## USER MANUAL



Версия: 01-2025

# KNX-302-22-IN, KNX-303-22-IN, KNX-304-22-IN









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## Attentions

1. Please keep devices away from strong magnetic field, high temperature, wet environment;



2. Do not fall the device to the ground or make them get hard impact;



3. Do not use wet cloth or volatile reagent to wipe the device;



4. Do not disassemble the devices.





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### Chapter 1. Summary

KNX Push Button Sensor, 4/6/8 buttons integrates the basic control functions of Switch, Dimming, RGB/RGBW lighting, Colour temperature control, Blind, Scene, Value sender, Shift register, Multiple operation, Delay mode, RTC operation mode, String sending, and has a built-in temperature sensor to detect the local ambient temperature and supports RGB indication function.

In addition, the series products support Logic function and Scene Group function, and 2 external input interfaces (as Binary input detection or NTC detection), provide more possibilities for special and complex applications.

KNX Push Button Sensor, 4/6/8 buttons powered from KNX bus. It is available to assign the physical address and configure the parameters by engineering design tools ETS with .knxprod ( support edition ETS5.7 or higher ).

The functions are summarized as followed:

- Switch and Dimming
- Blind control
- Value sender
- Scene control
- Shift register
- RGB , RGBW and colour temperature control
- Multiple operation
- Delay mode
- Send RTC operation mode
- Send Strings
- Built-in temperature sensor
- Logic output, Scene group conversion;
- RGB LED indication function





## Chapter 2. Technical Data

Power Supply	Bus voltage	21-30V DC, via the KNX bus		
	Bus current	<18.4 mA/24V , <14.9 mA/30V (8 button)		
		<15.1mA/24V , <12.2mA/30V (6 button)		
		<12.2mA/24V , <10.0mA/30V (4 button)		
	Bus consumption	<447.0 mW (8 button)		
		<366.0mW (6 button)		
		<300.0mW (4 button)		
Input	2 external inputs, as dry contact input or 10K NTC input			
Connection	KNX	Bus connection terminal(Red/Black)		
	Input	Screw terminals, Wire Range:		
		Multi-core0.2-1.5mm²		
		Single core 0.2-2.5mm <sup>2</sup>		
		Torque 0.4N-m		
		Length <5m		
Temperature	Operation	– 5 °C 45 °C		
	Storage	– 25 °C 55 °C		
	Transport	– 25 °C 70 °C		
Environment	Humidity	<93%, except dewing		
Dimension	86 × 86 × 33mm			
Weight	0.09 kg			





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## Chapter 3. Dimension and Structural Diagram

## -86mm--33mm-8mm 0 0 0 -86mm-0 o 0 0 0 Panel dimension 76.80 4-85.00 1.80 41.40 04.00 TOP 4 (2-17.85) 78.80 50.70 060.00 ¥.73.95 0.80 017.80 7.80

### 3.2. Dimension Diagram

Metal plate dimension





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#### 3.3.Structural Diagram



Reset the device to the factory configuration: press the programming button and hold for 4 seconds then release, repeat the operation for 4 times, and the interval between each operation is less than 3 seconds.





Application	Maximum of communication objects	Maximum number of group addresses	Maximum number of associations	Secure group addresses
KNX Wall Panel, 2-Gang with KNX Secure KNX Wall Panel, 3-Gang with KNX Secure KNX Wall Panel, 4-Gang with KNX Secure	208	500	500	500

## Chapter 4. Project Design and Programming

#### **General function**

General function includes device In operation setting, KNX telegrams delay time setting, request device status after voltage recovery. And support whether to enable normal/night mode.

#### **Temperature measurement function**

Support internal temperature measurement, and can be sent to the bus after change or cyclically; Support high or low temperature alarm, and can be sent to the bus.

#### External input interface function

Up to support 2 channels, enable/disable each channel functions. Optional dry contact detection or NTC temperature detection.

When selecting dry contact detection, only supports the basic functions, including switch, scene send strings (press/release, short/long, send after voltage recovery, disable function).

When selecting NTC temperature detection, the external temperature probe can be connected to detect the external temperature and the B value data of temperature sensing probe needs to be set.

#### **Button function**

Each button can be configured as independent function, and can activate disable function. Support the functions, including switch, dimming, blind, scene, value sender, shift register, multiple operation, delay mode, RTC operation mode, send strings.





For switch and scene functions, it is possible to configure whether long and short operation to select common 1 object or separate 2 objects.

#### Indication LED function

Brightness level of indication LED is adjustable, and adjusted according to normal/night status. And set the delay time for entering standby mode and for LED status all turned off.

When the delay time is not 0, enable/disable panel orientation indication function, support to set the work mode, colour, indication period time and brightness.

The indication settings for button functions:

①Disable, Control by button switch object, Control by external object (1bit/1byte), Indicate button press (Flash and Always on), Always on.

(2) The LED indication colours can be set independently. When customized colours are used, Customized colour configuration is required.

#### Logic function

Up to support 8 channels of logic, each channel up to support 8 inputs and 1 logic result.

Logic function support functions, including AND, OR, XOR, Gate forwarding, Threshold comparator, Format convert, Gate function, Delay function and Staircase lighting.

#### Scene group function

Up to support 8 channels of scene group forward, each group up to support 8 configurable output, datatype is optional 1bit/1byte/2byte.





## Chapter 5. Parameter setting description in the ETS

#### 5.1. KNX Secure

KNX Push Button Sensor with Secure, 4/6/8 buttons is a KNX device that complies with the KNX secure standard. That is, you can run the device in safe way.

If secure commissioning is actived in ETS project, the following information must be considered during device debugging:

Autorial	
Activated	

 It is essential to assign a project password as soon as a KNX Secure device is imported into a project. This will protect the project against unauthorized access.

The password must be kept in a safe place – access to the project is not possible without it (not even the KNX Association or device manufacturer will be able to access it)!

#### Without the project password, the commissioning key will not be able to be imported.

A commissioning key is required when commissioning a KNX Secure device (first download). This key (FDSK = Factory Default Setup Key) is included on a sticker on the side of the device, and it must be imported into the ETS prior to the first download:

♦ On the first download of the device, a window pops up in the ETS to prompt the user to enter the key, as shown in Fig.5.1 (2) below.





The certificate can also be read from the device using a QR scanner (recommended).

i59 -	1.1.8 1-10V Dimming 0	Controller with S	Secure			
10.441						
	This device is configured					
	If you do not have access deactivate secure commis			an either skip	o the downloa	ad or
			o camera fou	nd!		
	-	-	H	1.	-	

Fig.5.1(2) Add Device Certificate window

♦ Alternatively, the certificates of all Secure devices can be entered in the ETS beforehand.

This is done on the "Security" tab on the project overview page, as shown in Fig.5.1(3) below.

The certificates can be also added to the selected device in the project, as shown in Fig.5.1(4).

Overview Bus Catalogs S	Settings	
Projects Archive ETS Inside	Test Secure de	emo Import Date: 2022/4/27 16:49 Last Modified: 2022/5/26 13:5
+ / ± ±	Search Details	Security Project Log Project Files
Name	Last N	
Test Secure demo	202. Export	
Test Project Push button sensor Plus with Secure	2022/ Export Keyring	
PARTY DESCRIPTION OF A	2022/ Device Certificates	s
and the second se		- Delete
And the second second second second	2022/ Serial Number •	
KNX Smart Touch with push button, 3-gang_V1.1	2022/ 0085:25110029	1B188D0478CC407E1C768F5AB88694BB 1.1.1 IP Interface with Secure
Devices  Add Devices	Search	Settings Comments Information
E Devices	Name	Name
Dynamic Folders	General	KNX Presence Sensor, Microwave
► 🚺 KNX Presence Sensor,Microwave	III Internal sensor measurement	Individual Address
🕑 🌆 KNX Motion Sensor,PIR	Presence detector 1	• • • •
	Constant lighting	Description
	Constant lighting	Description
	Constant lighting RTC controller Scene Group function	Description
	Constant lighting	Description Last Modified 2023/2/24 10:59 Last Downloaded - Serial Number - Secure Commissioning Activated
	Constant lighting RTC controller Scene Group function	Last Modified 2023/2/24 10:59 Last Downloaded - Serial Number - Secure Commissioning

Fig.5.1(4) Add Device Certificate

♦ There is a FDSK sticker on the device, which is used for viewing FDSK number.

Without the FDSK, it will no longer be possible to operate the device in KNX Secure mode

after a reset.





The FDSK is required only for initial commissioning. After entering the initial FDSK, the ETS will assign a new key, as shown in Fig.5.1(5) below.

The FDSK will be required again only if the device was reset to its factory settings (e.g. If the device is to be used in a different ETS project).

	Adding Daviso Cartificato    KNX Presence Sensor,Microwave	
	This device supports secure commissioning. If you have the certificate of the device available, you can scan the QR code or enter it now.	
Initial FDSK		
ETS assigned	ACCSUE - YA4PSP - KJAVSP - TNYIBQ - JQ2RF7 - 3XCNDL Serial Number 0085:241300E3 Factory Key FAF52415EBE6DC20304C3512FF771346	FDSK:0085:2A1300E3 ACCSUE-YA4P5P- KJAV5P-TNYIBQ-
	OK Cancel	JQ2RF7-3XCNDL

Fig.5.1(5)

#### Example:

If this application in the project needs to be tried with another device, it is no longer the original device. When the application is downloaded to a new device, the following prompt will appear on the left of Fig.5.1(6), click yes, the Add Device Certificate window will appear, then enter the initial FDSK of the new device, and you need to reset the device to the factory settings (it is not required if the device is still factory default; If it has been used, it will be required to reset, otherwise the following error message will appear on the right of Fig.5.1(6)), and then the device can be successfully downloaded again.



Fig.5.1(6) Example





Whether the device is replaced in the same project, or the device is replaced in a different project,

the processing is similar: Reset the device to the factory settings, then reassign the FDSK.

After the device is downloaded successfully, the label Add Device Certificate turns gray, indicating that the key for this device has been assigned successfully, as shown in Fig.5.1(7) below.

Activated	
Add Device Certificat	>
Status	
Unknown	,

Fig.5.1(7)

ETS generates and manages keys:

Keys and passwords can be exported as needed to the use of security keys outside of the associated ETS projects. As shown in Fig.5.1(8) below, the file extension is .knxkeys.

Fest Secure de	mo			Import Date: 2022/4/27 16:49	Last I
Details	Security	Project Log	Project Files		
Export					
Export Keyring					
Device Certificates           + Add         × D	elete				
Serial Number 🔺	Factory Key (FDSK)		Device		
Serial Number ▲ 0085:25090001	Factory Key (FDSK) F25370641BEC1AAFF07	737BDE0F982C68	Device		
	F25370641BEC1AAFF07			nsor Plus with Secure, 1/2/3/4	4gang

Fig.5.1(8)

Note: Any USB interface used for programming a KNX Secure device must support 'long frames''. Otherwise ETS will report a download failure information, as shown below.





#### 5.2. Parameter window "General"

#### 5.2.1.Parameter window "General setting"

General	Send delay after voltage recovery [015]	5	÷
General setting	Send cycle of "In operation" telegram [1240,0=inactive]	0	* *
Proximity setting Advanced setting	Extension function		
	Night mode	$\checkmark$	
Internal temperature measurem	Night mode need send read request after voltage recovery	$\checkmark$	
Input	Note: Default to normal mode if no re	esponse when request after startup	
Button	Proximity function via bus	~	
Button 1 - Switching	Distance with		
Button 2 - Switching	Brightness setting	50	
Customized colour	Status LED brightness in normal mode	50	• 9
	Status LED brightness in night mode	5	• 9
	Status LED brightness in standby mode	5	• 9
	Delay time after no operation for standby mode [0255,0=inactive]	10	*
	Delay time for turn off all status LED after standby mode [0255,0=inactive]	11	÷
	Wake up device via any button operation		
	Panel orientation indication when turn off status LED	Trigger via object	•
	LED 8 reuse as indication LED		
	Work mode	1=trigger/0=no trigger	•
	Colour of indication LED	Yellow	
	Indication period time	20	•
	Brightness of indication LED	5	• 9

Fig.5.2.1 "General setting" parameter window

#### Parameter "Send delay after voltage recovery [0..15]s"

This parameter is for setting the delay time that sends status request telegram to bus after the device voltage recovery. Options: **0..15** 

The setting dose not contain the device initialization time, and bus telegrams received during delay time will be recorded.



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#### Parameter "Send cycle of "In operation" telegram [1..240,0=inactive]s"

This parameter is for setting the time interval when this device cycle send telegrams through the bus to indicate this device in normal operation. When set to "0", the object "In operation" will not send a telegram. If the setting is not "0", the object "In operation" will send a telegram according to the set period time with logic "1" to the bus. Options: **0...240s**, **0= inactive** 

As to reduce the bus load as much as possible, the maximum time interval should be selected according to actual needs.

#### **Extension function**

#### Parameter "Night mode"

Parameters as follow are visible when the parameter enabled, to set night mode.

#### Parameter "Night mode need send read request after voltage recovery"

This parameter is for setting whether the object "Night mode" to send read request when bus recovery or finish programming.

If send the read request, LED indicates according to setting brightness of responded normal/night mode.

#### Note: Default to normal mode if no response when request after startup

This note is visible when previous parameter is enabled.

#### Parameter "Proximity function via bus"

This parameter is for setting whether to link the panel by receiving proximity signal from the bus,

and display the interface "Proximity setting" after enabled.

#### **Brightness setting**

#### Parameter "Status LED brightness in normal mode"

This parameter is for setting the button LED brightness when indicated during normal or day mode.

Options:

0% 5% 10% 20%





#### 70%

#### Parameter "Status LED brightness in night mode"

This parameter is visible when night mode enabled. Set the button LED brightness when indicated during night mode. Options:

0%
5%
10%
20%
70%

#### Parameter "Status LED brightness in standby mode"

This parameter is visible when the delay time for the normal mode to enter the standby mode is not 0. Set the button LED brightness when indicated during standby mode. Options:

5% 10% 20% ... 70%

Parameter "Delay time after no operation for standby mode [0...255,0=inactive]s"

This parameter is for setting the delay time for the normal mode to enter the standby mode. When 0, it will not activate standby mode. Options: **0...255,0=inactive** 

#### Parameter "Delay time for turn off all status LED after standby mode[0...255,0=inactive]s"

This parameter is visible when the delay time for the normal mode to enter the standby mode is not

0. Set the delay time for turn off all indication LED after standby mode. When 0, the command to turn

#### off all LED will not be executed. Options: 0...255,0=inactive

#### Parameter "Delay time for turn off all status LED[0...255,0=inactive]s"

This parameter is visible when the delay time for the normal mode to enter the standby mode is 0. Set the delay time for turn off all indication LED after normal mode. When 0, the command to turn off all LED will not be executed. Options: **0...255,0=inactive** 





#### Parameter "Wake up device via any button operation"

This parameter is visible when the delay time for the indication LED all to go off is not 0. Set whether to wake up the panel via any button operation. If a wake-up is required, the first operation when the LEDs are all off is not a functional response; if it is not required, then each button operation is responsive.

#### Parameter "Panel orientation indication when turn off status LED"

This parameter is visible when the delay time for the indication LED all to go off is not 0. Set whether to activate panel orientation indication when turn off all LED. Options:

Disable Always trigger Trigger via object

Parameters as follow are visible when panel orientation indication function is enabled:

#### LED x reuse as indication LED(x=4/6/8, display according to push button type)

#### Parameter "Work mode"

This parameter is visible when panel orientation indication function is enabled and selected "Trigger via object". Set the work mode for panel orientation indication. Options:

> 0=trigger/1=no trigger 1=trigger/0=no trigger 0 is trigger,1 is no reaction 1 is trigger,0 is no reaction

#### Parameter "Colour of indication LED"

This parameter is for setting the colour of panel orientation indication LED. Options:

Red	Orange
Green	Cyan blue
Blue	Customized colour 1
White	Customized colour 2
Yellow	Customized colour 3
Cyan	Customized colour 4
Magenta	Customized colour 5





#### Parameter "Indication period time"

Orientation indication LED lights up is a fading soft flashing effect, with a fixed time of approx. 5s from dark to light and back again. This parameter defines a full cycle, that is including two periods, 5s for the soft flashing effect and always off. The longer the set time is, the longer the time of always off is longer. Options:

10s	
20s	
60s	

#### Parameter "Brightness of indication LED"

This parameter is for setting the brightness of panel orientation indication LED. Options:

5%	
10%	
20%	
50%	





#### 5.2.2. Parameter window "Proximity setting"

#### 1.2.8 KNX Wall Panel, 4-Gang with KNX Secure > General > Proximity setting

– General	The Proximity function triggered via	Proximity object
General setting		
Proximity setting		
Advanced setting		



#### Parameter "The Proximity function triggered via"

This parameter is for setting the trigger way of proximity function.

Option is read-onlyby default **Proximity object** 

Proximity object: When another device on the bus supports proximity function and can send a sense signal, the proximity signal can be received via the object "Proximity input".

#### 5.2.3. Parameterwindow "Advanced setting"

#### 1.2.8 KNX Wall Panel, 4-Gang with KNX Secure > General > Advanced setting

- General	Input interface	~
General setting	Logic function Scene group function	✓ ✓
Proximity setting		
Advanced setting		

Fig.5.2.3 "Advanced setting" parameter window

#### Parameter "Input interface"

Setting page of input interface is visible after this parameter enabled.

