M M M K-BUS

M - P B S _V1.3

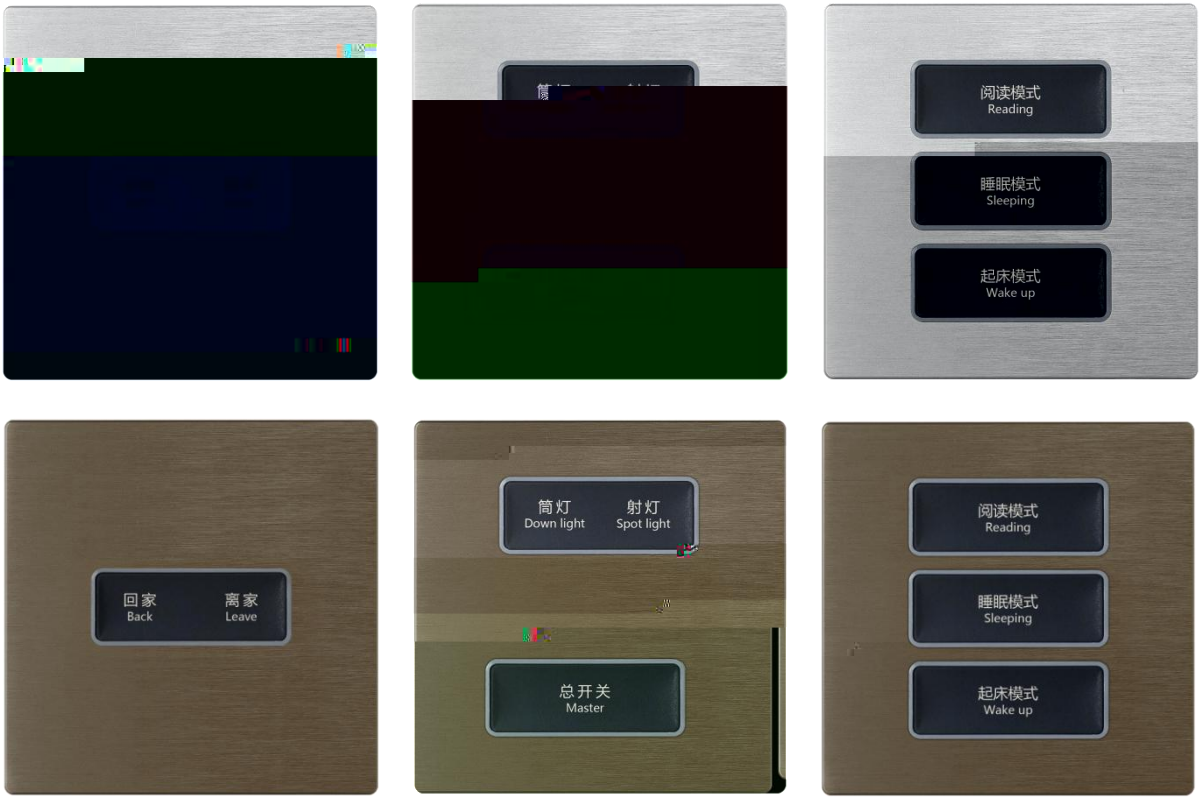
CHKPM-0 /0 .1.2

CHKPM-0 / .1.2

CHKPM-0 / .1.2

=1 3 =1 3

=2 =9



KNX/EIB

.....3

.....4

ETS 5

4.1 G a 5

4.2 11

4.2.1 Ma -B /R X 11

4.2.2.1 S 14

4.2.2.2 S /D 16

4.2.2.3 Va /F 19

4.2.2.4 S 20

4.2.2.5 S 21

4.2.2.6 S 23

4.2.2.7 RGB 26

4.2.2.8 M a 28

4.2.2.9 D a 30

4.3 33

4.3.1 S 33

4.3.2 S /D 35

4.3.3 S 37

4.3.4 S 38

4.5 .....

5.3 LED **59**

5.4 ..... **60**

5.4.1 AND/OR//XOR **60**

5.4.2 Ga a **61**

5.4.3 T a a **62**

5.4.3 F a **63**

5.5 ..... **66**

KNX ,

! k

k

! ! ! RGB ! ! k

! 2 2 k

3 6

k

KNX k

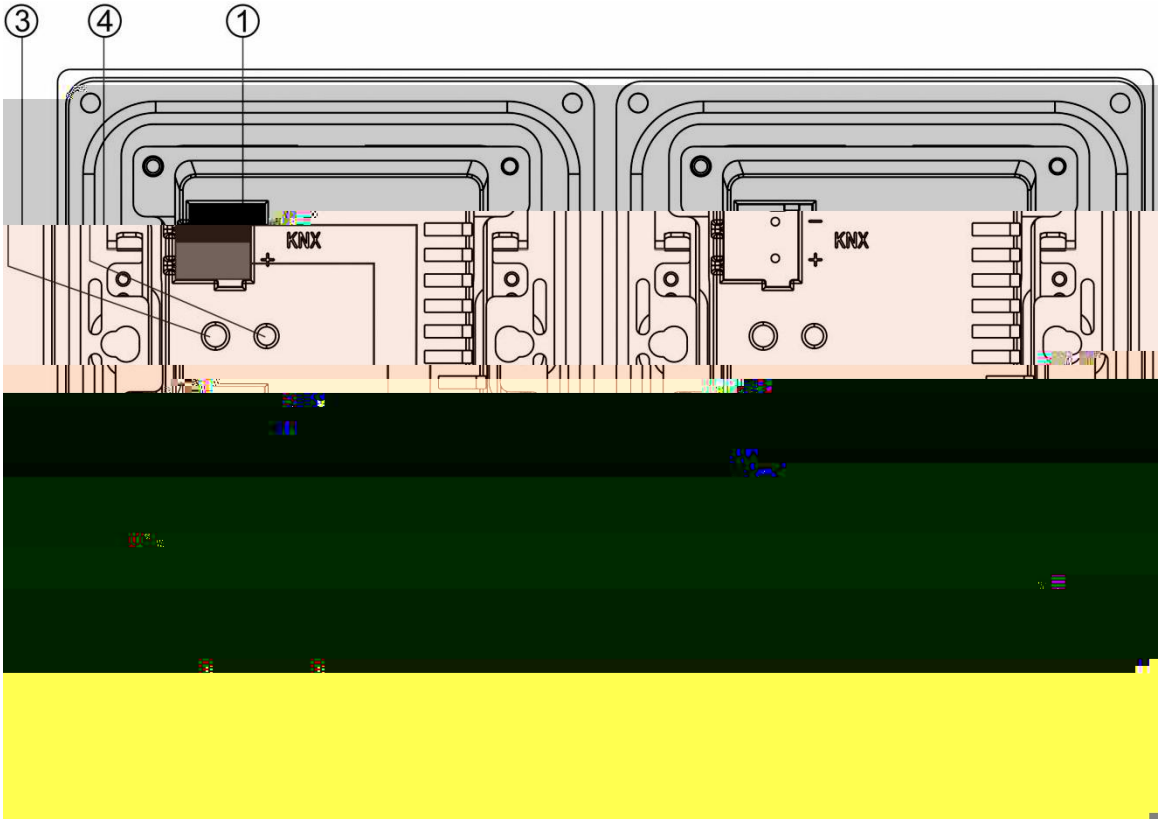
.knxprod ETS (ETS4 k

-
-
-
-
-
- **RGB RGBW**
-
-

-
-
- **LED**

k

21-30V DC KNX <4.3mA 24V <4.1mA 30V <125mW
21-30V DC <26mA 24V <21.5mA 30V <50mA 24V <40mA 30V <71.5mA 24V <60.5mA 30V <0.65W <1.2W <1.9W
KNX / 0.8mm^2 /
LED LED LED
5 °C ... 45 °C 25 °C ... 55 °C 25 °C ... 70 °C
<93%,
86
86*86*33.6mm( ) 172*86*33.6mm( ) 258*86*33.6mm( )
0.13kg 0.26kg 0.39kg



° 1 KNX ° 2 ° 3

° 4 LED LED

KNX

k

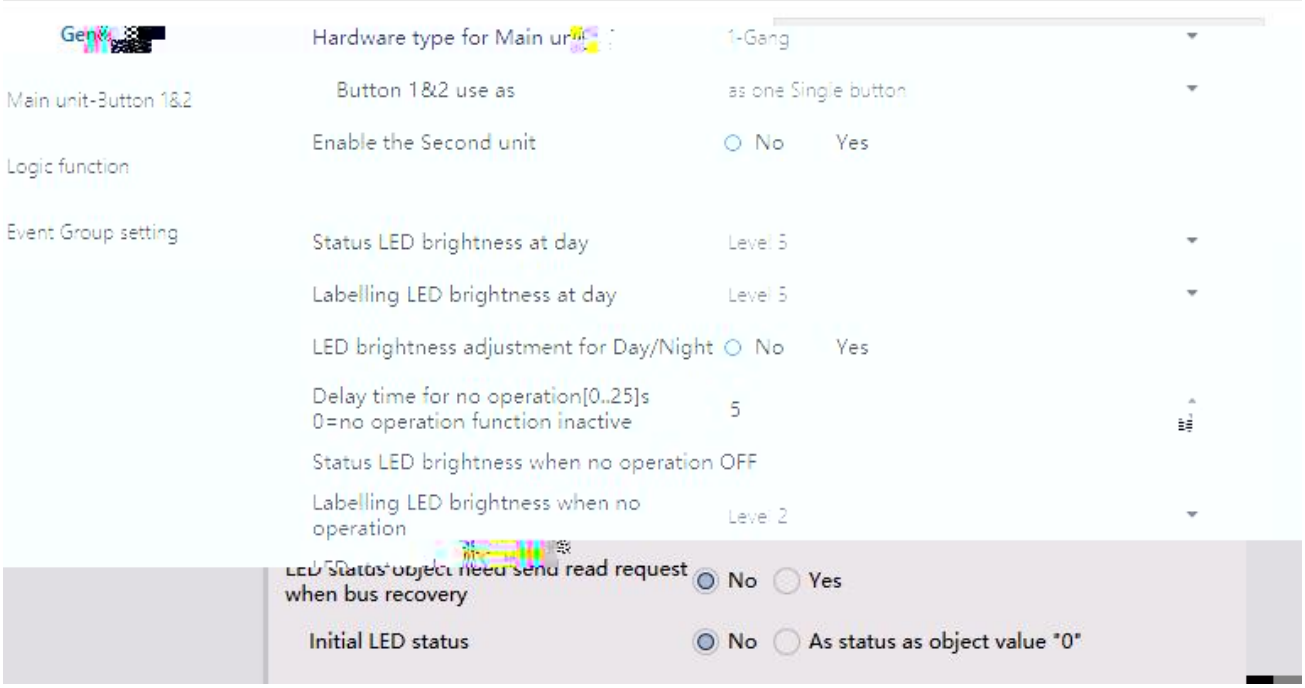
ETS

4.1 G a

General 4.1

k

k k k



4.1 General

Ha a Ma

LED k

1-Ga

2-Ga

3-Ga

B 1&2/3&4/5&6 a

k

a S b

a I b

a L b (R)

as one Single button as two Independent button

as Linked button (Rocker)

k

4.2 4.3 k

/ 0 k

E ab S

k

E ab

D ab

Enable Hardware Type for Second unit ! Button 1&2 use as Enable the Third unit k

E ab T

k

E ab

D ab

Enable Hardware Type for Third unit ! Button 1&2 use as k

S a LED b a a

LED k

L 1

L 2

L 3

L 4

L 5

/ LED k

Lab LED b a a

LED k

L 1

L 2

L 3

L 4

L 5

LED b a Da /N

LED LED / k

N

Y

No: LED LED k

Yes / k

LED k

P a Da /N

/

Da =1/N =0
Da =0/N =1

Day=1/Night=0 Day/Night mode 1 0

k

Day=0/Night=1 Day/Night mode 0 1

k

Da /N a b

LED brightness adjustment for Day/Night Yes k

Day/Night mode k

N

Y

No: k LED brightness in day mode after startup LED

k

Yes LED / k

k

S a LED b a

LED k

OFF

L 1

L 2

L 3

L 4

L 5

OFF:

