

DOOYA Electronic R&D Course Project Input Specification BD-4.2-20_C/00

Project Model:common external interface 485 ~~protocol (opening and closing curtains) protocol version:A4~~ Responsible Engineer: Time:2015-1-6 charge of the audit:

Version update:

2015-01-10: re-publishing

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Project model: General for external interface 485 ~~protocol (opening and closing curtain)~~ Protocol version: A4

1 Introduction to functions

~~Universal 485 protocol suitable for opening and closing curtains (see general rules for basic format)~~

Responsible engineer: Time: 2015-1-6 Supervisor review:

2 Applicable read and write address description

~~Data address description Data format can be read and written 0x00-ID-L 0x01-0xfe writable* 0x01-ID-H 0x01-0xfe*~~ 0x02-Current position (percentage) 0x00-0x64 (0xff means no travel is set)

~~DOWN (DOWN) to the stroke point, 0% read only-M~~
~~100% when open (UP) to the stroke point~~
0x03-motor default direction 0x00—default direction 0x05 (A3)
0x04-pull start enable 0x00—default open can read and write-M can read and write-M read only-M
~~0x01—reverse direction~~
Motor state-0x00-STOP
~~0x01—Closed, no pull function~~
Version) 0x01—OPEN 0x01—
0x27 (A1)-passive external switch type default 0x00—Strong power double-key non-rebound mode (default)
~~double rebound switch~~
0x02—CLOSE 0x01—Hotel mode (card power switch)
~~0x03—SETTING~~
0x03—DC24V Electronic switch
0x02—Double non-rebound switch can read and write M Can read and write-M
0x28 (A1)-High current external switch type
~~(Only EV type motor with 5~~
~~0x04—Single key cycle switch~~
~~0xe0-0xef information for the host to read and write (note: 1) Read and write*~~
~~Core power cord) key can rebound mode~~
~~0x02-Strong electric double~~

0xF0-Device type 0x01-Opening and closing curtain (Note: 1) Read only* 0xf1-Module channel number

~~4-15 (Note: 1) Read only* 0xfd software version 0-255 (Note: 1) Read only* 0xfe (A1)* protocol version Read~~

Only 0xA4 3 applicable control command Description

~~Instruction (note-2) Describe instruction parameter remarks 0x01-open command none~~

~~0x02-Close command none~~

~~0x03-stop command none~~

~~0x04-percentage command 0~100 (percentage)~~

~~0x07-Delete itinerary none (all delete)* 0x08(A1)-Restore factory settings None* 0x09(A2)~~

~~See the general rules for setting the scene mode~~

~~0x0A (A2)-operating scenario mode, see general rules~~

~~0x0B(A2) To delete the scene mode, see the general rules~~

~~0x0f(A4)-No inversion command, the last execution is the open command, then the close command~~

~~is executed, otherwise the open command is executed 4-other instructions~~

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5 illustrates

returns 55 12 34 03 01 AD 8A

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5.1.1 Control command-open

5.1 Control command (0x03)

Start code device address function data
address CRC16

The host sends 55 00 00 03 01 E9 3C 5-1-2

Control Command-Close

Device returns nothing

start code device address function data
address CRC16

Host sends 55 12 34 03 01 AD 8A Equipment

Start code device address function data address CRC16

Host sends 55 12 34 03 02 ED 8B Equipment
returns 55 12 34 03 02 ED 8B

Start code device address function data address data information CRC16

Start code device address function data address CRC16

The host sends 55 00 00 03 02 A9 3D 5-1-3
~~Control command stop~~
Device returns nothing

Group control group control

Start code device address function data address CRC16

Host sends 55 12 34 03 03 2C 4B Equipment
returns 55 12 34 03 03 2C 4B

Start code device address function data address CRC16

The host sends 55 00 00 03 03 68 FD 5-1-4
~~Control command percentage (30%)~~
Device returns nothing

group control

host send 55 12 34 03 04 1E C8 E5 (*) ~~When the device does not set the stroke, it returns to 0xFF and the motor does not move.~~

