	-	w	-	-	switch	Low
<b>2</b> 845	Logic NO.1	Output A			1 bit	С	-	-	Т	-	switch	Low
■2 846	Logic NO.1	Output B			1 bit	С	-	-	Т	-	switch	Low
■2 847	Logic NO.1	Output C			1 bit	С	-	-	Т	-	switch	Low
<b>4</b> 848	Logic NO.1	Output D			1 bit	С	-	-	Т	-	switch	Low

No.	Name	Object function	Length	Flag	Data type					
840	Logic NO.1Logic NO.8	Gate value select	1 byte	CW	17.001 scene number					
Selects the scene of	Selects the scene of logical gate forwarding.									
841844	Logic NO.1Logic NO.8	Input AInput D	1 bit 4 bits 1 byte	CW	1.001 switch 3.007 Dimming control 5.010 counter pulses (0255)					
Receives the value of	of the logic gate input	Input AInput D.								
845848	Logic NO.1Logic NO.8	Output AOutput D	1 bit 4 bits 1 byte	СТ	1.001 switch 3.007 Dimming control 5.010 counter pulses (0255)					
The logic gate forwa outputs, set by para	rds the output value. meters.	The output value is the sam	e as the input value, l	but one input can be f	orwarded to one or more					

# 3.8.3 "Threshold comparator" parameters and communication objects

### Parameters

+ General	Description of logic function		
+ Home page	Logic operation	Threshold comparator	•
+ Function page	Data type of Threshold value	1byte unsigned (DPT5.010)	•
	Threshold value [0255]	127	÷
Temperature Sensor	If Object value <threshold td="" value<=""><td>Do not send telegram</td><td>Ŧ</td></threshold>	Do not send telegram	Ŧ
Human Centric Lighting	If Object value=Threshold value	Do not send telegram	Ŧ
- Timer function	If Object value!=Threshold value	Do not send telegram	Ŧ
	If Object value>Threshold value	Do not send telegram	•
Time function 1	If Object value<=Threshold value	Do not send telegram	•
Alarm	If Object value>=Threshold value	Do not send telegram	•
- Logic operations	Send result when	New input received Object value changes	
	Time delay of sending: base [s]	None	•
Logic - No.1	Time delay of sending: factor [1255]	1	<u>+</u>
+ Scene Control			

Name	Description	Range
Description of logic function	Names the "Logic - No.x".	30byte text
Logic operation	Sets the logic operation Threshold comparator.	AND (default) OR XOR Gate forwarding Threshold comparator Format convert Max. value
Data type of Threshold value	Sets the data type of the threshold value.	4bit (DPT3.007) 1byte unsigned (DPT5.010) (default) 2byte unsigned (DPT7.001) 2byte signed (DPT8.x) 2byte float (DPT9.x) 4byte unsigned (DPT12.x) External temperature (DPT 9.001) External humidity (DPT 9.007) Brightness (DPT 9.004) CO2 (DPT 9.008)
Threshold value [0255]	Sets threshold value. The value range is determined by the data type selected.	Data type of output value = 4bit: 015 (default: 8) Data type of output value = 1byte unsigned: 0255 (default: 127) Data type of output value = 2byte unsigned: 065535 (default: 32768) Data type of output value = 2byte signed: -3276832767 (default: 1000) Data type of output value = 2byte float: -670760670760 (default: 1000) Data type of output value = 4byte unsigned: 04294967295 (default: 65536) Data type of output value = External temperature: -2095 °C (default: 25 °C) Data type of output value = External humidity: 0100 % (default: 50 %) Data type of output value = Brightness: 065535 lux (default: 250 lux) Data type of output value = CO2: 04000 ppm (default: 500 ppm)

Name	Description	Range
If Object value <threshold value If Object value=Threshold value If Object value!=Threshold value If Object value&gt;Threshold value If Object value&lt;=Threshold value If Object value&gt;=Threshold value</threshold 	<ul> <li>Set the send value at different scenarios between object value and threshold value.</li> <li>In the event of conflicts between commands, the value sent is the one that fulfills the last scenario.</li> <li>E.g.: if the parameters are set as follows:</li> <li>"If Object value=Threshold value" is set to "Send value 0";</li> <li>"If Object value&lt;=Threshold value 1"</li> <li>when the object value = threshold value, then the logic result sends "1"</li> </ul>	Do not send telegram (default) Send value '0' Send value '1'
Send result when	Sets the trigger for sending the logic result. <b>Note</b> : For the first logic calculation, the result is sent even if it has not changed.	New input received (default) Object value changes
Time delay of sending: base [s]	Sets the time delay for sending the logic result to bus. Time delay=Base [s] * Factor There is no delay for "None".	None (default) 0.1s 1s 2s 5s 10s 25s
Time delay of sending: factor [1255]	Sets the time delay for sending the logic result to bus. Time delay=Base [s] * Factor	1255 (default: 1)

