

1-way 16A Dimming Actuator

2-way 10A Dimming Actuator

4-way 5A Dimming Actuator

Manual-Ver2.1

MD011602

MD021002

MD040502

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1 Overview

This manual provides you with detailed technical information for the dimming actuator MD24 series, including installation and programming details, and explains how to use the dimming actuator MD24 series based on practical examples. To facilitate installation to the distribution box, the dimming actuator MD24 series are designed as a modular installation device that can be mounted on a 35 mm DIN rail.

The dimming actuator MD24 series are used to control the brightness value of the luminaire.

The system is installed with other loads through the EIB/ KNX bus.

Set up and operate the whole system using engineering design tool software ETS.

2 Product and function overview

The dimming actuator MD series is a modular installation device with 4-way 5A, 2-way 10A, and 1-way 20A outputs. Connect to the EIB / KNX system through the EIB bus terminals, and use the engineering design tool ETS software (version ETS4 or above) to assign physical addresses and set parameters.

The dimming actuator can control the voltage dimming of LED spotlights, downlights, halogen lamps, quartz lamps, etc., and the output dimming type is leading edge dimming.

The dimming actuator has manual control buttons, and LEDs indicate the dimming status of each circuit.

Function description:

Device name	Device type	Function description
4-way 5A dimming actuator	MD040502	(1) 4 independent circuits SCR dimming output; (2) With manual control dimming function; (3) With relative dimming function and absolute dimming function; (4) With status report feedback function; (5) With timing cycle function, can realize stair light control and cyclic flashing control; (6) With field save and restore function; (7) With scene combination control function; (8) Dimming lamps range: LED spotlight, downlight, halogen lamp, quartz lamp and other voltage dimming, output dimming type leading edge dimming;
2-way 10A dimming actuator	MD021002	(1) 2 independent circuits SCR dimming output; (2) With manual control dimming function; (3) With relative dimming function and absolute dimming function; (4) With status report feedback function; (5) With timing cycle function, can realize stair light control and cyclic flashing control; (6) With field save and restore function; (7) With scene combination control function; (8) Dimming lamps range: LED spotlight, downlight, halogen lamp, quartz lamp and other voltage dimming, output dimming type leading edge dimming;
1-way 16A dimming actuator	MD011602	(1) 1 independent circuit SCR dimming output; (2) With manual control dimming function; (3) With relative dimming function and absolute dimming function; (4) With status report feedback function;

		(5) With timing cycle function, can realize stair light control and cyclic flashing control; (6) With field save and restore function; (7) With scene combination control function; (8) Dimming lamps range: LED spotlight, downlight, halogen lamp, quartz lamp and other voltage dimming, output dimming type leading edge dimming;
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3 Detailed parameters

3.1 1-way 16A dimming actuator MD011602

Main output	1 independent circuits SCR dimming output
Main input	200~240V
Bus input	21-30VDC
Bus current	≤ 12mA
Frequency	50-60Hz
Power	≤ 3.6 W
Output (each circuit)	16 A (1 circuits total maximum power 3600W)
Operating temperature	- 5°C...+45°C
Storage temperature	-25°C...+ 55°C
Transport temperature	-25°C...+ 70°C
Relative humidity	max 90%
Shell material	Metal
Dimension (Lx W x H)	220mmX102mmX68mm
Weight (approx.)	1.4 KG
Installation method	DIN rail mounting

3.2 2-way 10A dimming actuator MD021002

Main output	2 independent circuits SCR dimming output
Main input	200~240V
Bus input	21-30VDC
Bus current	≤ 12mA
Frequency	50-60Hz
Power	≤ 2.7 W
Output (each circuit)	10 A (2 circuits total maximum power 3600W)
Shell material	PA66
Operating temperature	- 5°C...+45°C
Storage temperature	-25°C...+ 55°C
Transport temperature	-25°C...+ 70°C
Relative humidity	max 90%
Dimension (Lx W x H)	220mmX102mmX68mm
Weight (approx.)	1.4KG
Installation method	DIN rail mounting

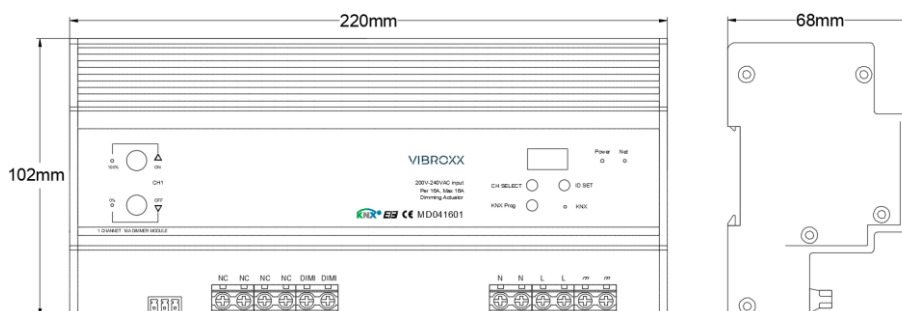
3.3 4-way 5A dimming actuator MD040502

Main output	4 independent circuit SCR dimming output
Main input	200~240V
Bus input	21-30VDC
Bus current	≤ 12mA
Frequency	50-60Hz
Power	≤ 2.5 W
Output (each circuit)	5A (4 circuit total maximum power 3600W)
Operating temperature	- 5°C...+45°C
Storage temperature	-25°C...+ 55°C
Transport temperature	-25°C...+ 70°C
Relative humidity	max 90%
Shell material	metal
Dimension (Lx W x H)	220mmX102mmX68mm
Weight (approx.)	1.4KG
Installation method	DIN rail mounting

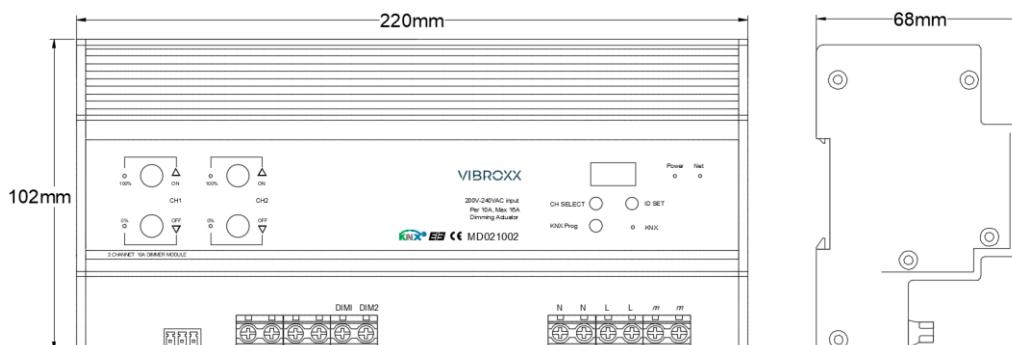
4 Dimensional drawing and wiring diagram