Parameter "Logic function"

Setting page of logic function is visible after this parameter enabled.

#### Parameter "Scene group function"

Setting page of scene group function is visible after this parameter enabled.





#### 5.3.Parameter window "Internal temperature measurement"

General		Temperature sensor setting		
Genera	I setting	Temperature calibration	0.0	- K
	ity setting	Send temperature when the result change by	1.0K	•
	ced setting	Cyclically send temperature [0255,0=inactive]	10	\$ min
Internal	temperature measur	Send alarm telegram for low/high temperature	Respond after change	•
Input		Threshold value for low temperature alarm [015]	0	•0
Button		Threshold value for high temperature alarm [30.45]	45	°C

1.2.8 KNX Wall Panel, 4-Gang with KNX Secure > Internal temperature measurement

Fig.5.3 "Internal temperature measurement" parameter window

The following parameters is used for setting the calibration value, sending condition and error report of internal sensor. If internal sensor is selected for other functions as well, please refer to this section.

#### Temperature sensor setting

#### Parameter "Temperature calibration"

This parameter is for setting the temperature calibration value of the internal sensor, that is, to calibrate the measured value of internal sensor to make it closer to the current ambient temperature. Options:

> -5.0K ... 0.0K ... 5.0K

Note: after the device is powered on, the stability time of internal sensor detection will take 30 minutes, therefore, the detected temperature value in the early stage of device work may be inaccurate.

Parameter "Send temperature when the result change by"

This parameter is for setting when temperature turns to a certain value, whether to enable to send

the current temperature value to the bus. Not send when disable. Options:

Disable





1.0K

•••

10K

#### Parameter "Cyclically send temperature [0...255,0=inactive]min"

Setting the time for cyclically sending the temperature detection value to the bus. Options: **0..255** This period is independent and starts time counting after programming completion or reset. Transmission change has no affect on this period.

#### Parameter "Send alarm telegram for low/high temperature"

This parameter is for setting condition of sending telegram when low/high temperature alarm. Options:

No respond

#### **Respond after read only**

#### **Respond after change**

Respond after read only: Only when the device receives a read alarm from other bus device or bus will the object "Low temperature alarm"/" High temperature alarm" send the alarm status to the bus;

Respond after change: the object "Low temperature alarm"/" High temperature alarm" will immediately send the telegram to the bus to report the alarm value when the alarm status has changed.

These two parameters as follow are visible when "Respond after read only" or "Respond after change" are selected.

#### ---Parameter "Threshold value for low temperature alarm [0..15]°C"

This parameter is for setting the threshold value for low temperature alarm. When the temperature lower than low threshold, low temperature alarm object will send telegram. Options:

0°C 1°C ... 15°C





#### ——Parameter "Threshold value for high temperature alarm [30..45]°C"

This parameter is for setting the threshold value for high temperature alarm. When the temperature higher than high threshold, high temperature alarm object will send telegram. Options:

30°C 31℃ ... 45°C

#### 5.4. Parameter window "Input"

1.2.8 KNX Wall Panel, 4-Gang with KNX Secure > Input

+	General	Function of input 1	BI: Switch sensor	•
	Internal temperature measurem	Function of input 2	Temperature probe(NTC 10K)	•
-	Input			
		Fig.5.4 "Input	" parameter window	

#### Parameter "Function of input x"(x=1, 2)

This parameter is for setting the function of external input interface. Support temperature detection and dry contact input (BI), setting page will be visible when select corresponding chosen. Also can be disable this channel function. Options:

Disable Temperature probe(NTC 10K) Bl: Switch sensor Bl: Scene control Bl: Send String(14bytes)

When select Temperature probe(NTC 10K), can detect external temperature, which needs set B value of temperature probe.

When select dry contact input (BI), only supports the basic functions, including switch, scene send strings (press/release, short/long, send after voltage recovery, disable function).

Chapters as follow explain the functions of external input interface separately.





#### 5.4.1.Temperature probe

General	Description (max 30char.)		
Internal temperature measurem	B value of temperature sensor (must refer to the characteristic of	3950	-
Input	component) Temperature calibration	0.0	<b>▼</b> K
Input 1 - Temperature probe	Send temperature when the result change by	1.0K	•
Button	Cyclically send temperature [0255]	0	‡ min
	Reply error of sensor measurement	Respond after change	+
Button 1 - Switching	Object value of error	0 0=no error/1=error 1=	no error/0=error
Button 2 - Switching	Lower threshold value for error report	0	* °C
Customized colour	Upper threshold value for error report	60	• °C
Logic function			

1.2.8 KNX Wall Panel, 4-Gang with KNX Secure > Input > Input 1 - Temperature probe

Fig.5.4.1 Parameter setting of temperature probe

#### Parameter "Description (max 30char.)"

This parameter is for setting the name description of temperature probe.

#### Parameter "B value of temperature sensor(must refer to the characteristic of component)"

This parameter is for setting the B value of temperature sensor. Options:

Note: This value must refer to the characteristic of component, available from the instruction manual. If selected B value is different from used sensor, it will effect detection result directly.

#### Parameter "Temperature calibration"

This parameter is for setting the temperature calibration value of the temperature sensor, that is, to

calibrate the measured value of sensor to make it closer to the current ambient temperature. Options:

-5.0K ... 0.0K ... 5.0K





#### Parameter "Send temperature when the result change by"

This parameter is for setting when temperature turns to a certain value, whether to enable to send the current temperature value to the bus. Not send when disable. Options:

> Disable 0.5K 1.0K ... 10K

#### Parameter "Cyclically send temperature [0...255,0=inactive]min"

Setting the time for cyclically sending the temperature detection value to the bus. Not send when value is 0.

Options: 0..255

#### Parameter "Reply error of sensor measurement"

This parameter for setting the condition of sending error status report when temperature exceeds the valid detection. Options:

No respond

#### **Respond after read only**

#### **Respond after change**

Respond after read only: Only when the device receives a read error from other bus device or bus will the object "Temperature error report, Sensor" send the error status to the bus;

Respond after change: The object "Temperature error report, Sensor" will immediately send the telegram to the bus to report the error value when the error status has changed.

These three parameters as follow are visible when "Respond after read only" or "Respond after change" are selected.

#### ——Parameter "Object value of error"

This parameter for defining object value of error. Options:

0=no error/1=error

1=no error/0=error





0=no error/1=error: The object value for which sensor no error occurs is 0, and the object value for which sensor error occurs is 1;

1=no error/0=error: It has the opposite meaning.

#### ---Parameter "Lower threshold value for error report"

This parameter is for setting the lower threshold value for temperature error. When the temperature lower than the threshold, temperature error object will send telegram.

Options: 10°C / 5°C / 0°C / -5°C / -10°C / -20°C

#### ----Parameter "Upper threshold value for error report"

This parameter is for setting the upper threshold value for temperature error. When the temperature higher than the threshold, temperature error object will send telegram.

Options: 40°C / 45°C / 50°C / 55°C / 60°C / 70°C





#### 5.4.2.Binary input

General	Description (max 30char.)		
Internal temperature measurem	Distinction between short and long operation	O No Yes	
Input	Reaction on close the contact	ON	•
1 11 5 5 1	Reaction on open the contact	OFF	
Input 1 - Switch sensor	Send object value after voltage recovery	O No Yes	
Button	(valid if reaction is not toggle)		
Button 1 - Switching	Number of objects	① 1 ○ 2	
button i bintening	Disable function	Disable	
2.8 KNX Wall Panel, 4-Gang w	ith KNX Secure > Input > Input 1 - Swit	tch sensor	
2.8 KNX Wall Panel, 4-Gang w	ith KNX Secure > Input > Input 1 - Swit	ich sensor	
		cch sensor No © Yes	
General Internal temperature measurem	Description (max 30char.) Distinction between short and long		\$ *0.1
General Internal temperature measurem Input	Description (max 30char.) Distinction between short and long operation	No 💿 Yes	\$ *0.1
General Internal temperature measurem	Description (max 30char.) Distinction between short and long operation Long operation after [325]	No O Yes	\$ *0.1
General     Internal temperature measurem     Input	Description (max 30char.) Distinction between short and long operation Long operation after [325] Connected contact type	No Ves 5 Normally open Normally closed	

#### Fig.5.4.2(1) Parameter setting of switch sensor

#### 1.2.8 KNX Wall Panel, 4-Gang with KNX Secure > Input > Input 1 - Scene control

+ General	Description (max 30char.)			
Internal temperature measurem	Distinction between short and long operation	Nd Yes		
- Input	Reaction on close the contact	Recall scene	*	
×	8 bit scene number	Scene No.1	•	
Input 1 - Scene control	Reaction on open the contact	Recall scene	•	
- Button	8 bit scene number	Scene No.2	*	
Button 1 - Switching	Number of objects	1 2		
Button 2 - Switching	Disable function	Disable	•	
1.2.8 KNX Wall Panel, 4-Gang with KNX Secure > Input > Input 1 - Scene control				
+ General	Description (max 30char.)			
Internal temperature measurem	Distinction between short and long	🔿 No 🔘 Yes		

Internal temperature measurem	Distinction between short and long operation	🔵 No 🔘 Yes	
— Input	Long operation after [325]	5	‡ *0.1s
Input 1 - Scene control	Connected contact type	Normally open O Normally closed	
input i scene control	Reaction on short operation	Recall scene	•
- Button	8 bit scene number	Scene No.1	•
Button 1 - Switching	Reaction on long operation	Store scene	•
Button 2 - Switching	8 bit scene number	Scene No.1	•
Customized colour	Number of objects	◎ 1 ○ 2	
+ Logic function	Disable function	Disable	•

+ Scene Group function

-

+

#### Fig. 5.4.2(2) Parameter setting of scene control

		5	
1.2.8 KNX Wall Panel, 4-Gang wi	th KNX Secure > Input > Input 1 - Send	d String	
+ General	Description (max 30char.)		
Internal temperature measurem	Distinction between short and long operation	O No Ves	
- Input	Reaction on close the contact	○ No reaction ◎ Send Value	
Input 1 - Send String	String (14byte) value	Hello, world !	
	Reaction on open the contact	No reaction Send Value	
- Button	Send object value after voltage recovery	O No Ves	
Button 1 - Switching	Disable function	Disable	•
Button 2 - Switching			
1.2.8 KNX Wall Panel, 4-Gang wit	th KNX Secure > Input > Input 1 - Send	d String	
1.2.8 KNX Wall Panel, 4-Gang with + General	th KNX Secure > Input > Input 1 - Seno Description (max 30char.)	d String	
		d String 	
+ General	Description (max 30char.) Distinction between short and long		0.1s
+ General Internal temperature measurem - Input	Description (max 30char.) Distinction between short and long operation	No @ Yes	0.1s
+ General Internal temperature measurem	Description (max 30char.) Distinction between short and long operation Long operation after [3.25]	 ○ No ◎ Yes 5	0.1s
+ General Internal temperature measurem - Input	Description (max 30char.) Distinction between short and long operation Long operation after [325] Connected contact type	No Ves 5 + * * O Normally open Normally closed	0.1s
General     Internal temperature measurem     Input     Input 1 - Send String	Description (max 30char.) Distinction between short and long operation Long operation after [3.25] Connected contact type Reaction on short operation	No O Yes 5 + + + + + + + + + + + + + + + + + + +	0.1s



25



#### Parameter "Description (max 30char.)"

This parameter is for setting the name description for binary input function.

#### Parameter "Distinction between short and long operation"

This parameter is for setting whether to distinction between short and long operation. Options:

No

Yes

#### ---Parameter "Long operation after [3..25]\*0.1s"

This parameter is visible when distinction between short and long operation. Set the effective time of long operation. When button operation out of the setting time, it is a long operation, otherwise it is a short operation.

Options: 3..25

#### ——Parameter "Connected contact type"

This parameter is visible when distinction between short and long operation. Set the connected contact type.

Options:

Normally open Normally closed

When function is selected "BI: Switch sensor", the following parameters are visible, for setting switch sensor.

#### ---Parameter "Reaction on short/long operation"

This parameter is visible when distinction between short and long operation, performing the action according to the settings of the short and long operations. Set the switch value to send when button operation. Options:

No reaction OFF ON TOGGLE





No reaction: No telegrams have been sent.

ON: Send the on telegram.

OFF: Send the off telegram.

TOGGLE: Each operation will alternate between on and off.

#### ---Parameter "Reaction on close/open the contact"

This parameter is visible when no distinction between short and long operation. Detect the close and open operations, and perform the actions according to the settings. Set the switch value to send when button operation. Options:

> No reaction OFF ON TOGGLE

#### ---Parameter "Send object value after voltage recovery (valid if reaction is not toggle)"

This parameter is visible when no distinction between short and long operation. This parameter is valid if not select "TOGGLE" or "No reaction", set whether to send object value after voltage recovery. Options:

No

Yes

When function is selected "BI: Scene control", the following parameters are visible, for setting scene control.

#### ---Parameter "Reaction on short/long operation"

This parameter is visible when distinction between short and long operation, performing the action according to the settings of the short and long operations. Set the scene command to send when button operation. Options:

No reaction Recall scene Store scene





#### ——Parameter "Reaction on close/open the contact"

This parameter is visible when no distinction between short and long operation. Detect the close and open operations, and send or storage scenes according to the settings. Set the scene command to send when button operation. Options:

> No reaction Recall scene Store scene

#### ——Parameter "8 bit scene number"

This parameter is visible when "Recall scene" or "Store scene" is selected. Set the scene number,

#### range: Scene NO.1~64, corresponding telegram is 0~63

When function is selected "BI: Send String(14bytes)", the following parameters are visible, for setting string sending.

#### ---Parameter "Reaction on short/long operation"

This parameter is visible when distinction between short and long operation, performing the action according to the settings of the short and long operations.Options:

No reaction

Send Value

#### ---Parameter "Reaction on close/open the contact"

This parameter is visible when no distinction between short and long operation. Detect the close and open operations, and send strings according to the settings. Options:

No reaction

Send Value

#### ——Parameter "String (14byte) value"

This parameter is visible when "Send Value" is selected. Input the strings to send.





#### ——Parameter "Send object value after voltage recovery"

This parameter is visible when no distinction between short and long operation. Set whether to send object value after voltage recovery. Options:

No

Yes

#### Parameter "Number of objects"

This parameter is visible when the parameter "Reaction on long/open operation" is not selected "No reaction". Set whether to use a common object or two separate objects when open/close and long/short operations. Options:

1 2

#### Parameter "Disable function"

This parameter is visible when binary input functions are selected. Set trigger value to disable/enable contacts. Options:

Disable Disable=1/Enable=0 Disable=0/Enable=1





#### 5.5. Parameter window "Button"

This series of products has several panels, including 2-gang, 3-gang and 4-gang. The function of

the button panels is similar, so the 4-gang panel is used as an example below.

1.2.8 KNX Wall Panel, 4-Gang with KNX Secure > Button

+	General	Push button type	4-gang		
	Internal temperature measurem				
+	Input		$\mathbf{\mathbf{U}}$		
-	Button				
	Button 1 - Switching	Panel preview			•
	Button 2 - Switching				
	Button 3 - Dimming		(2)	(7)	(8)
	Button 4 - Colour temperature				
	Customized colour	Long operation for button after [3250]	5		‡ *0.1s
+	Logic function	Function of button 1	Switch		•
+	Scene Group function	Function of button 2	Switch		•
		Function of button 3	Dimming		•
		Function of button 4	Colour tempe	rature control	•
		Function of button 5	Disable		•
		Function of button 6	Disable		•
		Function of button 7	Disable		•
		Function of button 8	Disable		•

Fig.5.45 "Button" parameter window

#### Parameter "Push button type"

This parameter is for setting the push button type. Under the parameter, it displays the panel preview picture according the push button type. If the type is 4-gang, shown as Fig.5.4.

#### —Parameter " Long operation for button after [3..250]\*0.1s"

Button operation is distinguished between long and short operation as default, this parameter is for setting the valid time for long operation. So, when you press longer than the time set here, it will be identified as long operation, otherwise, it will be taken as short operation. Options: **3..250** 

Parameter "Function of button x"(x=1~8)

This parameter is for setting the function of button. Options:

Disable	Scene control
Switch	Blind
Dimming	Shift register





RGB lighting	Multiple operation
RGBW lighting	Delay mode
Colour temperature control	RTC operation mode
Value sender	String(14bytes)

Chapters as follow explain the button function separately.

#### 5.5.1.Switch function

1.2.8 KNX Wall Panel, 4-Gang with KNX Secure > Button > Button 1 - Switching		
+ General	Description (max 30char.)	
Internal temperature measurem	Distinction between short and long operation	🔵 No 🔘 Yes
+ Input	Reaction on short operation	TOGGLE 👻
- Button	Reaction on long operation	No reaction 👻
Button 1 - Switching	Disable function	Disable 🔻
Button 2 - Switching		
Button 3 - Dimming	Status LED indication	Control by button switch object 🔹
	When object value="0", LED is	Red 💌
Button 4 - Colour temperature		
Customized colour	When object value="1", LED is	Yellow

Fig.5.5.1 Parameter setting of switch function

#### Parameter "Description (max 30char.)"

This parameter is for setting the name description for the current button function, up to input 30 chapters.

#### Parameter "Distinction between short and long operation"

This parameter is for setting whether to distinction the contact operation between short and long operation. Options:

No

Yes

When select "Yes", the operation reaches a certain time to determine whether the operation is a long or short operation before the contact performs the setting action.