# Communication objects

Number	Name	Object Function	Description	Group Address	Length	С	R	w	т	U	Data Type	Priority
<b>■</b> 2 840	Logic NO.1	Threshold value input			1 byte	С	-	W	-	U	counter pulses (0255)	Low
■2 848	Logic NO.1	Logic result			1 bit	С	-	-	Т	-	boolean	Low

No.	Name	Object function	Length	Flag	Data type				
840	Logic NO.1Logic NO.8	Threshold value input	4 bits 1 byte 2 bytes 4 bytes	CWU	3.007 dimming 5.010 counter pulses 7.001 pulses 12.001 counter pulses 8.x signed value 9.x float value 9.001 temperature 9.007 humidity 9.004 lux 9.008 parts/million (ppm)				
The communication	object is used as the	input value for threshold co	mparator.						
848	Logic NO.1Logic NO.8	Logic result	1bit	СТ	1.002 boolean				
Sends the result of I with the set threshol	Sends the result of logical operation. In other words, the value that is sent after object "Threshold value input" (object 840) is compared with the set threshold value of the device.								

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# 3.8.4 "Format convert" parameters and communication objects

### Parameters

+	General	Description of logic function	
+	Home page	Logic operation	Format convert 🔹
+	Function page	Format conversion	1x1Byte>8x1Bit
	Temperature Sensor	Send result when	New input received Object value changes
	Human Centric Lighting		
+	Timer function		
	Alarm		
-	Logic operations		
	Logic - No.1		
+	Scene Control		

Name	Description	Range
Description of logic function	Names the "Logic - No.x".	30byte text
Logic operation	Sets the logic operation Format conversion.	AND (default) OR XOR Gate forwarding Threshold comparator Format convert Max. value
Format conversion	Selects the format conversion.	2x1Bit>1x2Bit 8x1Bit>1x1Byte 1x1Byte>1x2Byte 2x1Byte>1x2Byte 2x2Byte>1x4Byte 1x1Byte>8x1Bit (default) 1x2Byte>2x1Byte 1x4Byte>2x2Byte 1x3Byte>3x1Byte 3x1Byte>1x3Byte
Send result when	Sets the trigger for sending the logic result. <b>Note</b> : For the first logic calculation, the result is sent even if it has not changed.	New input received (default) Object value changes

# **Communication objects**

### 2×1Bit-->1×2Bit

"2x1bit --> 1x2bit" function: Converts two 1bit values to one 2bit value, such as Input bit1=1, bit0=0--> Output 2bit=2

	Number '	Name	Object Function	Description	Group Address	Length	С	R	w	т	U	Data Type	Priority
<b>Z</b>	40	Logic NO.1	Input 1bit-bit0			1 bit	С	-	W	- 1	J sı	witch	Low
■2 8	41	Logic NO.1	Input 1bit-bit1			1 bit	С	-	W	- 1	J si	witch	Low
∎‡ 8	48	Logic NO.1	Output 2bit			2 bit	С	-	-	T -	- 51	witch control	Low

No.	Name	Object function	Length	Flag	Data type				
840	Logic NO.1Logic NO.8	Input 1bit-bit0	1 bit	CWU	1.001 switch				
841		Input 1bit-bit1							
Provides the in	Provides the input value for conversion.								

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No.	Name	Object function	Length	Flag	Data type
848	Logic NO.1Logic NO.8	Output 2bit	2 bits	СТ	2.001 switch control
Sends the con	verted value output.				

#### 8×1Bit-->1×1Byte

"8x1bit --> 1x1-byte" function: Converts eight 1bit values to one 1-byte value, such as Input bit2=1, bit1=1, bit0=1, other bits are 0--> Output 1-byte=7

Number	* Name	Object Function	Description	Group Address	Length	С	R	w	т	U	Data Type	Priority
■2 840	Logic NO.1	Input 1bit-bit0			1 bit	С	-	W	-	Us	switch	Low
■2 841	Logic NO.1	Input 1bit-bit1			1 bit	С	-	W	-	Us	switch	Low
■2 842	Logic NO.1	Input 1bit-bit2			1 bit	C	-	W	-	Us	switch	Low
<b>■2</b> 843	Logic NO.1	Input 1bit-bit3			1 bit	С	-	W	-	Us	switch	Low
■2 844	Logic NO.1	Input 1bit-bit4			1 bit	С	-	W	-	Us	switch	Low
■2 845	Logic NO.1	Input 1bit-bit5			1 bit	C	-	W	-	Us	switch	Low
■2 846	Logic NO.1	Input 1bit-bit6			1 bit	C	-	W	-	Us	switch	Low
■2 847	Logic NO.1	Input 1bit-bit7			1 bit	С	-	W	-	Us	switch	Low
■2 848	Logic NO.1	Output 1byte			1 byte	C	-	-	Т	- c	counter pulses (0255)	Low

