Product Specifications

File No: YZ-YF-QR-008-V01 Date: 2022-03-12

Customer Name	
Product Name	for projector screen
Product Code	FJ5 YM2003-01A

Version	Updated Date	Making people	Content
01	Aug 1st, 2022	Fu Xiaoling	Original version
02			
03			

Examination and Approval	
Prepared By	
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Customer Approval	
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FJ5 YM2003-01A Intelligent WIFI Electronic Limit Controller for Projector Screen

1. Features

1、RF built-in remote control, frequency 868.35MHz, FSK modulation method, built-in standard antenna, distance ≥ 200m.

2、Projector wireless trigger function, open the projector screen down automatically, close the projector screen up automatically.

3、Projector DC trigger function, open the projector screen down automatically, close the projector screen up automatically.

4、Built-in WIFI module, automatic to search and connect network when power on, simple and practical.

5、Connect with mechanical limit tubular motor or mechanical limiter + synchronous motor by default.

6、 With electronic limit function, match the motor with Hall signal to realize the electronic limit function.

7、RS485 function, connect intelligent central control system, general control protocol.

8、Externally connect dry contact port, lead length > 50m.

9、Externally connect IR function, general remote control protocol, distance > 10m.

10、The rubber strip port with function of stopping by block, 3.3VDC, detect the resistance change of the rubber strip to judge the protection of stopping by block.

11、The screen opening and rebounding to ensure the flatness of the screen surface.

12、The output end use anti-shock relay, which has strong surge tolerance and long service life.

13、Wide voltage power supply, general use.

14、Adopt international first-line brand chips, stable and reliable performance, good batch consistency.

15、With “buzz” notice function, easy to operate.

2. Application range

This product is widely used in control systems for projector screen, supports a wide voltage input (AC100-240V), generally applicable.

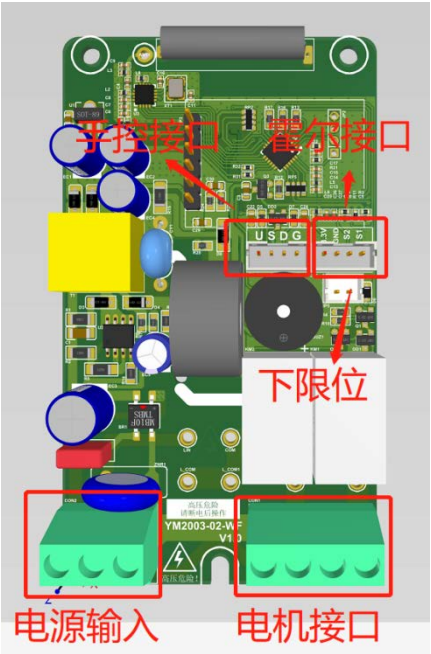
It can be used with mechanical limiter + synchronous motor, or with tubular motor with Hall.

3. Technical parameter

Input Voltage	DC 3V
Electricity power	300W
RF frequency	868.35MHz
RF Sensitivity	-110dBm
RF modulation method	FSK
RF communication protocol	customized (Rolling Code Encryption)
Projector Trigger Voltage	5 - 12VDC
Dry Contact Port Voltage	3VDC
Dry contact distance	< 100m
RS485 protocol	customized/MODBUS RTU/Bidirectional
RS485 maximum number of nodes	< 32pcs
RS485 transmission distance	< 200m (twisted pair)
IR port voltage	5VDC / 50mA customized
Electronic limit accuracy	5mm
Repeat positioning accuracy	5mm
Control method	RF remote control/dry contact/IR remote control/RS485/APP/projector trigger
Working temperature	-20□ ～ +60□
Dimensions	68Lmm× 68.5Wmm

4. Installation instruction

1. Port instruction



From left to right: manual port, Hall port, lower limit, power input, motor input

5. Application

- ❖ Cut off the main power before wiring to ensure safe operation
- ❖ Keep a distance of more than 1.5m between the receiver and the ground
- ❖ The receiver antenna should not touch or get close to metal objects, otherwise it will affect the receiving distance, and the distance from the metal objects should be more than 0.3m
- ❖ Avoid electrostatic interference, which will damage some electronic components
- ❖ Make sure the cable carrier not affected by longitudinal force after installation
- ❖ Pay attention to waterproof, indoor use, not installing the receiver in an outdoor environment
- ❖ The external dry contact leads should not be routed side by side with strong electricity, and the route distance should be less than 100m
- ❖ When using dry contact interface for multiple group control, the wire diameter should be ≧ 0.75 square
- ❖ the RS485 signal line should use twisted pair to improve the stability of signal transmission, adding RS485 repeater if the line exceeds 200m
- ❖ The power of the external sensor should be less than 2W, and the lead length less than 10m

6. Operations

1. Programming

Power-on programming: the screen power on within 10 seconds, press "UP" on the remote control for 2s, then the limiter power on, beep slowly to enter into programming preparation, release the "UP" on the remote control and press it once, the buzzer beeps long, finishing programming.

Note: This function is only supported by the limiter that has not yet learned the remote control. (Use this method when factory pairing)

Wake up programming: the limiter power on within 30s, press the "back PROG" of the remote control for 7s, beep slowly to enter into programming preparation, then press the "STOP" of the remote control for 2s, the buzzer beeps long, finishing programming.

Note: Only the remote control that wakes up the limiter and programs is supported. (Use this method when you can't find the remote control of programming).