## Parameter "Reaction on short/press operation" Parameter "Reaction on long/release operation"

These parameters are for setting the performed actions when press/release the contact or long/short operation. The object value is updated when the input is determined. Options:

No reaction

0FF

ON

#### TOGGLE

No reaction: No telegrams have been sent.

ON: Send the on telegram.

OFF: Send the off telegram.

TOGGLE: Each operation will alternate between on and off. For example, if the last telegram was sent (or received) for on, then the next operation will trigger a telegram for off. When the switch is operated again, it will send a telegram for on etc., So the switch will always remember the previous state and covert to opposite value during next operation.

#### Parameter "Number of objects"

This parameter is visible when the parameter "Reaction on long/release operation" is not selected "No reaction". Set the number of objects when short/long or press/release operation:

1 2

#### Parameter "Disable function"

This parameter is for setting trigger value to disable/enable contacts. Options:

Disable

Disable=1/Enable=0

Disable=0/Enable=1





#### —Parameter "Status LED indication when button disable"

This parameter is visible when previous parameter is selected "Disable=1/Enable=0" or "Disable=0/Enable=1". Set the LED indication status when button disable. Options:

#### No

#### Flashing

No: no indication and stay the normal indication status;

Flashing: always flashing until receive the "Enable" telegram it will back to normal indication, the flashing period is 1s on and 1s off.

#### ----Parameter "LED indication colour"

This parameter is visible when previous parameter is selected "Flashing". Set the LED indication colour, and when it is a customized colour, you need to configure the the colour in the "Customized colour" interface.Options:

Red	Orange
Green	Cyan blue
Blue	Customized colour 1
White	Customized colour 2
Yellow	Customized colour 3
Cyan	Customized colour 4
Magenta	Customized colour 5

Repeat parameters will not be illustrated in next chapters; the usage is similar.





#### 5.5.2. Dimming function

1.2.8 KNX Wall Panel, 4-Gang with KNX Secure > Button > Button 1 - Dimming			
+ General	Description (max 30char.)		
Internal temperature measurem	Reaction on short operation	TOGGLE	•
+ Input	Reaction on long operation	Brighter/Darker	•
- Button	Dimming mode	Start-Stop dimming Step dimming	
Button 1 - Dimming	Disable function	Disable	•
Button 2 - Switching	Status LED indication	Control by button switch object	•
Button 3 - Dimming	When object value="0", LED is	Red	
Button 4 - Colour temperature	When object value="1", LED is	Yellow	•
Customized colour			

Fig.5.5.2 Parameter setting of dimming function

#### Parameter "Reaction on short operation"

This parameter is for setting the the switch value to send when short operation. Options:

No reaction	
OFF	
ON	
TOGGLE	
No reaction: No telegrams have been sent.	
ON: Send the on telegram.	
OFF: Send the off telegram.	

TOGGLE: Each operation will alternate between on and off.

#### Parameter "Reaction on long operation"

This parameter is for setting the the relative dimming value to send when long operation, with

dimming brightness or darker; when release the contact stop dimming. Options:

No reaction

Brighter

Darker

#### **Brighter/Darker**

No reaction: No telegrams have been sent.

Brighter: The dimming up value will be sent.

Darker: The dimming down value will be sent.





Note: In "TOGGLE" mode of this parameter setting, the value sent will be linked. For example, if the last value is switching on status, then it will be dimmed down in next dimming operation; if the last value is switching off, then it will be dimmed up in next dimming operation.

#### Parameter "Dimming mode"

This parameter is visible when previous parameter is not "No reaction". Set the way of relative dimming. Options:

#### Start-Stop dimming

#### Step dimming

Start-stop dimming: The dimming mode will be start-stop, a dimming up or down telegram will be sent when the dimming starts, and a stop telegram will be sent when dimming ends. Here the dimming telegram will not be sent cyclically.

Steps dimming: The dimming mode will be a step one and the dimming telegram will be sent cyclically. When dimming ends, a stop dimming telegram will be sent immediately.

#### ——Parameter "Step size"

This parameter is visible when the dimming way is selected "Step dimming". Set a cyclically sending dimming telegram which changes the brightness percentage, Options:

100% 50% ... 1.56%

#### ----Parameter "Interval of tele. cyclic send [0..25,0=send once]\*0.1s"

This parameter is visible when the dimming way is selected "Step dimming". Set intervals of two cyclically sending dimming telegram. Options: **0..25**, **0=send once** 





#### 5.5.3.RGB lighting

1.2.8 KNX Wall Panel, 4-Gang with KNX Secure > Button > Button 1 - RGB			
+	General	Description (max 30char.)	
	Internal temperature measurem	Object datatype of absolute brightness	1x3byte 3x1byte
+	Input	Reaction on short operation	TOGGLE 👻
		Reaction on long operation	Absolute value 🔻
	Button	RGB Value	#FFFFF
	Button 1 - RGB	Default Value: #FFFFFF	
	Button 2 - Switching	Disable function	Disable 👻
	Button 3 - Dimming	Status LED indication	Indicate button press
	Button 4 - Colour temperature	When press the button,indicator is	On O Flashing
	Customized colour	Flashing period time is	0.8 <b>v</b> s
+	Logic function	Normal indication is	OFF ON
+	Scene Group function	LED indication colour	Magenta 👻

Fig.5.5.3 Parameter setting of RGB lighting function

#### Parameter "Object datatype of absolute brightness"

This parameter is for setting the object datatype for RGB lighting. Options:

#### 1x3byte

3x1byte

#### Parameter "Reaction on short operation"

#### Parameter "Reaction on long operation"

These parameters are for setting the performed actions when long/short operation. Options:

No reaction		
OFF		
0 N		
TOGGLE		
Absolute value		
——Parameter "RGB value"		

This parameter is visible when previous parameter is selected "Absolute value". Set the sending RGB value when long/short operation. Options: **#0000..#FFFF** 




## 5.5.4.RGBW lighting

1.2	.8 KNX Wall Panel, 4-Gang wit	h KNX Secure > Button > Button 1 - F	GBW	
+	General	Description (max 30char.)		
	Internal temperature measurem	Object datatype of absolute brightness	1x6byte 4x1byte	
+	Input	Reaction on short operation	TOGGLE	•
		Reaction on long operation	Absolute value	•
	Button	RGB Value	#FFFFF	
	Button 1 - RGBW	White Value	255	
	Button 2 - Switching			
	Button 3 - Dimming	Disable function	Disable	•
	Button 4 - Colour temperature			
	Customized colour	Status LED indication	Indicate button press	•
+	Logic function	When press the button,indicator is	🔵 On 🔘 Flashing	
		Flashing period time is	0.8	<b>▼</b> 5
+	Scene Group function	Normal indication is	OFF ON	
		LED indication colour	Magenta	•

Fig.5.5.4 Parameter setting of RGBW lighting function

## Parameter "Object datatype of absolute brightness"

This parameter is for setting the object datatype for RGBW lighting. Options:

#### 1x6byte

#### 4x1byte

Parameter "Reaction on short operation"

#### Parameter "Reaction on long operation"

These parameters are for setting the performed actions when long/short operation. Options:

No reaction OFF ON TOGGLE Absolute value

#### —Parameter "RGB value"

This parameter is visible when previous parameter is selected "Absolute value". Set the sending RGB value when long/short operation. Options: **#0000..#FFFF** 

#### ——Parameter "White Value"

This parameter is visible when previous parameter is selected "Absolute value". Set the sending white brightness value when long/short operation. Options: **0..255** 





## 5.5.5.Colour temperature control

1.2.8 KNX Wall Panel, 4-Gang with KNX Secure > Button > Button 1 - Colour temperature							
+ General		Description (max 30char.)					
Internal tem	perature measurem	Reaction on short operation	TOGGLE	•			
+ Input		Reaction on long operation	Absolute value	*			
· mpar		Send brightness value	100	÷ %			
- Button		Send Colour temperature value	4000	÷ K			
Button 1 -	Colour temperature						
Button 2 -	Button 2 - Switching	Disable function	Disable	•			
Button 3 -	Dimming	Status LED indication	Indicate button press	•			
Button 4 -	Colour temperature	When press the button, indicator is	🔵 On 🔘 Flashing				
Customized	d colour	Flashing period time is	0.8	▼ s			
+ Logic functi	on	Normal indication is	OFF ON				
+ Scene Grou	p function	LED indication colour	Magenta	•			

Fig.5.5.5 Parameter setting of colour temperature control function

## Parameter "Reaction on short operation"

## Parameter "Reaction on long operation"

These parameters are for setting the performed actions when long/short operation. Options:

No reaction
OFF
ON
TOGGLE
Absolute value

## ----Parameter "Send brightness value"

This parameter is visible when previous parameter is selected "Absolute value". Set the sending brightness value when long/short operation. Options: **0..100%** 

#### —Parameter "Send Colour temperature value"

This parameter is visible when previous parameter is selected "Absolute value". Set the sending colour temperature value when long/short operation. Options: **1000...10000K** 





#### 5.5.6.Value sender function

.2.8 KNX Wall Panel, 4-Gang wit	h KNX Secure > Button > Button 1 -	Value sender	
+ General	Description (max 30char.)		
Internal temperature measurem	Reaction on short operation	1bit value[ON/OFF]	-
- Input	Value 1	OFF ON	
- Button	Reaction on long operation	No reaction	
Button 1 - Value sender	Disable function	Disable	
Button 2 - Switching	Status LED indication	Indicate button press	
Button 3 - Dimming	When press the button, indicator is	On O Flashing	
Button 4 - Colour temperature	Flashing period time is	0.8	•
Customized colour	Normal indication is	OFF ON	
Logic function	LED indication colour	Magenta	

Fig.5.5.6 Parameter setting of value sender

# Parameter "Reaction on short operation" Parameter "Reaction on long operation"

These parameters are for setting the datatype to send when long/short operation. Options:

No reaction 1bit value[On/Off] 2bit value[0..3] 4bit value[0..15] 1byte value[0..255] 2byte value[0..65535] 2byte float value 4byte value[0..4294967295] 4byte float value

## ——Parameter "Value 1/2"

These parameters are visible when "No reaction" is not selected. Set the data value to send when perform short/long operation. Range of value is determined according to the previous parameter selected datatype.





## 5.5.7.Scene function

General	Description (max 30char.)		
Internal temperature measurem	Reaction on short operation	Stop(Adjust Up/Down)	•
Input	Reaction on long operation	Up/Down	•
Button	Disable function	Disable	•
Button 1 - Blind	Status LED indication	Indicate button press	•
Button 2 - Switching	When press the button, indicator is	🔵 On 🔘 Flashing	
Button 3 - Dimming	Flashing period time is	0.8	•
Button 4 - Colour temperature	Normal indication is	O OFF O ON	
Customized colour	LED indication colour	Magenta	•
Logic function	Flashing period time is	0.8	-
Scene Group function	Normal indication is	OFF ON	
	LED indication colour	Magenta	•

## Parameter "Reaction on short operation"

1.2.8 KNX Wall Panel, 4-Gang with KNX Secure > Button > Button 1 - Blind

#### Parameter "Reaction on long operation"

These parameters are for setting to recall or storage scene when long/short operation. Options:

No reaction Recall scene Store scene

## ——Parameter "8 bit scene number"

This parameter is visible when "No reaction" is not selected. Set the scene number. Options:

Scene NO.1 Scene NO.2 Scene NO.3 ... Scene NO.64

Corresponding telegram is 0~63

## Parameter "Number of objects"

This parameter is visible when the parameter "Reaction on long operation" is not selected "No reaction". Set the number of objects when short/long operation:





#### 5.5.8.Blind function

+ General	Description (max 30char.)		
Internal temperature measurer	n Reaction on short operation	Stop(Adjust Up/Down)	•
+ Input	Reaction on long operation	Up/Down	•
- Button	Disable function	Disable	•
Button 1 - Blind	Status LED indication	Indicate button press	•
Button 2 - Switching	When press the button, indicator is	On O Flashing	
Button 3 - Dimming	Flashing period time is	0.8	•
Button 4 - Colour temperatur	e Normal indication is	OFF ON	
Customized colour	LED indication colour	Magenta	•
	Fig 5 5 8 Parar	meter setting of blind function	

Parameter "Reaction on short operation"

#### Parameter "Reaction on long operation"

These parameters are for setting to performed actions when long/short operation. Options:

No reaction Up Down Up/Down Stop(Adjust Up) Stop(Adjust Down) Stop(Adjust Up/Down) No reaction: No reaction is performed.

Up: The curtains/blinds will be opened or moved up.

Down: The curtains/blinds will be closed or moved down.

Up/Down: Alternately open/close or move up/down the curtains/blinds.

Stop (Adjust Up): Stop the curtain movement or move up the angle of blinds.

Stop (Adjust Down): Stop the curtain movement or move down the angle of blinds.

Stop (Adjust Up/Down): Stop the curtain movement or move up/down the angle of blinds alternately.

#### -Parameter "Interval of tele. cyclic send [0..25,0=send once]\*0.1s "

This parameter is visible when previous parameter is selected "Stop...". Set the time interval of cyclical blinds angle adjustment telegram sent. Options: **0..25,0=send once** 





## 5.5.9.Shift register function

-	General	Description (max 30char.)		
	Internal temperature measurem	Shift type	Shift by step value Shift without step v	value
	Input	Value begin with	0	
	Input	Value end with(must be larger than value	10	
	Button	begin with) Step size	2	
		step size	2	,
2	.8 KNX Wall Panel, 4-Gang wit	h KNX Secure > Button > Button 1 - Shi	ft register	
	General	Description (max 30char.)		
	Internal temperature measurem	Shift type	○ Shift by step value	alue
	Input	Object datatype	1byte unsigned value	•
	•	Shift number	1	
	Button	Value 1	0	4
	Button 1 - Shift register	Direction	From lowest to highest and cyclically	
	Button 2 - Switching	Reset function	O Disable Enable by long operation	
	Button 3 - Dimming			
	Button 4 - Colour temperature	Disable function	Disable	•
	Customized colour			
		Status LED indication	Indicate button press	•
	Logic function	When press the button, indicator is	🔵 On 🔘 Flashing	
	Scene Group function	Flashing period time is	0.8	•
		Normal indication is	OFF ON	

Fig.5.5.9 Parameter setting of shift register function

## Parameter "Shift type"

This parameter is for setting the shift type. Options:

#### Shift by step value

#### Shift without step value

Shift by step value: Here the lowest value and highest value of shift can be set, the value increased (from lowest to highest) or decreased (from highest to lowest) from every shift can also be set.

Shift without step value: When there's no step value, the actual value sent by each shift can be set (max. 10 value), in every operation one value will be sent.

## Three parameters as follow are visible when "Shift by step value" is selected

——Parameter "Value begin with"





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This parameter is for setting the lowest value of the shift. Options: 0..240

## ---Parameter "Value end with(must be larger than value begin with)"

This parameter is for setting the highest value of the shift. Options: 1..250

The highest value must be larger than lowest value.

——Parameter "Step size"

This parameter is for setting the increase (from low to high) or decrease (from high to low) value.

Options: 0..240

## Parameters as follow are visible when "Shift without step value" is selected

## Parameter "Object datatype"

This parameter is for setting the object datatype for the shift object. Option is only **1byte unsigned** value/Scene number/HVAC mode

## ——Parameter "Shift number"

This parameter is for setting the number of shift, up to set maximum 10 values, Options: 0/1/2../10

——Parameter "Value x"(x=1~10)

This parameter is for setting the value when each shift operation to send, display according to data type. Options: 0..255/Scene No.1~64/Comfort mode/Standby mode/Economy mode/Frost/heat protection

Parameter "Direction"

This parameter is for setting the shift direction. Options:

From lowest to highest and stop to the end

From highest to lowest and stop to the begin

From lowest to highest and cyclically

## From highest to lowest and cyclically

From lowest to highest and stop to the end: Shift from low to high.

From highest to lowest and stop to the begin: Shift from high to low.

From lowest to highest and cyclically: once to the end value, shift direction starts over again and

constantly cycling from low to high operation.





From highest to lowest and cyclically: once to the start value, shift direction starts over again and constantly cycling from high to low operation.

## Parameter "Reset function"

This parameter is for setting whether to enable shift reset function. Options:

#### Disable

#### Enable by long operation

Disable: Not possible to reset shift;

Enable by long operation: Possible to reset shift by long operation, when reset, shift will start new.

## 5.5.10. Multiple operation function

-	General	Description (max 30char.)		
	Internal temperature measurem	Object type for object1	1Bit_On/Off	
	Input	Function of short operation	TOGGLE	
		Function of long operation	No reaction	
	Button			
	Button 1 - Multiple operation	Object type for object2	1Bit_On/Off	
	Button 2 - Switching	Function of short operation	TOGGLE	
	- Button 3 - Dimming	Function of long operation	No reaction	
	Button 4 - Colour temperature	Object type for object3	1Bit_On/Off	
	Customized colour	Function of short operation	TOGGLE	
	Logic function	Function of long operation	No reaction	
	Scene Group function			
	scene group function	Object type for object4	1Bit_On/Off	
		Function of short operation	TOGGLE	
		Function of long operation	No reaction	
		Disable function	Disable	
		Status LED indication	Indicate button press	
		When press the button, indicator is	🔵 On 🔘 Flashing	
		Flashing period time is	0.8	
		Normal indication is	OFF ON	
		LED indication colour	Magenta	

Fig.5.5.10 Parameter setting of multiple operation function





# Parameter "Object type for object x"(x=1~4)

This parameter is for setting the datatype when long/short operation to send. Options:

Disable 1Bit\_On/Off 1Bit\_Up/Down 1Byte\_RecallScene 1Byte\_StoreScene 1Byte\_Percentage 1Byte\_Unsigned value

---Parameter "Function of short operation"

–Parameter "Function of long operation"

This parameter is for setting the specific values to send when perform the operation, either no action or sending value (the specific value will be set in next parameter).