4.1-Dimensional drawing

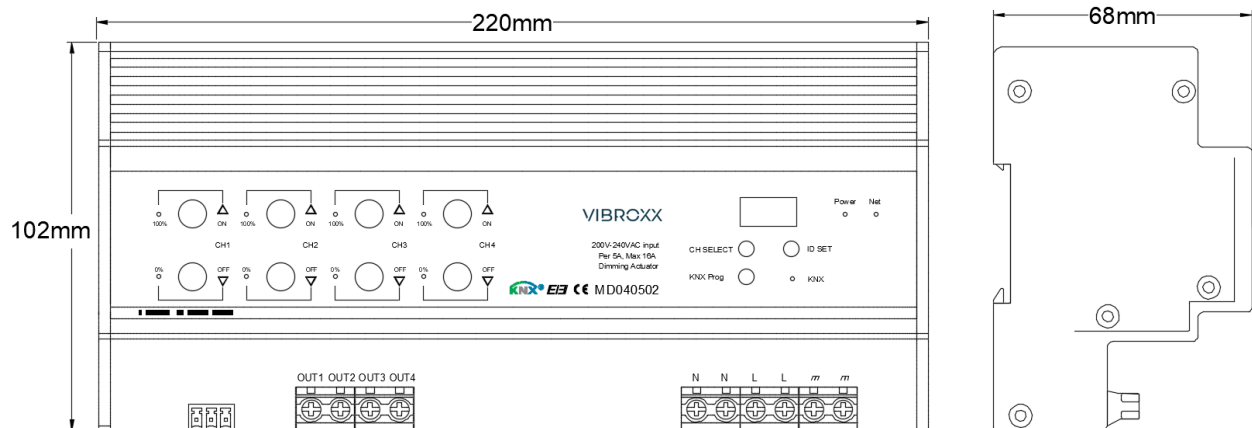
4.1.1 MD011602 Dimensional drawing



4.1.2 MD021002 Dimensional drawing

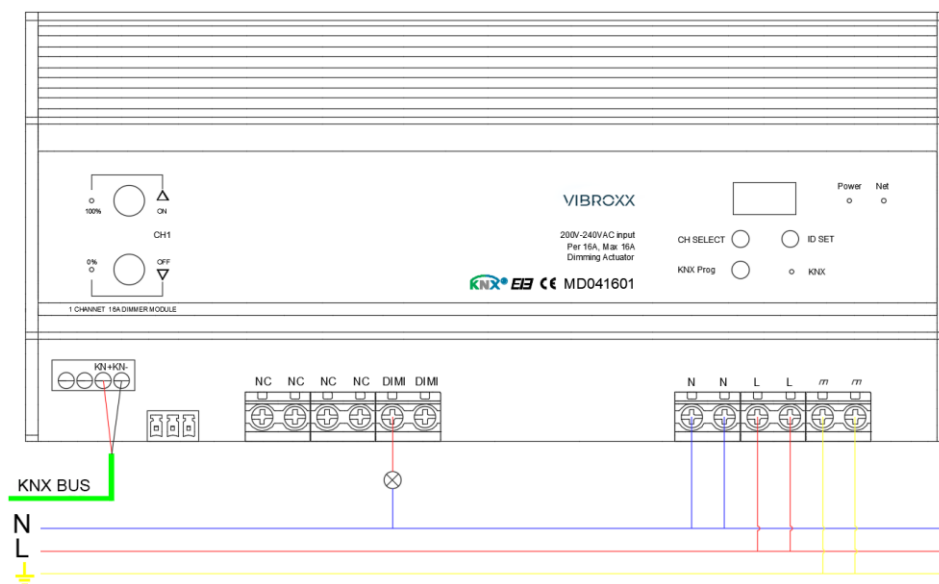


4.1.3 MD040502 Dimensional drawing

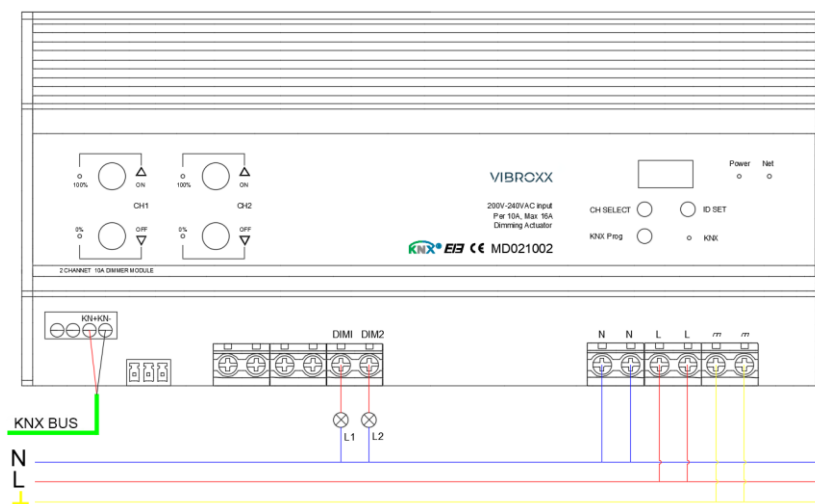


4.2 Wiring diagram

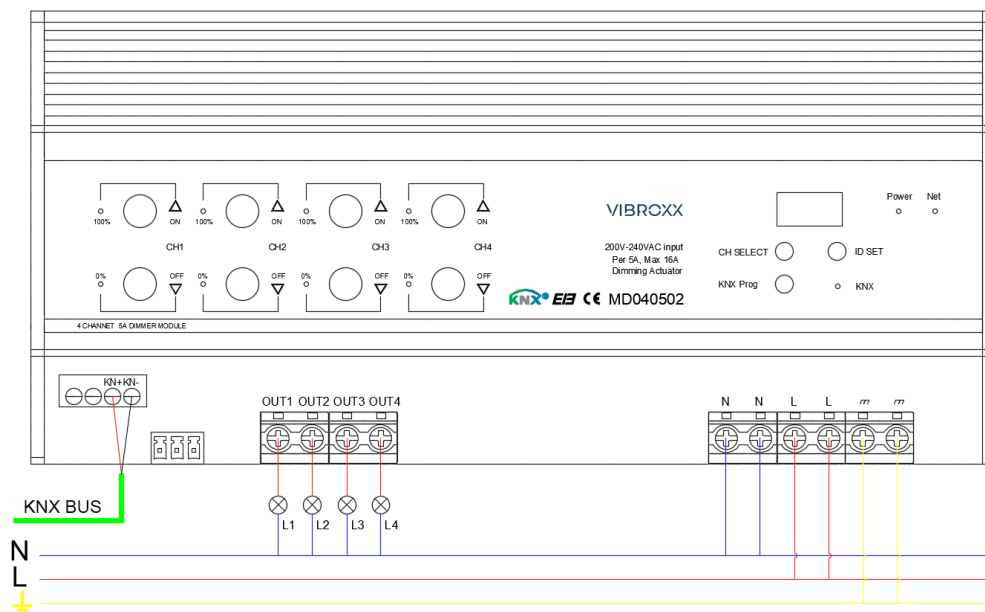
4.2.1 MD011602 Wiring diagram



4.2.2 MD021002 Wiring diagram

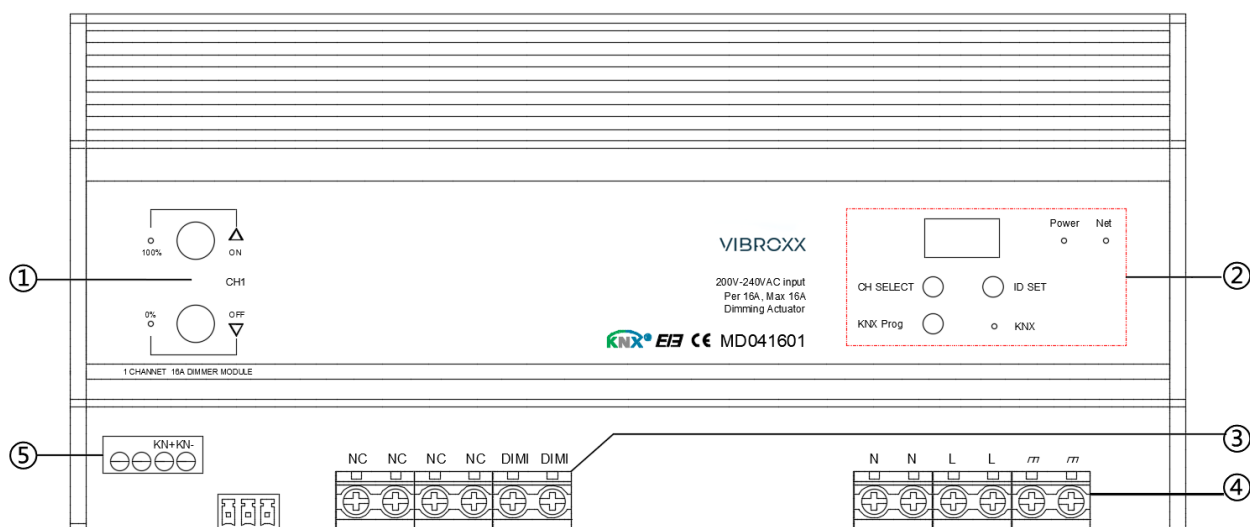


4.2.3 MD040502 Wiring diagram



5 Product operation instructions

5.1 MD011602 Product operation instructions



- Description: Each channel control button and status indicator light;
- (1) Long press the upper button, the brightness of the corresponding channel will increase (up to the set maximum brightness value), release it to stop; short press the upper row button, the brightness value will increase to the