

# Q1、N17、N21電機 RS-485/RS-232 通訊控制

公司保留更改產品設計與說明書之權利，恕不另行通知，圖片僅供參考，以實物為準。

## 通訊參數設定、資料格式

通訊協議控制指令為7個字節的16進制表示的指令，PC採用16進制發送，232\485端口參數設定：波特率9600，無校驗位，8位資料位，1位停止位。數據資料包格式：0x55, D1, D2, D3, Cmd, Parm1, Parm2, Parm3, checksum

### 字節1 (資料標頭碼)

標誌碼	取值範圍
0x55	固定值

### 字節2、3 (預設地址：FEFE)

地址碼	取值範圍：(字母、數字組合，如：C3B6)	備註
D1	0x01 ~ 0xFE	地址H
D2	0x01 ~ 0xFE	地址L

### 字節5 (Cmd)

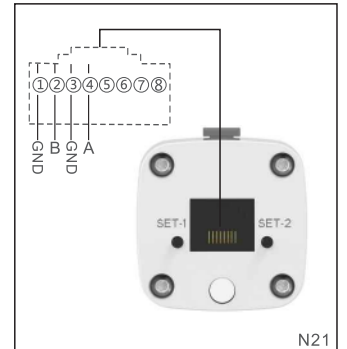
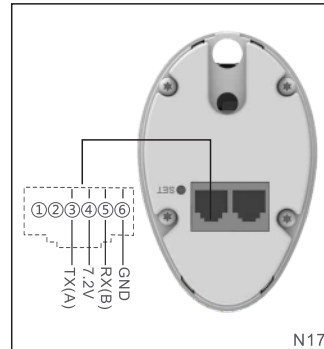
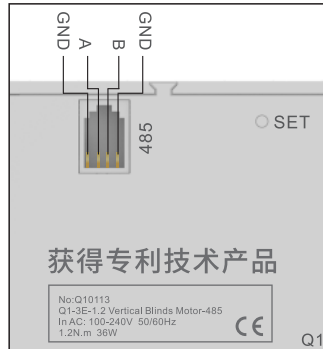
功能	命令值	備註
寫設備地址	0xAA	需先給電機通電，然後按一下電機SET1按鍵進入寫入設備地址狀態，再發送寫入命令
	0xBB	用命令直接寫入設備地址
開合方向打開	0xDD	控制電機開合方向運行
開合方向關閉	0xEE	
開合停止	0xCC	開合方向停止控制
開合方向百分比	0x67	開合方向百分比控制
開合方向換向	0xCD	開合電機運行方向換向
查詢	0x98	開合方向百分比、電機狀態。注意：查開合方向百分比電機必須有行程才可以查詢

### 字節6 (Parm1)

字節5	字節6 (Parm1) 值	備註：Parm1
0x67	0--0x64	控制開合百分比值
0xCD	00或者01	設定開合方向值，00預設方向，01反向
0x98	0--0x64	為查詢指令返回時，Parm1表示為開合的百分比值
xxxx	00	字節5是其他命令時，此參數值0

### 字節7 (Parm2)

字節5	字節7 (Parm2) 值	備註：Parm1
0x98	00 --0x64	Parm2表示為查詢調光的百分比值，如果字節5是其他指令，此數值為0



### 字節8 ( Parm3 )

字節5	字節8 ( Parm3 ) 值	備註
0x98	00或者01或者02	Parm3表示為查詢電機當前處於某種狀態，00停止、01打開中、02關閉中，如果字節5是其他指令，此數為0

### 字節9

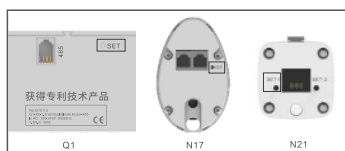
字節9	備註
Checksum	Checksum = 55+FE+FE+.....+00，取低字節。(參考舉例說明)

舉例說明 ( 16進制表示 ) : 地址 = FEFE · 通道 = 03

寫設備地址：只存一個地址碼，再重複代碼即覆蓋之前的，預設地址和通道：FEFE03，強烈建議使用字母、數字組合 ( 如:C3B6 )，地址禁用頭碼55。

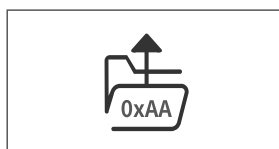
**方式一：** 按下電機的SET鍵，電機正反轉停止後10秒內發送0xAA命令資料包，電機正反轉提示，寫入成功。

	頭碼	地址H	地址L	通道	Cmd	Parm1	Parm2	Parm3	checksum
主機發送	55	FE	FE	03	AA	00	00	00	FE
電機反饋	55	FE	FE	03	AA	00	00	00	FE