#### ----Parameter "Value x..."(x=1~2)

This parameter is visible when object type is selected "1byte\_RecallScene", "1byte\_StoreScene", "1byte\_Percentage", "1byte\_Unsigned value". Set sending values when perform operations. The range of value is up to the datatype selected by the parameter before last one.





## 5.5.11.Delay mode function

. . . . . . . . . . . . . . .

1.2.8 KNX Wall Panel, 4-Gang wi	th KNX Secure > Button > Button 1 -	Delay mode	
+ General	Description (max 30char.)		
Internal temperature measurem	Object type for short operation	1Bit_On/Off	•
+ Input	Send mode	No action when operation,delay then send value1	•
- Button	Delay time [06500]	10	* * S
	Value 1	OFF ON	
Button 1 - Delay mode	Value 2	OFF ON	
Button 2 - Switching Button 3 - Dimming	Object type for long operation	Disable	•
Button 4 - Colour temperature Customized colour	Disable function	Disable	•
+ Logic function	Status LED indication	Indicate button press	•
- Logic function	When press the button, indicator is	🔵 On 🔘 Flashing	
+ Scene Group function	Flashing period time is	0.8	₹ s
	Normal indication is	OFF ON	
	LED indication colour	Magenta	•

Fig.5.5.11 Parameter setting of delay mode function

## Parameter "Object type for short operation"

#### Parameter "Object type for long operation"

These parameters are for setting the datatype when long/short operation to send. Options:

Disable 1Bit\_On/Off

4Bit\_Dimming

1Byte\_Unsigned value

## —Parameter " Send mode"

This parameter is for setting the send mode. Options:

No action when operation, delay then send value1 No action when operation, delay then send value2 Send value1 when operation, delay then send value2

Send value2 when operation, delay then send value1

-Parameter " Delay time [0..6500]s"

This parameter is for setting the delay time. Options: 0..6500

## Parameter "Value x"(x=1~2)

This parameter is for setting the value 1/2 to send. The range of value is up to the datatype selected by the parameters.





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## 5.5.12.RTC mode function

General	Description (max 30char.)	
Internal temperature measurem	Object type for output	🔵 1bit 🥥 1byte
Input	Reaction on short operation	No reaction O Send Value
	Operation mode	Comfort mode
- Button	Reaction on long operation	No reaction Send Value
Button 1 - RTC mode		
Button 2 - Switching	Disable function	Disable
Button 3 - Dimming	Status LED indication	Indicate button press
Button 4 - Colour temperature		
Customized colour	When press the button, indicator is	🔵 On 🔘 Flashing
Castornized colour	Flashing period time is	0.8
Logic function	Normal indication is	OFF ON
Scene Group function	LED indication colour	Magenta

Parameter "Object type for output"

This parameter is for setting object datatype for output. Options:

1bit

1byte

Parameter "Reaction on short operation"

#### Parameter "Reaction on long operation"

These parameters are for setting the performed operation when long/short operation. Options:

No reaction Send Value

## —Parameter "Operation mode"

This parameter is visible when "No reaction" is not selected. Set the operation mode of RTC.

Options:

Auto

- Comfort mode
- Standby mode
- Economy mode

#### Frost/heat protection

Activate corresponding modes when object telegram is 1, and not activated when object telegram

is 0. All is standby mode when all objects telegram are 0.





## Note: There is no "Auto" selected when output object is 1 bit.

## Parameter "Standby mode object"

Consider that some products will not have this object, so that set the object, send telegram 1 when standby mode.

This parameter is visible when 1bit is selected. Set whether to enable the object of standby mode. Options:

Disable

Enable

#### 5.5.13.String function

#### 1.2.8 KNX Wall Panel, 4-Gang with KNX Secure > Button > Button 1 - String

+	General	Description (max 30char.)	
	Internal temperature measurem	Reaction on short operation	○ No reaction
+	Input	String (14byte) value	Hello, world !
-	Button	Reaction on long operation	No reaction Send Value
	Button 1 - String	Disable function	Disable 👻
	Button 2 - Switching	Status LED indication	Indicate button press
	Button 3 - Dimming	When press the button,indicator is	On O Flashing
	Button 4 - Colour temperature	Flashing period time is	0.8 🔻 s
	Customized colour	Normal indication is	OFF ON
+	Logic function	LED indication colour	Magenta 👻
+	Scene Group function		

#### Fig.5.5.13 Parameter setting of string function

# Parameter "Reaction on short operation" Parameter "Reaction on long operation"

These parameters are for setting the performed operation when long/short operation. Options:

No reaction

Send Value

## ——Parameter "String (14byte) value"

This parameter is visible when "No reaction" is not selected. Set the string value to send.





## 5.5.14.LED indication function

Status LED indication	Control by button switch object	•	
When object value="0", LED is	OFF	•	
When object value="1", LED is	Blue	•	
	Control by button switch object		
Status LED indication	Control by external object	•	
External object datatype	0 1bit 1byte		
When object value="0", LED is	OFF	•	
When object value="1", LED is	Blue	•	
Status LED indication	Control by external object	•	
External object datatype	1bit 🔘 1byte		
Threshold value is	50	÷	
If object value < threshold value, LED is	OFF	•	
If object value=threshold value, LED is	Red	•	
If object value>threshold value, LED is	OFF	•	
	Control by external object		
Status LED indication	Indicate button press	•	
When press the button, indicator is	On Flashing		
On duration time is	1s	•	
LED indication colour	Red	•	
Status LED indication	Indicate button press	•	
When press the button, indicator is	On OFlashing		
Flashing period time is	0.8	▼ s	
Normal indication is	O OFF ON		
LED indication colour	Red	•	
	Indicate button press		
Status LED indication	Always on	•	
LED indication colour	Red	•	
	Always on		

Fig.5.5.14 Parameter setting of LED indication function

## Parameter "Status LED indication"

This parameter is for setting the LED indication status. When button function set with switch function, such as switch, dimming function. Options:





Disable Control by button switch object Control by external object Indicate button press Always on

There is no option "Control by button switch object" when not with switch function, such as scene, blind, value sender, delay mode and etc.

Parameters as follow are visible when LED indication status is selected "Control by button switch object".

——Parameter "When object value="0", LED is"

## ——Parameter "When object value="1", LED is"

These parameters are for setting the LED indication colour according to switch function and dimming function. Options:

OFF	Orange
Red	Cyan blue
Green	Customized colour 1
Blue	Customized colour 2
White	Customized colour 3
Yellow	Customized colour 4
Cyan	Customized colour 5
Magenta	

Parameters as follow are visible when LED indication status is selected "Control by external object".

## ——Parameter "External object datatype"

This parameter is for setting the external object datatype. Options:

1bit 1byte





# Note: The object will send read request when the device power on, indicate according to the response value, and no handled when no receive a response.

Two parameters as follow are visible when 1 bit is selected.

## ——Parameter "When object value="0", LED is"

## ——Parameter "When object value="1", LED is"

These parameters are for setting the LED indication colour according to 1 bit object value from the bus. Options:

0FF	Orange
Red	Cyan blue
Green	Customized colour 1
Blue	Customized colour 2
White	Customized colour 3
Yellow	Customized colour 4
Cyan	Customized colour 5
Magenta	

Four parameters as follow are visible when 1 byte is selected.

#### ——Parameter "Threshold value is"

This parameter is for setting the threshold value. Options: 1..255

----Parameter "If object value<threshold value, LED is"

----Parameter " If object value=threshold value, LED is"

## ----Parameter " If object value>threshold value, LED is"

These parameters are for setting the LED indication colour according to the comparison of both the object value and the threshold value. Options:

OFF	Orange
Red	Cyan blue
Green	Customized colour 1
Blue	Customized colour 2
White	Customized colour 3
Yellow	Customized colour 4





## Cyan

**Customized colour 5** 

#### Magenta

Parameters as follow are visible when LED indication status is selected "Indicate button press".

-Parameter "When press the button, indicator is"

This parameter is for setting the LED indication status when press the button. Options:

0n

## Flashing

Parameter as follow is visible when On is selected.

## ——Parameter "On duration time is"

This parameter is for setting the LED on duration time. Options:

500ms
1s
2s
3s

Parameters as follow are visible when Flashing is selected.

## ---Parameter "Flashing period time is"

This parameter is for setting the LED flashing period time. options:

0.4s 0.8s ... 2.0s

## ——Parameter "Normal indication is"

This parameter is for setting the LED normal indication when finish flashing. Options:

OFF ON

Parameter as follow is visible when LED indication status is selected "Indicate button press" or "Always on".





## -Parameter "LED indication colour"

This parameter is for setting the LED indication colour. Options:

Red	Orange
Green	Cyan blue
Blue	Customized colour 1
White	Customized colour 2
Yellow	Customized colour 3
Cyan	Customized colour 4
Magenta	Customized colour 5

## 5.5.15.Parameter window "Customized colour"

1.2.8 KNX Wall Panel, 4-Gang with KNX Secure > Button > Customized colour

+ General	Customized colour 1			
Internal temperature measurem	RGB value	#000000		
+ Input	Customized colour 2 RGB value	#000000		
— Button	Customized colour 3			
Customized colour	RGB value			
+ Logic function	Customized colour 4 RGB value	3		
+ Scene Group function	Customized colour 5	#000000	-	
	RGB value	R [] G [] B []		
		н	0°	
		s []	0 %	
		v []	0 %	

#### Fig.5.5.15 "Customized colour" parameter window

#### Customized colour x (x=1~5)

Parameter "RGB value"

This parameter is for setting the customized colour of LED indication, user up to define 5 colours.

## Options: #000000 ....#FFFFFF





## 5.6.Parameter window "Logic"

1.2.8 KNX Wall Panel, 4-Gang with KNX Secure > Logic function		
+ General	1st Logic function	$\checkmark$
	2nd Logic function	$\checkmark$
Internal temperature measurem	. 3rd Logic function	$\checkmark$
+ Input	4th Logic function	$\checkmark$
	5th Logic function	$\checkmark$
+ Button	6th Logic function	$\checkmark$
- Logic function	7th Logic function	$\checkmark$
~	8th Logic function	$\checkmark$
1st Logic function		
2nd Logic function		

Fig.5.6 "Logic function setting" parameter window

## Parameter "1st/2nd/3rd... Logic function"

This parameter is for setting the setting interface of logic function, display corresponding logic

function page when select. Up to enable 8 logic functions.

## Parameter "Description for logic function"

This parameter is for setting the name description for logic function, up to input 30 characters.

## Parameter "Function of channel"

This parameter is for setting function of the channel. Options:

AND
OR
XOR
Gate forwarding
Threshold comparator
Format convert
Gate function
Delay function
Staircase lighting





AND/OR/XOR: as the parameter is similar to the communication object (only the logic algorithm is different), the following parameters taking one options for example.

## 5.6.1.Parameter window "AND/OR/XOR"

1.2	.8 KNX Wall Panel, 4-Gang wit	h KNX Secure > Logic function > 1st	Logic function	
+	General	Description for logic function		
	Internal temperature measurem	Function of channel	AND	•
+	Input	Input a	Normal	•
		Default value	O ○ 1	
+	Button	Input b	Normal	•
-	Logic function	Default value	O ○ 1	
	1st Logic function	Input c	Inverted	•
	2nd Logic function	Default value	O ○ 1	
	3rd Logic function	Input d	Disconnected	•
	4th Logic function	Default value	O ○ 1	
	5th Logic function	Input e	Disconnected	•
	δth Logic function	Default value	O ○ 1	
	7th Logic function	Input f	Disconnected	•
	8th Logic function	Default value	O ○ 1	
+	Scene Group function	Input g	Disconnected	•
		Default value	O ○ 1	
		Input h	Disconnected	•
		Default value	0 0 1	
		Result is inverted	🔘 No 🔵 Yes	
		Read input object value after voltage recovery	No Yes	
		Output send when	Receiving a new telegram Every change of output object	
		Send delay time: Base	None	•
		Factor: 1255	1	* *

Fig.5.6.1 "AND/OR/XOR" parameter window





## Parameter "Input a/b/c/d/e/f/g//h"

This parameter is for setting whether input x to calculate, whether to normally calculate or inverted calculate.Options:

Disconnected Normal Inverted

Disconnected: not to calculate;

Normal: to directly calculate the input value;

Inverted: invert the input value, then to calculate. Note: not to invert the initiate value.

---Parameter "Default value"

This parameter is for setting the initial value of logic input x. Options:

0

1

## Parameter "Result is inverted"

This parameter is for setting whether to invert the logic calculation result. Options:

No

Yes

No: output directly;

Yes: output after inverting.

## Parameter "Read input object value after bus voltage recovery"

This parameter is for setting whether to send the read request to the logic input object after device voltage recovery or finish programming. Options:

No

Yes

## Parameter "Output send when"

This parameter is for setting the condition of sending logic result. Options:

Receiving a new telegram





## Every change of output object

Receiving a new telegram: every time the object received a new input value will the logic result be sent to the bus;

Every change of output object: only when logic result has changed will it be sent to the bus.

Parameter "Send delay time"					
Base:	None				
	0.1s				
	1s				
	10s				
	25s				
Factor:	1255				

Tip: when in the first time to logic calculate, the logic result will be sent even if it has no change.

This parameter is for setting the delay time for sending the logic calculation result to the bus. Delay time = Base × Factor, if option "None" of Base is selected, then there is no delay.





## 5.6.2. Parameter window "Gate forwarding"

General	Description for logic function		
Internal temperature measurem	Function of channel	Gate forwarding	-
· Input	Object type of Input/Output	1bit	•
- Button	Default scene NO. of Gate after startup [1~64,0=inactive]	0	4
· Logic function	1->Gate trigger scene NO. is [1~64,0=inactive]	0	
1st Logic function	Input A send on	Output A	
2nd Logic function	Input B send on	Output B	•
3rd Logic function	Input C send on	Output C	•
4th Logic function	Input D send on	Output D	•
5th Logic function 6th Logic function	2->Gate trigger scene NO. is [1~64,0=inactive]	0	
7th Logic function	Input A send on	Output A	
8th Logic function	Input B send on	Output B	•
Scene Group function	Input C send on	Output C	•
	Input D send on	Output D	•
	3->Gate trigger scene NO. is	0	

Fig.5.6.2 "Gate forwarding" parameter window

## Parameter "Object type of Input/Output"

This parameter is for setting the object type of input/output. Options:

1bit

4bit

1byte

#### Parameter "Default scene NO. of Gate after startup [1~64,0=inactive]"

This parameter is for setting the initial scene where logical gate forwarding can be performed by

default after device starts, which needs to be configured in the parameters. Options 1..64, 0=inactive

Note: gate scene is recommended to be selected before operating, or it will enable the initiate scene by default.

#### Parameter "z->Gate trigger scene NO. is [1~64,0=inactive]"(z=1~8)

This parameter is for setting scene number of logic gate forwarding. Up to 8 trigger scene number can be set for each logic. Options: 1..64, 0=inactive





# –Parameter "Input A/B/C/D send on"

This parameter is for setting the output of input X (X=A/B/C/D) after gate forwarding. Options:

Output A Output B

•••

## Output B,C,D

According to the options, one input can be forwarded into one or more outputs, the output value is the same as the input value.

## 5.6.3. Parameter window "Threshold comparator"

General	Description for logic function		
Internal temperature measurem	Function of channel	Threshold comparator	
Input	Threshold value data type	1byte unsigned value (DPT5.010)	
nipat.	Threshold value	0	
Button	If Object value <threshold td="" value<=""><td>Do not send telegram</td><td></td></threshold>	Do not send telegram	
Logic function	If Object value=Threshold value	Do not send telegram	
1st Logic function	If Object value!=Threshold value	Do not send telegram	
2nd Logic function	If Object value>Threshold value	Do not send telegram	
3rd Logic function	If Object value<=Threshold value	Do not send telegram	
4th Logic function	If Object value>=Threshold value	Do not send telegram	
5th Logic function	Output send when	Receiving a new telegram Every change of output object	
6th Logic function	Send delay time: Base	None	
7th Logic function	Factor: 1.,255	1	

Fig.5.6.3 "Threshold comparator" parameter window





## Parameter "Threshold value data type"

This parameter is for setting the threshold value data type. Options:

4bit value (DPT3.007)
1byte unsigned value (DPT5.010)
2byte unsigned value (DPT7.001)
2byte signed value (DPT8.x)
2byte float value (DPT9 x)

4byte unsigned value[04294967295]
Ext. temperature value (DPT 9.001)
Ext. humidity value (DPT 9.007)
Illuminance value (DPT 9.004)

#### Parameter "Threshold value "

This parameter is for setting threshold value, the range depends on the data type. Options:

4bit value (DPT3.007) 0..15 /1byte unsigned value (DPT5.010) 0..255 /

2byte unsigned value (DPT7.001) 0..65535 / 2byte signed value (DPT8.x) -32768..32767 /

2byte float value (DPT9.x) -670760...670760 / 4byte unsigned value[0..4294967295] 0..4294967295 /

Ext. temperature value (DPT 9.001) -20..95℃ / Ext. humidity value (DPT 9.007) 0..100% /

Illuminance value (DPT 9.004) 0..65535lux

#### Parameter "Hysteresis threshold value"

This parameter is visible when object datatype is selected "2byte float value (DPT9.x)", "Illuminance value (DPT 9.004)". Set the hysteresis threshold value. Options: **0..500** 

Parameter "If Object value<Threshold value"

Parameter "If Object value=Threshold value"

Parameter "If Object value!=Threshold value"

Parameter "If Object value>Threshold value"

Parameter "If Object value<=Threshold value"

#### Parameter "If Object value>=Threshold value"

This parameter is for setting the logic result value that should be sent when threshold value Less than, equal to, not equal to, greater than, less than or equal to the setting valve. When object datatype is selected "2byte float value (DPT9.x)", can only set the object value less than or greater than threshold value. Options:

Do not send telegram





#### Send value "0"

## Send value "1"

Do not send telegram: not consider to select this option;

Send value "0"/"1": when condition is satisfied, send telegram 0 or1.