Level 1-5: 1 5 k

Lab LED b a

LED k

OFF

L 1

L 2

L 3

L 4

L 5

OFF:

Level 1-5: 1 5 k

D a a [0..25] 0= a a

k **0..25**

S a LED b a OFF

LED k

Lab LED b a

LED k

OFF

L 1

L 2

L 3

L 4

L 5

OFF:

Level 1-5: 1 5 k

LED a b a b

LED k

N

Y

No: Initial LED status k

Yes LED k k

l a LED a

Yes LED

N

A a a b a 0

No:

As status as object value 0 : LED 0 k LED Control

by external object 1byte Indicate contact press k

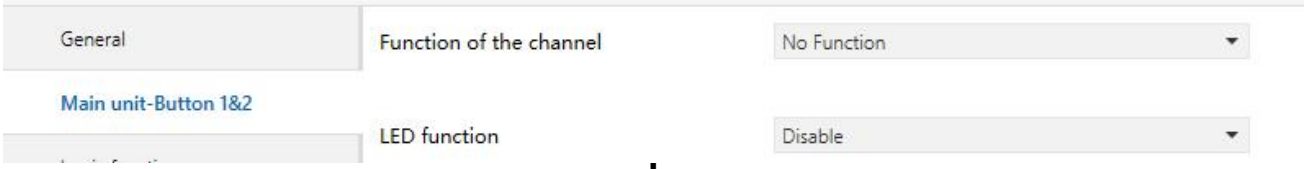
4.2

k

k

4.2.1 Ma -B /R X

Main unit-Button/Rocker X 4.2 k



4.2 Main unit-Button/Rocker X

F a

N

S

S /D

Va /F /

S

S

S

RGB RGB

M a

D a

k

LED F

LED LED k

D ab

C b b b

C b a b

I a b

Disable k

Control by button switch object LED

Switch Short, Switch k

LED k **/D** k

Control by external object LED k

Indicate button press LED k

E a b a a

LED Control by external object LED k

1b

1b

T b a = 0/1 , LED

LED Control by button switch object Control by external object 1bit

LED LED 1 0 k

OFF

ON

T a

LED Control by external object 1byte LED k

1..255

I b a < a , LED

LED Control by external object 1byte LED

k

OFF

ON

l b a = a , LED

LED Control by external object 1byte LED

□ □ k □ □ □ □

OFF

ON

l b a > a , LED

LED D

4.2.2.1 S

Main unit-Button X: Switch 4.3

k

k **3..25**

R a a b /R a a a b

/ / k k

N a

OFF

ON

TOGGLE

No action k

ON

OFF

TOGGLE

k

D ab

k

D ab

E ab

Enable k k

k

T a ab b

/ k

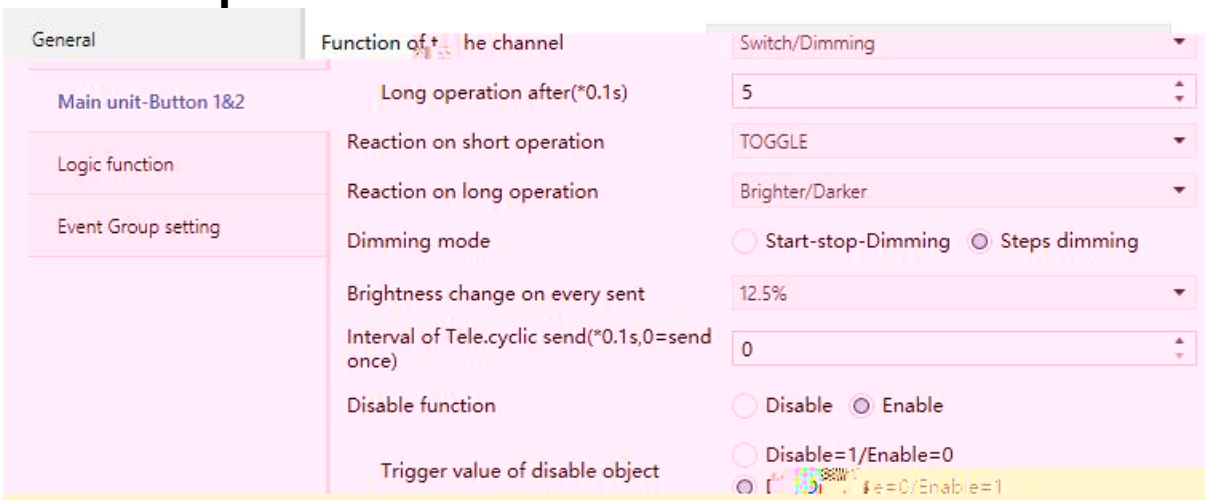
D ab =1/E ab =0

D ab =0/E ab =1

k

4.2.2.2 S /D

Main unit-Button X:Switch/Dimming 4.4 k



4.4 Main unit-Button X:Switch/Dimming

L a a *0.1

k

k **3..25**

R a a

N a

ON

OFF

TOGGLE

No action k

ON k

OFF k

TOGGLE k

R a a

k

N a

B

Da

B /Da

No reaction k

Brighter k

Darker k

Brighter/Darker k

TOGGLE

k

k

D

k

S a - -D

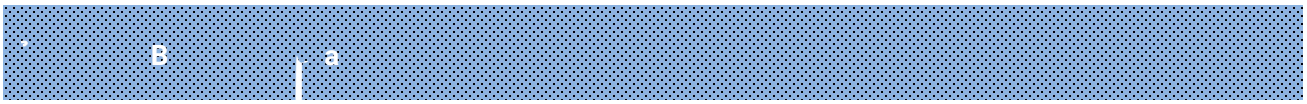
S

Start-stop-Dimming

k k

Steps dimming

k



Dimming mode Steps dimming ,

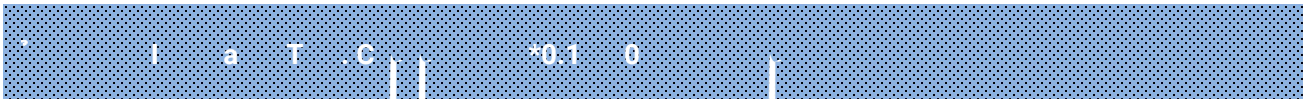
k

100%

50%

` `

1.56%

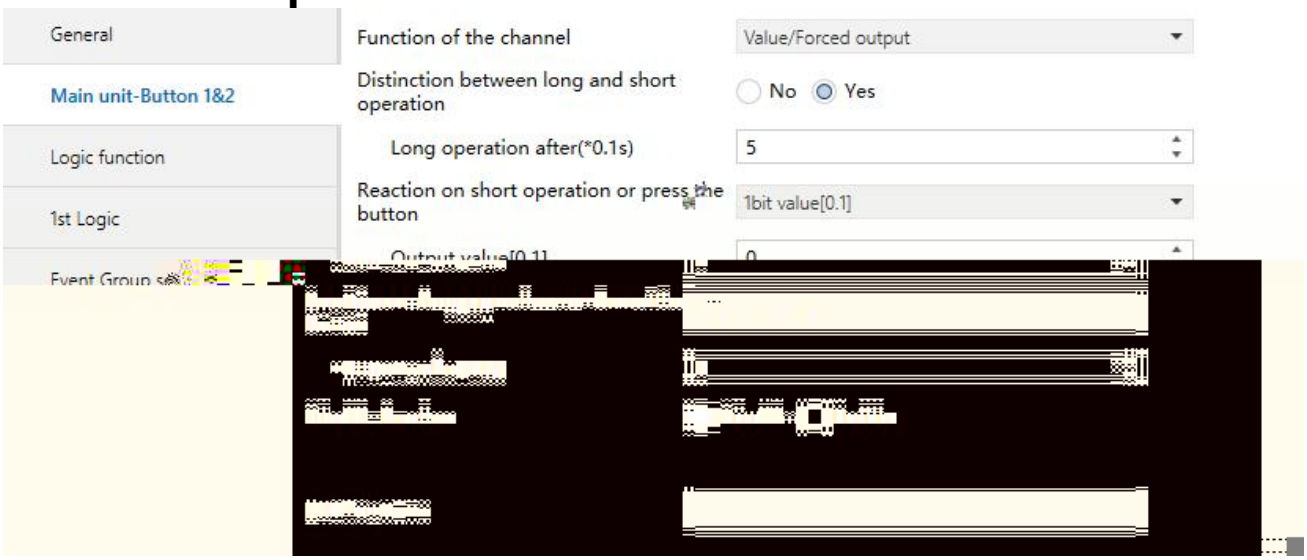


Dimming mode Steps dimming , k

0..25 , 0= k

4.2.2.3 Va /F

Value/Force output 4.5 k



4.5 Main unit-Button x- Value/Forced output

D b a a

/ k Yes

k

Y

N

L a a *0.1

/ k

k **3..25**

R a a b / R a a a

b

/ / k

N a

1b a [0...1]

KNX/EIB □

b

/ /

N a

R a

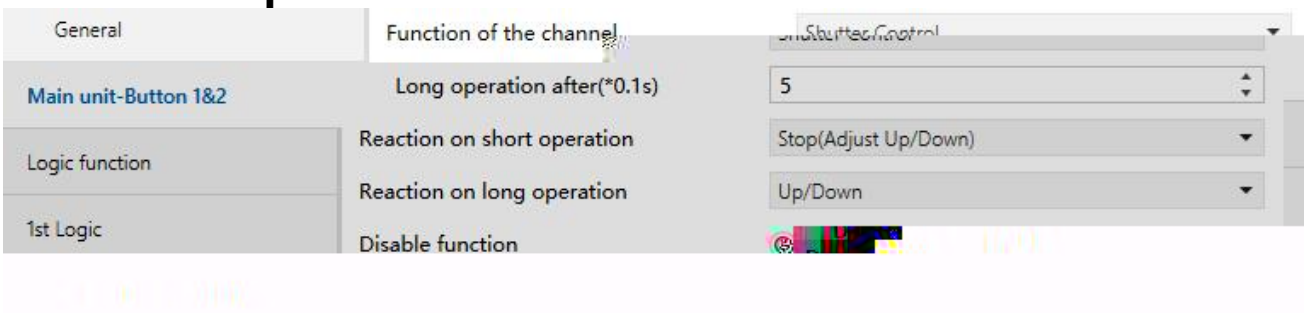
S

S b [1..64]

