

Mosfet Dimming Actuator

Take M/D02.1 as example

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Part 01

Introduction

1.1.23 2CH 3A Dimmer M/D02.1 > General

General	System delay operation after recovery (2..255s)	2
Channel A	Cycle send general telegram(1..65535s,0-invalid)	0
A>dimming config	The load type is	<input type="radio"/> Leading edge dimming <input checked="" type="radio"/> Trailing edge dimming
Channel B	Enable sequence 1	<input checked="" type="radio"/> Disable <input type="radio"/> Enable
B>dimming config	Enable sequence 2	<input checked="" type="radio"/> Disable <input type="radio"/> Enable

The MOSFET dimmer supports two dimming modes, select the correct one according to the load type.

Leading edge dimming: suitable for resistive or inductive load type, such as incandescent, halogen, motor, etc

Trailing edge dimming: suitable for resistive or capacitive load type, such as incandescent, LED etc

1.1.23 2CH 3A Dimmer M/D02.1 > Channel A

General	The response of channel state(1bit)	1bit only changed
Channel A	The response of channel state(1byte)	1byte only changed
A>dimming config	Statistics total ON time to allow (0..65535h=7.4years)	<input checked="" type="radio"/> Disable <input type="radio"/> Enable
Channel B	The status after bus voltage recovery	OFF
B>dimming config	Over temperature protection	Invalid
	Read temperature(Degrees Celsius)	<input checked="" type="radio"/> Disable <input type="radio"/> Enable

1bit:

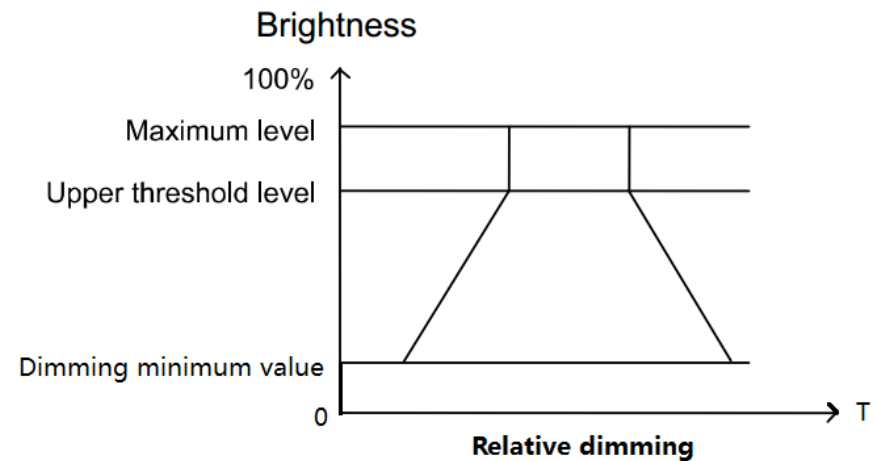
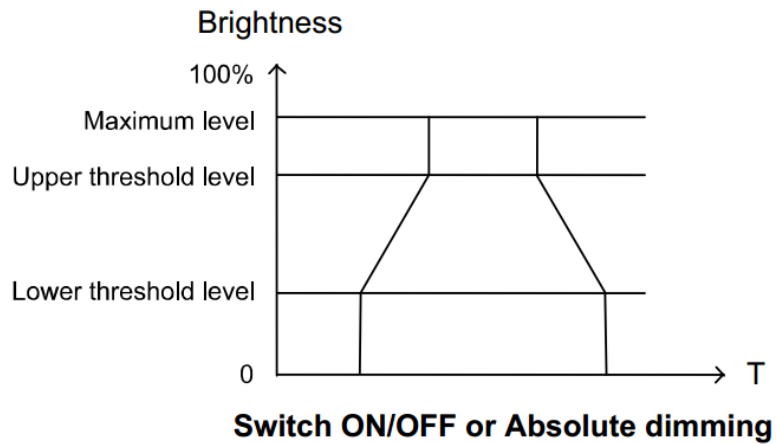
normally use this object to feedback the channel state to the button, so the button indicator can show the correct state of it. if the channel brightness>0, send out command '1'; if the brightness=0, send out command '0'.

1 byte:

normally use this object to feedback the channel specific brightness to the app, then the app can show the percentage value of its brightness.