No.	Name	Object function	Length	Flag	Data type
840847	Logic NO.1Logic NO.8	Input 1bit-bit0Input 1bit-bit7	1 bit	CWU	1.001 switch
Provides input	value for conversion.				
848	Logic NO.1Logic NO.8	Output 1byte	1 byte	СТ	5.010 counter pulses (0255)
Sends the con	verted value output.				

#### 1×1Byte-->1×2Byte

"1x1-byte --> 1x2-byte" function: Converts one 1-byte value to a 2-byte value, such as Input 1-byte=125--> Output 2-byte=125.Although the value remains the same, the data type of the value is different.

	Number	Name	Object Function	Description	Group Address	Length	С	R	w	τu	J Data Type	Priority
<b>.</b> ‡	840	Logic NO.1	Input 1byte			1 byte	С	-	w -	U	counter pulses (0255)	Low
12	848	Logic NO.1	Output 2byte			2 bytes	С	-	- 1		pulses	Low

No.	Name	Object function	Length	Flag	Data type						
840         Logic NO.1Logic NO.8         Input 1byte         1 byte         CWU         5.010 counter pulses (0)											
Provides input value for conversion.											
848	Logic NO.1Logic NO.8	Output 2byte	2 bytes	СТ	7.001 pulses						
Sends the converted value output.											

#### 2×1Byte-->1×2Byte

"2x1-byte --> 1x2-byte" function: Converts two 1-byte values to one 2-byte value, such as Input 1-byte-low = 255 (\$FF), Input 1-byte-high = 100 (\$64) --> Output 2-byte = 25855 (\$64 FF)

Number	Name	Object Function	Description	Group Address	Length	С	R	W	/ т	U	Data Type	Priority
<b>■2</b>  840	Logic NO.1	Input 1byte-low			1 byte	C	-	W	÷	U	counter pulses (0255)	Low
■2 841	Logic NO.1	Input 1byte-high			1 byte	С	-	W	-	U	counter pulses (0255)	Low
<b>■‡</b>  848	Logic NO.1	Output 2byte			2 bytes	C	-	-	т	-	pulses	Low

No.	Name	Object function	Length	Flag	Data type
840	Logic NO.1Logic NO.8	Input 1byte-low	1 byte	CWU	5.010 counter pulses (0255)
841		Input 1byte-high			
Provides input	value for conversion.				
848	Logic NO.1Logic NO.8	Output 2byte	2 bytes	СТ	7.001 pulses
Sends the con	verted value output.				

#### 2×2Byte-->1×4Byte

"2x2-byte --> 1x4-byte" function: Converts two 2-byte values to one 4-byte value, such as Input 2-byte-low = 65530 (\$FF FA), Input 2-byte-high = 32768 (\$80 00)--> Output 4-byte = 2147549178 (\$80 00 FF FA)

N	lumber *	Name	Object Function	Description	Group Address	Length	С	R	w	т	U	Data Type	Priority
■2 840	10	Logic NO.1	Input 2byte-low			2 bytes	С	-	W	-	U	pulses	Low
<b>1</b>	1	Logic NO.1	Input 2byte-high			2 bytes	С	-	W	-	U	pulses	Low
■2 84	8	Logic NO.1	Output 4byte			4 bytes	С	-	-	Т	-	counter pulses (unsigned)	Low

No.	Name	Object function	Length	Flag	Data type					
840	Logic NO.1Logic NO.8	Input 2byte-low	2 bytes	CWU	7.001 pulses					
841		Input 2byte-high								
Provides input	value for conversion.									
848	Logic NO.1Logic NO.8	Output 4byte	4 bytes	СТ	12.001 counter pulses					
Sends the converted value output.										