S NO.1 64 0 63

4.2.2.5 S

Main unit-Button x: Shutter control 4.7



4.7 Main unit-Button x: Shutter control

L a a *0.1

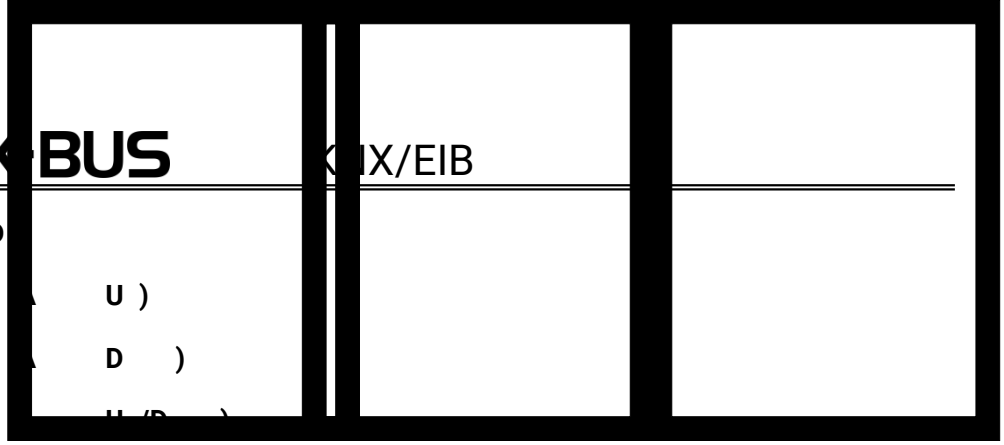
3..25

R a / a

N a

U

D



U /D

S U)

S D)

S

No action

Up k

Down k

Up/Down / k

Stop (Adjust Up) k

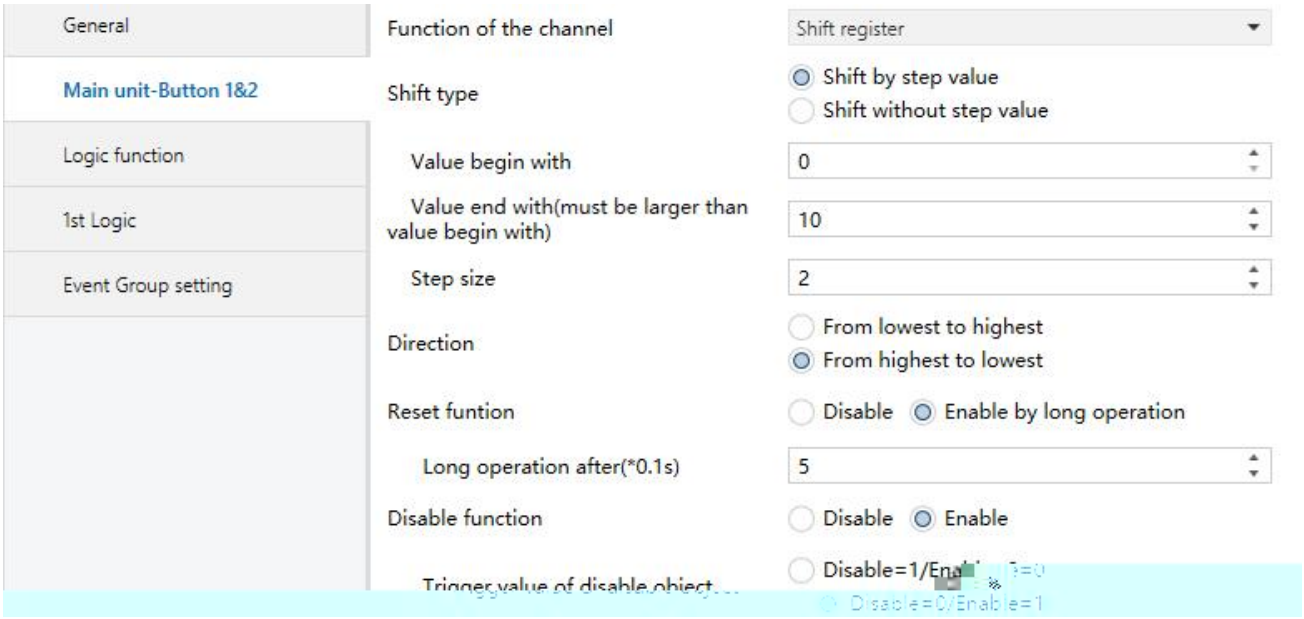
Stop (Adjust Down) k

Stop (Adjust Up/Down) / k

I a T . C *0.1 0

4.2.2.6 S

Main unit-Button x:Shift register 4.8 k



4.8 Main unit-Button x: Shift register

S

k

S b a

S a

Shift by step value

k

Shift without step value 10

k

Va b

Shift by step value k **0...240** k

Va (b a a a b)