1.1.23 2CH 3A Dimmer M/D02.1 > Channel A

General	The response of channel state(1bit)	1bit only changed
Channel A	The response of channel state(1byte)	1byte only changed
A>dimming config	Statistics total ON time to allow (0..65535h=7.4years)	<input checked="" type="radio"/> Disable <input type="radio"/> Enable
Channel B	The status after bus voltage recovery	OFF
B>dimming config	Over temperature protection	Invalid
	Read temperature(Degrees Celsius)	<input checked="" type="radio"/> Disable <input type="radio"/> Enable
	Maximum level	100%(255)
	Upper threshold level	100%(255)
	Lower threshold level	0%(0)
	Dimming minimum level	0%(0)
	Show the function page ==>>	<input checked="" type="radio"/> Disable <input type="radio"/> Enable



1.1.23 2CH 3A Dimmer M/D02.1 > A>dimming config

General	Switching ON fade time(0..255s)	3
Channel A	Switching OFF fade time(0..255s)	3
A>dimming config	Enable relative dimming	<input checked="" type="radio"/> Disable <input type="radio"/> Enable
Channel B	Enable absolute dimming	<input checked="" type="radio"/> Disable <input type="radio"/> Enable
B>dimming config		

ON/OFF fade time: For example, you set 3 seconds and turn it on by pressing a user panel, the load will turn on slowly and reach the max brightness 3 seconds later.

1.1.23 2CH 3A Dimmer M/D02.1 > A>dimming config

General	Switching ON fade time(0..255s)	3
Channel A	Switching OFF fade time(0..255s)	3
A>dimming config	Enable relative dimming	<input type="radio"/> Disable <input checked="" type="radio"/> Enable
Channel B	-Relative(4bits) dimming fade time (brightness0%..100%/2..255s)	5
B>dimming config	-Relative dimming is saved as the brightness of the switch	<input checked="" type="radio"/> NO <input type="radio"/> YES
	Enable absolute dimming	<input type="radio"/> Disable <input checked="" type="radio"/> Enable
	-Absolute(1byte) dimming fade time (brightness0%..100%/0..255s)	5
	-Absolute dimming is saved as the brightness of the switch	<input checked="" type="radio"/> NO <input type="radio"/> YES

Relative dimming:

long pressing the button to dim up/down, adjust the brightness visually.

Absolute dimming:

The channel will output a certain brightness when receives a percentage telegram

1.1.23 2CH 3A Dimmer M/D02.1 > A:scene		
General	Fade time of scene dimming(2..255s)	5
Channel A	Total 10 scenes,configuration as following:	
A>dimming config	>>Output assigned to(scene 1..64)	Scene NO.10
A:function	Output brightness value	0%(0)
	Fade time for brighter/darker(0..255s)	3
A:scene	>>Output assigned to(scene 1..64)	Not allocate

Scene: the combination of several channels' status (on/off or different brightness levels.)

This dimmer supports 64 scenes totally, and each channel can be applied to 10 scenes at most

Assign current channel to some scenes and set the brightness for different scenes in scene page.

1.1.23 2CH 3A Dimmer M/D02.1 > General

General	System delay operation after recovery (2..255s)	2
G:sequence 1	Cycle send general telegram(1..65535s,0-invalid)	0
Channel A	The load type is	<input type="radio"/> Leading edge dimming <input checked="" type="radio"/> Trailing edge dimming
A>dimming config	Enable sequence 1	<input type="radio"/> Disable <input checked="" type="radio"/> Enable
A:function	Enable sequence 2	<input checked="" type="radio"/> Disable <input type="radio"/> Enable
A:scene	Enable sequence 3	<input checked="" type="radio"/> Disable <input type="radio"/> Enable
Channel B	Enable sequence 4	<input checked="" type="radio"/> Disable <input type="radio"/> Enable
B>dimming config	Enable sequence 5	<input checked="" type="radio"/> Disable <input type="radio"/> Enable

Sequence: the combination of difference scenes with playing parameters.

one sequence can have up to 24 steps, one step can call one scene, set the step running time, when this time elapses, will turn to next step.



Part 2

Commission

If we want to use DLP panel's Rocker C to control dimmer's channel A to realize this functions:

- a. short press left button to turn on it.
- b. short press right button to turn off it.
- c. long press left button to dim up.
- d. long press right button to dim down.