set maximum brightness value; long press the lower button, the corresponding Channel brightness decreases (minimum to 0%), release to stop;
- (2) Short press the upper button to reduce the brightness value to 0%. (The speed of the dimming change depends on the time set in the VD library).
- (3) When the brightness reaches 100% or 0%, the corresponding indicator lights up.
- Description: Set buttons and indicators;

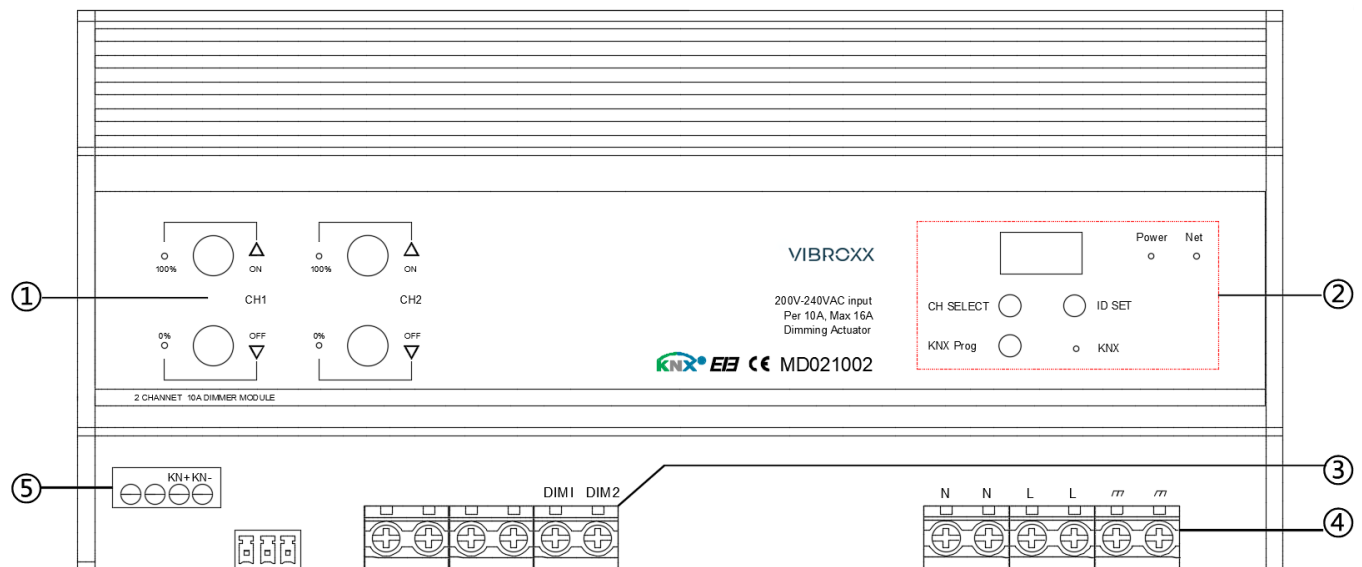
(1) CH SELECT indicates the channel selection, and the LED display will indicate the dimming percentage of the currently selected channel;

(2) KNX Prog means that it becomes a button, short press the button, the indicator light is on, and enters the programming state. When programming, the indicator light turns off automatically;

(3) POWER indicates the power status indicator.