If there is a conflict between the setting options between parameters, the base on the value that should be sent when reach the final parameter condition. For example: parameter "If Object

value=Threshold value" is set to be "Send value "0" "; parameter "If Object value<=Threshold value" is

set to be "Send value "1" "; when object value is equal to the threshold value, then the logic result will

send "1".

## Parameter "Output send when"

This parameter is for setting the condition of sending logic result. Options:

#### Receiving a new telegram

## Every change of output object

Receiving a new telegram: every time the object received a new input value will the logic result be sent to the bus;

Every change of output object: only when logic result has changed will it be sent to the bus.

Parameter "S	Send delay time"	-	
Base:	None		
	0.1s		
	1s		
	10s		
	25s		
Factor:	1255		

## Tip: when in the first time to logic algorithm, the logic result will be sent even if it has no change.

This parameter is for setting the delay time for sending the logic algorithm result to the bus. Delay time = Base x Factor, if option "None" of Base is selected, then there is no delay.





## 5.6.4. Parameter window "Format convert"

+ General	Description for logic function		
Internal temperature measuren	n Function of channel	Format convert	•
+ Input	Function	2x1Bit>1x2Bit	•
+ Button	Output send when	<ul> <li>Receiving a new telegram</li> <li>Every change of output object</li> </ul>	
<ul> <li>Logic function</li> </ul>			
1st Logic function			
	Fig.5.6.4 "Forma	at convert" parameter window	



This parameter is for setting the format convert type. Options:

2x1bit-->1x2bit 8x1bit-->1x1byte 1x1byte-->1x2byte 2x1byte-->1x2byte 2x2byte-->1x4byte 1x1byte-->8x1bit 1x2byte-->2x1byte 1x4byte-->2x2byte 1x3byte-->3x1byte 3x1byte-->1x3byte

#### Parameter "Output send when"

This parameter is for setting the condition of sending logic result. Options:

#### Receiving a new telegram

#### Every change of output object

Receiving a new telegram: every time the object received a new input value will the logic result be

sent to the bus;

Every change of output object: only when logic result has changed will it be sent to the bus.

Tip: when in the first time to logic algorithm, the logic result will be sent even if it has no change.





## 5.6.5. Parameter window "Gate function"

1.2.8 KNX Wall Panel, 4-Gang with KNX Secure > Logic function > 1st Logic function



## Parameter "Object type of Input/Output"

This parameter is for setting the object type of input/output. Options:

1bit[On/Off] 1byte[0..100%] 1byte[0..255] 2byte[Float] 2byte[0..65535]

## —Parameter "Filter function"

This parameter is visible when "1bit[On/Off]" is selected. Set whether to filter On or Off telegram,

only pass one of them or pass all. Options:

#### Deactivate

On filter out

#### Off filter out

Deactivate: Do not filter the On or Off telegrams;

On filter out: Off can pass, On cannot pass;

Off filter out: On can pass, Off cannot pass.

## ——Parameter "Value output"

This parameter is visible when "1bit[On/Off]" is selected. Set whether to invert the value then output it. Options:





## Normal

## Inverted

## Parameter "Gate object value"

This parameter is for setting whether to invert the gate object value then output it. Options:

Normal

Inverted

Parameter "Gate status after voltage recovery"

This parameter is for setting the gate status after power on. Options:

Disable

Enable

Parameter "Save input signal when gate close"

This parameter is for setting whether to save input signal on gate close. Options:

## No

Yes

No: disable to save the input, the input values received during the gate closing period are ignored;

Yes: enable to save the input, the input values received during the gate closing period are output when gate is open (whether the input value is changed or not).





## 5.6.6.Parameter window "Delay function"

#### 1.2.8 KNX Wall Panel, 4-Gang with KNX Secure > Logic function > 1st Logic function

+ General	Description for logic function		
Internal temperature measurem	Function of channel	Delay function	•
+ Input	Object type of Input/Output	1bit[On/Off]	•
	Delay time [06500]	10	* S
+ Button			
<ul> <li>Logic function</li> </ul>			
1st Logic function			
	Fig. 5. 4. 4 "Delay function"	'n e meneten win de w	

Fig.5.6.6 "Delay function" parameter window

## Parameter "Object type of Input/Output"

This parameter is for setting the object type of input/output. Options:

1bit[On/Off] 1byte[0..100%] 1byte[0..255] 2byte[Float] 2byte[0..65535]

## —Parameter "Delay time [0..6500]s"

This parameter is for setting the delay time that output object forwards the value when the input object receives the telegram. Options: **0..6500** 

Note: Receive telegram again in delay time, re-timing.





## 5.6.7. Parameter window "Staircase lighting"

1.2	8 KNX Wall Panel, 4-Gang with	n KNX Secure > Logic function > 1st Log	gic function
+	General	Description for logic function	
	Internal temperature measurem	Function of channel	Staircase lighting 🔹
+	Input	Trigger value	1 .
		Object type of output	1bit 1byte
+	Button	Duration time of staircase lighting[106500]	10 *
-	Logic function	Send value 1 when trigger	OFF ON
	1st Logic function	Send value 2 after duration time	OFF ON
	2nd Logic function	Retriggering	🔵 Disable 🔘 Enable

Fig.5.6.7 "Staircase lighting" parameter window

## Parameter "Trigger value"

This parameter is for setting the telegram value of the object "Trigger value". Options:

#### Parameter "Object type of output"

This parameter is for setting the object type of output. Options:

1bit

1byte

## Parameter "Duration time of staircase lighting[10..6500]s"

This parameter is for setting duration time of staircase lighting after the stair light power on.

Options: 10..6500

## –Parameter "Send value 1 when trigger"

#### ——Parameter "Send value 2 after duration time"

These parameters are for setting the value to send. Send value 1 when trigger, and then send value

2 after duration time. Options display according to the output object datatype.

When 1 bit, options:

0FF

0 N





67

## When 1 byte , options: 0..255

## Parameter "Retriggering"

This parameter is for setting whether to trigger re-timing when received trigger value in delay time.

Options:

Disable

Enable

# 5.7. Parameter window "Scene Group"

.2.0 KivA wall Fallel, 4-Gang Wit	th KNX Secure > Scene Group function > Function setting	y
+ General	Scene Group 1 Function	
Internal temperature measurem	Scene Group 2 Function       Scene Group 3 Function       Scene Group 4 Function	
+ Input		
+ Button	Scene Group 5 Function Scene Group 6 Function	
+ Logic function	Scene Group 7 Function Scene Group 8 Function	
<ul> <li>Scene Group function</li> </ul>		
Function setting		
- Group 1		
Output 1 Function		
+ Group 2		
+ Group 3 1.2.8 KNX Wall Panel, 4-Gang wit	th KNX Secure > Scene Group function > Group 1	
	Output 1 Function	
1.2.8 KNX Wall Panel, 4-Gang wit		
1.2.8 KNX Wall Panel, 4-Gang wit	Output 1 Function     Image: Constraint of the second	
1.2.8 KNX Wall Panel, 4-Gang wit + General Internal temperature measurem + Input	Output 1 Function     Image: Constraint of the second	
1.2.8 KNX Wall Panel, 4-Gang wit + General Internal temperature measurem + Input	Output 1 Function     Image: Constraint of the second	
1.2.8 KNX Wall Panel, 4-Gang wit + General Internal temperature measurem + Input + Button	Output 1 Function     Image: Constraint of the second	
1.2.8 KNX Wall Panel, 4-Gang with + General Internal temperature measurem + Input + Button + Logic function	Output 1 Function     Image: Constraint of the second	
1.2.8 KNX Wall Panel, 4-Gang wit + General Internal temperature measurem + Input + Button + Logic function - Scene Group function	Output 1 Function     Image: Constraint of the second	
1.2.8 KNX Wall Panel, 4-Gang wit + General Internal temperature measurem + Input + Button + Logic function - Scene Group function Function setting	Output 1 Function     Image: Constraint of the second	
1.2.8 KNX Wall Panel, 4-Gang with + General Internal temperature measurem + Input + Button + Logic function - Scene Group function Function setting - Group 1	Output 1 Function     Image: Constraint of the second	





1.2.8 KNX Wall Panel, 4-Gang wit	h KNX Secure > Scene Group funct	tion > Group 1 > Output 1 Function
+ General	Description for Output 1 function	
Internal temperature measurem	Object type of Output 1	1bit 👻
+ Input	1->Output 1 trigger scene NO. is [1~64,0=inactive]	0
+ Button	Object value of Output 1	0 0 1
+ Logic function	Delay time for sending [0255]	0 *0.1s
- Scene Group function	2->Output 1 trigger scene NO. is [1~64,0=inactive]	0
Function setting	Object value of Output 1	© 0 🗌 1
- Group 1	Delay time for sending [0255]	0 *0.1s
Output 1 Function		
+ Group 2	3->Output 1 trigger scene NO. is [1~64,0=inactive]	0
+ Group 3	Object value of Output 1	◎ 0 ○ 1
	Delay time for sending [0255]	0 *0.1s
	4->Output 1 trigger scene NO. is [1~64,0=inactive]	0

Fig.5.7 "Scene Group" parameter window

## Parameter "Scene Group x Function"(x=1~8)

This parameter is for setting whether to enable scene group x function, up to 8 scene groups.

## Parameter "Output y Function"(y=1~8)

This parameter is for setting whether to enable output y of scene group x, up to 8 output functions for each scene group.

As 8 group functions are the same, and 8 output functions of each group as well, the following description only about one output of a group.

#### Parameter "Description for Output y function"(y=1~8)

This parameter is for setting the name description for output y of group x, up to input 30 characters.

## Parameter "Object type of Output y"(y=1~8)

This parameter is for setting the object type of output y of group x. Options:

1bit 1byte 2byte

## Parameter "Object datatype"

This parameter is for setting the datatype of 1byte or 2byte.

When the datatype is 1byte, options:

#### 1byte unsigned value





## HVAC mode

When the datatype is 2byte, options:

## 2byte unsigned value

## Temperature value

## Parameter "z->Output y trigger scene NO. is [1~64,0=inactive]"(z=1~8)

This parameter is for setting the triggered scene number of output y of group x. Up to 8 triggered scene of each output can be configured. Options:**0..64, 0=inactive** 

## –Parameter "Object value of Output y"

This parameter is for setting the output value, the range depends on the data type of output y.

When the datatype is 1bit, options: 0..1

When the datatype is 1byte-1byte unsigned value, options: 0..255

When the datatype is 1byte-HVAC mode, options:

Comfort mode

Standby mode

Economy mode

#### Frost/heat protection

When the datatype is 2byte-2byte unsigned value, options: 0..65535

When the datatype is 2byte-Temperature value, options:

-5℃ -4℃ ... 45℃

## ---Parameter "Delay time for sending [0…255]\*0.1s"

This parameter is for setting the delay time for sending the output value to the bus. Options: 0..255





# Chapter 6. Description of Communication Object

The communication object is the medium to communicate other device on the bus, namely only the communication object can communicate with the bus.

NOTE: "C" in "Flag" column in the below table means enable the communication function of the object; "W" means value of object can be written from the bus; "R" means the value of the object can be read by the other devices; "T" means the object has the transmission function; "U" means the value of the object can be updated.

## 6.1. "General" Communication Object

Number	Name	Object Function	Descrip Group Address	Length	С	R	W	Т	U	Data Type	Priority
∎⊉ 1	General	In operation		1 bit	С	R	-	Т	-	switch	Low
₽204	Extension function	Night mode		1 bit	С	-	W	Т	U	day/night	Low
■208	Extension function	Panel orientation indication		1 bit	С	-	W	-	-	trigger	Low
■206	Extension function	Proximity input		1 bit	С	-	W	-	5	switch	Low

Fig.6.1	"General"	communication object	
---------	-----------	----------------------	--

N0.	Object Function	Name	Data Type	Flag	DPT
1	In operation	General	1bit	C,R,T	1.001 switch

The communication object is used to periodically send a telegram "1" to the bus to indicate that the device is working properly.

204	Night mode	Extension function	1bit	C,W C,W,T,U	1.024 day/night
-----	------------	--------------------	------	----------------	-----------------

This communication object is used to send day/night status to the bus. Telegram value:

0 —— Day

1 —— Night

The object flag is C,W when send read request is disabled; The object flag is C,W,T,U when it is enabled.





206	Proximity input	Extension function	1bit	C,W	1.001 switch				
The communication object is visible when proximity function is triggered by the object. Receive									
the tel	the telegram value from bus:								
	1——Trigger proximity function								
	0——Leaving (No proximity)								
208	Panel orientation indication	Extension function	1bit	C,W	1.017 trigger				
Tł	This communication object is used to receive the telegrams from the bus that trigger panel								
orienta	ation indication function. Tel	egram value is set by	the paramet	er.					

Table 6.1 "General" communication object table

# 6.2. "Internal sensor" Communication Object

Name	Object Function	Descr	Group A	Length	С	R	W	T	U	Data Type	Priority
Internal sensor	Temperature value			2 bytes	С	R	5	Т	5	temperature (°C)	Low
Internal sensor	Low temperature alarm			1 bit	С	R	-	т	-	alarm	Low
Internal sensor	High temperature alarm			1 bit	С	R	-	т	-	alarm	Low
	Internal sensor	Internal sensor Temperature value Internal sensor Low temperature alarm	Internal sensor Temperature value Internal sensor Low temperature alarm	Internal sensor Temperature value Internal sensor Low temperature alarm	Internal sensor         Temperature value         2 bytes           Internal sensor         Low temperature alarm         1 bit	Internal sensor         Temperature value         2 bytes         C           Internal sensor         Low temperature alarm         1 bit         C	Internal sensor         Temperature value         2 bytes         C         R           Internal sensor         Low temperature alarm         1 bit         C         R	Internal sensor     Temperature value     2 bytes     C     R     -       Internal sensor     Low temperature alarm     1 bit     C     R     -	Internal sensor     Temperature value     2 bytes     C     R     -     T       Internal sensor     Low temperature alarm     1 bit     C     R     -     T	Internal sensor     Temperature value     2 bytes     C     R     -     T       Internal sensor     Low temperature alarm     1 bit     C     R     -     T	Internal sensor     Temperature value     2 bytes     C     R     -     T     -     temperature (°C)       Internal sensor     Low temperature alarm     1 bit     C     R     -     T     -     alarm

"Internal sensor" communication object Fig.6.2

NO.	Object Function	Name	Data Type	Flag	DPT					
2	Temperature value	Internal sensor	2byte	C,R,T	9.001 temperature					
The communication object is used for transmitting the temperature value detected by the built-ir										
temperati	temperature sensor of the device to the bus. Range:-50~99.8									
3	Low temperature alarm	Internal sensor	1 bit	C,R,T	1.005 alarm					
The	communication object is u	sed to send the low	v temperatu	re alarm	signal to bus, when					
temperati	ure lower than low threshold	that defined by param	neter.							
4	High temperature alarm	Internal sensor	1bit	C,R,T	1.005 alarm					
The	The communication object is used to send the high temperature alarm signal to bus, when									
temperati	temperature higher than high threshold that defined by parameter.									