Here are the steps:

1. Select the status feedback type of Channel A.

1.1.23 2CH 3A Dimmer M/D02.1 > Channel A

General	The response of channel state(1bit)	1bit only changed
G:sequence 1	The response of channel state(1byte)	1byte only changed
Channel A	Statistics total ON time to allow (0..65535h=7.4years)	<input checked="" type="radio"/> Disable <input type="radio"/> Enable
A>dimming config	The status after bus voltage recovery	OFF
A:function	Over temperature protection	Invalid
A:scene	Read temperature(Degrees Celsius)	<input checked="" type="radio"/> Disable <input type="radio"/> Enable
Channel B	Maximum level	100%(255)
B>dimming config	Upper threshold level	100%(255)
	Lower threshold level	0%(0)
	Dimming minimum level	0%(0)
	Show the function page ==>>	<input type="radio"/> Disable <input checked="" type="radio"/> Enable

2.Enable relative dimming

1.1.23 2CH 3A Dimmer M/D02.1 > A>dimming config

General	Switching ON fade time(0..255s)	3
G:sequence 1	Switching OFF fade time(0..255s)	3
Channel A	Enable relative dimming	<input type="radio"/> Disable <input checked="" type="radio"/> Enable
A>dimming config	-Relative(4bits) dimming fade time (brightness0%..100%/2..255s)	5
A:function	-Relative dimming is saved as the brightness of the switch	<input checked="" type="radio"/> NO <input type="radio"/> YES
A:scene	Enable absolute dimming	<input type="radio"/> Disable <input checked="" type="radio"/> Enable
Channel B	-Absolute(1byte) dimming fade time (brightness0%..100%/0..255s)	5
B>dimming config	-Absolute dimming is saved as the brightness of the switch	<input checked="" type="radio"/> NO <input type="radio"/> YES

3. Create group address for Channel Output, Relative Dimming ,Response State.

0	General	Send cycles				1 bit	C	R	-	T	-
10	Output A	Channel output	Living Room Spotlight	1/0/5		1 bit	C	-	W	-	U
11	Output A	Relative dimming(4bit)	Living Room Spotlight Relative Dimming	1/0/6		4 bit	C	-	W	-	U
13	Output A	Response state(1bit)	Living Room Spotlight on/off Feedback	2/0/5		1 bit	C	R	-	T	-
14	Output A	Response state(1byte)	Living Room Spotlight Dimming Feedback	2/0/7		1 byte	C	R	-	T	-

4. Select Independent button mode

1.1.6 DLP Panel M/DLP04.1 > Rocker C

General1	Rocker C work mode	<input checked="" type="radio"/> Independent button mode <input type="radio"/> Combined button mode
General2	=====	=====

5. Select the button operation mode and reaction on each button.

1.1.6 DLP Panel M/DLP04.1 > Rocker C

General1	Rocker C work mode	<input checked="" type="radio"/> Independent button mode <input type="radio"/> Combined button mode
General2	=====	=====
Functions	Rocker C : left button operation mode	Dimming controller
Rocker A	-> Reaction on left short button	ON
Rocker B	-> Reaction on left long button	Dim->Brighter
Rocker C	--Delay for switch ON of left short button(0..255s)	0
Rocker D	--Delay for switch OFF of left short button(0..255s)	0
	Dimming steps	Step1 (100%)
	Long button time after	1s
	-----	-----
	LED status source	Local
	--LED status	ON/OFF status
	=====	=====
	Rocker C : right button operation mode	Dimming controller
	-> Reaction on right short button	OFF
	-> Reaction on right long button	Dim->Darker
	--Delay for switch ON of right short button(0..255s)	0

6.Link the group address with the button.

↔ 60	Rocker C left short	Switching	Livingroom Spotlight	1/0/5	1 bit	C - W T U
↔ 61	Rocker C left long	Dimming	Livingroom Spotlight Relative Dimming	1/0/6	4 bit	C - W T U
↔ 65	Rocker C right short	Switching	Livingroom Spotlight	1/0/5	1 bit	C - W T U
↔ 66	Rocker C right long	Dimming	Livingroom Spotlight Relative Dimming	1/0/6	4 bit	C - W T U

7.Download data for both panel and dimmer.