#### 1×1Byte-->8×1Bit

"1x1-byte --> 8x1bit" function: Converts one 1-byte value to eight 1but values, such as Input 1-byte=200 --> Output bit0=0, bit1=0, bit2=0, bit3=1, bit4=0, bit5=0, bit6=1, bit7=1

	1	umber *	Name	Object Function	Description	Group Address	Length	с	R	W	۲	U	Data Type	Priority
1	28	40	Logic NO.1	Input 1byte			1 byte	С	-	W	-	U	counter pulses (0255)	Low
	₹8	41	Logic NO.1	Output 1bit-bit0			1 bit	С	-	-	Т	-	switch	Low
	78	42	Logic NO.1	Output 1bit-bit1			1 bit	С	-	-	т	-	switch	Low
	28	43	Logic NO.1	Output 1bit-bit2			1 bit	С	-	-	т	-	switch	Low
ŀ	₹8	44	Logic NO.1	Output 1bit-bit3			1 bit	С	-	-	т	-	switch	Low
	28	45	Logic NO.1	Output 1bit-bit4			1 bit	С	-	-	т	-	switch	Low
	₹8	46	Logic NO.1	Output 1bit-bit5			1 bit	С	-	-	т	-	switch	Low
	28	47	Logic NO.1	Output 1bit-bit6			1 bit	С	-	-	т	-	switch	Low
	78	48	Logic NO.1	Output 1bit-bit7			1 bit	С	-	-	т	-	switch	Low

No.	Name	Object function	Length	Flag	Data type				
840	Logic NO.1Logic NO.8	Input 1byte	1 byte	CWU	5.010 counter pulses (0255)				
Provides input value for conversion.									
841848	Logic NO.1Logic NO.8	Output 1bit-bit0Output 1bit-bit7	1 bit	СТ	1.001 switch				
Sends the con	verted value output.								

#### 1×2Byte-->2×1Byte

"1x2-byte --> 2x1-byte" function: Converts one 2-byte value to two 1-byte values, such as Input 2-byte = 55500 (\$D8 CC) --> Output 1-byte-low = 204 (\$CC), Output 1-byte-high =216 (\$D8)

P	Number '	Name	Object Function	Description	Group Address	Length	С	R	w	т	U	Data Type	Priority
<b>■</b> ‡ 84	40	Logic NO.1	Input 2byte			2 bytes	С	-	W	-	U	pulses	Low
∎‡ 84	47	Logic NO.1	Output 1byte-low			1 byte	С	-	-	Т	-	counter pulses (0255)	Low
∎‡ 84	48	Logic NO.1	Output 1byte-high			1 byte	С	-	-	Т	-	counter pulses (0255)	Low

No.	Name	Object function	Length	Flag	Data type					
840	Logic NO.1Logic NO.8	Input 2byte	2 bytes	CWU	7.001 pulses					
Provides input value for conversion.										
847	Logic NO.1Logic NO.8	Output 1byte-low	1 byte	СТ	5.010 counter pulses (0255)					
848		Output 1byte-high								
Sends the converted value output.										

#### 1×4Byte-->2×2Byte

"1x4-byte --> 2x2-byte" function: Converts one 4-byte value to two 2-byte values, such as Input 4-byte = 78009500 (\$04 A6 54 9C) --> Output 2-byte-low = 21660 (\$54 9C), Output 2-byte-high =1190 (\$04 A6)

Number '	Name	Object Function	Description	Group Address	Length	С	R	w	т	U	Data Type	Priority
<b>2</b> 840	Logic NO.1	Input 4byte			4 bytes	С	-	W	-	U	counter pulses (unsigned)	Low
<b>4</b> 7	Logic NO.1	Output 2byte-low			2 bytes	С	-	-	т	-	pulses	Low
■2 848	Logic NO.1	Output 2byte-high			2 bytes	С	-	-	т	-	pulses	Low

No.	Name	Object function	Length	Flag	Data type					
840	Logic NO.1Logic NO.8	Input 4byte	4 bytes	CWU	12.001 counter pulses					
Provides input value for conversion.										
847 848	Logic NO.1Logic NO.8	Output 2byte-low Output 2byte-high	2 bytes	СТ	7.001 pulses					
Sends the converted value output.										

#### 1×3Byte-->3×1Byte

"1x3-byte --> 3x1-byte" function: Converts one 3-byte value to three 1-byte values, such as Input 3-byte = \$78 64 C8--> Output 1-byte-low = 200 (\$C8), Output 1-byte-middle = 100 (\$64), Output 1-byte-high =120 (\$78)

Number	* Name	Object Function	Description	Group Address	Length	С	R	w	т	U	Data Type	Priorit
■2 840	Logic NO.1	Input 3byte			3 bytes	C	-	W	-	U	RGB value 3x(0255)	Low
<b>■2</b> 846	Logic NO.1	Output 1byte-low			1 byte	C	-	-	Т	÷	counter pulses (0255)	Low
■2 847	Logic NO.1	Output 1byte-middle			1 byte	C	-	-	Т	-	counter pulses (0255)	Low
■2 848	Logic NO.1	Output 1byte-high			1 byte	C	-	-	Т	-	counter pulses (0255)	Low