- Description: Load output terminals, the aperture can be connected to $\varnothing 4$ wires;
- Description: 200~240VAC power supply wiring port, the aperture can be connected to $\varnothing 4$ wires;
- Description: KNX terminal block, KNX bus connection, the red line is connected to "+", and the black line is connected to "-";

5.2 MD021002 Product operation instructions



- Description: Each channel control button and status indicator light;

(1) Long press the upper row buttons, the brightness of the corresponding channel increases (up to the set maximum brightness value), release to stop; short press the upper row buttons to increase the brightness value to the set maximum brightness value; long press the lower row buttons, the brightness of the corresponding channel decreases (minimum to 0%), release to stop;

(2) Short press the lower buttons to decrease the brightness value to 0%. (The speed of dimming changes depends on the time set in the VD library).

(3) When the brightness reaches 100% or 0%, the corresponding indicator lights up.

- Setting buttons and indicators

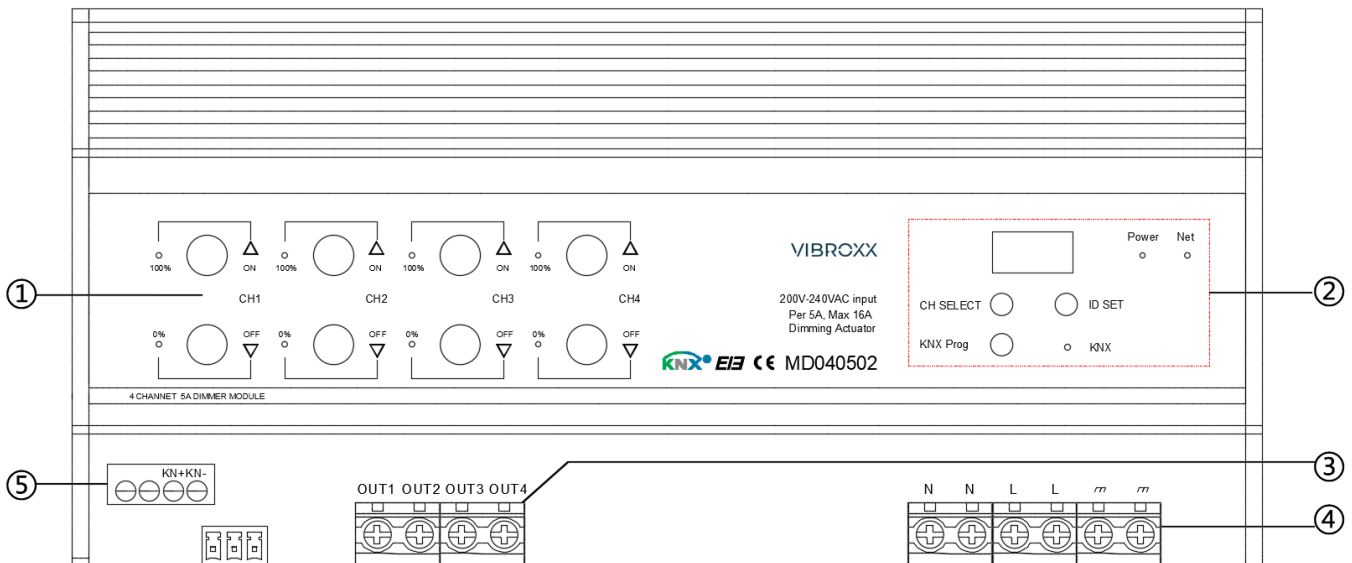
(1) CH SELECT :Indicates the channel selection, the LED display will indicate the dimming percentage of the currently selected channel;

(2)KNX SET: programming key , short press the button, the indicator light is on, enter the programming state, when programming, the indicator light turns off automatically;

(3) POWER: Power status indicator;

- Description: Load output terminals , aperture can be connected to $\varnothing 4$ wire;
- Description: 200 ~ 240VAC power connection port, aperture can be connected to $\varnothing 4$ wire;
- Description: KNX terminal block, KNX dedicated line access, red line access "+", black line access "-";

5.3 MD040502 Product operation instructions



- Description: Each channel control button and status indicator light;
 - (1) Long press the upper row buttons, the brightness of the corresponding channel increases (up to the set maximum brightness value), release to stop; short press the upper row buttons to increase the brightness value to the set maximum brightness value; long press the lower row buttons, the brightness of the corresponding channel decreases (minimum to 0%), release to stop;
 - (2) Short press the lower buttons to decrease the brightness value to 0%. (The speed of dimming changes depends on the time set in the VD library).
 - (3) When the brightness reaches 100% or 0%, the corresponding indicator lights up.
- Setting buttons and indicators
 - (1) CH SELECT: Indicates the channel selection, the LED display will indicate the dimming percentage of the currently selected channel;
 - (2) KNX Prog: programming key, short press the button, the indicator light is on, enter the programming state, when programming, the indicator light turns off automatically;
 - (3) POWER: Power status indicator;
- Description: Load output terminals, aperture can be connected to $\phi 4$ wire;
- Description: 200 ~ 240VAC power connection port, aperture can be connected to $\phi 4$ wire;
- Description: KNX terminal block, KNX dedicated line access, red line access "+", black line access "-";

6 Parameter setting and communication object description

6.1 Parameter setting instructions

6.1.1 Dimming function parameter setting

The following uses ETS5 as an example. Set parameters in ETS5. Note: In the following description, Channel X or X represents the output of the corresponding channel

1) Open the curtain actuator (MD Series) parameter setting interface in ETS5, as shown in Figure 6.1.1. The parameter "Channel X" indicates the output of the corresponding channel.

options: Disable, Enable

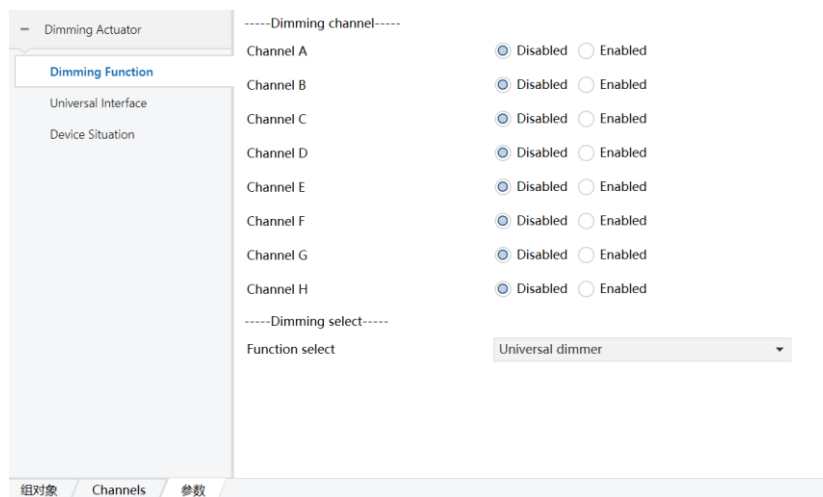


Figure 6.1.1

2) Select "Enable" for Channel X (8 channels for Channel A ~ Channel H, only need to open the required circuits, for example, 4 channels for dimming need to only enable Channel A ~ Channel D) After setting, the interface is shown in Figure 6.1.2, and 4 options in the red block as shown in figure.