按下電機的SET鍵

正反轉動提示



正反轉動提示



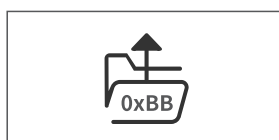
寫入成功

**方式二：** 在電機通電待機狀態下，直接發送0xBB命令資料包，電機正反轉提示，寫入成功。

	頭碼	地址H	地址L	通道	Cmd	Parm1	Parm2	Parm3	checksum
主機發送	55	FE	FE	03	BB	00	00	00	0F
電機反饋	55	FE	FE	03	BB	00	00	00	0F



電機通電待機



正反轉動提示



寫入成功

控制窗簾打開：( 如果窗簾運行方向不對，則執行一次開合換向動作 )

	頭碼	地址H	地址L	通道	Cmd	Parm1	Parm2	Parm3	checksum
主機發送	55	FE	FE	03	DD	00	00	00	31
電機反饋	55	FE	FE	03	DD	00	00	00	31

控制窗簾關閉：( 如果窗簾運行方向不對，則執行一次開合換向動作 )

	頭碼	地址H	地址L	通道	Cmd	Parm1	Parm2	Parm3	checksum
主機發送	55	FE	FE	03	EE	00	00	00	42
電機反饋	55	FE	FE	03	EE	00	00	00	42

控制窗簾開合停止

	頭碼	地址H	地址L	通道	Cmd	Parm1	Parm2	Parm3	checksum
主機發送	55	FE	FE	03	CC	00	00	00	20
電機反饋	55	FE	FE	03	CC	00	00	00	20

### 開合百分比控制(100%)

	頭碼	地址H	地址L	通道	Cmd	Parm1	Parm2	Parm3	checksum
主機發送	55	FE	FE	03	67	64	00	00	1F
電機反饋	55	FE	FE	03	67	64	00	00	1F
	55	FE	FE	03	67	FF*	00	00	BA

### 開合方向換向(Parm1=00默認正向,Parm1=01反向)

	頭碼	地址H	地址L	通道	Cmd	Parm1	Parm2	Parm3	checksum
主機發送	55	FE	FE	03	CD	01	00	00	22
電機反饋	55	FE	FE	03	CD	01	00	00	22

### 查詢(Parm1-調光百分比50%,Parm2-開合百分比20%,Parm3-電機狀態01)

	頭碼	地址H	地址L	通道	Cmd	Parm1	Parm2	Parm3	checksum
主機發送	55	FE	FE	03	98	00	00	00	EC
電機反饋	55	FE	FE	03	98	32	14	01*	33

\*Parm3-00電機停止,01開合打開,02開合關閉

### 進入設置

	頭碼	地址H	地址L	通道	Cmd	Parm1	Parm2	Parm3	checksum
主機發送	55	FE	FE	03	33	00	00	00	87
電機反饋	55	FE	FE	03	33	00	00	00	87

### 清除開合行程

	頭碼	地址H	地址L	通道	Cmd	Parm1	Parm2	Parm3	checksum
主機發送	55	FE	FE	03	44	00	00	00	98
電機反饋	55	FE	FE	03	44	00	00	00	98

### 設定開合行程步驟如下:

步驟1:發送0xDD窗簾開啟指令資料包,穿透簾運轉開啟,直到馬達自動堵住停止後才會自動產生開啟行程。

步驟2:發送0xEE窗簾關閉指令封包,穿透簾運轉關閉,直到馬達自動堵住停止後才會自動產生關閉行程。

### 清除開合行程步驟如下:

步驟1:發送0x33進入設定指令資料包,穿透簾開與合1次提示,馬達進入設定狀態,倒數計時10秒。

步驟2:10秒內發送0x44清除開合行程資料包,穿透簾開與合1次提示,行程清除成功。

# Q1、N17、N21 Motor RS-485/RS-232 Communication Control

Company reserves the right to change product design and specifications without prior notice then ,photos are for reference only.

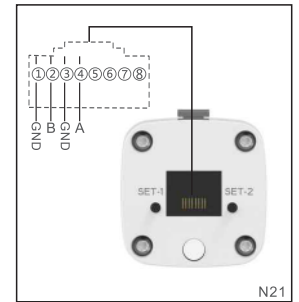
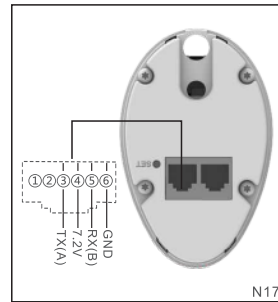
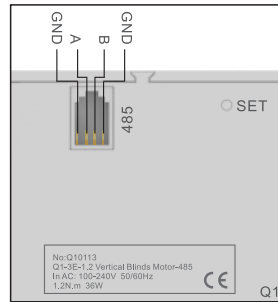
A/O H12158