No.	Name	Object function	Length	Flag	Data type						
840	Logic NO.1Logic NO.8	Input 3byte	3 bytes	CWU	232.600 RGB value 3 x (0255)						
Provides input value for conversion.											
846	Logic NO.1Logic NO.8	Output 1byte-low	1 byte	СТ	5.010 counter pulses (0255)						
847		Output 1byte-middle									
848		Output 1byte-high									
Sends the converted value output											

#### 3×1Byte-->1×3Byte

"3x1-byte --> 1x3-byte" function: Converts three 1-byte values to one 3-byte value, such as Input 1-byte-low = 150 (\$96), Input 1-byte-middle = 100 (\$64), Input 1-byte-high = 50 (\$32) --> Output 3-byte = \$32 64 96

Number	* Name	Object Function	Description	Group Address	Length	с	R	w	т	U	Data Type	Priority
<b>2</b> 840	Logic NO.1	Input 1byte-low			1 byte	C	-	W	-	U	counter pulses (0255)	Low
■2 841	Logic NO.1	Input 1byte-middle			1 byte	C	-	W	-	U	counter pulses (0255)	Low
<b>4</b> 2	Logic NO.1	Input 1byte-high			1 byte	C	-	w	-	U	counter pulses (0255)	Low
■2 848	Logic NO.1	Output 3byte			3 bytes	С	-	-	Т	-	RGB value 3x(0255)	Low

No.	Name	Object function	Length	Flag	Data type				
840	Logic NO.1Logic NO.8	Input 1byte-low	1 byte	CWU	5.010 counter pulses (0255)				
841		Input 1byte-middle							
842		Input 1byte-high							
Provides input	value for conversion.								
848	Logic NO.1Logic NO.8	Output 3byte	3 bytes	СТ	232.600 RGB value 3 x (0255)				
Sends the converted value output.									

# 3.8.5 "Max. value" parameters and communication objects

"Max. value" receives max. 3 1-byte unsigned integers or data as a percentage and compares the received values to output the maximum one to bus.

+ General	Description of logic function	
+ Home page	Logic operation	Max. value 🔻
+ Function page	Data type for max. value function	1byte [0255]     1byte [0100%]
Temperature Sensor	Send result when	New input received Object value changes
Human Centric Lighting		
+ Timer function		
Alarm		
- Logic operations		
Logic - No.1		
+ Scene Control		

Name	Description	Range
Description of logic function	Names the "Logic - No.x".	30byte text
Logic operation	Sets the logic operation Max. value.	AND (default) OR XOR Gate forwarding Threshold comparator Format convert Max. value
Data type for max. value function	Sets the data type for maximum value function.	1byte [0255] (default) 1byte [0100%]
Send result when	Configures the condition of sending the result. <b>Note</b> : For the first logic calculation, the result is sent even if it has not changed.	New input received (default) Object value changes

# **Communication objects**

Number	* Name	Object Function	Description	Group Address	Length	С	R	w	т	U	Data Type	Priority
■2 840	Logic NO.1	Value 1			1 byte	С	-	W	-	U	counter pulses (0255)	Low
<b>2</b> 841	Logic NO.1	Value 2			1 byte	С	-	W	-	U	counter pulses (0255)	Low
■2 842	Logic NO.1	Value 3			1 byte	С	-	W	-	U	counter pulses (0255)	Low
■2 848	Logic NO.1	Max. value			1 byte	С	-	-	Т	-	counter pulses (0255)	Low

No.	Name	Object function	Length	Flag	Data type					
840842	Logic NO.1Logic NO.8	Value 1Value 3	1 byte	CWU	5.010 counter pulses 5.001 percentage value					
Receives Value 1Value 3.										
848	Logic NO.1Logic NO.8	Max. value	1 byte	СТ	5.010 counter pulses 5.001 percentage value					
Sends the result of I	ogical operation.		·	·	·					

# 3.9 "Scene control"

# 3.9.1 "Function setting" parameters

+ General		Scene Group 1		✓
+ Home p	age	Scene Group 2	!	
+ Function	n page			
Temper	ature Sensor			
Human	Centric Lighting			
+ Timer fu	unction			
Alarm				
+ Logic o	perations			
- Scene C	ontrol			
Functi	on setting			
– Scene	Group 1			
Ou	tput 1			

Name	Description	Range
Scene Group 1Scene	If Scene Group x is enabled, a separate page with scene options displays.	Enable
Group 8	You can set the scene group function used for each specific scene.	Disable