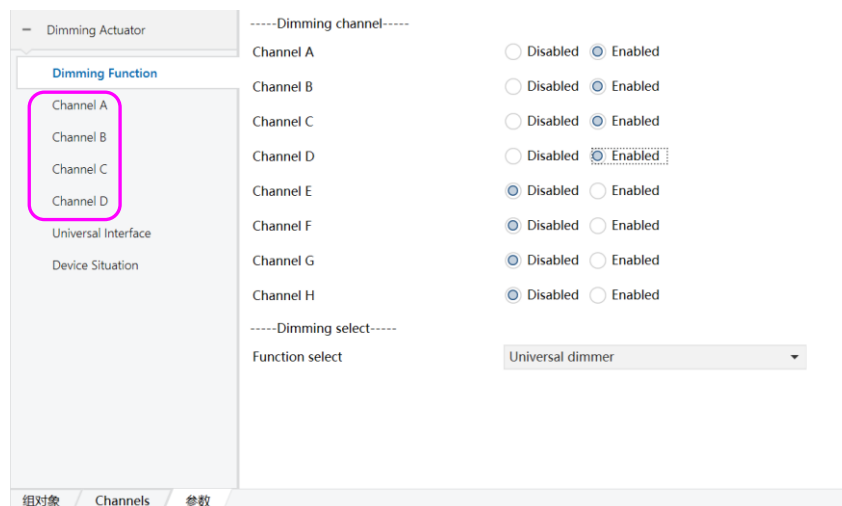


Figure 6.1.2

3) Click the options in the red block above to set the parameters of each circuit. Take Channel A as an example, as shown in figure 6.1.3

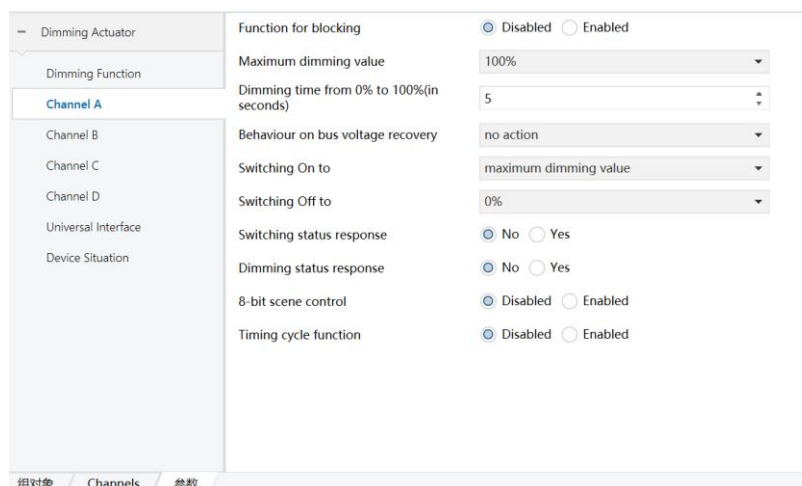


Figure 6.1.3

Parameter	Description
Function for blocking	Function for blocking, when "Enabled" is selected, parameter "Blocking value after voltage recovery" will appear, options: "unblocking" , "blocking" , "as before voltage failure" ; parameter "Blocking value", options: "blocking=1, unblocking=0" .
Maximum dimming value	Maximum dimming value, options: 0%, 1%, 2%.....100%;
Dimming time from 0% to 100% [in seconds]	Dimming time from 0% to 100%, can be filled in: 0, 1, 2, 3.....250;
Behavior on bus voltage recovery	Action of dimming actuator after voltage recovery, options: "no action" , "dimming up" , "dimming down" , "as before bus voltage failure" .
Switching On to	Indicates the dimming value when dimming is pressed, options: maximum dimming value, last dimming value, assigned dimming value; when assigned dimming value is selected, parameter Switching On value will appear, options: 1%, 2%, 3%.....100%
Switching Off to	Indicates the dimming value when dimming off is pressed, options: 1%, 2%, 3%.....100%
Switching status response	Switching status response, options: Yes, No. When Yes is selected, parameter transmission of switching status will appear, options: using read request only (Status response only when sending request) , on change in status (Status change immediately with status feedback), Always in operation (Feedback whenever control data is sent) .
Dimming status response	Dimming status response, options: Yes, No. When Yes is selected, parameter transmission of switching status will appear, options: using read request only (Status response only when sending request) , on change in status (Status change immediately with status feedback), Always in operation (Feedback whenever control data is sent) .
Behavior on bus voltage recovery	Represents bus voltage recovery status after power failure, options: Switch on, Switch off, As before voltage failure;
8-bit scene control	Scene control function, options: Enable, Disable, when "Enable" is selected, "scene" will appear in the corresponding channel on the left side of the interface. Click "scene" and the interface will be switched as shown in figure 6.1.4. In the interface "Delay time before operation[0-255s]" represents the time that the scene is delayed when the scene is called , can be filled in: 0, 1, 2, 3.....255 " ; Channel A assignment 1—8" represents the setting of the scene number, which can be set to 1-64, and " Output dimming Value " represents the channel brightness corresponding to the scene number, options: 0%, 1%.....100%(
Timing cycle function	Timing cycle function, options: Enable, Disable, when "Enable" is selected, " Timing cycle " will appear in the corresponding channel on the left side of the interface, click "Timing cycle" , and the interface will be switched as shown in figure 6.1.5. In the interface "Brightness value" represents the maximum brightness value in a cycle, options: 0%, 1%, 2%.....100%; "Fade time of brighter[0-255s]" represents the gradient time from minimum brightness to maximum brightness, can be filled in: 0, 1, 2.....255s; "Brighten duration[0-255min]" indicates the time after which the maximum brightness is reached, can be filled in: 0, 1, 2.....255min; "Brighten duration[0-59s], indicates the time after which the maximum brightness is reached, can be filled in: 0, 1, 2.....59s; "Darkness value" represents the minimum brightness value in a cycle, options: 0%, 1%.....100%; "Fade time of darker[0-255s]" represents the gradient time from maximum brightness to minimum brightness, can be filled in: 0, 1, 2.....255s; "Darken duration[0-255min]" indicates the time after which the minimum

brightness is reached, can be filled in: 0, 1, 2.....255min; "Darken duration[0-255s]" indicates the time after which the minimum brightness is reached, can be filled in: 0, 1, 2.....255s;
"Cycle number(0=unlimited) " Represents the number of cycles, can be filled in any value, where 0 means infinite loop.