Table 6.2 "Internal sensor" communication object table





## 6.3. "Input" Communication Object

Number	Name	Object Function	Descri Group / Le	ength	С	R	W	T	U	Data Type	Priority
<b>†</b>  198	Input 1 - Temperature probe	Actual temperature, Sensor	<mark>2 t</mark>	oytes	С	R	-	Т	-	temperature (°C)	Low
199	Input 1 - Temperature probe	Temperature error report, Sensor	16	oit	С	R	2	Т	2	alarm	Low
		Temperatu	ure probe								
Number	Name	Object Function	Descri Group / Le	ength	С	R	W	Т	U	Data Type	Priority
198	Input 1 - Switch sensor	Switch	16	oit	С	-	W	Т	U	switch	Low
198	Input 1 - Switch sensor	Close, Switch	16	oit	C	-	W	Т	U	switch	Low
<b>1</b> 99	Input 1 - Switch sensor	Open, Switch	16	oit	С	-	W	Т	U	switch	Low
198	Input 1 - Switch sensor	Short, Switch	16	oit	C	-	W	Т	U	switch	Low
199	Input 1 - Switch sensor	Long, Switch	16	oit	С	2	W	T	U	switch	Low
200	Input 1 - Switch sensor	Disable	16	oit	С	-	W	-	-	enable	Low
		BI: Switch	n sensor								
Number	Name	Object Function	Descri Group / Le	ength	C	R	W	Т	U	Data Type	Priority
198	Input 1 - Scene control	Scene	1 b	yte	С	-	-	T	53	scene control	Low
198	Input 1 - Scene control	Close, Scene	1 ь	yte	С	-	-	Т	-	scene control	Low
199	Input 1 - Scene control	Open, Scene	1 b	yte	С	-	2	T	2	scene control	Low
198	Input 1 - Scene control	Short, Scene	16	yte	C	-	-	Т	÷	scene control	Low
199	Input 1 - Scene control	Long, Scene	16	oyte	С	-	-	Т	-	scene control	Low
200	Input 1 - Scene control	Disable	16	oit	С	-	W	-	÷	enable	Low
		BI: Scene	e control								
Number	Name	Object Function	Descri Group / Le	ength	с	R	W	/ Т	U	Data Type	Priority
198	Input 1 - Send String	String	14	bytes	С	-	-	Т	÷	Character String (ISO	Low
198	Input 1 - Send String	Close, String	14	bytes	С	×.	4.	Т	-	Character String (ISO	Low
199	Input 1 - Send String	Open, String	14	bytes	С	-	-	Т	-	Character String (ISO	Low
198	Input 1 - Send String	Short, String	14	bytes	C	-	-	Т	-	Character String (ISO	Low
199	Input 1 - Send String	Long, String	14	6	~			τ.		Character String (ISO	Louis

BI: Send string

Fig.6.3 "Input" communication object

N0.	Object Function	Name	Data	Flag	DPT
			Туре		
198	Actual temperature, Sensor	Input 1 - {{Temperature probe}}	2byte	C,R,T	9.001 temperature

The communication object is used for transmitting the temperature value detected by the external temperature sensor of the device to the bus. Range:-50~99.8

The name in parentheses changes with the parameter "Description (max 30 char.)". If description is empty, display "Input x - ..." by default. The same below.

199	Temperature error report,	hand 4 (ft and a hand a hand a h	1bit	C,R,T	1.005 alarma				
	Sensor	Input 1 - {{Temperature probe}}	1.005 alarm						
The communication object is used to send the error report of the external temperature sensor, and									
the ob	ject value is defined accordi	ng to the parameters.							
198	Switch	Input 1 - {{Switch sensor}}	1bit	C,W,T,U	1.001 switch				
198	Close/Short, Switch	Input 1 - {{Switch sensor}}	1bit	C,W,T,U	1.001 switch				




199	Open/Long, Switch	Input 1 - {{Switch sensor}}	1 bit	C,W,T,U	1.001 switch

These communication objects are used to trigger a switching operation. Use a common object or two separate objects is according to the parameter setting.

Only the object "Switch" is visible when use a common object. If use two separate objects, "Close/Open" is visible when there is no distinction for short/long operation; "Short/Long" is visible when there is distinction for short/long operation. Telegrams:

0——Off

1——On

198	Scene	Input 1 - {{Scene control}}	1 byte	C,T	18.001 scene control
198	Close/Short, Scene	Input 1 - {{Scene control}}	1byte	C,T	18.001 scene control
199	Open/Long, Scene	Input 1 - {{Scene control}}	1byte	C,T	18.001 scene control

These communication objects are used to send a 8 bit command to recall or storage scene. Use a common object or two separate objects is according to the parameter setting.

Only the object "Scene" is visible when use a common object. If use two separate objects, "Close/Open" is visible when there is no distinction for short/long operation; "Short/Long" is visible when there is distinction for short/long operation. Telegrams:

Detailed 8bit the meaning of the directive.

Set up a 8bit Orders for the (Binary code): FXNNNNNN

F: '0' recall scene; '1' for storage scene;

X : 0 ;

NNNNN: Scene number( 0... 63).

As follows:

Object message	Description
value	
0	Recall scene 1
1	Recall scene 2
2	Recall scene 3
63	Recall scene 64
128	Store scene 1
129	Store scene 2
130	Store scene 3
191	Store scene 64





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Pa	Parameter setting Options are 1~64, actually communication object "Scene" corresponds to the										
telegra	telegram received is 0~63 . Such as parameter settings is the scene 1, communication										
object	object "Scene" sends the scene for 0.										
198	98 String Input 1 - {{Send String}} 14byte C,T 16.001 character string (ISO 8859-1)										
198	Close/Short, String	Input 1 - {{Send String}}	14byte	C,T	16.001 character string (ISO 8859-1)						
199	199       Open/Long, String       Input 1 - {{Send String}}       14byte       C,T       16.001 character string (ISO 8859-1)										
ТІ	hese communication o	bjects are used to send	d the strir	ng to b	us. Use a common object or two						
separa	ate objects is according	g to the parameter setting	<b>]</b> .								
0	nly the object "String	" is visible when use	a commo	n obje	ct. If use two separate objects,						
"Close	/Open" is visible when	there is no distinction fo	r short/loı	ng oper	ration; "Short/Long" is visible when						
there i	s distinction for short/	long operation.									
200	200         Disable         Input 1 - {{}}         1bit         C,W         1.003 enable										
ТІ	The communication object is used to disable/enable the function of contact input, apply to binary										
input f	unction, including swit	ch, scene and send string	].								

Table 6.3 "Input" communication object table

# 6.4. "Button" Communication Object

Number	Name	<b>Object Function</b>	Descri Group / Length	C	R	V	/ Т	U	Data Type	Priority
₹ 142	Button 1 - Switching	Switch	1 bit	С		W	Т	U	switch	Low
₹ 142	Button 1 - Switching	Press, Switch	1 bit	С	-	W	Т	U	switch	Low
<b>≵</b>  143	Button 1 - Switching	Release, Switch	1 bit	С	7	W	Т	U	switch	Low
₹ 142	Button 1 - Switching	Short, Switch	1 bit	C	-	W	Т	U	switch	Low
≵ 143	Button 1 - Switching	Long, Switch	1 bit	С	-	W	Т	U	switch	Low
₹ 147	Button 1 - Switching	Disable	1 bit	С	-	W	-	-	enable	Low
<b>≵</b>  148	Button 1 - Switching	LED status	1 bit	С	-	W	Т	U	switch	Low
		S	witching							
Number	Name	<b>Object Function</b>	Descri Group / Length	С	R	W	/ Т	U	Data Type	Priority
₹ 142	Button 1 - Dimming	Short, Switch	1 bit	C	-	W	Т	U	switch	Low
<b>≵</b>  143	Button 1 - Dimming	Long, Dimming	4 bit	С	2	W	Т	2	dimming control	Low
₹ 147	Button 1 - Dimming	Disable	1 bit	C	-	W	-	-	enable	Low
<b>≵</b>  148	Button 1 - Dimming	LED status	1 bit	С	-	W	Т	U	switch	Low
		[	Dimming							
Number	Name	<b>Object Function</b>	Descri Group / Length	C	R	W	/ Т	U	Data Type	Priority
₹ 142	Button 1 - RGB	Switch	1 bit	C		W	Т	U	switch	Low
₽ 143	Button 1 - RGB	RGB dimming value	3 bytes	С	÷	2	Т	2	RGB value 3x(0255)	Low
₽ 143	Button 1 - RGB	Red dimming value	1 byte	С		-	Т	-	percentage (0100%)	Low
₹ 144	Button 1 - RGB	Green dimming value	1 byte	С	-	0	Т	0	percentage (0100%)	Low
10 10 10 10 10 10 10 10 10 10 10 10 10 1	Button 1 - RGB	Blue dimming value	1 byte	С	-	-	Т	-	percentage (0100%)	Low
₽ 145				-					And a state of the second second second	125.55
l <b>‡</b>  145   <b>‡</b>  147	Button 1 - RGB	Disable	1 bit	C	-	W	-	-	enable	Low





Number	Name	<b>Object Function</b>	Descri	Group /	Leng	yth	С	R	W	Т	U	Data Type	Priority
₹ 142	Button 1 - RGBW	Switch			1 bit		С	-	W	Т	U	switch	Low
₹ 143	Button 1 - RGBW	RGBW dimming value			6 byte	es	С	2	2	Т	2	RGBW value 4x(0100%	)Low
₹ 143	Button 1 - RGBW	Red dimming value			l byte		С	2	2	Т	2	percentage (0100%)	Low
₹ 144	Button 1 - RGBW	Green dimming value			l byte		C	-	-	т	-	percentage (0100%)	Low
₹ 145	Button 1 - RGBW	Blue dimming value			l byte		С	2	2	т	2	percentage (0100%)	Low
₹ 146	Button 1 - RGBW	White dimming value			l byte		C	-	-	т	-	percentage (0100%)	Low
₹ 147	Button 1 - RGBW	Disable			l bit		С	2	W	-	2	enable	Low
148	Button 1 - RGBW	LED status R	GBW lighting		l bit		C	978	W	Т	U	switch	Low
Number	Name	Object Function	Descri Group	/ Lengt	h C	R	V	νт	ι	D	ata	Туре	Priority
₹ 142	Button 1 - Colour temperature	Switch		1 bit	С	-	W	Т	U	sw	itch		Low
₹ 143	Button 1 - Colour temperature	Brightness value		1 byte	С	2	120	Т	12	pe	rcen	tage (0100%)	Low
₹ 144	Button 1 - Colour temperature	Colour temperature value		2 bytes	C C	÷	-	Т		ab	solu	te colour temperature (K)	Low
<b>₽</b> 147	Button 1 - Colour temperature	Disable		1 bit	С	-	W	1	12	en	able		Low
₹ 148	Button 1 - Colour temperature	LED status		1 bit	С	÷	W	Т	U	SW	itch		Low
		<b>•</b> • •											

Colour temperature control

Number	Name	C	bject Function		Descri Group / I	Length	С	R	W	/ T	U	Data Type	Priorit
≵ 142	Button 1 - Value sender	Sh	o <mark>rt, 1</mark> bit value		1	bit	С	-	-	Т		switch	Low
₹ 143	Button 1 - Value sender	Lo	ong, 1bit value		1	bit	С	91	-	Т	-	switch	Low
142	Button 1 - Value sender	Sł	nort, 2bit value		2	bit	C	-	-	Т	-	switch control	Low
<b>¢</b>  143	Button 1 - Value sender	Lo	ong, 2bit value		2	bit	С	2	2	Т	2	switch control	Low
₹ 142	Button 1 - Value sender	SI	nort, 4bit value		4	bit	C	•	-	Т	-	dimming control	Low
≠143	Button 1 - Value sender	Lo	ong, 4bit value		4	bit	С	2	-	Т	-	dimming control	Low
₹ 142	Button 1 - Value sender	Sł	nort, 1byte value		1	byte	C	×.	-	Т	-	counter pulses (0255)	Low
₽ 143	Button 1 - Value sender	Lo	ong, 1byte value		1	byte	С	5	-	Т	-	counter pulses (0255)	Low
142	Button 1 - Value sender	SI	nort, 2byte value		2	bytes	C	-	2	Т	4	pulses	Low
≠ 143	Button 1 - Value sender	La	ong, 2byte value		2	bytes	С	-	•	Т	-	pulses	Low
₹ 142	Button 1 - Value sender	r S	hort, 2byte float valu	e	2	bytes	С	-	-	Т	-	2-byte float value	Low
₹143	Button 1 - Value sender	r Li	ong, 2byte float valu	e	2	bytes	С	-	2	Т	Ξ.	2-byte float value	Low
				Value send	ler(1)								
₹ 142	Button 1 - Value sender	Sł	nort, 4byte value		4	bytes	С	4	-	Т	23	counter pulses (unsig	Low
₹143	Button 1 - Value sender	Lo	ong, 4byte value		4	bytes	С	-	3	Т	5	counter pulses (unsig	Low
<b>≵</b>  142	Button 1 - Value sender	Sh	ort, 4byte float value	2	4	bytes	C	8	-	Т	-	4-byte float value	Low
<b>≵</b>  143	Button 1 - Value sender	La	ong, 4byte float value		4	bytes	С	-	2	Т	62 L	4-byte float value	Low
				Value seno	ler(2)								
Number	Name	(	Object Function		Descri Group / I	Length	С	R	V	V T	U	Data Type	Priority
₹ 142	Button 1 - Scene	Se	ene		1	byte	C	e.	-	Т	-	scene control	Low
₹142	Button 1 - Scene	SI	nort, Scene		1	byte	С	17	5	Т	5	scene control	Low
<b>‡</b>  143	Button 1 - Scene	Lo	ong, Scene		1	byte	С	-	-	Т	-	scene control	Low
147	Button 1 - Scene	D	isable		1	bit	С	7	W	-	5	enable	Low
<b>∤</b> 148	Button 1 - Scene	LE	ED status		1	bit	С	-	W	Т	U	switch	Low
Numbe	r Name	Object F	unction	Scene Description	Group Address	Leng	th	С	R	W	Т	U Data Type	Priorit
₹ 142	Button 1 - Blind	Up/Down	Blind			1 bit	-	c i	-	W	Т	- up/down	Low
<b>∤</b> 143	Button 1 - Blind	Stop/Adju	st, Blind			1 bit	4	c i	2	W	Т	- step	Low
147	Button 1 - Blind	Disable				1 bit	4	c /	-	W	-	- enable	Low
₹ 148	Button 1 - Blind	LED status	5			1 bit	4	c i	2	W	Т	U switch	Low
				Blind									
Number	Name	C	Object Function		Descri Group A	Length	C	R	V	V T	U	Data Type	Priorit
₹ 142	Button 1 - Shift register	Re	egister value		1	byte	C	7	W	T		counter pulses (0.255)	Low
₽68	Btn 1 - Shift register	Disable			1 b	it C		1	W	-	- 3	enable	Low
\$969	Btn 1 - Shift register l	ED status		Shift regi	1 bi ster	it C		1	W	Т	U	switch	Low
Number	Name	C	Diject Function	7	Descri Group /	Length	С	R	V	V T	U	Data Type	Priorit
≵ 142	Button 1 - Multiple oper	ration O	bject1-On/Off		1	bit	6	4	14/	т		switch	Low





<b> ‡</b>  142	Button 1 - Multiple operation	Object1-Up/Down	1 bit	С	4	W	Т	- up	p/down	Low
₹ 142	Button 1 - Multiple operation	Object1-SceneControl	1 byte	C	•	÷	Т	- sc	ene control	Low
₹ 142	Button 1 - Multiple operation	Object1-Percentage	1 byte	С	81239	4	Т	- ре	ercentage (0100%)	Low
₹ 142	Button 1 - Multiple operation	Object1-Unsigned value	1 byte	C	5	-	T	- co	ounter pulses (0255)	Low
₹ 147	Button 1 - Multiple operation	Disable	1 bit	С	-	W	-	- en	nable	Low
<b>≵</b>  148	Button 1 - Multiple operation	LED status	1 bit le operation	C	5	W	T	U sw	vitch	Low
Number	Name	Object Function	Descri Group / Length	С	R	v	/ Т	UD	Data Type	Priority
₹ 142	Button 1 - Delay mode	Short, Delay mode	1 bit	C	- 1.252 19483		Т		vitch	Low
₹ 143	Button 1 - Delay mode	Long, Delay mode	1 bit	C	್ರಾ	-	T		vitch	Low
₹ 142	Button 1 - Delay mode	Short, Delay mode	4 bit	С	82.9	2	т	- di	mming control	Low
₽ 143	Button 1 - Delay mode	Long, Delay mode	4 bit	С		-	Т	- di	mming control	Low
₹ 142	Button 1 - Delay mode	Short, Delay mode	1 byte	C		-	Т		ounter pulses (0255)	Low
≠ 143	Button 1 - Delay mode	Long, Delay mode	1 byte	С	-	-	Т	- co	ounter pulses (0255)	Low
₹ 147	Button 1 - Delay mode	Disable	1 bit	C	iπ.	W	<u>к</u> -	- er	nable	Low
₹148	Button 1 - Delay mode	LED status	1 bit	С	-	W	Т	U sv	vitch	Low
		De	lay mode							
Number	Name	<b>Object Function</b>	Descri Group / Length	C	R	V	Τ	UD	Data Type	Priority
₹ 142	Button 1 - RTC mode	Comfort mode	1 bit	C	1	-	Т	- er	nable	Low
₽ 143	Button 1 - RTC mode	Economy mode	1 bit	С	2	12	T	- er	nable	Low
₹ 144	Button 1 - RTC mode	Frost/Heat protection mode	1 bit	C	-	-	Т	- er	nable	Low
₹ 145	Button 1 - RTC mode	Standby mode	1 bit	С	4	-	T	- er	nable	Low
	Button 1 - RTC mode	Operation mode	1 byte	C	-	-	T	- H\	/AC mode	Low
₹ 147	Button 1 - RTC mode	Disable	1 bit	С	2	W	1	- en	able	Low
<b>≵</b>  148	Button 1 - RTC mode	LED status RTC op	1 bit eration mode	C	-	W	T	U sw	vitch	Low
Number	Name	Object Function	Descri Group / Length C	R	W	т	U	Data T	ype	Priority
₽142	Button 1 - String	String	14 bytes C		-	т	-	Charact	er String (ISO 8859-1	) Low
≵ 147	Button 1 - String	Disable	1 bit C	- 31	W	-	-	enable		Low
₹ 148	Button 1 - String	LED status	1 bit C	1	W	T	U	switch		Low

String(14bytes)

	communica	

NO.	Object Function	Name	Data Type	Flag	DPT
142	Switch	Button 1 - {{Switching}}	1bit	C,W,T,U	1.001 switch
142	Press/Short, Switch	Button 1 - {{Switching}}	1bit	C,W,T,U	1.001 switch
143	Release/Long, Switch	Button 1 - {{Switching}}	1bit	C,W,T,U	1.001 switch

These communication objects are used to trigger a switching operation. Use a common object or two separate objects is according to the parameter setting when press/release and long/short operation.