Shift by step value k **1...250** k

k

S

Shift by step value

k **0...240** k

S b

Shift without step value 10 k

1/2/.../10 k

k

Va 1..10

k **0..255** k

D

k

F

F

From lowest to highest value 1 value 10

value 10 value 1 k

From highest to lowest value 10 value 1

value 1 value 10 k

R

k

D ab

E ab b a

Disable

Enable by long operation k

R a / a b

k

N a

S a

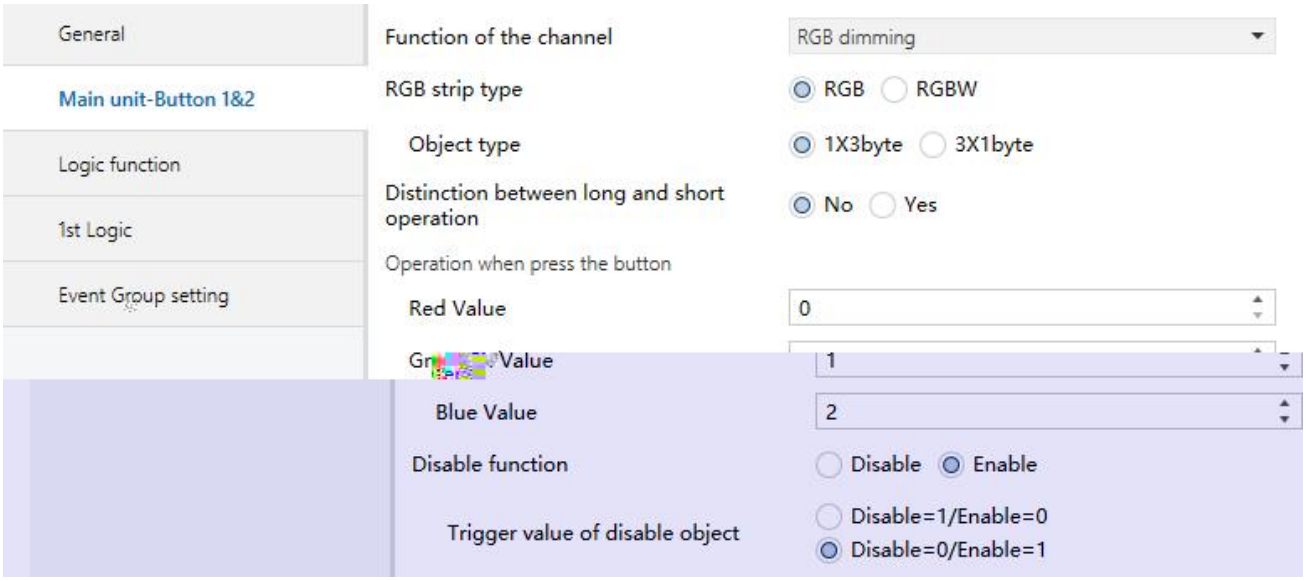
L a a *0.1

k

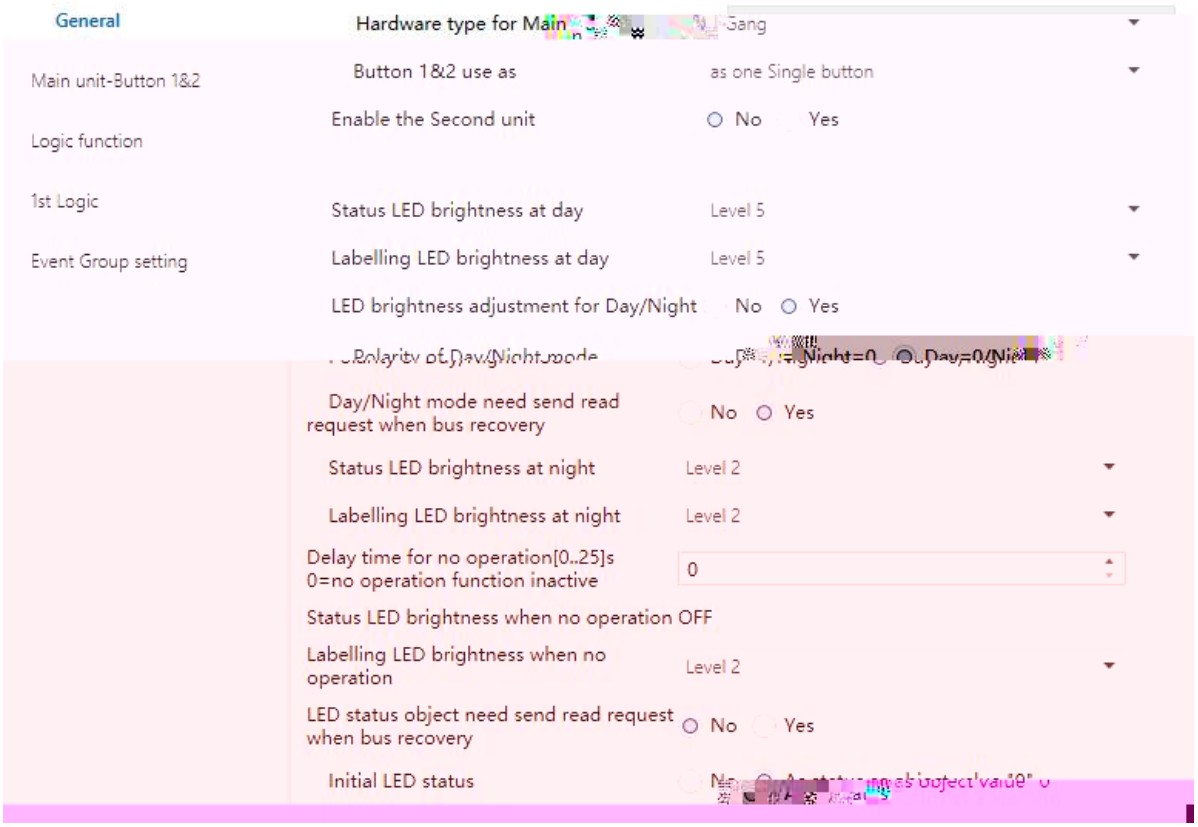
k **3..25** k

4.2.2.7 RGB

Main unit-Button x: RGB dimming 4.9 4.10 k



4.9 Main unit-Button x: RGB dimming 1



4.10 Main unit-Button x:RGBW dimming 2

RGB

RGB

RGB

RGBW

RGB RGB k

RGBW RGBW k

Ob

k

RGB

1 3b 3byte RGB

3 1b 1byte RGB

RGBW

1 6b 6byte RGBW

4 1b 1byte RGBW

D b a a

/ k Yes

k

N

M M

Y

L a a *0.1

/ k

k **3..25** k

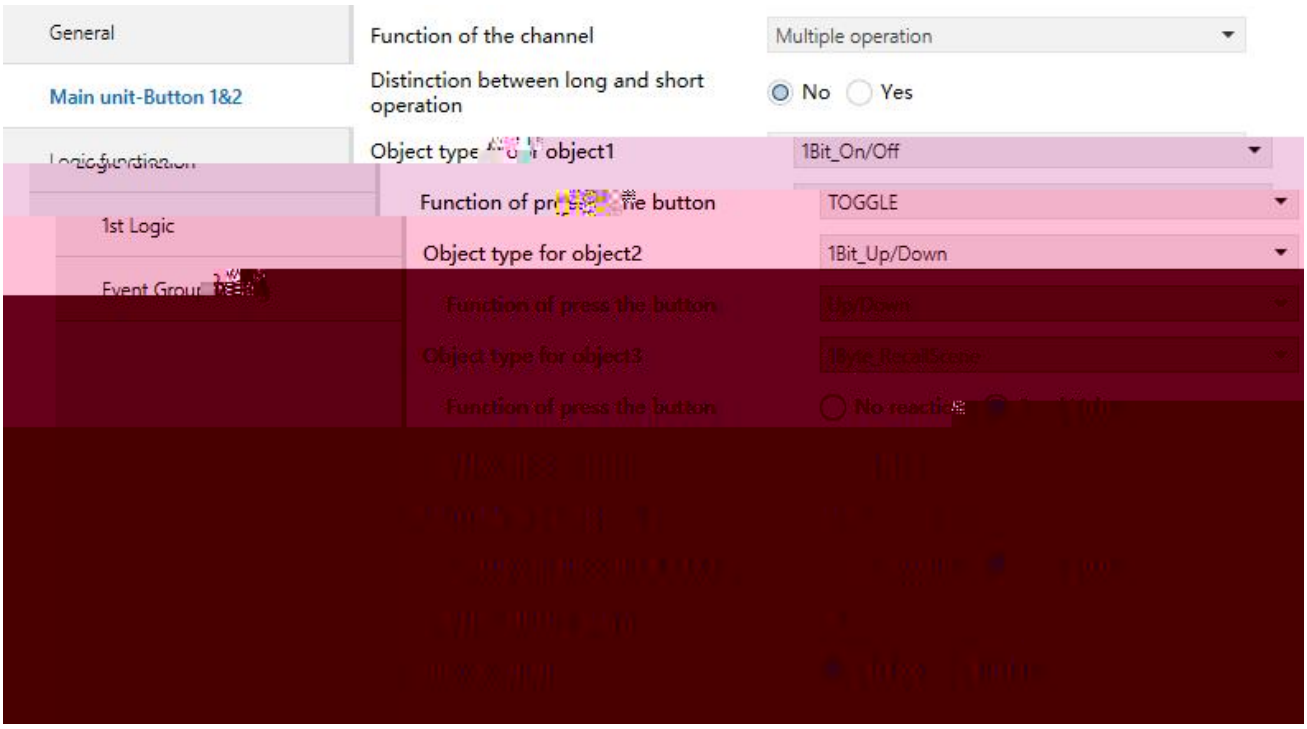
O a b R / G /B /W Va (0..255)

/ **0...255**

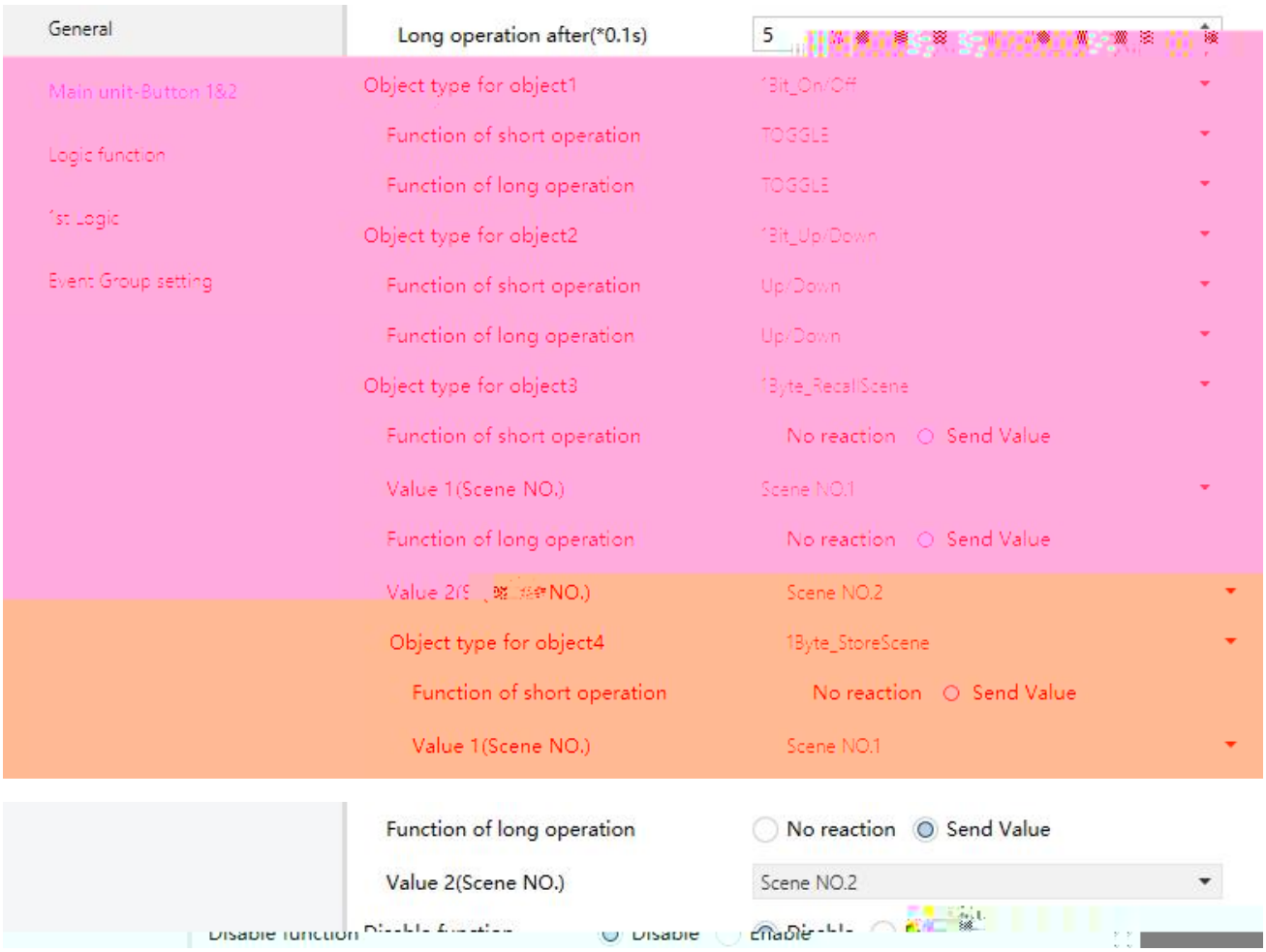
4.2.2.8 M a

Multiple operation 4.11 k

k 4 k



4.11 Multiple operation ( )



4.12 Multiple operation ( )

D	b	a	a

/ k Yes

k

N

Y

L a a *0.1

/ k

k **3..25** k

Ob	b	(=1..4)

/ k

D ab

1B _O /O

` `

1B _U a

F	b / F	a / F	a

no reaction (send value,

) k

Va 1/2 ...

1byte_Recall Scene 1byte_Store Scene 1byte_Percentage

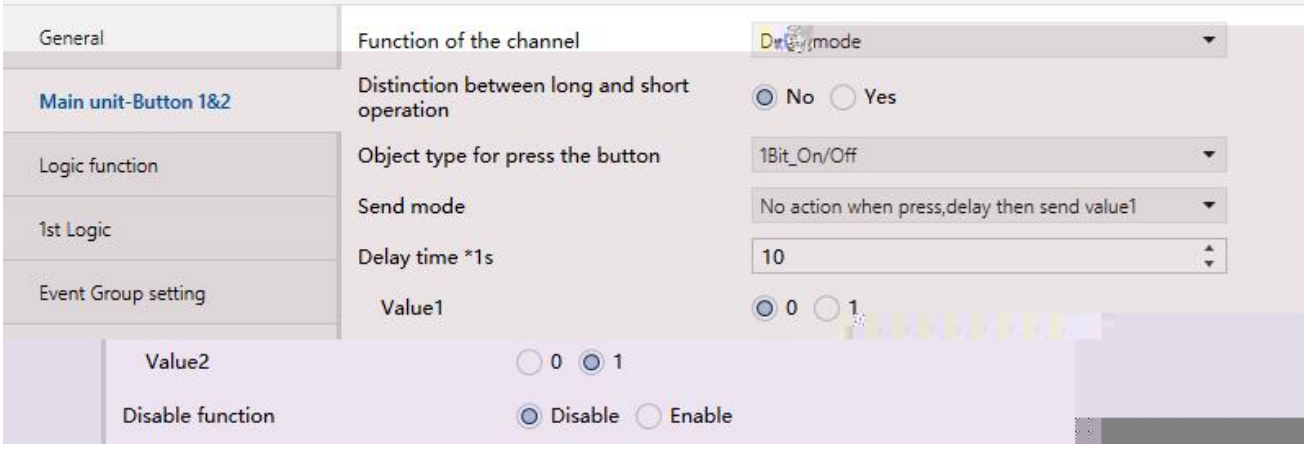
1byte_Unsigned value k k

k

4.2.2.9 D a

Delay mode 4.13 4.14 k

k



4.13 Button x- Delay mode ( )

4.14 Button x- Delay mode ( )

D b a a

/ k Yes

k

N

Y

L a a *0.1

/ k

k **3..25** k

Ob b / Ob a / Ob a

/ k

D ab

1B _O /O

4B _D

1B _U a

S

k

N a , a a 1 1

N a , a a 2 2

S a 1 , a a 2 1 2

S a 2 , a a 1 2 1

D a *1

k 0..6500

a 1/2[ ]