The screenshot shows the 'Dimming Actuator' configuration window. On the left, a sidebar lists 'Dimming Function', 'Channel A', 'A:scene', 'Channel B', 'Channel C', 'Channel D', 'Universal Interface', and 'Device Situation'. The 'A:scene' option is selected. The main area displays seven scene assignments, each with a label 'A: Scene assignment X [1--64]' and a corresponding 'Output dimming value' dropdown menu, all currently set to '0%'.

Figure 6.1.4

The screenshot shows the 'Dimming Actuator' configuration window with the 'A:Timing cycle' option selected in the sidebar. The main area displays parameters for the timing cycle: 'Brightness value' (100%), 'Fade time of brighter(in seconds)' (5), 'Brighten duration(in minutes)' (0), 'Brighten duration(in seconds)' (30), 'Darkness value' (0%), 'Fade time of darker(in seconds)' (5), 'Darken duration(in minutes)' (0), 'Darken duration(in seconds)' (0), and 'Cycle number(0=unlimited)' (1).

Figure 6.1.5

4) Parameter "function select" represents function select for dimming, options: "Universal dimmer", "0-10V dimmer", "1-10V dimmer" .

6.1.2 Parameter setting of dry contact interface

1) Click "Universal Interface" as shown in Figure 6.1.6, Universal Interface A-D is set to enable, four dry contact interfaces will be enabled.

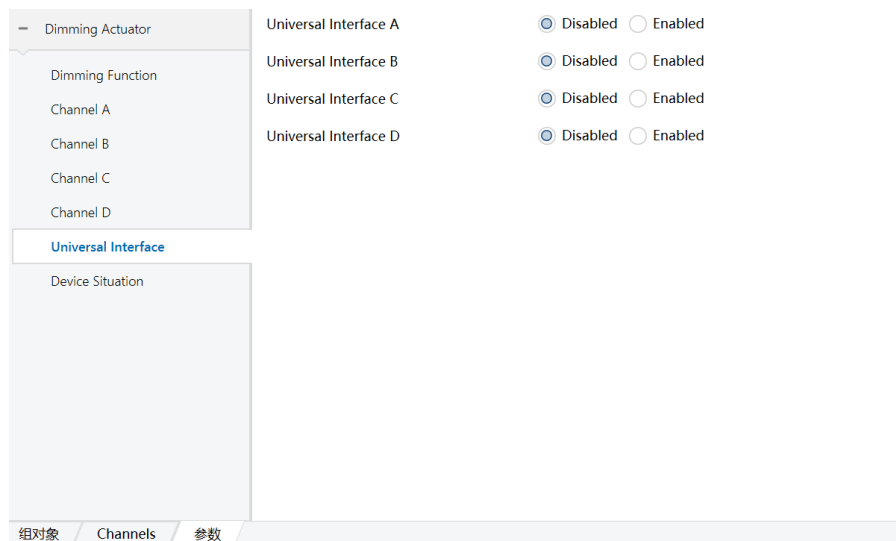


Figure 6.1.6

2) After the setting is completed, there will be Interface A-D four dry contact interfaces on the right. Click each dry contact interface to set its parameters. The following uses Universal Interface A as an example, as shown in Figure 6.1.7.

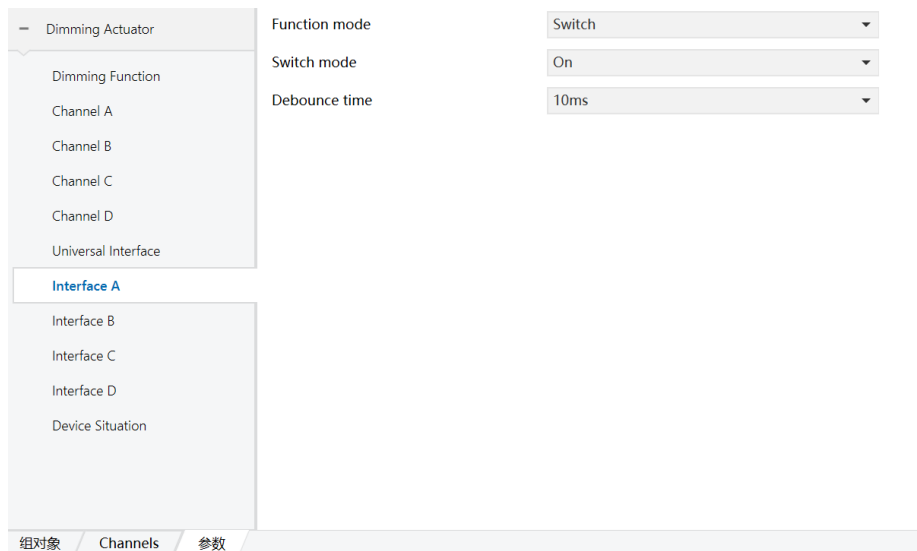


Figure 6.1.7

3) Parameter "function mode" is divided into 6 modes: Switch, Blind, Blind Position, Dimming, Dimming Position, Scene.