# 3.9.2 "Scene group" parameters and communication objects Parameters

General	Output 1	✓
Home page	Output 2	
	Output 3	
Function page	Output 4	
	Output 5	
lemperature Sensor	Output 6	
Human Centric Lighting	Output 7	
	Output 8	
Timer function		
Alarm		
Logic operations		
Scene Control		
Function setting		
Scene Group 1		
Output 1		
	General Home page Function page Temperature Sensor Human Centric Lighting Timer function Alarm Logic operations Scene Control Scene Control Function setting Scene Group 1 Output 1	GeneralOutput 1Home pageOutput 2Output 3Output 3Function pageOutput 4Output 5Output 6Human Centric LightingOutput 7Timer functionOutput 8AlarmOutput 8Logic operationsScene ControlFunction settingScene Group 1Output 1Output 1

Parameter setting "Scene Group x" defines and processes scene tasks. A group opening can trigger the sending of several telegrams on the bus, open various functions and, concurrently perform various settings. A total of 8 scene groups can be configured and up to 8 outputs can be trigger for each group. They are all configurable. The scene group can also be recalled by other devices on the bus.

Name	Description	Range
Output 1Output 8	If Output x is enabled, a separate page output options displays. You can set the output function that is used for each specific output.	Enable Disable

#### **Communication objects**

Numb	er * Name	Object Function	Description	Group Address	Length	с	R	w	т	U	Data Type	Priority
<b>775</b>	Scene	Scene recall			1 byte	С	-	W	-	-	scene number	Low
<b>■2</b> 776	Scene NO.1-Output 1	On/Off			1 bit	С	-	-	Т	-	switch	Low
<b>■‡</b> 777	Scene NO.1-Output 2	1byte unsigned value			1 byte	С	-	-	Т	-	counter pulses (0255)	Low
<b>778</b>	Scene NO.1-Output 3	HVAC mode			1 byte	С	-	-	Т	-	HVAC mode	Low
<b>■‡</b> 779	Scene NO.1-Output 4	2byte unsigned value			2 bytes	С	-	-	Т	-	pulses	Low
<b>2</b> 780	Scene NO.1-Output 5	Temperature value			2 bytes	С	-	-	Т	-	temperature (°C)	Low

No.	Name	Object function	Length	Flag	Data type					
775	Scene	Scene recall	1 byte	CW	17.001 scene number					
Triggers each output in the scene group to send a specific value to the bus by recalling the scene number. Telegram value: 063										
776780	Scene NO.1- Output 1Scene NO.1-Output 8	On/Off 1byte unsigned value HVAC mode 2byte unsigned value Temperature value	On/Off 1byte unsigned value HVAC mode 2byte unsigned value Temperature value	СТ	1.001 switch 5.010 counter pulses 20.102 HVAC mode 7.001 pulses 9.001 temperature					
When a scene is recalled, the communication object sends the corresponding output value of the scene to the bus. If the output is not set to this scene, it is not sent. A total of 8 scene groups can be set, with 8 outputs per group.										
3

General	Description of Output 1		
Home page	Data size	1bit	•
Function page	1: Trigger scene No. [064, 0=inactive]	0	<b>▲</b> ∵
- unenon page	Predefined value: [01]	0 1	
Temperature Sensor	Send after [0255]	0	÷ *0.1
Human Centric Lighting	2: Trigger scene No. [064, 0=inactive]	0	▲ ▼
Timer function	Predefined value: [01]	◎ 0 ○ 1	
Alarm	Send after [0255]	0	÷0.1
	3: Trigger scene No. [064, 0=inactive]	0	* *
Logic operations	Predefined value: [01]	0 1	
Scene Control	Send after [0255]	0	÷ *0.1
Function setting	4: Trigger scene No. [064, 0=inactive]	0	÷
- Scene Group 1	Predefined value: [01]	◎ 0 ○ 1	
Output 1	Send after [0255]	0	÷ *0.
	5: Trigger scene No. [064, 0=inactive]	0	÷
	Predefined value: [01]	0 1	
	Send after [0255]	0	÷ *0.
	6: Trigger scene No. [064, 0=inactive]	0	
	Predefined value: [01]	0 1	
	Send after [0255]	0	*0. ⁻
	7: Trigger scene No. [064, 0=inactive]	0	\$
	Predefined value: [01]	◎ 0 ○ 1	
	Send after [0255]	0	÷ *0.
	8: Trigger scene No. [064, 0=inactive]	0	
	Predefined value: [01]	<b>◎ 0</b> ○ 1	
	Send after IO 2551	0	* *0