1/2 k k

4.3

k

4.3.1 S

Switch

TOGGLE

No action k

OFF k

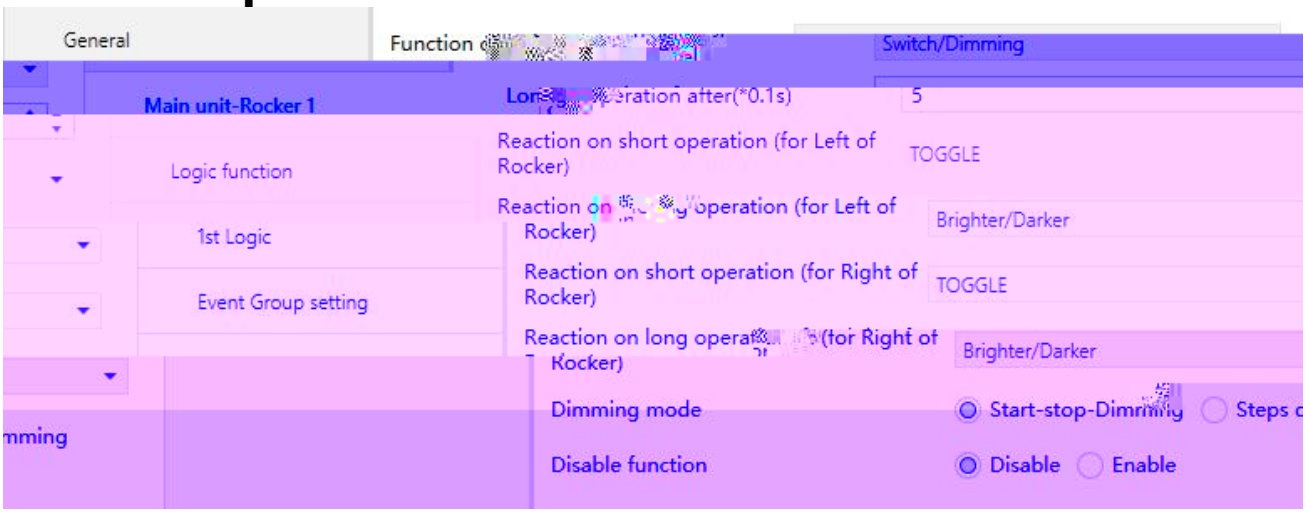
ON k

TOGGLE

k

4.3.2 S /D

Switch/Dimming 4.15 k



4.15 Main unit-Rocker x:Switch/Dimming

L a a *0.1

k

k **3..25** k

R a a

R a a L /R

1.56%

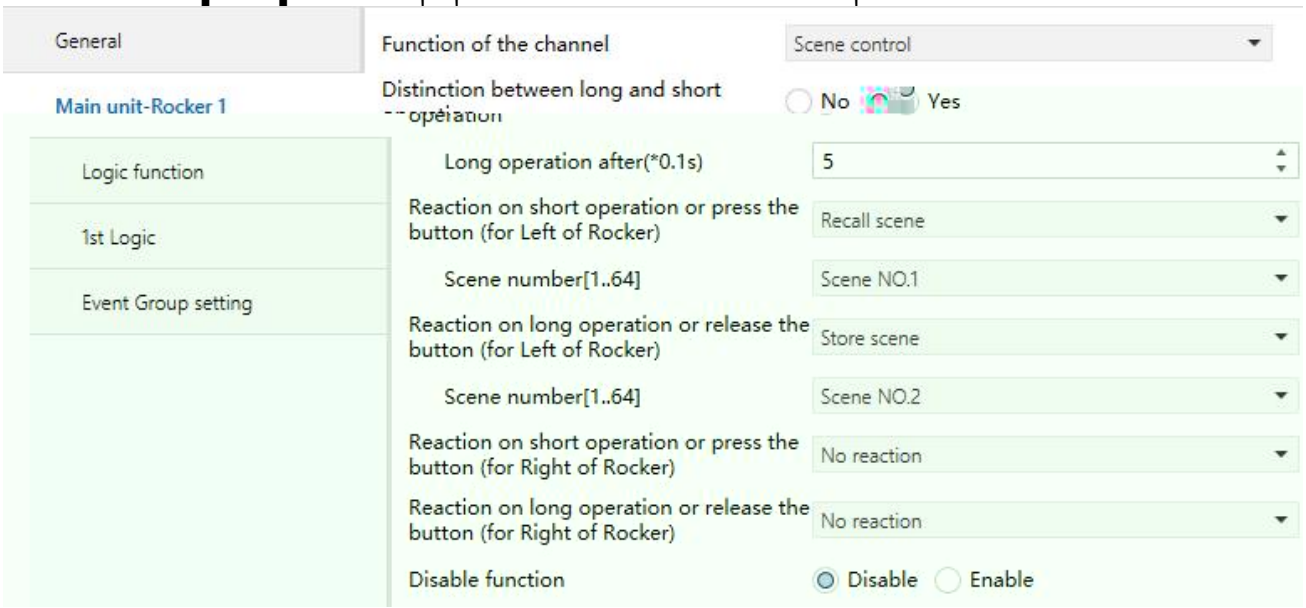
I a T . C *0.1 0

Dimming mode Steps dimming ,

0..25 , 0=

4.3.3 S

Scene control 4.17



4.17 Main unit-Rocker x: Scene control

D b a a

/ Yes

N

Y

L a a *0.1

/

k **3..25**

R a / a L /R R

N a

U

D

U /D

S (A U)

S (A D)

S (A U /D)