(1) Switch mode

Parameter	Description
Switch mode	Represents the action of the corresponding circuit control when the dry contact is triggered, options: on, off, toggle, user define; when user define is selected, The following parameters appear: (1) Reaction on closing the contact, options: on, off, no reaction; (2) Reaction on opening the contact, options: on, off, no reaction; (3) cyclic transmission of

	object, options: no, if "switch" =ON (relay on) , if "switch" =OFF (relay off) , always. When if "switch" =ON、 if "switch" =OFF or always are selected , parameters will appear: transmission cycle time: base and Time factor[1-255] (Here the two parameters indicate the time interval between cyclic transmissions, transmission cycle time = base value × Time factor[1-255] value) .
debounce time	Debounce time, options: 10ms, 20ms.....100ms

(2) Blind mode

Parameter	Description
Blind mode	Curtain action controlled by corresponding circuit when dry contact is triggered , options: up, down, toggle;
Long operation	Long press operation, options: yes, no. When yes is selected, parameter "Long operation after" will be added, options: 0.5s、 1s、 2s.....7s; The interval of data(base:0.1s) represents the interval at which each piece of data is sent during a long press, can be filled in: 1, 2, 3 ... 255;
debounce time	Debounce time, options: 10ms, 20ms.....100ms

(3) Blind Position mode

Parameter	Description
Blind value (Range:0-255)0-100%	Represents the percentage of the position of the corresponding circuit control curtain when the dry contact is triggered. It can be filled in: 0-255;
debounce time	Debounce time, options: 10ms, 20ms.....100ms

(4) dimming mode

Parameter	Description
Dimming mode	Represents the dimming action controlled by the corresponding circuit when the dry contact is triggered , options: Dimming up, dimming down, toggle;
Long operation after:	Represents a corresponding action after a long press , options: 0.5s, 1s, 2s.....7s
Transmission mode for long operation	Data transmission mode when long press , options: One-time transmission, cyclic transmission.
Step dimming	Represents the amplitude of dimming, options: 100%、 50%、 25%、 12%、 6%、 3%、 1%
Send stop instruction when releasing	Command to stop when long press is released, options: No, Yes

debounce time	Debounce time, options: 10ms, 20ms.....100ms
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(5) Dimming position mode

Parameter	Description
Dimming value (Range:0-255)0-100%	It indicates the brightness percentage of the corresponding circuit control dimming when the dry contact is triggered. It can be filled in: 0-255;
debounce time	Debounce time, options: 10ms, 20ms.....100ms

(6) Scene mode

Parameter	Description
Scene number	Represents the scene number called when the dry contact is triggered. It can be filled in: 1-64;
debounce time	Debounce time, options: 10ms, 20ms.....100ms

6.1.3 Device Situation

1) Click "Device Situation", parameter in Figure 6.3.1 will show:

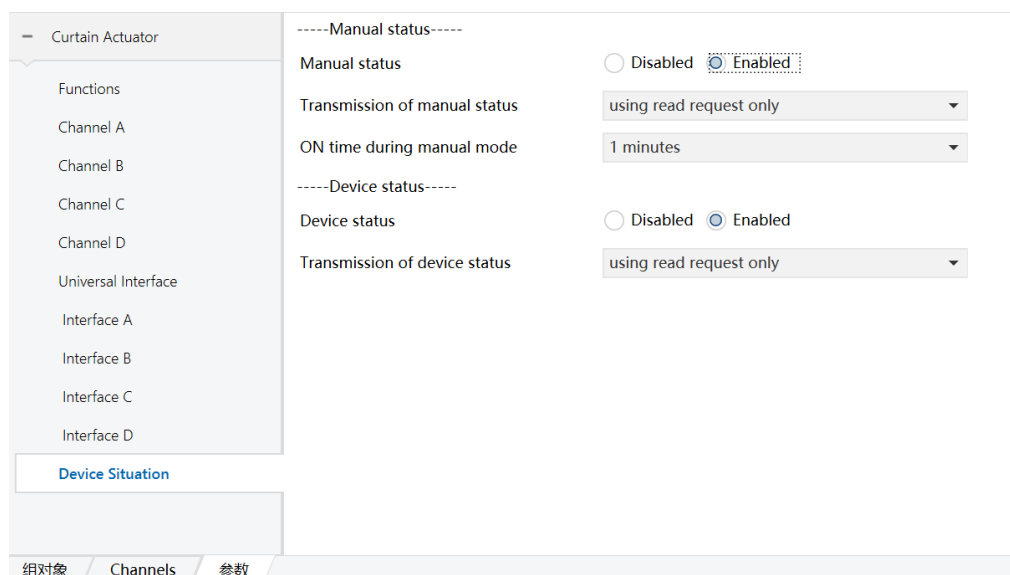


Figure 6.3.1

(1) Manual status indicates manual status. The following parameters appear when "enabled" is selected.

Parameter	Description
Transmission of manual status	Transmission of manual status, options: "using read request only" (Status response only when sending request), "on change in status" (Status change immediately with status feedback), "transmission in cycles"; when "transmission in cycles" is selected, parameter "the time in cycles" (Interval time), will appear, options: 1second, 2seconds.....

	120minutes.
ON time during manual mode	ON time during manual mode, options: "1 minute" , "2minutes "..... "120 minutes" , "unlimited" .

(2) Device status the following parameters appear when "enabled" is selected.

Parameter	Description
Transmission of manual status	Transmission of manual status, options: "using read request only" (Status response only when sending request) , "on change in status" (Status change immediately with status feedback)、"transmission in cycles"; when "transmission in cycles" is selected, parameter "the time in cycles" (Interval time), will appear, options: 1second, 2seconds..... 120minutes.

6.2 Communication object description

The communication object is the medium for the device to communicate with other devices on the bus, that is, only the communication object can perform bus communication. The role of each communication object is described in detail below.

The dimming actuator has a total of 97 objects, as shown in Figure 6.2.1, and the specific functions are shown in Table 1.1.

Note: in the column of table properties, "C" represents the communication function enable of the communication object, "W" represents the value of the communication object can be rewritten through the bus, "R" represents the value of the communication object can be read through the bus, "T" represents the communication object has the transmission function, and "U" represents the value of the communication object can be updated.

序号 ^	名称	对象功能	描述	群组地址	长度	C	R	W	T	U	数据类型	优先级
0	Channel A, Block	Block / Unblock			1 bit	C	R	W	T	U	switch	低
2	Channel A, Switching	On / Off			1 bit	C	R	W	T	U	switch	低
3	Channel A, Dimming	Brighter / Darker			4 bit	C	R	W	T	U	dimming c...	低
4	Channel A, Dimming value	8-bit Value			1 byte	C	R	W	T	U	percentag...	低
10	Channel B, Switching	On / Off			1 bit	C	R	W	T	U	switch	低
11	Channel B, Dimming	Brighter / Darker			4 bit	C	R	W	T	U	dimming c...	低
12	Channel B, Dimming value	8-bit Value			1 byte	C	R	W	T	U	percentag...	低
18	Channel C, Switching	On / Off			1 bit	C	R	W	T	U	switch	低
19	Channel C, Dimming	Brighter / Darker			4 bit	C	R	W	T	U	dimming c...	低
20	Channel C, Dimming value	8-bit Value			1 byte	C	R	W	T	U	percentag...	低
26	Channel D, Switching	On / Off			1 bit	C	R	W	T	U	switch	低
27	Channel D, Dimming	Brighter / Darker			4 bit	C	R	W	T	U	dimming c...	低
28	Channel D, Dimming value	8-bit Value			1 byte	C	R	W	T	U	percentag...	低
64	Switch, Interface A	On / Off			1 bit	C	R	W	T	U	switch	低
72	Switch, Interface B	On / Off			1 bit	C	R	W	T	U	switch	低
80	Switch, Interface C	On / Off			1 bit	C	R	W	T	U	switch	低
88	Switch, Interface D	On / Off			1 bit	C	R	W	T	U	switch	低
96	Manual status	On / Off			1 bit	C	R	W	T	U	switch	低
97	Device status	On / Off			1 bit	C	R	-	T	U	switch	低