## 3.9.2.1 "Output 1" parameters

Name	Description	Range
Description of Output 1	Names the "Output x". Note: Maximum 30 characters displayed	30byte text
Data size	Defines the object type of Output y of Scene Group x. x: the number of Scene Group, x=18 y: the number of Output, y=18	1bit (default) 1byte 2byte
Data type	Displayed if data size is set to 1byte.	1byte unsigned value (default) HVAC mode
Data type	Displayed if data size is set to 2byte.	2byte unsigned value (default) Temperature value
1: Trigger scene No. [064, 0=inactive]	Defines the scene number triggered; up to 8 triggered scenes can be configured for each output.	064
Predefined value Parameter name is based on the selected data type.	Determines the output value. The value range is based on the data type of output y.	Data type of Output 1 = 1bit: 0 / 1 (default: 0) Data type of Output 1 = 1byte unsigned value: 0255 (default: 127) Data type of Output 1 = 1byte HVAC mode: Comfort mode (default), Standby mode, Economy mode, Protection mode Data type of Output 1 = 2byte unsigned value: 065535 (default: 32767) Data type of Output 1 = 2byte Temperature value: 045 °C (default: 25 °C)
Send after [0255]	Sets the time delay for sending the output value to bus.	0255*0.1 s (default: 0)

# 4 Icons

# 4.1 Functional page icons

## 4.1.1 Icon list for function page

Replacement ID	ETS options	lcon	Replacement ID	ETS options	lcon
0	Light		2	Ceiling light	
3	Downlight		4	Wall light	
5	Spotlight	<b>₩</b>	6	Chandelier	Ť
7	General scene	$\bigotimes$	8	Curtain	
9	Shading		10	On	
11	Off	$\bigcirc$	12	Occupied 1	
13	Unoccupied 1		14	Occupied 2	Í
15	Unoccupied 2	$\bigcirc$	16	Welcome	ت _ر ر،۲

4

Replacement ID	ETS options	lcon	Replacement ID	ETS options	lcon
17	Visiting	-	18	Dinner	Ψ٩
19	Party	Y	20	Meeting	ij.
21	Sleeping		22	Reading	
23	Media		24	Cleaning	Ĩ
25	TV		26	Audio	5
27	Socket (CHN)	<b>4 B</b> -1 -1	28	Socket (EU)	$\odot$
29	Fan	5	30	Door lock	
31	Door access	•	32	Power supply	<b>%</b>
33	Window 1		34	Window 2	
35	Alarm	$\bigwedge$	36	Timer	$(\mathbf{S})$

Replacement ID	ETS options	lcon	Replacement ID	ETS options	lcon
37	Projector	<u> </u>	38	Multimedia	
39	Electric heating		40	Air conditioner 1	
41	Air fresh	<b>↓</b>	42	Setting	 
43	Power	(	44	Unlock	Ţ
44	Lock		45	Unmute	⟨")
45	Mute	22	46	Day	-`Ó
46	Night	$\mathcal{D}$	47	Auto	A
47	Manual		48	Floor light	Î
49	Eco		50	Doorbell	Ŷ
51	Do not Disturb	(D)	52	Make up Room	S T

<u> </u>	

Replacement ID	ETS options	lcon	Replacement ID	ETS options	lcon
53	Room Pressure		54	Supply Airflow	Ś
55	Exhaust Airflow	Ś	56	Humidity	00
57	PM10	(PM) 10	58	PM2.5	PM 2.5
59	VOC	Voc	60	CO2	
61	Send Value	*	62	Disinfection	

## 4.1.2 Replace icons

Insert Micro SD card with the following settings:

- 1. Create a folder named **Functionicon** under the root directory in Micro SD card.
- 2. Put icon files in folder with the same name as the one to be replaced.
  - All icons must be named as per the naming conventions below;
  - If no new icons are added, use default.
- 3. Picture resolution must be 80*80 with png as the suffix.

## Naming rule

	icon	_0	_a	.png		
Title of icon files (Fixed)						
Replacing ID No.	0, 262: Function page For icon list, see Icon $[\rightarrow 146]$	ge icons list for function page				
Icon statusa. Off status - dark screen styleb. Off status - light screen stylec. On status (only the icon is on)d. On status (both the background and icon are on)						
Format of icon files (F	Format of icon files (Fixed)					

## Example: the following 4 icons are defaults for lighting On/Off status and their ID=0.



To replace them, name the new icons in folder **Functionicon** the same as original icons. Insert Micro SD card to upload the customized icons:



Horizontal



Insert Micro SD card to delete the customized icons:

- 1. Create a folder named Functionicon under the root directory in Micro SD card;
- 2. Do not put any icon files with correct name in folder

### Vertical



### Horizontal



### Note

Supports only SDHC cards and FAT32 format. •

(i)

≏ 25.0°

Solar Protect

Floor heating

5

Audio

Home 3

**& 40**[%]

Recover to initial status?