No reaction k

Up k

Down k

Up/Down / k

Stop (Adjust Up) k

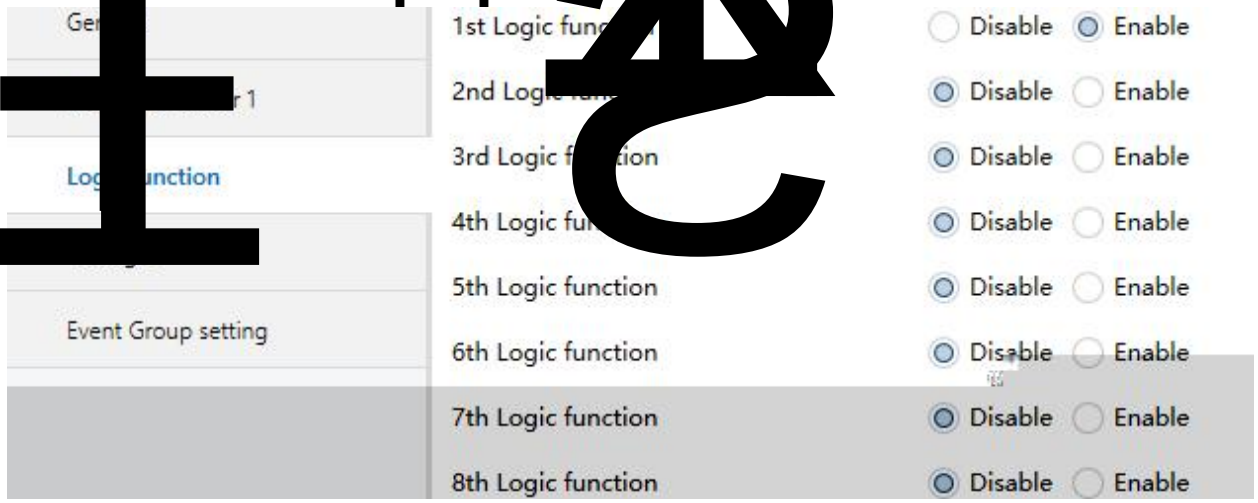
Stop (Adjust Down) k

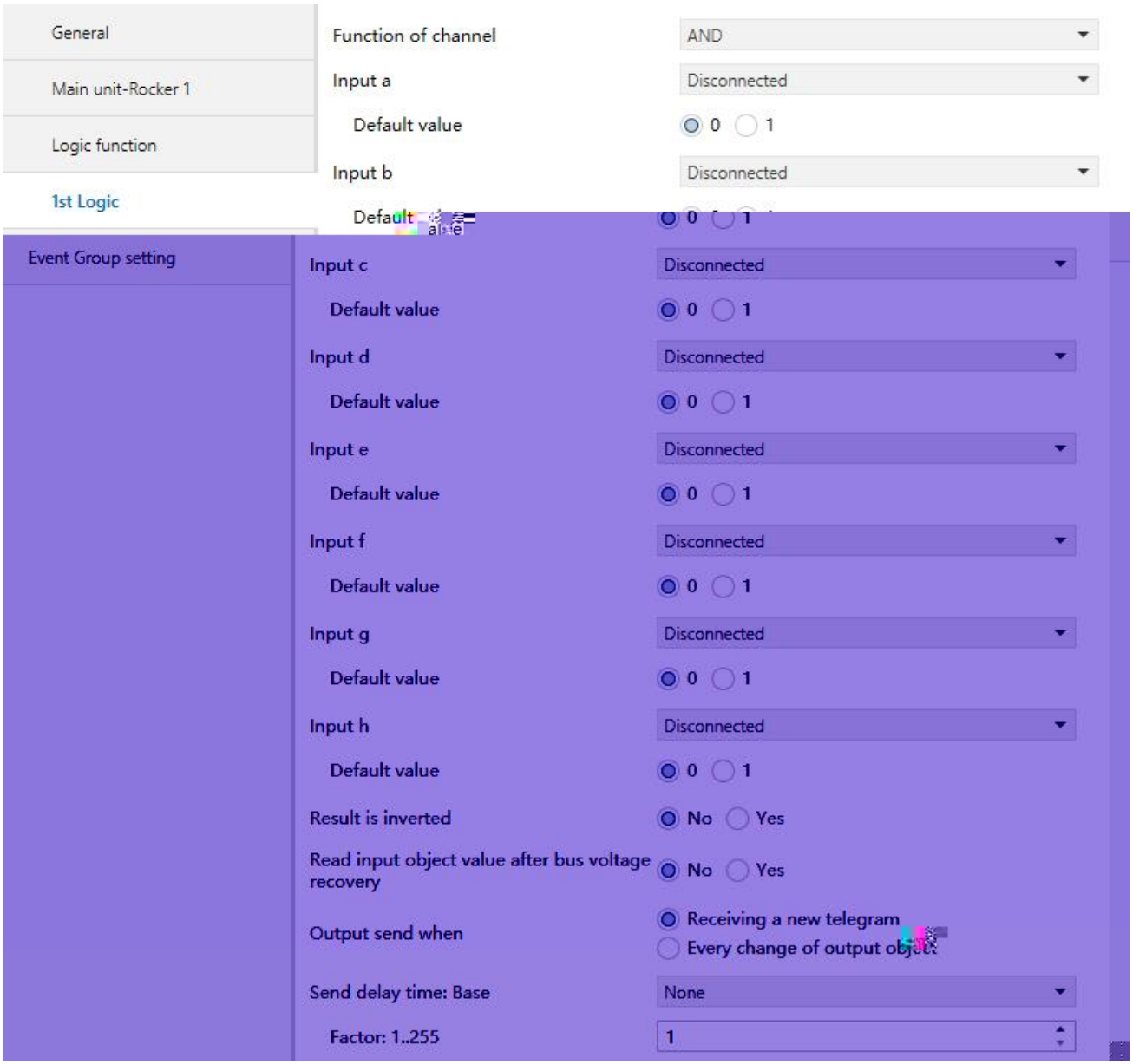
Stop (Adjust Up/Down) / k

I a T			*0.1 0	

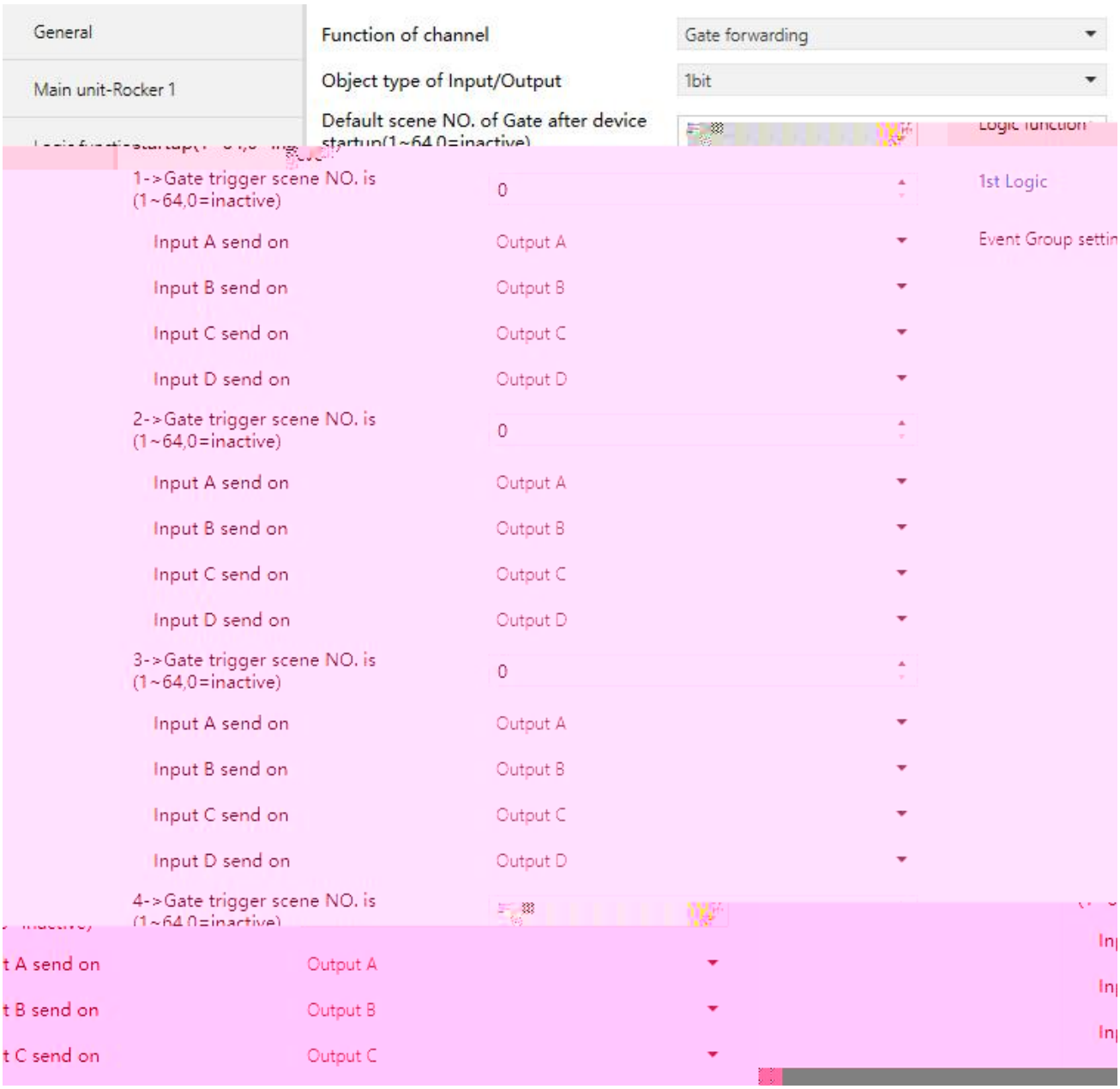
k **0..25 0** k

Logic function 4.20 8

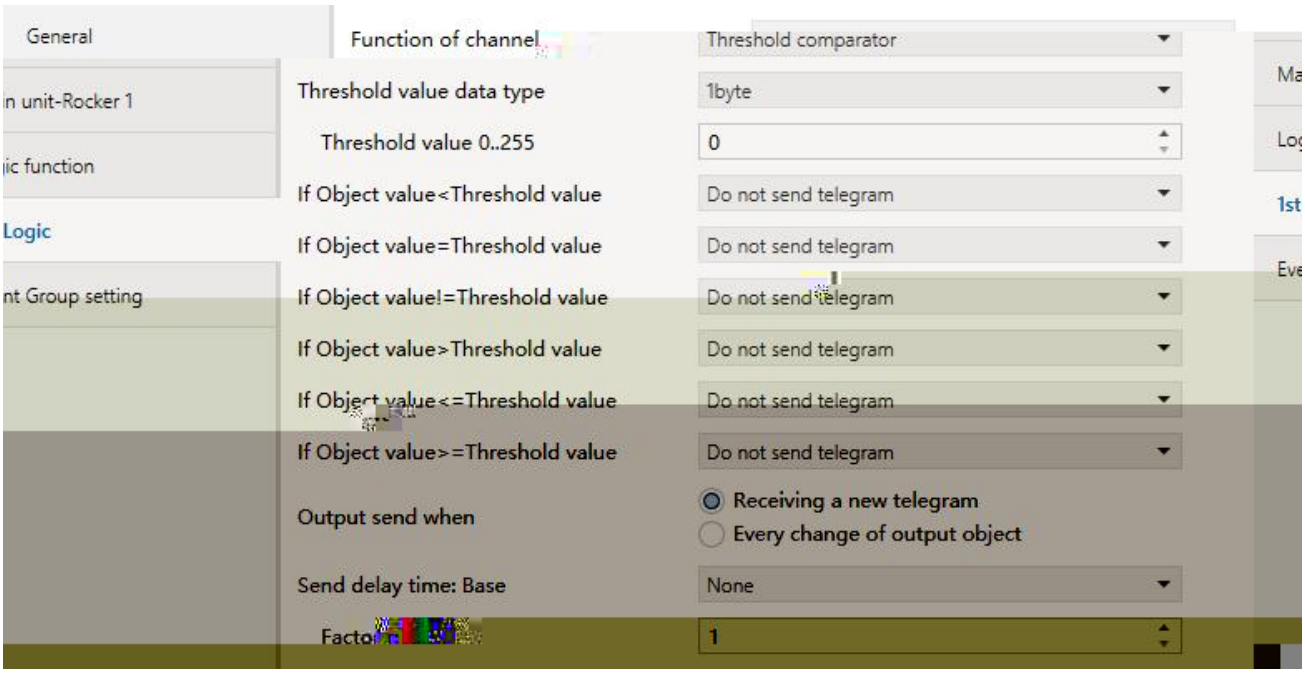




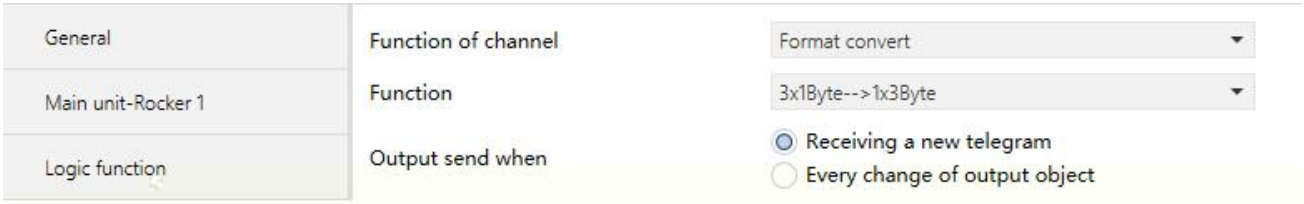
4.21 Logic function -- AND/OR/XOR



4.22 Logic function -- Gate forwarding



4.23 Logic function -- Threshold comparator



4.24 Logic function -- Format convert

F a

k

D ab

AND

OR

XOR

Ga a

T a a

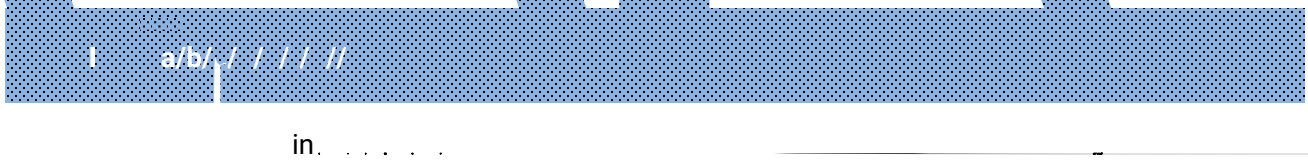
F a

AND/OR/XOR

k

5.1 AND/OR/XOR

AND/OR/XOR 4.



R a a

E a b

Receiving a new telegram

Every change of output object

S a :

Ba : N
0.1
1
...
10
25

Fa : 1..255

Base x Factor Base

None

4.5.2 Ga a

Gate forwarding 4.22 k

Ob	I /O

/ k

1b

4b

1b

D a	NO. O Ga a	a 1 64 0= a

k **1..64,**

0=

-> Ga	NO. (1 64,0= a) (X=1 8)

x k 8 **1..64 0=**

k

I A/B/C/D

k

O A

O B

...

O C,D

O B,C,D

k

k

4.5.3 T a a

Threshold comparator 4.23 k

T a a a

k

4b

1b

2b

4b

T a

k **4b 0..15/1b 0..255/ 2b 0..65535 /4b**

0..4294967295

I Ob a <T a

I Ob a =T a

I Ob a !=T a

I Ob a >T a

I Ob a <=T a

I Ob a >=T a

! ! ! !

k

D a

S a 0

S a 1

Do not send telegram:

Send value 0 / 1 0 1 k

k If Object value=Threshold value Send value 0 If

Object value<=Threshold value Send value 1 1 k

O

k

R a a

E a b

Receiving a new telegram

Every change of output object k

k

S a

Ba : N

0.1

1

...

25

Fa : 1..255

k Base x Factor Base

None k

4.5.4 F a

Format convert 4.24 k

F

k

2 1b -->1 2b

8 1b -->1 1b

...