## Communication parameter setting, data format

Control instruction of the communication protocol is 7-byte hexadecimal. The PC uses hexadecimal to send. 232\485 port parameter settings: baud rate 9600, no check digit, 8 data bits, 1 stop bit Packet format: 0x55, D1, D2, D3, Cmd, Parm1, Parm2, Parm3, checksum

### Byte 1 (data header code):

Flag code	Range of values:
0x55	fixed value



### Byte 2, 3 (default address: FEFE):

Address code:	Value range: (combination of letters and numbers, such as: C3B6)	Remarks:
D1	0x01~0xFE	Address H
D2	0x01~0xFE	Address L

### Byte 4 (channel):

Channel value:	Value range:	emarks:
D3	0x01~0xFE	0x05 is broadcasting public channel, no feedback data when broadcasting

### Byte 5 (Cmd):

Function:	Command Value:	Remarks:
Write device address	0xAA	Need to power on the motor first, then press the SET1 button of the motor to enter the state of writing the device address, and then send the write command.
	0xBB	Write the device address directly with the command.
Opening and closing direction: open	0xDD	Control motor opening and closing, not dimming.
Opening and closing direction: close	0xEE	
Left dimming	0xD1	Control motor dimming, not opening and closing.
Right dimming	0xE1	
Stop opening and closing , stop dimming	0xCC	Opening and closing stop and dimming stop are common command values.
Opening and closing percentage	0x67	Opening and closing percentage control. The opening and closing limit must be set firstly.
Dimming percentage	0x76	Left and right dimming percentage control, the dimming limit must be set firstly.
Opening and closing reversing	0xCD	Opening and closing direction reversing, dimming direction cannot be reversed.
Query	0x98	Opening and closing percentage, dimming percentage, motor status. Note: To check the percentage, the motor must have the related limit firstly.

### Byte 6 (Parm1):

Byte 5:	Byte 6 (Parm1) Value	Remark: Parm1
0x76	0---0x64	Dimming percentage control value
0x67	0---0x64	Opening and closing percentage control value
0xCD	00 or 01	set opening and closing direction value, 00 default direction, 01 reverse
0x98	0---0x64	When query command is returned, Parm1 means percentage value of opening and closing
xxxx	00	When byte 5 is other commands, this parameter value is 0

### Byte 7(Parm2):

Byte 5:	Byte7 (Parm2) Value	Remark:
0x98	00—0x64	Parm2 means percentage value of dimming when query. When byte 5 is other commands, this parameter value is 0

### Byte 8(Parm3):

Byte 5:	Byte 8(Parm3) Value	Remark:
0x98	00 or 01 or 02	Parm3 means to query motor state: 00 Stop, 01 Opening, 02 Closing. When byte 5 is other commands, this parameter value is 0

### Byte 9:

Byte 9:	Remark:
Checksum	Checksum = 55+FE+FE+.....+00, take the low byte. (Refer to example)

### Example (hexadecimal representation): address = FEFE, channel = 03

Write device address: save only one address code, repeating pairing will overwrite the previous one. The default address and channel: FEFE03. It is strongly recommended to use a combination of letters and numbers (such as: C3B6), and the header code 55 is disabled for the address.

**Method 1:** Press motor SET button, and send a 0xAA command packet within 10 seconds after motor turns forward and reverse. Then motor will turn forward and reverse, this means the writing is successful.

	Header Code	Address H	Address L	Channel	Cmd	Parm1	Parm2	Parm3	checksum
Host sends	55	FE	FE	03	AA	00	00	00	FE
Motor Feedback	55	FE	FE	03	AA	00	00	00	FE



**Method 2:** When the motor is powered on and in the standby state, directly send the 0xBB command packet, the motor will be forward and reverse, and the writing is successful.

	Header Code	Address H	Address L	Channel	Cmd	Parm1	Parm2	Parm3	checksum
Host sends	55	FE	FE	03	BB	00	00	00	0F
Motor Feedback	55	FE	FE	03	BB	00	00	00	0F



Open the blinds: (if the blinds run in wrong direction, perform an opening and closing reversing action)

	Header Code	Address H	Address L	Channel	Cmd	Parm1	Parm2	Parm3	checksum
Host sends	55	FE	FE	03	DD	00	00	00	31
Motor Feedback	55	FE	FE	03	DD	00	00	00	31

Close the blinds: (if the blinds run in wrong direction, perform an opening and closing reversing action)

	Header Code	Address H	Address L	Channel	Cmd	Parm1	Parm2	Parm3	checksum
Host sends	55	FE	FE	03	EE	00	00	00	42
Motor Feedback	55	FE	FE	03	EE	00	00	00	42