Equipment returns 55 12 34 03 04 1E C8 E5 55 12 34 03 04 FF* 08 AD

When the device is powered off and on again, there is no stroke at this time, and it cannot be controlled by percentage commands. You can execute the open or close command to restore the stroke before executing the percentage command control.

command restore factory settings

Start code device address function data address data content CRC16 Equipment returns 55 12 34 03 07 2D 88

Host sends 55 00 00 03 04 1E 7E D6 5-1-5 Control
~~command delete itinerary~~
The device returns no

Start code device address function data address CRC16

Host sends 55 12 34 03 08 6D 8C ~~Preparation review approval~~

start code device address function data address CRC16

Host sends 55 12 34 03 07 2D 88 5-1-6 Control

Equipment returns 55 12 34 03 08 6D 8C
Group Control

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~~device address is restored to 0xfefe, and itinerary is deleted.~~

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restoring the factory settings, all settings of the motor will be restored to the default state, and all saved data will be cleared.

5.1.7 Control Command-Set Scene Mode

Start code device address function data address data content CRC16

Host sends 55 12 34 03 09 01 8D BD Each motor can set up to 20 scene modes (the data content is the scene mode number). When the device has not set the itinerary, the scene cannot be set mode, and 0xFF is returned.

Equipment returns 55 12 34 03 09 01 8D BD FF* 0C 3D

When the device is powered on again after a power failure, the profile mode cannot be set at this time. You can execute the open or close command to restore the trip before setting the profile mode.
~~mode and returns 0xFF.~~

Start code device address function data address data content CRC16

Host sends 55 00 00 03 09 01 3B 8E Device returns nothing

5.1.8 Control command-running profile

Start code device address function data address data content CRC16

Host sends 55 12 34 03 0A 01 8D 4D When letting the motor run in a scenario that is not set, the motor will not run and return 0xFF.

The device returns 55 12 34 03 0A 01 8D 4D FF* 0C CD group control
When the motor has no set stroke, it cannot run the scene

When the device is powered on again after a power failure, the profile mode cannot be run at this time. You can execute the open or close command to restore the schedule before running the profile mode.

Start code device address function data address data content CRC16

Host sends 55 00 00 03 0A 01 3B 7E Device returns nothing

5.1.9 Control command-delete profile

Start code device address function data address data content CRC16

Host sends 55 12 34 03 0B 01 8C DD Equipment returns 55 12 34 01 0B 01 8C DD

Start code device address function data address data content CRC16

The host sends 55 00 00 03 0B 01 7A EE The device returns no

5.2.1 Read command-position (percentage)--0x02

5.2 Read command (0x01)

*When the device has a set itinerary, the device returns to the current itinerary (0x00-0x64), 0x00 means

~~completely closed, 0x64 means completely open.~~ Equipment returns 55 12 34 01 01 1E* 6A 75

~~*When the device does not set the itinerary, the device returns 0xFF~~ 5.2.2 Read command-direction status--0x03

FF* AA 3D

Start code device address function data address data length CRC16

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Host sends 55 12 34 01 03 01 2A DD Start code device address function data length data content CRC16

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Equipment returns 55 12 34 01 01 00* EA 7D

*0x00-default direction, 0x01-reverse direction

*This direction is used to determine the opening and closing direction of the curtain, such as when the curtain is closed when sending an opening control command, please execute the read direction at this time, and then write the opposite 5.2.3 Read command-Hand pull state--0x04

The direction is changed to make the control command consistent with the actual operation of the motor.

Start code device address function data address data length CRC16

Host sends 55 12 34 01 04 01 28 ED

Start code device address function data length data content CRC16

Equipment returns 55 12 34 01 01 00* EA 7D

5.2.4 Read command-motor status-0x05

*0x00-By default, it can be started by hand, 0x01- cannot be started by hand.