Use the DLP panel's rocker D to control the dimmer Channel B and realize these functions:

a.short press left button to dim to 50%

b.short press right button to dim to 100%

Here are the status:

1.Select the status feedback type of Channel B.

1.1.23 2CH 3A Dimmer M/D02.1 > Channel B	
General	The response of channel state(1bit) <input type="text" value="1bit only changed"/>
Channel A	The response of channel state(1byte) <input type="text" value="1byte only changed"/>
A>dimming config	Statistics total ON time to allow (0..65535h=7.4years) <input checked="" type="radio"/> Disable <input type="radio"/> Enable
A:function	The status after bus voltage recovery <input type="text" value="OFF"/>
A:scene	Over temperature protection <input type="text" value="Invalid"/>
Channel B	Read temperature(Degrees Celsius) <input checked="" type="radio"/> Disable <input type="radio"/> Enable
	Maximum level <input type="text" value="100%(255)"/>

2.Enable Absolute Dimming

1.1.23 2CH 3A Dimmer M/D02.1 > B>dimming config

General	Switching ON fade time(0..255s)	<input type="text" value="3"/>
Channel A	Switching OFF fade time(0..255s)	<input type="text" value="3"/>
A>dimming config	Enable relative dimming	<input type="radio"/> Disable <input checked="" type="radio"/> Enable
A:function	-Relative(4bits) dimming fade time (brightness0%..100%/2..255s)	<input type="text" value="5"/>
A:scene	-Relative dimming is saved as the brightness of the switch	<input checked="" type="radio"/> NO <input type="radio"/> YES
Channel B	Enable absolute dimming	<input type="radio"/> Disable <input checked="" type="radio"/> Enable
	-Absolute(1byte) dimming fade time (brightness0%..100%/0..255s)	<input type="text" value="5"/>
	-Absolute dimming is saved as the brightness of the switch	<input checked="" type="radio"/> NO <input type="radio"/> YES

[B>dimming config](#)

3. Create group address for Absolute dimming.

30	Output B	Channel output	Bedroom Spotlight	1/0/8	1 bit	C - W - U
31	Output B	Relative dimming(4bit)	Bedroom Spotlight Relative Dimming	1/0/9	4 bit	C - W - U
32	Output B	Absolute dimming(8bit)	Bedroom SpotlightAbsolute Dimming	1/0/10	1 byte	C - W - U
33	Output B	Response state(1bit)	Bedroom Spotlight on/off Feedback	2/0/8	1 bit	C R - T -
34	Output B	Response state(1byte)	Bedroom Spotlight Relative Dimming Feedback	2/0/10	1 byte	C R - T -

4. Select Independent button mode for Rocker D.

1.1.6 DLP Panel M/DLP04.1 > Rocker D

General1	Rocker D work mode	<input checked="" type="radio"/> Independent button mode <input type="radio"/> Combined button mode
General2	=====	=====
Functions	Rocker D : left button operation mode	Switch controller
Rocker A	-> Reaction on left short button	Toggle
Rocker B	-> Reaction on left long button	Invalid
Rocker C	-> Delay for left button	<input checked="" type="radio"/> No <input type="radio"/> Yes
Rocker D	Long button time after	1s
	-----	-----

5. Select the button operation mode and reaction on each button.

1.1.6 DLP Panel M/DLP04.1 > Rocker D

General1	Rocker D work mode	<input checked="" type="radio"/> Independent button mode <input type="radio"/> Combined button mode
General2	=====	=====
Functions		=====
Rocker A	Rocker D : left button operation mode	Percentage controller
Rocker B	->Percentage on left short button	50%(128)
Rocker C	->Percentage on left long button	0%(0)
	--Delay on left short button(0..255s)	0
	--Delay on left long button(0..255s)	0
Rocker D	Long button time after	1s
	-----	-----
	LED status source	Local
	--LED status	ON/OFF status
	=====	=====
		=====
	Rocker D : right button operation mode	Percentage controller
	->Percentage on right short button	100%(255)
	->Percentage on right long button	0%(0)

6. Link the Group address with button.

70	Rocker D left	Percentage	Bedroom Spotlight Absolute Dimming	1/0/10	1 byte	C	-	W	T	U
75	Rocker D right	Percentage	Bedroom Spotlight Absolute Dimming	1/0/10	1 byte	C	-	W	T	U

7. Download data to the panel and dimmer.

THANKS