Only the object "Switch" is visible when use a common object. If use two separate objects, "Press/Release" is visible when there is no distinction for short/long operation; "Short/Long" is visible when there is distinction for short/long operation. Telegrams:

0——Off

1——On

The name in parentheses changes with the parameter "Description (max 30char.)". If description is empty, display "Btn 1 - ..." by default. The same below.



142	Short, Switch	Button 1 - {{Dimming}}	1bit	C,W,T,U	1.001 switch
143	Long, Dimming	Button 1 - {{Dimming}}	4bit	C,W,T	3.007 dimming

These two communication objects are used to switch/dimming operation, with distinction for long/short operation.

Obj.142: Used to trigger switch operation. Telegrams:

0——Off

1——On

Obj.143: Used to trigger a relative dimming operation.

Dimming down when telegram is  $1 \sim 7$ , and the larger this range the adjust step is smaller. That is, the maximum step of dimming down when is 1, and the minimum step of dimming down when is 7, stop dimming when is 0;

Dimming up when telegram is 9~15, and the larger this range the adjust step is smaller. That is, the maximum step of dimming up when is 9, and the minimum step of dimming up when is 15, stop dimming when is 8.

142	Switch	Button 1 - {{RGB}}	1bit	C,W,T,U	1.001 switch
143	RGB dimming value		2 huta	C,T	232.600 RGB value
		Button 1 - {{RGB}}	3byte		3x(0255)
143	Red dimming value	Button 1 - {{RGB}}	1byte	C,T	5.001 percentage(0100%)
144	Green dimming value	Button 1 - {{RGB}}	1byte	C,T	5.001 percentage(0100%)
145	Blue dimming value	Button 1 - {{RGB}}	1byte	C,T	5.001 percentage(0100%)

Obj.142: Used to trigger switch operation. Telegrams:

0——0ff

1——On

Obj.143: The communication object is visible when 1x3byte for the RGB object type is selected. Apply to control brightness of multi-colour lamp, used for sending brightness value of RGB three-colour lamp to the bus.





3-Byte Code for RGB Dimming Object Data Type: U8 U8 U8, as follows:

Змѕв	2	1 <sub>LSB</sub>
R	G	В
υυυυυυυ	υυυυυυυ	υυυυυυυ

R: red dimming value; G: green dimming value; B: blue dimming value.

Obj.143, Obj.144, Obj.145: These three communication objects are visible when 3x1byte for the RGB object type is selected. Apply to control brightness of multi-colour lamp, used for sending brightness value of the control R(red) /G(green) / B (blue) channel to the bus. Telegrams: 0...100%

142	Switch	Button 1 - {{RGBW}}	1bit	C,W,T,U	1.001 switch
143	RGBW dimming value	Button 1 - {{RGBW}}	6byte	C,T	251.600 DPT_Colour_RGBW
143	Red dimming value	Button 1 - {{RGBW}}	1byte	C,T	5.001 percentage(0100%)
144	Green dimming value	Button 1 - {{RGBW}}	1byte	C,T	5.001 percentage(0100%)
145	Blue dimming value	Button 1 - {{RGBW}}	1byte	C,T	5.001 percentage(0100%)
146	White dimming value	Button 1 - {{RGBW}}	1byte	C,T	5.001 percentage(0100%)

Obj.142: Used to trigger switch operation. Telegrams:

0——Off

1——On

Obj.143: The communication object is visible when 1x6byte for the RGBW object type is selected. Apply to control brightness of multi-colour lamp, used for sending brightness value of RGBW four-colour lamp to the bus.

6 <sub>MSB</sub>	5	4	3	2	1 <sub>LSB</sub>
R	G	В	W	Reserve	rrrrmR mG mB mW
υυυυυυυ	υυυυυυυ	υυυυυυυ	υυυυυυυ	0000000	0000BBBB
				0	

R: red dimming value; G: green dimming value; B: blue dimming value; W: white dimming value;

mR: determines whether the red dimming value is valid, 0 = invalid, 1 = valid;





mG: determines whether the green dimming value is valid, 0 = invalid, 1 = valid;

mB: determines whether the blue dimming value is valid, 0 = invalid, 1 = valid;

mW: Determines whether the white dimming value is valid,0 = invalid,1 =valid.

Obj.143, Obj.144, Obj.145, Obj.146: These four communication objects are visible when 4x1byte for the RGBW object type is selected. Apply to control brightness of multi-colour lamp, used for sending brightness value of the control R(red) /G(green) / B (blue) / W(White) channel to the bus. Telegrams: 0...100%

142	Switch	Button 1 - {{Colour temperature}}	1bit	C,W,T,U	1.001 switch
143	Brightness value		1	C,T	5.001
		Button 1 - {{Colour temperature}}	1byte		percentage(0100%)
144	Colour temperature	Button 1 - {{Colour temperature}}	2 hvto	hute C.T.	7.600 absolute
	value	Button 1 - tto tour temperature	2byte	C,T	colour temperature

Obj.142: Used to trigger switch operation. Telegrams:

0——Off

1——On

Obj.143: Used for sending the dimming telegram of the colour temperature to the bus, that is, sending the brightness value. Telegrams: 0...100%

Obj.144: Used for sending the control telegram of the colour temperature to the bus.

Telegrams: 1000...10000 K





Long, 2bit value	2bit	2.001 switch control
Long, 4bit value	4bit	3.007 dimming
Long, 1byte value	1byte	5.010 counter pulses
Long, 2byte value	2byte	7.001 pulses
Short, 2byte float value		9.x float value
Short, 4byte value		12.001 counter pulses
Short, 4byte float value		14.x float value

These two communication objects are used for sending a fixed value to the bus, distinguish long and short operation. Range of values that can be sent are determined by the datatype, and the datatype is determined by the parameter setting.

142	Scene	Button 1 - {{Scene}}	1byte	C,T	18.001 scene control
142	Short, Scene	Button 1 - {{Scene}}	1byte	C,T	18.001 scene control
143	Long, Scene	Button 1 - {{Scene}}	1byte	C,T	18.001 scene control

These communication objects are used to send a 8 bit command to recall or storage scene. Use a common object or two separate objects is according to the parameter setting when long and short operation.

Only the object "Scene" is visible when use a common object. If use two separate objects, "Short/Long" is visible when there is distinction for short/long operation. Telegrams:

Detailed 8bit the meaning of the directive.

Set up a 8bit Orders for the (Binary code): FXNNNNNN

F: '0' recall scene; '1' for storage scene;

X:0;

NNNNN: Scene number( 0... 63).

As follows:

Object message	Description			
value				
0	Recall scene 1			
1	Recall scene 2			
2	Recall scene 3			
63	Recall scene 64			
128	Store scene 1			
129	Store scene 2			





		130  191		e scene  e scene d		
telegra		3 . Such as paran			-	ene" corresponds to the ene 1, communication
142	Up/Down, Blind	Btn 1 - {{Blind}}		1bit	C,W,T	1.008 up/down
143	Stop/Adjust, Blind	Btn 1 - {{Blind}}		1bit	C,W,T	1.007 step
Obj.142: Used for sending the telegram to the bus, to control blind up/down. Telegrams: 1——Move down 0——Move up Obj.143: Used for sending the telegram to the bus, to stop curtain movement. Telegrams:						
142	Register value	Button 1 - {{Shift regist	er}}	1 byte	C,W,T	5.010 counter pulses 17.001 scene number 20.102 HVAC mode
Tł	he communication obj	ect is used to send the	value of	shift reg	ister.	
142	Object1-On/Off Object1-Up/Down Object1-SceneControl Object1-Percentage Object1-Unsigned value	Button 1 - {{Multiple op	eration}}	1bit 1bit 1byte 1byte 1byte	С,W,T С,W,T С,T С,T С,T	<ul> <li>1.001 switch</li> <li>1.008 up/down</li> <li>18.001 scene control</li> <li>5.001</li> <li>percentage(0100%)</li> <li>5.010 counter pulses</li> </ul>
time, a objects	and operation once ca	an send the value of nat can be sent are	4 differe	nt datat	ype objec	e 4 objects at the same ts to the bus via these be, and the datatype is
142	Short, Delay mode	Button 1 - {{Delay mode	•}}	1 bit 4 bit 1 byte	C,T	1.001 switch 3.007 dimming 5.010 counter pulses





			11	bit			1.001 switch
143	Long, Delay mode	Button 1 - {{Delay mode}}	41	bit	C,T		3.007 dimming
			11	byte			5.010 counter pulses
These communication objects are used to send the value of delay mode to the bus, distinguish							
long and short operation. Range of values that can be sent are determined by the datatype, and the							
datatype is determined by the parameter setting.							

142	Operation mode	Button 1 - {{RTC mode}}	1byte	C,T	20.102 HVAC mode
142	Comfort mode	Button 1 - {{RTC mode}}	1bit	C,T	1.003 enable
143	Economy mode	Button 1 - {{RTC mode}}	1bit	C,T	1.003 enable
144	Frost/Heat protection mode	Button 1 - {{RTC mode}}	1 bit	C,T	1.003 enable
145	Standby mode	Button 1 - {{RTC mode}}	1bit	C,T	1.003 enable

These communication objects are used to send the RTC operation mode status to the bus.

When 1 byte: object 142 is visible, telegrams: 1-Comfort, 2-Standby, 3-Economy, 4-Protection, other reserved.

When 1bit:

Object 142——Comfort mode

Object 143——Economy mode

Object 144——Protection mode

Object 145——Standby mode

Only corresponding object send telegram "1" when activate one mode. When 1 bit standby object is not enable, three objects comfort, economy, protection all send 0 to activate standby mode. When 1 bit standby object is enable, only standby object sends 1 to activate standby mode.

142	String	Button 1 - {{String}}	14byte	C,T	16.001 character string (ISO			
					8859-1)			
	The communication object is used to send the string to the bus.							
147	Disable	Button 1 - {{}}	1bit	C,W	1.003 enable			
	The communication object	t is used to disable/ena	ble the f	unction of	contact input, apply to all the			
abov	above functions.							
148	LED status	LED status Button 1 - {{}} 1bit C.W.T.U	C,W,T,U	1.001 switch				
140		Bullon 1 - 129	1byte	0,44,1,0	5.010 counter pulses			





The communication object is used to control LED status via the bus, and also can receive status feedback. Range of values that can be sent are determined by the datatype, and the datatype is determined by the parameter setting.

Table 6.4 "Button" communication object table

### 6.5. "Logic" Communication Object

### 6.5.1. "AND/OR/XOR" Communication Object

Number	Name	Object Function	Descri Group A	Length	С	R	W	T	U	Data Type	Priority
₹5	1st Logic	Input a		1 bit	С	-	W	Т	U	boolean	Low
<b></b>	1st Logic	Input b		1 bit	С	7	W	Т	U	boolean	Low
<b>₽</b> 7	1st Logic	Input c		1 bit	C	-	W	Т	U	boolean	Low
\$8	1st Logic	Input d		1 bit	С	5	W	Т	U	boolean	Low
29	1st Logic	Input e		1 bit	C	-	W	Т	U	boolean	Low
<b> </b> ‡ 10	1st Logic	Input f		1 bit	С	7	W	Т	U	boolean	Low
≠  11	1st Logic	Input g		1 bit	C	-	W	Т	U	boolean	Low
₽ 12	1st Logic	Input h		1 bit	С	7	W	Т	U	boolean	Low
≠13	1st Logic	Logic result		1 bit	C	-	-	Т	-	boolean	Low

Fig.6.5.1 "AND/OR/XOR"	communication object
------------------------	----------------------

N0.	Object Function	Name	Data Type	Flag	DPT						
5/	Input x	{{1st Logic}}	1bit	C,W,T,U	1.002 boolean						
The communication object is used to receive the value of logical input Input x.											
The name in parentheses changes with the parameter "Description for logic function". If											
descrip	tion is empty, display "1st Logi	c" by default. The s	ame below.								
13     Logic result     {{1st Logic}}     1bit     C,T     1.002 boolean											
The communication object is used to send the results of logical operation.											

Table 6.5.1 "AND/OR/XOR" communication object table





### 6.5.2. "Gate forwarding" Communication Object

Number	Name	<b>Object Function</b>	Descri Group / Length	С	R	W	Т	U	Data Type	Priority
■2 5	1st Logic	Gate value select	1 byte	С	-	W	-	-	scene number	Low
∎‡ 6	1st Logic	Input A	1 bit	С	-	W	-	2	switch	Low
■2 7	1st Logic	Input B	1 bit	С	-	W	-	-	switch	Low
∎‡ 8	1st Logic	Input C	1 bit	С	-	W	-	2	switch	Low
∎‡ 9	1st Logic	Input D	1 bit	C	÷	W	-	-	switch	Low
■之 10	1st Logic	Output A	1 bit	С	2	-	Т	2	switch	Low
■‡ 11	1st Logic	Output B	1 bit	С	÷	-	Т	-	switch	Low
<b>‡</b>  12	1st Logic	Output C	1 bit	С	-	-	Т	-	switch	Low
■‡ 13	1st Logic	Output D	1 bit	C	÷	-	Т	-	switch	Low

Fig.6.5.2 "Gate forwarding" communication object

N0.	Object Function	Name	Data Type	Flag	DPT							
5	Gate value select	{{1st Logic}}	1byte	C,W	17.001 scene number							
The	The communication object is used to select the scene of logical gate forwarding.											
	1.001 switch											
6//9	Input x	{{1st Logic}}	4bit	c,w	3.007 dimming control							
0//7	input x			C,W	5.010 counter							
			1byte		pulses(0255)							
The	communication object is use	d to receive the val	ue of the log	ic gate	input Input x.							
			1bit		1.001 switch							
10//13	Output x	{{1st Logic}}	4bit	C,T	3.007 dimming control							
			1byte		5.010 counter pulses(0255)							
The communication object is used to output the value forwarded by the logic gate. The output												
value is	the same as the input value,	but one input can b	oe forwarded	l into o	ne or more outputs, set by							
parame	ters.											

Table 6.5.2 "Gate forwarding" communication object table





### 6.5.3. "Threshold comparator" Communication Object

Number	Name	Object Function	Descri Group / Length	С	R	W	T	U	Data Type	Priority
₹5	1st Logic	Threshold value input	4 bit	С	×.	W	×.	U	dimming control	Low
₹ 5	1st Logic	Threshold value input	1 byte	C	-	W	-	U	counter pulses (0255)	Low
₹5	1st Logic	Threshold value input	2 bytes	C	-	W	-	U	pulses	Low
<b>≵</b>  5	1st Logic	Threshold value input	2 bytes	С	-	W	÷	U	2-byte signed value	Low
<b> ‡</b>  5	1st Logic	Threshold value input	2 bytes	С	-	W	•	U	2-byte float value	Low
₹5	1st Logic	Threshold value input	4 bytes	C	÷	W	-	U	counter pulses (unsigned)	Low
₹5	1st Logic	Threshold value input	2 bytes	С	<u>s</u>	W	2	U	temperature (°C)	Low
₹5	1st Logic	Threshold value input	2 bytes	С	4	W	2	U	lux (Lux)	Low
₽ 13	1st Logic	Logic result	1 bit	С	-	-	Т	-	boolean	Low

Fig.6.5.3 "Threshold comparator" communication object

N0.	Object Function	Name	Data Type	Flag	DPT
5	Threshold value input	{{1st Logic}}	4bit 1byte 2byte 4byte	C,W, U	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
Th	ne communication object is use	d to input threshold	value.		
13	Logic result	{{1st Logic}}	1bit	C,T	1.002 boolean
	he communication object is use be sent after the object input th		C C		

Table 6.5.3 "Threshold comparator" communication object table





### 6.5.4. "Format convert" Communication Object

Num	ber Name	Object Function	Descri Group / Leng	th (		R	w	T	U	Data Type	Priority
■2 5	1st Logic	Input 1bit-bit0	1 bit	C		-	W	-	U	boolean	Low
∎‡ 6	1st Logic	Input 1bit-bit1	1 bit	C	1		W	2	U	boolean	Low
■之 13	1st Logic	Output 2bit	2 bit	С	ł		-	Т	-	switch control	Low

" $2x1bit \rightarrow 1x2bit$ "function: converts two 1bit values to a 2bit value, such as Input bit1=1, bit0=0->

#### Output 2bit=2

Number	Name	Object Function	Descri Group / Length	C	R	W	T	U	Data Type	Priority
■2 5	1st Logic	Input 1bit-bit0	1 bit	С	-	W	-	U	boolean	Low
■2 6	1st Logic	Input 1bit-bit1	1 bit	С	-	W	4	U	boolean	Low
■₽7	1st Logic	Input 1bit-bit2	1 bit	С	17	W	-	U	boolean	Low
∎‡ 8	1st Logic	Input 1bit-bit3	1 bit	С	-	W	-	U	boolean	Low
∎‡ 9	1st Logic	Input 1bit-bit4	1 bit	С	17	W		U	boolean	Low
■2 10	1st Logic	Input 1bit-bit5	1 bit	С	-	W	-	U	boolean	Low
<b>■‡</b>  11	1st Logic	Input 1bit-bit6	1 bit	C	17	W	-	U	boolean	Low
■‡ 12	1st Logic	Input 1bit-bit7	1 bit	С	-	W	-	U	boolean	Low
■ <b>‡</b>  13	1st Logic	Output 1byte	1 byte	С		-	Т	5	counter pulses (0255)	Low

" $8x1bit \rightarrow 1x1byte$ "function: converts eight 1bit values to a 1byte value, such as Input bit2=1, bit1=1, bit0=1,other bits are 0-> Output 1byte=7

Number	Name	Object Function	Descri Group / Length	C	R	V	V 1	r l	J Data Type	Priority
<b>■</b> ‡ 5	1st Logic	Input 1byte	1 byte	С	-	W	-	U	counter pulses (0255)	Low
<b>■</b> ‡ 13	1st Logic	Output 2byte	2 bytes	С	51	-	T	-	pulses	Low

" $1x1byte \rightarrow 1x2byte$ "function: converts one 1byte values to a 2byte value, such as Input 1byte=125 $\rightarrow$  Output 2byte=125.Although the value remains the same, the data type of the value is different.