1 3b -->3 1b

3 1b -->1 3b

O

k

R a a

E a b

Receiving a new telegram

Every change of output object k

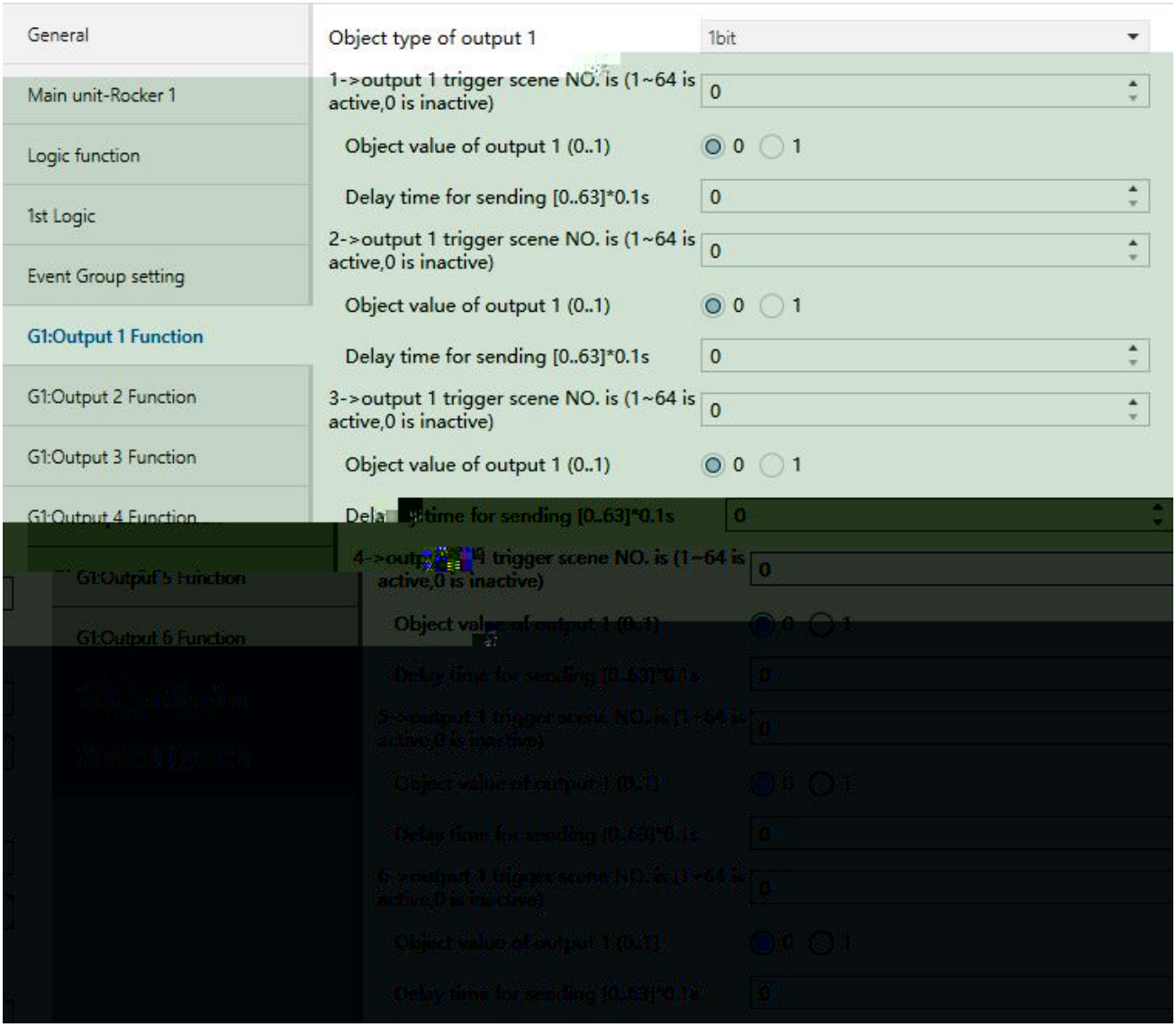
k

4.6 E G

Event Group setting 4.26 8

8 k

4.26 Event Group sett,



4.27 G x: Output y Function

E ab E G

k

N

Y

E G F :1 8

k

D ab

E ab

8 k 8 8

Ob	(:1 8)

y k

1b

1b

2b

->0	NO. (1 64 a ,0 a) (:1 6)

y k 6 **0..64 0=**

k

Ob	a (0..1/0..255/0..65535)

y **1b 0..1/1b 0..255/ 2b 0..65535**

'D a	[0...63]*0.1 "

: **0..63**

k

k

C **W**

R **T** **U**

k

5.1 G a

Number	Name	Object Function	Description	Group Address	Length	C	R	W	T	U	Data Type	Priority
246	LED brightness	Day/Night mode			1 bit	C	-	W	T	U	switch	Low

5.1 General

					DPT
246	**Da /N**	**LED b**	**1b**	**C,W,T,U**	**1.001 DPT_S**
		LED LED		k	

5.1 General

5.2 B /R X

Number	Name	Object Function	Description	Gr	Length	C	R	W	T	U	Data Type	Priority
15	Main unit-Button 1&2	Disable			1 bit	C	-	W	-	-	enable	Low
11	Main unit-Rocker 1	Press/release,Switch			1 bit	C	-	W	T	U	switch	Low

Switch

Number	Name	Object Function	Description	Gr	Length	C	R	W	T	U	Data Type	Priority
11	Main unit-Button 1&2	Short,Switch			1 bit	C	-	W	T	U	switch	Low
12	Main unit-Button 1&2	Long,Dimming			4 bit	C	-	W	T	-	dimming control	Low
15	Main unit-Button 1&2	Disable			1 bit	C	-	W	-	-	enable	Low

Switch/dimming

Number	Name	Object Function	Description	Gr	Length	C	R	W	T	U	Data Type	Priority
11	Main unit-Button 1&2	Short/Press,1bit value			1 bit	C	-	-	T	-	switch	Low
12	Main unit-Button 1&2	Long/Release,2bit value			2 bit	C	-	-	T	-	switch control	Low
15	Main unit-Button 1&2	Disable			1 bit	C	-	W	-	-	enable	Low

Value/Force output

Number	Name	Object Function	Description	Gr	Length	C	R	W	T	U	Data Type	Priority
11	Main unit-Button 1&2	Short/Press,Scene			1 byte	C	-	-	T	-		Low
12	Main unit-Button 1&2	Long/Release,Scene			1 byte	C	-	-	T	-		Low
15	Main unit-Button 1&2	Disable			1 bit	C	-	W	-	-	enable	Low

Scene control

Number	Name	Object Function	Description	Gr	Length	C	R	W	T	U	Data Type	Priority
11	Main unit-Button 1&2	Up/Down,Blind			1 bit	C	-	W	T	-	up/down	Low
12	Main unit-Button 1&2	Stop/Adjust,Blind			1 bit	C	-	-	T	-		Low
15	Main unit-Button 1&2	Disable			1 bit	C	-	W	-	-	enable	Low

Shutter control

Number	Name	Object Fu	Description	Gr		C	R	W	T	U	Data Type	Priority
11	Main unit-Button 1&2	Register value			1 byte	C	-	W	T	-	counter pulses (0..255)	Low
	Main unit-Button 1&2	Disable			1 bit	C	-	W	-	-	enable	Low

Shift register

Number	Name	Object Function	Description	Gr	Length	C	R	W	T	U	Data Type	Priority
11	Main unit-Button 1&2	Red dimming value			1 byte	C	-	-	T	-	counter pulses (0..255)	Low
12	Main unit-Button 1&2	Green dimming value			1 byte	C	-	-	T	-	counter pulses (0..255)	Low
13	Main unit-Button 1&2	Blue dimming value			1 byte	C	-	-	T	-	counter pulses (0..255)	Low
15	Main unit-Button 1&2	Disable			1 bit	C	-	W	-	-	enable	Low
11	Main unit-Button 1&2	RGB dimming value			3 bytes	C	-	-	T	-	RGB value 3x(0..255)	Low
11	Main unit-Button 1&2	RGBW dimming value			6 bytes	C	-	-	T	-	RGB value 4x(0..255)	Low

RGB dimming

Number	Name	Object Function	Description	Gr	Length	C	R	W	T	U	Data Type	Priority

Multiple operation

Number	Name	Object Function	Description	Gr	Length	C	R	W	T	U	Data Type	Prio
11	Main unit-Button 1&2	Short,Delay mode			1 bit	C	-	-	T	-	switch	Low
12	Main unit-Button 1&2	Long,Delay mode			1 bit	C	-	-	T	-	switch	Low
15	Main unit-Button 1&2	Disable			1 bit	C	-	W	-	-	enable	Low
11	Main unit-Button 1&2	Short,Delay mode			4 bit	C	-	-	T	-	dimming control	Low
12	Main unit-Button 1&2	Long,Delay mode			1 byte	C	-	-	T	-	counter pulses (0..255)	Low
11	Main unit-Button 1&2	Press,Delay mode			1 bit	C	-	-	T	-	switch	Low

Delay mode

5.2 Button/Rocker X

DPT

11	**P / a , S**	**Ma**	**-B**	**/R**	**X**	**1b**	**C,W, T,U**	**1.001 DPT_S**
12	**S a , S**	**Ma**	**-B**	**/R**	**X**	**1b**	**C,W, T,U**	**1.001 DPT_S**
12	**L a , S**	**Ma**	**-B**	**/R**	**X**	**1b**	**C,W, T,U**	**1.001 DPT_S**

k Press/release,Switch k Short/Long operation

k

11	**S , S**	**Ma**	**-B**	**/R**	**X**	**1b**	**C,W, T,U**	**1.001 DPT_S**

k 0 ˚ ˚ 1 ˚ ˚

12	**L , D**	**Ma**	**-B**	**/R**	**X**	**4b**	**C,W,T**	**3.007 DPT_D**

k

1~7 1 7 0

9~15 9

15 8 k

11 S /P ,1b /2b /4b
/1b /2b a

Ma , !

8bit k 8bit k

8bit NNNNNNN

F: 0

X 0

NNNNNN 0 63 k

1~64 Scene 0~63 k 1

Scene 0 k

0 1 2 63	1 2 3 64
128 129 130 191	1 2 3 64

11 U /D , B Ma -B /R X 1b C,T 1.008 DPT_ /

/ k

0 ˚ ˚ /

1 ˚ ˚ /

12 a /ES , /E

11	**R a**	**Ma -B X**	**1b**	**C,T**	**5.010 DPT_**	
	R ( ) k					
12	**G a**	**Ma -B X**	**1b**	**C,T**	**5.010 DPT_**	
	G ( ) k					
13	**B a**	**Ma -B X**	**1b**	**C,T**	**5.010 DPT_**	
	B ( ) k					
14	**W a**	**Ma -B X**	**1b**	**C,T**	**5.010 DPT_**	
	W( ) k					
11	**RGB a**	**Ma -B X**	**3b**	**C,T**	**232.600 RGB a 3 (0..255)**	
	RGB k R( ) k					
11	**RGBW a**	**Ma -B X**	**6b**	**C,T**	**251.600 RGB a 4 (0..255)**	
	RGBW k R( ) k					

6 RGBW U8 U8 U8 U8 R8 R4 B4

6MSB	**5**	**4**	**3**	**2**	**1LSB**
R	**G**	**B**	**W**		**R G B W**
UUUUUUUU	**UUUUUUUU**	**UUUUUUUU**	**UUUUUUUU**	**00000000**	**0000BBBB**

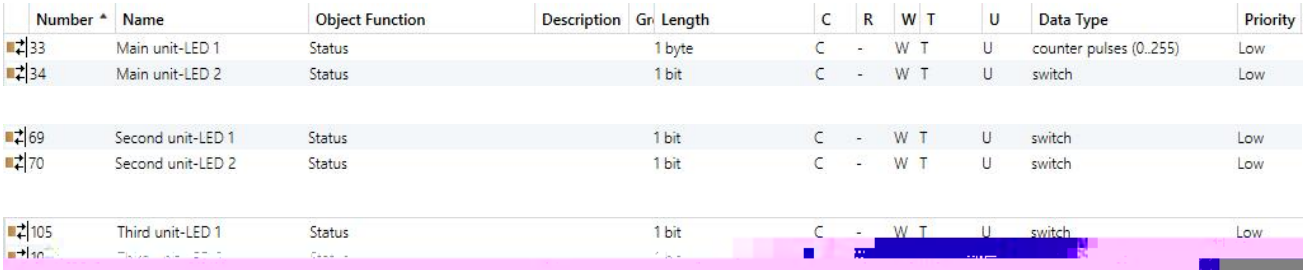
R:

G:

B:

W:

5.3 LED



Number	Name	Object Function	Description	Gr	Length	C	R	W	T	U	Data Type	Priority
33	Main unit-LED 1	Status			1 byte	C	-	W	T	U	counter pulses (0..255)	Low
34	Main unit-LED 2	Status			1 bit	C	-	W	T	U	switch	Low
69	Second unit-LED 1	Status			1 bit	C	-	W	T	U	switch	Low
70	Second unit-LED 2	Status			1 bit	C	-	W	T	U	switch	Low
105	Third unit-LED 1	Status			1 bit	C	-	W	T	U	switch	Low