Stop: Opening and closing stop and dimming stop are common command values

	Header Code	Address H	Address L	Channel	Cmd	Parm1	Parm2	Parm3	checksum
Host sends	55	FE	FE	03	CC	00	00	00	20
Motor Feedback	55	FE	FE	03	CC	00	00	00	20

Left dimming:

	Header Code	Address H	Address L	Channel	Cmd	Parm1	Parm2	Parm3	checksum
Host sends	55	FE	FE	03	D1	00	00	00	25
Motor Feedback	55	FE	FE	03	D1	00	00	00	25

## Right dimming:

	Header Code	Address H	Address L	Channel	Cmd	Parm1	Parm2	Parm3	checksum
Host sends	55	FE	FE	03	E1	00	00	00	35
Motor Feedback	55	FE	FE	03	E1	00	00	00	35

## Opening and closing percentage control (100%):

	Header Code	Address H	Address L	Channel	Cmd	Parm1	Parm2	Parm3	checksum
Host sends	55	FE	FE	03	67	64	00	00	1F
Motor	55	FE	FE	03	67	64	00	00	1F
	55	FE	FE	03	67	FF*	00	00	BA

\*When there is no opening and closing limit, feedback FF and motor no action, can not do opening and closing percentage control. FF means no opening and closing limit.

## Dimming percentage control (50%)

	Header Code	Address H	Address L	Channel	Cmd	Parm1	Parm2	Parm3	checksum
Host sends	55	FE	FE	03	76	32	00	00	FC
Motor Feedback	55	FE	FE	03	76	32	00	00	FC
	55	FE	FE	03	76	FF*	00	00	C9

\*When there is no dimming limit, feedback FF and motor no action, can not do dimming percentage control. FF means no dimming limit.

\*When there are opening & closing limit and dimming limit, the max dimming angle is 170 degree when blinds is fully close. It is 130 degree when blinds is not fully close. Percentage control feedback is also different.

## Opening and closing reversing (Parm1=00 default forward, Parm1=01 reverse)

	Header Code	Address H	Address L	Channel	Cmd	Parm1	Parm2	Parm3	checksum
Host sends	55	FE	FE	03	CD	01	00	00	22
Motor Feedback	55	FE	FE	03	CD	01	00	00	22

## Query (Parm1—Opening and closing 50%, Parm2—Dimming 20%, Parm3—Motor state 01)

	Header Code	Address H	Address L	Channel	Cmd	Parm1	Parm2	Parm3	checksum
Host sends	55	FE	FE	03	98	00	00	00	EC
Motor Feedback	55	FE	FE	03	98	32	14	01*	33

\*Parm3—00 Motor stops, 01 open, 02 close

## Enter setting

	Header Code	Address H	Address L	Channel	Cmd	Parm1	Parm2	Parm3	checksum
Host sends	55	FE	FE	03	33	00	00	00	87
Motor Feedback	55	FE	FE	03	33	00	00	00	87

## Delete opening and closing limit (not dimming limit)

	Header Code	Address H	Address L	Channel	Cmd	Parm1	Parm2	Parm3	checksum
Host sends	55	FE	FE	03	44	00	00	00	98
Motor Feedback	55	FE	FE	03	44	00	00	00	98

## Opening & closing limit and dimming limit setting steps: (if the opening and closing limit has been set, skip steps 1 and 2)

Opening & closing limit setting	Step 1:	Send the 0xDD opening command packet, the dream blinds will open. Until the motor is automatically blocked and stopped, now the opening limit is done.
	Step 2:	Send the 0xEE closing command packet, the dream blinds will close. Until the motor is automatically blocked and stopped, now the closing limit is done.
Dimming Limit setting	Step 3:	Fully close the dream blinds. Then send 0x33 command packet. The dream blinds will open and close once. Motor enters the setting state, and the countdown will be 10 seconds.
	Step 4:	Send 0xD1 left dimming data packet within 10 second. The dream blinds will open and close once. And then left dimming until the motor is automatically blocked and stopped. Now the dimming limit is done and it will automatically run in reverse to the 90-degree position.
Remark	Correct dimming angle	When the blinds is completely closed, if the dimming cannot be fully closed (170 degrees), please repeat steps 3 and 4. The premise is that there must be an opening and closing limit (if no opening and closing limit, it is impossible to set the dimming limit).

## Delete opening & closing limit steps:

Step 1	Send 0x33 command packet. The dream blinds will open and close once. Motor enters the setting state, and the countdown will be 10 seconds.
Step 2	Send 0x44 data packet within 10 seconds to delete opening & closing limit. The dream blinds will open and close once. The opening & closing limit has been deleted.