Num	nber Name	Object Function	Descri Group / Length	C	R	w	Т	U	Data Type	Priority
■\$ 5	1st Logic	Input 1byte	1 byte	С	-	W	-	U	counter pulses (0255)	Low
■之 13	1st Logic	Output 2byte	2 bytes	С	1	-	Т	-	pulses	Low

"2x1byte --> 1x2byte"function: converts two 1byte values to a 2byte value, such as Input 1byte-low = 255 (\$FF), Input 1byte-high = 100 (\$64) --> Output 2byte = 25855 (\$64 FF)

Number	Name	<b>Object Function</b>	Descri Group / Length	C	R	W	Т	U	Data Type	Priority
₹ 5	1st Logic	Input 2byte-low	2 bytes	С	-	W	2	U	pulses	Low
∎‡ 6	1st Logic	Input 2byte-high	2 bytes	С	5	W	σ.	U	pulses	Low
<b> </b> ‡ 13	1st Logic	Output 4byte	4 bytes	С	2	829	т	320	counter pulses (unsigned)	Low

"2x2byte -> 1x4byte"function: converts two 2 byte values to a 4byte value, such as Input 2byte-low = 65530 (\$FF FA), Input 2byte-high = 32768 (\$80 00)-> Output 2byte = 2147549178 (\$80 00 FF FA)





Number	Name	Object Function	Descri Group /	Length	С	R	W	Т	U	Data Type	Priority
<b>≠</b>  5	1st Logic	Input 1byte		1 byte	С	-	W	4	U	counter pulses (0255)	Low
₹6	1st Logic	Output 1bit-bit0		1 bit	С	-	-	Т	-	boolean	Low
₹7	1st Logic	Output 1bit-bit1		1 bit	С	-	4	Т	41	boolean	Low
<b>≵</b> 8	1st Logic	Output 1bit-bit2		1 bit	С	-	-	Т	-	boolean	Low
<b>₹</b> 9	1st Logic	Output 1bit-bit3		1 bit	C	-	4	Т	4	boolean	Low
₹10	1st Logic	Output 1bit-bit4		1 bit	С	-	-	Т	-	boolean	Low
≠ 11	1st Logic	Output 1bit-bit5		1 bit	C	-	4	Т	41	boolean	Low
‡ 12	1st Logic	Output 1bit-bit6		1 bit	С	-	-	Т	-	boolean	Low
<b>7</b> 13	1st Logic	Output 1bit-bit7		1 bit	C	-	4	Т	4	boolean	Low

"1x1byte  $\rightarrow$  8x1bit" function: converts one 1byte values to eight 1but value, such as Input 1byte=200  $\rightarrow$  Output bit0=0, bit1=0, bit2=0, bit3=1, bit4=0, bit5=0, bit6=1, bit7=1

Number	Name	Object Function	Descri Group / Length	C	R	W	/ Т	U	Data Type	Priority
■2 5	1st Logic	Input 2byte	2 bytes	C	-	W	-	U	pulses	Low
■2 12	1st Logic	Output 1byte-low	1 byte	С	:7	-	Т	-	counter pulses (0255)	Low
■2 13	1st Logic	Output 1byte-high	1 byte	C	-	-	Т	-	counter pulses (0255)	Low

"1x2byte -> 2x1byte"function: converts one 2byte values to two 2byte value, such as Input 2byte = 55500 (\$D8 CC) -> Output 1byte-low = 204 (\$CC), Output 1byte-high =216 (\$D8)

	Number	Name	<b>Object Function</b>	Descri Group / Length	C	R	W	Т	U	Data Type	Priority
	5	1st Logic	Input 4byte	4 bytes	С	-	W	-	U	counter pulses (unsigned)	Low
■2 1	2	1st Logic	Output 2byte-low	2 bytes	С	2	120	T	2	pulses	Low
■2 1	13	1st Logic	Output 2byte-high	2 bytes	C	-	•	Т	•	pulses	Low

"1x4byte -> 2x2byte"function: converts one 4byte values to two 2byte value, such as Input 4byte =

78009500 (\$04 A6 54 9C) -> Output 2byte-low = 21660 (\$54 9C), Output 2byte-high =1190 (\$04 A6)

Numb	er Name	Object Function	Descri Group / Length	с	R	W	Т	U	Data Type	Priority
∎‡ 5	1st Logic	Input 3byte	3 bytes	С	-	W	-	U	RGB value 3x(0255)	Low
<b>■</b> ‡ 11	1st Logic	Output 1byte-low	1 byte	С	0	-	Т	-	counter pulses (0255)	Low
■2 12	1st Logic	Output Ibyte-middle	1 byte	С	-	-	т	-	counter pulses (0255)	Low
<b>■</b> ‡ 13	1st Logic	Output 1byte-high	1 byte	С	2	20	т	-	counter pulses (0255)	Low

"1x3byte -> 3x1byte"function: converts one 3byte values to three 1byte value, such as Input 3byte = \$78

64 C8-> Output 1byte-low = 200 (\$C8), Output 1byte-middle = 100 (\$64), Output 1byte-high = 120 (\$78)

Number	Name	Object Function	Descri Group / Length	С	R	V	V T	U	Data Type	Priority
■2 5	1st Logic	Input 1byte-low	1 byte	C	-	W	-	U	counter pulses (0255)	Low
∎‡ 6	1st Logic	Input 1byte-middle	1 byte	С	2	W	1	U	counter pulses (0255)	Low
∎‡ 7	1st Logic	Input 1byte-high	1 byte	C	-	W	-	U	counter pulses (0255)	Low
∎‡ 13	1st Logic	Output 3byte	3 bytes	С	2	2	Т	2	RGB value 3x(0255)	Low

"3x1byte -> 1x3byte"function: converts three 1byte values to a 3byte value, such as Input 1byte-low =

150 (\$96), Input 1byte-middle = 100 (\$64), Input 1byte-high = 50 (\$32)-> Output 3byte = \$32 64 96 Fig.6.5.4 "Format convert" communication object





N0.	Object	Name	Data	Flag	DPT				
	Function		Туре						
			1bit		1.001 switch				
			1byte		5.010 counter pulses(0255)				
5	Input	{{1st Logic}}	2byte	C,W,U	7.001 pulses				
			3byte		232.600 RGB value 3x(0255)				
			4byte		12.001 counter pulses				
Tł	ne communicatio	on object is used to inp	ut a value that	t needs to b	e converted.				
			1bit		1.001 switch				
			2bit		2.001 switch control				
			1byte		5.010 counter pulses(0255)				
13	Output	{{1st Logic}}	2byte	C,T	7.001 pulses				
			3byte		232.600 RGB value 3x(0255)				
			4byte		12.001 counter pulses				
The communication object is used to output the converted value.									

Table 6.5.4 "Format convert" communication object table

### 6.5.5. "Gate function" Communication Object

Number	Name	Object Function	Descri Gr	oup / L	ength	С	R	W	Т	U	Data Type	Priority
∎‡ 5	1st Logic	Input		11	bit	С	2	W	1	22	switch	Low
∎‡ 6	1st Logic	Gate input		11	bit	С	-	W	-	-	boolean	Low
∎‡ 13	1st Logic	Output	0	11		C	2	2	T	-	switch	Low
Number	Name	Object Function	Output - 1bit[ Descri G			С	R	M	/ Т	ι	Data Type	Priority
<b>≠</b>  5	1st Logic	Input		1	byte	С	2	W	2	4	percentage (0100%)	Low
<b>₽</b> 6	1st Logic	Gate input		1	bit	С	-	W	-	-	boolean	Low
<b> </b> ‡ 13	1st Logic	Output		1	byte	С	2	-	Т	-	percentage (0100%)	Low
Number	Name	Input/O Object Function	utput - 1 byte Descri G			C	R	N	/ т	U	Data Type	Priority
<b>≠</b>  5	1st Logic	Input		1	byte	С	4	W	84	-	counter pulses (0255)	Low
∎‡ 6	1st Logic	Gate input		1	bit	С	-	W	-		boolean	Low
∎‡ 13	1st Logic	Output	Output - 1 byte			C	94	-	Т	-	counter pulses (0255)	Low
Number	Name	Object Function				С	R	W	T	U	Data Type	Priority
≠ 5	1st Logic	Input		2	bytes	С	-	W	2	20	temperature (°C)	Low
₹ 6	1st Logic	Gate input		18	oit	С	-	W	-	-	boolean	Low
<b>  </b> 13	1st Logic	Output Input/	'Output - 2byt			С	-	-	τ	-	temperature (°C)	Low
Number	Name	<b>Object Function</b>	the second se			С	R	W	T	U	Data Type	Priority
∎≵ 5	1st Logic	Input		2	bytes	С	2	W	1	2	pulses	Low
\$6	1st Logic	Gate input		11	bit	С	-	W	-	-	boolean	Low
<b>∤</b> 13	1st Logic	Output Input/0	utput - 2byte[		S. 508	С	2	24	Т	20	pulses	Low

Fig.6.5.5 "Gate function" communication object



N0.	Object	Name	Data	Flag	DPT
	Function		Туре		
					1.001 switch
			1bit		5.001 percentage
5	Input	{{1st Logic}}	1byte	C,W	5.010 counter pulses
			2byte		9.001 temperature
					7.001 pulses
	The communica	tion object is used to i	input a value tha	at needs to	gate filter.
6	Gate input	{{1st Logic}}	1bit	C,W	1.002 boolean
-	The communica	ation object is used t	to control the s	switch stat	tus of gate input. Input signal is
		-			ut status is still sent if there is a
		s when gate close.			
		5			1.001 switch
			bit		5.001 percentage
13	Output	{{1st Logic}}	1byte	C,T	5.010 counter pulses
			2byte		9.001 temperature
					7.001 pulses
	The communica	tion object is used to	output the val	ue after ga	ate filtering. Only when gate input
statu	is is open, outpu	t is available, defined	by the object "G	ate input".	
	, , ,			nication obio	

Table 6.5.5 "Gate function" communication object table





### 6.5.6. "Delay function" Communication Object

Number	Name	Object Function	Descri Group	Length	C	R	W	Т	U	Data Type	Priority
₹5	1st Logic	Input		1 bit	С	-	W	-	8 <b>7</b> 8	switch	Low
≵ 13	1st Logic	Output		1 bit	С	ų.	-	T	-	switch	Low
		Input	/Output -1bit[On/C	off]							
₹ 5	1st Logic	Input		1 byte	C	-	W	-	ie:	percentage (0100%)	Low
‡ 13	1st Logic	Output		1 byte	С	5	572	Т		percentage (0100%)	Low
		Input/	Output -1byte[010	0%]							
Number	Name	<b>Object Function</b>	Descri Group	Length	с	R	W	т	U	Data Type	Priority
<b>≵</b>  5	1st Logic	Input		1 byte	С	-	W	-	-	counter pulses (0255)	Low
<b>≵</b>  13	1st Logic	Output		1 byte	С	2	2	Т	2	counter pulses (0255)	Low
		Input/	'Output -1byte[02	55]							
Number	Name	Object Function	Descri Group	Length	С	R	W	т	U	Data Type	Priority
₽5	1st Logic	Input		2 bytes	С	÷	W	-	-	temperature (°C)	Low
₽13	1st Logic	Output		2 bytes	C	<u>د</u>	2	Т	2	temperature (°C)	Low
		Input	/Output - 2byte[Flo	at]							

ame	Object Function	Descri Group / Length	-	IN IN	vv	1	U	Data Type	Priority
Logic	Input	2 bytes	С	×.	W	÷ .	-	pulses	Low
Logic	Output	2 bytes	C	<u>ہ</u>	-	T	-	pulses	Low
	-	ogic Output	.ogic Output 2 bytes		.ogic Output 2 bytes C -	.ogic Output 2 bytes C	.ogic Output 2 bytes C T	.ogic Output 2 bytes C T -	.ogic Output 2 bytes C T - pulses

Fig.6.5.6 "Delay function"	' communication object
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N0.	Object	Name	Data	Flag	DPT					
	Function		Туре							
					1.001 switch					
			1bit		5.001 percentage					
5	Input	{{1st Logic}}	1byte	C,W	5.010 counter pulses					
			2byte		9.001 temperature					
					7.001 pulses					
Tł	The communication object is used to input a value that needs to delay.									
					1.001 switch					
			1bit		5.001 percentage					
13	Output	{{1st Logic}}	1byte	С,Т	5.010 counter pulses					
			2byte		9.001 temperature					
					7.001 pulses					
Tł	The communication object is used to output that needs to delay converted value, delay time is									

defined by the parameter.

Table 6.5.6 "Delay function" communication object table





## 6.5.7. "Staircase lighting" Communication Object

Number	Name	Object Function	Descri Group A	Length	1 0	F	2	w	т	U	Data Type	Priority		
<b>‡</b>  5	1st Logic	Trigger value		1 bit	С	-	V	N		-	trigger	Low		
<b>‡</b>  6	1st Logic	Light-on duration time		2 bytes	C	୍	٧	N	2 7	28	time (s)	Low		
13	1st Logic	Output	1 bit C T - switch						Low					
13	1st Logic	Output		1 byte	C	×.	-		т	-	counter pulses (0255)	Low		
		Fig.6.5.7 "Staircase lig	hting" comm	unicat	ion	n ol	bje	ect						
NO. (	Object Function	Name	Data	Flag				DPT						
			Туре											
5 1	Frigger value	{{1st Logic}}	1 bit	c,w	,				1.017 trigger					
The	communication obje	ect is used to receive	e the value t	to trig	gge	er	st	ai	rca	ise	e lighting.			
6 I	_ight-on duration time	{{1st Logic}}	2byte	C,W 7.005 time(s)										
The	communication obj	ect is used to mod	ify the stai	rcase	e li	igh	nt-	or	n d	ur	ation time, the	e modified		
range is	referenced from the	range defined by the	e paramete	r, take	e t	he	li	m	it v	al	ue if exceeded			
	• • •		1bit				1.001 switch							
13 (	Output {{1st Logic}} C,				C,T				5.010 counter pulses					
The	communication obj	ect is used to output	t value 1 wł	nen tr	rig	ge	r,	ar	nd	se	end value 2 afte	er duratior		
time. Te	legram value is deter	mined by the param	eter setting	g data	aty	pe								
	Tak	ole 6.5.7 "Staircase light	ing" commun	nicatio	n c	hi	<u></u>	+ +	əhl	<u> </u>				

Table 6.5.7 "Staircase lighting" communication object table





### 6.6. "Scene Group" Communication Object

Number	Name	<b>Object Function</b>	Description	Group Address	Length	С	R	W	Т	U	Data Type	Priority
■2 77	Scene Group	Main scene trigger			1 byte	С	-	W	-	-	scene num	Low
■2 78	1st Scene Group-Output 1	1bit value			1 bit	С	21	2	Т	2	switch	Low
■≵ 79	1st Scene Group-Output 2	1bit value			1 bit	С	-	-	Т	-	switch	Low
■2 80	1st Scene Group-Output 3	1bit value			1 bit	С	2	2	Т	2	switch	Low
∎‡ 81	1st Scene Group-Output 4	1bit value			1 bit	С	-	-	Т	-	switch	Low
■‡ 82	1st Scene Group-Output 5	1bit value			1 bit	С	2	2	Т	2	switch	Low
■2 83	1st Scene Group-Output 6	1bit value			1 bit	С	-	-	Т	-	switch	Low
■2 84	1st Scene Group-Output 7	1bit value			1 bit	С	2	2	Т	2	switch	Low
₽2 85	1st Scene Group-Output 8	1bit value			1 bit	C	-	-	Т	-	switch	Low

#### Fig.6.6 "Scene Group" communication object

77	Main scene trigger	Scene Group	1byte	C,W	17.001 scene number
			Туре		
N0.	Object Function	Name	Data	Flag	DPT

This communication object triggers each output in the scene group to send a specific value to the bus by recalling the scene number. Telegrams: 0.. 63

	1bit value				1.001 switch
	1byte unsigned value		1bit		5.010 counter pulses
78//	HVAC mode	1st Scene Group-{{Output x}}	1byte	C,T	20.102 HVAC mode
	2byte unsigned value		2byte		7.001 pulses
	Temperature				9.001 temperature

When a scene is recalled, the communication object is used to send the corresponding output value of the scene to the bus. If the output is not set to this scene, it will not be sent.

A total of 8 scene groups can be set up, with 8 outputs per group.

The name in parentheses changes with the parameter "Description for logic function". If description is empty, display "1st Scene Group-Output x" by default. The same below.

Table 6.6 "Scene Group" communication object table