5.3 LED

					DPT
33/34/69/70/105/106	**S a**	**Ma -LED X**	**1b /1b**	**C,W,T,U**	**1.001 DPT_S /5.010 DPT_**
		1bit/1byte	LED		k

5.3 LED

5.4

5.4.1 AND/OR//XOR

Number	Name	Object Function	Description	Gr	Length	C	R	W	T	U	Data Type	Priority
109	1st Logic	Input a			1 bit	C	-	W	T	U	boolean	Low
109	1st Logic	Gate value select			1 byte	C	-	W	-		-	
109	1st Logic	Threshold value input			1 byte	C	-	W	-	U	counter pulses (0..255)	

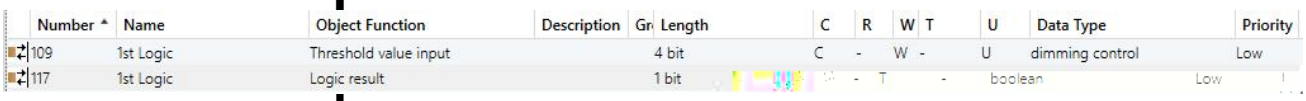
5.4 AND/OR/XOR

					DPT
109/../116	**I**	**1 /.../8 L**	**1b**	**C,W,T,U**	**1.002 DPT_B**
Input x k					
117	**L**	**1 /.../8 L**	**1b**	**C,T**	**1.002 DPT_B**
k					

5.4 AND/OR/XOR

KNX/EIB □

5.4.3 T a a



Number	Name	Object Function	Description	Gr	Length	C	R	W	T	U	Data Type	Priority
109	1st Logic	Threshold value input			4 bit	C	-	W	-	U	dimming control	Low
117	1st Logic	Logic result			1 bit		-	T	-		boolean	Low

5.5 Threshold comparator

					DPT
109	**T a**	**1 /.../8 L**	**4b /1b /2b / 4b**	**C,W,U**	**3.007 DPT_D / 5.010 DPT_ / 7.001 DPT_ / 12.001 DPT_**
k					
117	**L**	**1 /.../8 L**	**1b**	**C,T**	**1.002 DPT_b a**
k					k

5.5 Threshold comparator

5.4.3 F a

2x1bit --> 1x2bit 2 1bit 2bit Input bit1=1, bit0=0--> Output 2bit=2 k

Number	Name	Object Function	Description	Gr	Length	C	R	W	T	U	Data Type	Priori
109	1st Logic	Input 1bit-bit0			1 bit	C	-	W	-	U	boolean	Low
110	1st Logic	Input 1bit-bit1			1 bit	C	-	W	-	U	boolean	Low
111	1st Logic	Input 1bit-bit2			1 bit	C	-	W	-	U	boolean	Low
112	1st Logic	Input 1bit-bit3			1 bit	C	-	W	-	U	boolean	Low
113	1st Logic	Input 1bit-bit4			1 bit	C	-	W	-	U	boolean	Low
114	1st Logic	Input 1bit-bit5			1 bit	C	-	W	-	U	boolean	Low
115	1st Logic	Input 1bit-bit6			1 bit	C	-	W	-	U	boolean	Low
116	1st Logic	Input 1bit-bit7			1 bit	C	-	W	-	U	boolean	Low
117	1st Logic	Output 1byte			1 byte	C	-	-	T	-	counter pulses (0..255)	Low

8x1bit --> 1x1byte : 8 1bit 1byte Input bit2=1, bit1=1, bit0=1, 0--> Output 1byte=7 k

Number	Name	Object Function	Description	Gr	Length	C	R	W	T	U	Data Type	Priori
109	1st Logic	Input 1byte			1 byte	C	-	W	-	U	counter pulses (0..255)	Low
117	1st Logic	Output 2byte			2 bytes	C	-	-	T	-	pulses	Low

1x1byte --> 1x2byte 1byte 2byte Input 1byte=125--> Output 2byte=125,

k

Number	Name	Object Function	Description	Gr	Length	C	R	W	T	U	Data Type	Prio
109	1st Logic	Input 1byte-low			1 byte	C	-	W	-	U	counter pulses (0..255)	Low
110	1st Logic	Input 1byte-high			1 byte	C	-	W	-	U	counter pulses (0..255)	Low
117	1st Logic	Output 2byte			2 bytes	C	-	-	T	-	pulses	Low

2x1byte --> 1x2byte 2 1byte 2byte Input 1byte-low = 255 ($FF), Input 1byte-high = 100 ($64) --> Output 2byte = 25855 ($64 FF) k

Number	Name	Object Function	Description	Gr	Length	C	R	W	T	U	Data Type	Priority
109	1st Logic	Input 2byte-low			2 bytes	C	-	W	-	U	pulses	Low
110	1st Logic	Input 2byte-high			2 bytes	C	-	W	-	U	pulses	Low
111		Output 4byte			4 bytes	C	-	-	T	-	counter pulses (unsigned)	Low

2x2byte --> 1x4byte 2 2byte 4byte Input 2byte-low = 65530 ($FF FA), Input 2byte-high = 32768 ($80 00)--> Output 2byte = 2147549178 ($80 00 FF FA) k

Number	Name	Object Function	Description	Gr	Length	C	R	W	T	U	Data Type	Priority
109	1st Logic	Input 1byte			1 byte	C	-	W	-	U	counter pulses (0..255)	Low
110	1st Logic	Output 1bit-bit0			1 bit	C	-	-	T	-	boolean	Low
111	1st Logic	Output 1bit-bit1			1 bit	C	-	-	T	-	boolean	Low
112	1st Logic	Output 1bit-bit2			1 bit	C	-	-	T	-	boolean	Low
113	1st Logic	Output 1bit-bit3			1 bit	C	-	-	T	-	boolean	Low
114	1st Logic	Output 1bit-bit4			1 bit	C	-	-	T	-	boolean	Low
115	1st Logic	Output 1bit-bit5			1 bit	C	-	-	T	-	boolean	Low
116	1st Logic	Output 1bit-bit6			1 bit	C	-	-	T	-	boolean	Low
117	1st Logic	Output 1bit-bit7			1 bit	C	-	-	T	-	boolean	Low

1x1byte --> 8x1bit 1 1byte 8 1bit Input 1byte=200 --> Output bit0=0, bit1=0, bit2=0, bit3=1, bit4=0, bit5=0, bit6=1, bit7=1

Number	Name	Object Function	Description	Gr	Length	C	R	W	T	U	Data Type	Priority
109	1st Logic	Input 2byte			2 bytes	C	-	W	-	U	pulses	Low
116	1st Logic	Output 1byte-low			1 byte	C	-	-	T	-	counter pulses (0..255)	Low
117	1st Logic	Output 1byte-high			1 byte	C	-	-	T	-	counter pulses (0..255)	Low

1x2byte --> 2x1byte 1 2byte 2 1byte Input 2byte = 55500 ($D8 CC) --> Output 1byte-low = 204 ($CC), Output 1byte-high =216 ($D8)

Number	Name	Object Function	Description	Gr	Length	C	R	W	T	U	Data Type	Priority
109	1st Logic	Input 4byte			4 bytes	C	-	W	-	U	counter pulses (unsigned)	Low
116	1st Logic	Output 2byte-low			2 bytes	C	-	-	T	-	pulses	Low
117	1st Logic	Output 2byte-high			2 bytes	C	-	-	T	-	pulses	Low

1x4byte --> 2x2byte 1 4byte 2 2byte Input 4byte = 78009500 ($04 A6 54 9C) --> Output 2byte-low = 21660 ($54 9C), Output 2byte-high =1190 ($04 A6)

Number	Name	Object Function	Description	Gr	Length	C	R	W	T	U	Data Type	Priority
109	1st Logic	Input 3byte			3 bytes	C	-	W	-	U		Low
115	1st Logic	Output 1byte-low			1 byte	C	-	-	T	-	counter pulses (0..255)	Low
116	1st Logic	Output 1byte-middle			1 byte	C	-	-	T	-	counter pulses (0..255)	Low
117	1st Logic	Output 1byte-high			1 byte	C	-	-	T	-	counter pulses (0..255)	Low

1x3byte --> 3x1byte 1 3byte 3 1byte Input 3byte = $78 64 C8--> Output 1byte-low = 200 ($C8) , Output 1byte-middle = 100 ($64) , Output 1byte-high =120 ($78)

Number	Name	Object Function	Description	Gr	Length	C	R	W	T	U	Data Type	Priorit
109	1st Logic	Input 1byte-low			1 byte	C	-	W	-	U	counter pulses (0..255)	Low
110	1st Logic	Input 1byte-middle			1 byte	C	-	W	-	U	counter pulses (0..255)	
111	1st Logic	Input 1byte-high			1 byte	C	-	W	-	U	counter pulses (0..255)	Low
117	1st Logic	Output 3byte			3 bytes	C	-	-	T	-	RGB value 3x(0..255)	Low

3x1byte --> 1x3byte 3 1byte 1 3byte Input 1byte-low = 150 ($96), Input 1byte-middle = 100 ($64), Input 1byte-high = 50 ($32)--> Output 3byte = $32 64 96

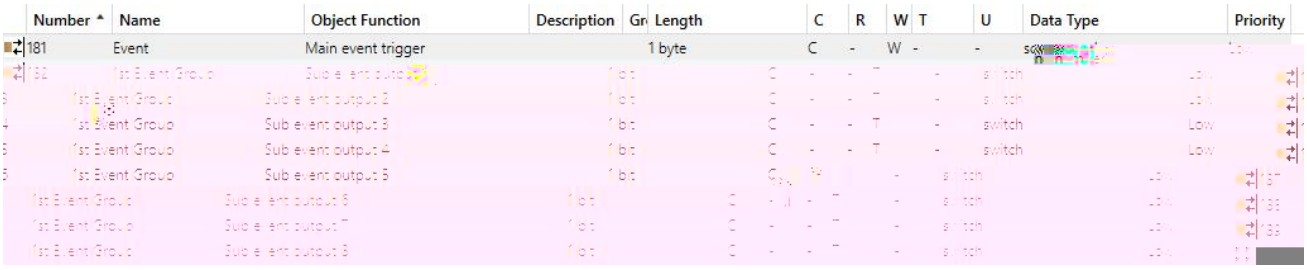
5.6 Format convert

					DPT
109	**I ...**	**1 /.../8 L**	**1b /1b /2b /3b /4b**	**C,W,U**	**1.002 DPT_b a / 5.010 DPT_ / 7.001 DPT_ / 232.600 RGB a 3 (0..255)/ 12.001 DPT_**
		k			
		1 /.../8			**2.001 DPT_S / 5.010 DPT_ /**

117	**O ...**	**L**	**2b /1b /2b /4b**	**C,T**	**7.001 DPT_ / 232.600 RGB a 3 (0..255)/ 12.001 DPT_**
		k			

5.6 Format convert

5.5



5.5

					DPT
181	**Ma**	**E**	**1b**	**C,W**	**17.001 DPT_ b**
				k	0..63
182/../ 189	**S b 1..8**	**1 /.../8 E G**	**1b /1b / 2b**	**C,T**	**1.001 DPT_S / 5.010 DPT_ / 7.001 DPT_ /**
				k	k

5.5