Figure 6.2.1

Number	Name	Communication object function	Data type	Attribute
0,8,16,24,32,40,48,56	Channel A, Block	Block / Unblock	1bit	C,R,W,T,U
This communication object is used to enable and contact the blocking function. When the value "01" is sent, the				

blocking function is enabled. This circuit cannot send any value to the bus control device. When the value "00" is sent, the blocking function is released, and the dimming actuator receives and sends normally. data.

1,9,17,25,33,41,49,57	Channel X, Scene	8-bit Value	1 Byte	C,R,W,T
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This communication object is enabled when the parameter "8-bit scene control " of "Channel X" selects "Enable". This communication object can send a 1-byte command to call the setting operation of corresponding scene number. The parameter setting options are 1 ~ 64. In fact, the scene message received by the communication object Scene, Channel X is 0 ~ 63. If the parameter is set to scene 1, the communication object Scene, Channel X receives the scene is 0

2,10,18,24,32,40,48,56	Channel X,Switching	On/Off	1 bit	C,R,W,T
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The communication object is enabled when the parameter " Channel X " selects "Enable", the communication object receives 1, turn on the relay and adjust the dimming to the set maximum value; when the communication object receives the value "0", close the relay after the dimming output reaches the minimum

3,11,19,27,35,43,51,59	Channel X, Dimming	Brighter/Darker	4 bit	C,R,W,T
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The communication object is enabled when the parameter " Channel X " selects "Enable", this object is used to receive the relative dimming value of the corresponding output channel. Dimming commands include Brighter, Darker, and Stop.

4,12,20,28,36,44,52,60	Channel X, Dimming Value	8-bit Value	1 Byte	C,R,W,T
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The communication object is enabled when the parameter " Channel X " selects "Enable", this object is used to receive the absolute dimming value of the corresponding output channel.

5,13,21,29,37,45,53,61	Channel X, Timing cycle	On/Off	1 bit	C,R,W,T
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The communication object is enabled when the parameter "Timing cycle function" in " Channel X " selects "Enable", when the communication object receives the value "1", the cyclic dimming function is executed; when the communication object receives the value "0", the cyclic dimming function stops.

6,14,22,30,38,46,54,62	Channel X, Status switching	On/Off	1bit	C,R,T
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The communication object is enabled when the parameter "Switching status response" in " Channel X " selects "Yes", the value of this communication object can directly indicate the dimmer switch status of the corresponding channel.

7,15,23,31,39,47,55,63	Channel X, Status dimming value	0-100%	1 Byte	C,R,T
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The communication object is enabled when the parameter "Dimming status response" in " Channel X " selects "Yes", the value of this communication object can directly indicate the dimming percentage of the corresponding channel.

64,72,80,88	Switch,Interface X	On/Off	1 bit	C,R,W,T
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This communication object is enabled when "Function mode" in "Interface X" selects "Switch". When the dry contact is triggered, the channel sends corresponding ON or OFF instructions according to the corresponding mode.

65,73,81,89	Blind,Interface X	Up/Down	1 bit	C,R,W,T
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This communication object is enabled when "Function mode" in "Interface X" selects "Blind", when the dry contact is triggered, the channel sends the corresponding up or down instruction according to the corresponding mode.

66,74,82,90	Blind,long,Interface X	Up/Down	1 bit	C,R,W,T
This communication object is enabled when "long operation" in "Blind" of "Interface X" selects "yes", when the dry contact is triggered by long press, the channel sends the corresponding up or down instruction according to the corresponding mode.				
67,75,83,91	Blind value,Interface X	8-bit value	1 Byte	C,R,W,T
This communication object is enabled when "Function mode" in "Interface X" selects "Blind position", when the dry contact is triggered, the channel sends the corresponding curtain height percentage instruction according to the corresponding mode.				
68,76,84,92	Dimming switch,Interface X	On/Off	1 bit	C,R,W,T
This communication object is enabled when "Function mode" in "Interface X" selects "Dimming", when the dry contact is triggered by a short press, the channel sends the corresponding dimming on/off instruction according to the corresponding mode.				
69,77,85,93	Dimming level,Interface X	Brighter/Darker	4 bit	C,R,W,T
This communication object is enabled when "Function mode" in "Interface X" selects "Dimming", when the dry contact is triggered by a long press, the channel sends corresponding series of relative dimming instructions according to the corresponding mode				
70,78,86,94	Dimming value,Interface X	8-bit value	1 Byte	C,R,W,T
This communication object is enabled when "Function mode" in "Interface X" selects "Dimming position", when the dry contact is triggered, the channel sends absolute dimming instructions according to the setting percentage.				
71,79,87,95	Scene,Interface X	8-bit value	1 Byte	C,R,W,T
This communication object is enabled when "Function mode" in "Interface X" selects "Scene", when the dry contact is triggered, the channel sends corresponding scene control instructions according to the corresponding mode.				
96	Manual status	On/Off	1 bit	C,R, T
The communication object is enabled when the parameter " Manual status " selects "Enable", this communication object is used to indicate the switch of manual mode (Manual mode=on) and bus mode (Manual mode=off) . When switching to manual mode (press the bus on the switch actuator and the manual control switch button, the "Manual" indicator lights up), you can control the on / off of each circuit on the corresponding button on the module.				
97	Device status	On/Off	1 bit	C,R, T
This communication object is enabled when the parameter "Device status" is selected to be "enabled". This communication object is used to detect the current condition of the device. When the value "01" is sent through this object, it indicates that the 220V power supply is normal. When the value "00" is sent, it indicates that the 220V power				

supply is abnormal.

7 Safe use and maintenance

- (1) Read all instructions carefully before use.
- (2) Create a good ventilation environment.
- (3) During use, pay attention to moisture, shock and dust.
- (4) Strictly forbid to rain, contact with other liquids or corrosive gases.
- (5) If it is wet or attacked by liquid, it should be dried in time.
- (6) When the machine fails, please contact professional maintenance personnel or our company.

8 Contact

Contact: Vibroxx