Device address function data address data length CRC16

Host sends 55 12 34 01 05 01 29 7D

Start code device address function data length data content CRC16

Equipment returns 55 12 34 01 01 00* EA 7D

5.2.5 Read command-weak current switch type-0x27

*00- means the motor stops. 01- means the motor is turned on. 02-Indicates that the motor is off. 03-Indicates that the motor is in the setting state

Start code Device address Function data address Data length CRC16

Host sends 55 12 34 01 27 01 31 DD

Start code device address function data length data content CRC16

Equipment returns 55 12 34 01 01 01* 2B BD

*0x03-DC246 electronic switch (open key, press once to open, press again to stop)

*0x01-default double rebound switch (open key, press once to open, press again to stop)

*0x02-double non-rebound switch (open key, Press to open, lift to stop)

5.2.6 Read command-strong current switch type-0x28

*0x04-single key cycle switch (one key, press once to open, press again to stop, press again to close, press again to stop)

start code device address function data address data length CRC16

Host sends 55 12 34 01 28 01 34 2D

Start code device address function data length data content CRC16

Equipment returns 55 12 34 01 01 00* EA 7D

*0x00-default normal two-wire strong current switch (the white wire is connected to the live wire to open, the black wire is connected to the live wire to close, and the disconnection stops) 5.2.7

Read command-protocol version-0xfe

*0x01-Hotel mode (the white wire is connected and the live wire motor is turned on, and the white wire is disconnected the live wire motor is turned off)

start code device address function data address data length CRC16

Host sends 55 12 34 01 fe 01 6A 4D

Start code device address function data length data content CRC16

Equipment returns 55 12 34 01 01 A3* AA 04

5.3.1 Write command-write device address* --0x00

5.3 Write command (0x02)

start code device address function data address data length data data CRC16

The host sends 55 00 00 02 00 02 12 (ID_L) 34 (ID_H) 50 7F *ID_H cannot be set to 0x00, 0xff, and ID_L cannot be set to 0x00, 0xff. The default address is 0xfefe (restore factory settings).

Start code device address function data address data length CRC16

*Before writing the device address, press and hold the motor setting button for 5 seconds, wait until the LED flashes twice, and then execute it. After success, the LED will flash 5 times continuously. Operation unsuccessful device address

device returns 55 12 34 02 00 02 9A 2C

*The default address 0xfefe

keeps the original address unchanged.

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5.3.2 Write command set direction 0x03

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start code device address function data address data length data CRC16

Host sends 55 12 34 02 03 01 01* 9D 5B

*0x01 is set to the opposite direction

Start code device address function data address data length CRC16

Equipment returns 55 12 34 02 03 01 DA DD

5.3.3 Write command-set pull enable-0x04

Start code device address function data address data length data CRC16

Host sends 55 12 34 02 04 01 01* 2C 9A

Start code device address function data address data length CRC16

Equipment returns 55 12 34 02 04 01 D8 ED

5.3.4 Write command-set weak current switch type-0x27

*It is set to start without hand.

Start code device address function data address data length data CRC16

Host sends 55 12 34 02 27 01 02* 9D 51

*0x02 Set to double key non-rebound switch mode

Start code device address function data address data length CRC16

Equipment returns 55 12 34 02 27 01 C1 DD

5.3.5 Write command-set strong current switch type-0x28

Start code device address function data address data length data CRC16

Host sends 55 12 34 02 28 01 01* ED 53

*0x01 is set to single live wire switch mode (plug in card power switch)

Start code device address function data address data length CRC16

Equipment returns 55 12 34 02 28 01 C4 2D

5.4 Slave request command (0x04)

Start code device address function data address CRC16

The slave sends 55 FE FE 04 01 BB 14

Start code device address function data address data length data data CRC16

The host sends 55 00 00 02 00 02 12 (ID L) 34 (ID H) 50 7F When the motor is energized, press and hold the motor setting button, the indicator light flashes twice (about 5 seconds) and then release the button, the slave will actively send a request to the host to allocate the address

start code device address function data address data length CRC16

Within 10 seconds, the master can send a write address command to the slave to change the device address of the slave.

Return from the machine 55 12 34 02 00 02 9A 2C