Home 2

19:56

02-22 Tue.

Lighting

Cancel

Air conditioner

s.

Ventilation

- Supports Micro SD cards up to a max. capacity of 32 GB. •
- The device picture storage size is approximate 4 MB. The message "Invalid image, please check!" displays • once the total size of the valid pictures on the Micro SD card is greater than 3.8 MB.



40% 🔇

Ð

Л

Audio

# 4.2 Home page icons

# 4.2.1 Icon list for home page

Replacement ID	ETS options	lcon	Replacement ID	ETS options	lcon
90	Multifunction		91	Lighting	-
92	Scenario	R	94	Shading	
96	Air conditioner		99	Floor heating	
101	Water heating		102	Audio	5
103	Air quality	<b>-A</b> -	104	RGB	(Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Const
105	Ventilation 1	Ş	106	Ventilation 2	
107	Power meter	W	108	Energy display	P
109	Heating	<b>\$</b> \$\$	110	Cooling	*
111	Heating/Cooling	<u> </u>	112	Temperature	<b>I</b> ≞

Replacement ID	ETS options	lcon	Replacement ID	ETS options	lcon
113	AV system	Ŀ	114	Security	
115	Bedroom	•	117	Living room 1	
118	Living room 2		119	Dinner room	۳٩
121	Study room		122	Gym	-1   -
123	Basement	٦	124	Office	
125	Meeting room	i i i	126	Exhibition hall	। ♪ へ
127	Training room	Ţ	128	Warehouse	Æ
129	Building	<u>i</u>	130	Recreation	<u>11</u>
131	Reception				

## 4.2.2 Replace icons

Insert Micro SD card with the following settings:

1. Create a folder named **Pageicon** under the root directory in Micro SD card.

- 2. Put icon files in folder with the identical name of the one to be replaced.
  - All icons must be named as per the naming conventions below;
  - If no new icons are added, use default.
- 3. Picture resolution must be 80*80 with png as the suffix.

## Naming rule in Pageicon folder

	icon	_90	_a	.png		
Title of icon files (Fixed)						
Replacing ID No.	9092, 94, 96, 99, 10 121131: Home page For icon list, see Icon [→ 152]	092, 94, 96, 99, 101115, 117119, 21131: Home page icons for icon list, see Icon list for home page → 152]				
Icon statusa. Off statusb. On status (both the background and icon are on)						
Format of icon files (F	Format of icon files (Fixed)					

Example: the following 2 icons are default for Multi-function and their ID=90.





icon_90_a.png



To replace them, name the new icons in folder **Pageicon** the same as original icons. Insert Micro SD card to upload the customized icons:



Horizontal





Insert Micro SD card to delete the customized icons:

- 1. Create a folder named Pageicon under the root directory in Micro SD card;
- 2. Do not put any icon files with correct name in folder



Vertical









### Note

- Supports only SDHC cards and FAT32 format.
- Supports Micro SD cards up to a max. capacity of 32 GB.
- The device picture storage size is approximate 4 MB. The message "Invalid image, please check!" displays once the total size of the valid pictures on the Micro SD card is greater than 3.8 MB.



### Horizontal



# 5 Appendix

## 5.1 Cyber security disclaimer

Siemens provides a portfolio of products, solutions, systems and services that includes security functions that support the secure operation of plants, systems, machines and networks. In the field of Building Technologies, this includes building automation and control, fire safety, security management as well as physical security systems. In order to protect plants, systems, machines and networks against cyber threats, it is necessary to implement – and continuously maintain – a holistic, state-of-the-art security concept. Siemens' portfolio only forms one element of such a concept.

You are responsible for preventing unauthorized access to your plants, systems, machines and networks which should only be connected to an enterprise network or the internet if and to the extent such a connection is necessary and only when appropriate security measures (e.g. firewalls and/or network segmentation) are in place. Additionally, Siemens' guidance on appropriate security measures should be taken into account. For additional information, please contact your Siemens sales representative or visit:

https://www.siemens.com/global/en/home/company/topic-areas/future-of-manufacturing/industrial-security.html

Siemens' portfolio undergoes continuous development to make it more secure. Siemens strongly recommends that updates are applied as soon as they are available and that the latest versions are used. Use of versions that are no longer supported, and failure to apply the latest updates may increase your exposure to cyber threats. Siemens strongly recommends to comply with security advisories on the latest security threats, patches and other related measures, published, among others, here:

https://www.siemens.com/cert/ => 'Siemens Security Advisories'

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