Add a remote control: Press the "back PROG" of the remote control for 7s, beep slowly to enter into programming preparation.

Press the "STOP" of the remote control for 2s, the buzzer beeps long, finishing programming.

Note: You can program 20 remote controls, and if more than 20 remote controls are used, the first one will be covered.

Under programming, automatically exit if no any action for more than 30s.

2. Change direction

Press the "STOP" on the remote control for 5s, beep quickly to enter the setting state, then press the "UP" on the remote control for 2s, beep long once, the direction change.

3. Set the limit manually

Delete the limit and set it manually If the automatic limit position setting not ideal.

Set the lower limit manually

Press the "STOP" + "DOWN" on the remote control, the buzzer beeps long to enter into setting the lower limit position.

Press the "STOP" + "DOWN" on the remote control again when reaching the expected position, the buzzer beeps long and limit setting finished.

Set the upper limit manually

Press the "STOP" + "UP" on the remote control, the buzzer beeps long to enter into setting the upper limit position.

Press the "STOP" + "UP" on the remote control again when reaching the expected position, the buzzer beeps long and limit setting finished.

Note: If there is no any action within 30s, the controller will exit from setting state automatically.

Dot move mode when the limit position not set or during setting state. Press and hold for 2s after limit position setting, convert to continuous move.

4. Delete all remote controls

Press the "STOP" of the remote control for 5s, beep quickly to enter the setting state, then press the "DOWN" on the remote control for 2s, the buzzer beeps long, deleting finished.

Note: Only delete the codes of all remote controls, running direction and limit position unchanged.

5. Delete all limit position

Press the "STOP" of the remote control for 5s, beep quickly to enter the setting state, then press the "STOP" on the remote control for 5s, the buzzer beeps long, deleting all finished.

Note: Only delete all the limit position, the code and direction of the remote control kept.

6. Factory reset

Press the "STOP" of the remote control for 5s, beep quickly to enter the setting state, then press the "back PROG" on the remote control for 7s, the buzzer beeps long, factory reset.

Note: delete all remote control codes, running directions and wifi modules to clear the network.

7. Instruction of external dry contact

1) Connect to the 6P network cable interface.

2) Function control:

A. When the pulse signal of line 3+line 6 is connected, the motorized screen continues to rise.

B. When the pulse signal of line 4 + line 6 is connected, the electric curtain stops running.

C. When the pulse signal of line 5 + line 6 is connected, the electric screen continues to drop.

Note: It can also be matched with the switches to realize the functions of “up and up, down and down, and up and down switching” stopping functions.

8. The description of Projector switching 12V trigger function

A. DC/AC 12V is trigger, the motorized screen automatically drops.

B. DC/AC 12V is trigger, the motorized screen automatically rises.

C. Input voltage range: DC/AC 5V-12V (2.5mm audio interface).

9. Projector USB Wireless Trigger

1) Add the wireless trigger code to the receiver first, the operation is as follows:

The first way:

Press the "back PROG" of the remote control for 7s, beep slowly to enter into programming preparation.

Press the "SET button" of the wireless trigger for 5s, the buzzer beeps long once, finishing programming.

The second way:

The screen powers on again after powered off for 3s. the trigger is inserted into the USB port, then press and hold the "SET button" of the wireless trigger for 5s. The buzzer beeps twice, finishing

programming.

2) Insert the wireless trigger into the USB port of the projector after finishing programming, turn on the projector, the LED indicator light of the wireless trigger will flash slowly, triggering the screen to automatically drop.

The light will turn off and the screen will automatically rise when the wireless trigger detects the projector turned off.

From above to below: LED indicator, SET button

Note: When the wireless trigger detects the projector turned on, the LED indicator of the wireless trigger will flash once per second.

When detecting the projector turned off, the LED indicator of the wireless trigger will turn off.

(Some brands of projectors do not turn off the USB power when turned off, such projectors cannot match the wireless trigger).

10. WIFI distribution network

Under no network configuration, automatically enter the network configuration mode when powered on.

According to step 6 <Factory reset>, you can clear the network network configured by the module.

11. Rubber strip stopping by block function

It can match the resistance variable rubber strip. When there is no resistance and no pressure, the resistance value is infinite. When receiving resistance, it is lower than 100 ohms.

If the rubber strip is pressed when the screen running down, the motor will stop and protect immediately, and the buzzer will beep quickly to indicate that it is blocked.

If the rubber strip has been pressed and suffered resistance, the motor will not continue to run downward, and the buzzer will beep shortly to indicate that it is in place.

12. Rebound function after the screen opened

When the screen opening reaches the limit position, the motor will immediately run in reverse for 0.6s, the curtain surface tightens.

7. Package

type of packaging	
number of packaging	

size of packaging	

8. Trouble shooting

No response when powered	A. No programming of remote control, turn on the power and program again B. Wrong Cable line or motor line connecting, check again
the reversed running direction	the two lines of the motor connect reversely. Use the remote control to change the direction or switch both lines.
not sensitivity of remote control	A The external antenna is shielded or interfered by metal, adjust the antenna position B The voltage of the remote control is low, replace the battery

9. FCC Warning

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception,

which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

-- Reorient or relocate the receiving antenna.

-- Increase the separation between the equipment and receiver.

-- Connect the equipment into an outlet on a circuit different

from that to which the receiver is connected.

-- Consult the dealer or an experienced radio/TV technician for help.

The device has been evaluated to meet general RF exposure requirement. The device can be u sed in portable exposure condition without restriction