

PWM8A04 3-channel RS485 to PWM module Command

Function code

RS485 address (Station address) (1)	Function (1)	Register address (2)	Read number (2)	CRC16 (2)
	03 Read			
	06 Write			
	16(0x10) Write multiple registers			

Read / write register;Read function code is 03 ,Write function code is 06/16				
Register address	Register contents	Number of bytes	Units	Remarks
0x0000	CH1 PWM Frequency	2	Hz Frequency	Frequency range:1Hz-20000Hz Stepping:1Hz Such as: Write 0x07D0 decimal 2000 Frequency output2000Hz; Write 0x0064 decimal 100 Frequency output 100Hz Default Clock:1000Hz
0x0001	CH2 PWM Frequency			
0x0002	CH3 PWM Frequency			
0X0070 (112)	CH1 PWMDuty ratio	2	1%	Default duty cycle: 50% Duty cycle adjustment range: 0-100% Such as: Write 0x0037 Decimal 55 Duty cycle output is 55%; Write 0x002D decimal 45 Duty cycle output 45%
0X0071 (113)	CH2 PWMDuty ratio			
0X0072 (114)	CH3 PWMDuty ratio			
0x00FB (251)	Factory Reset	2	Restore factory setting: 1 Short the RESET jumper for 5 seconds; 2 Enter the following command at the current baud rate:FF 06 00 FB 00 00 ED E5	
0x00FC (252)	Command Return Time	2	40MS	Such as: reading 0X0019 Decimal system is 25 Time delay=25*40=1000ms

0x00FD (253)	RS485 address (Slave ID)	2	Read address: FF 03 00 FD 00 01 00 24; Set the device address to 0x02: FF 06 00 FD 00 02 8C 25	
0x00FE (254)	Baud rate	2	0x0000-0x0008	0:1200 1:2400 2:4800 3:9600(default) 4:19200 5:38400 6: 57600 7: 115200 8: Restore factory setting
0x00FF (255)	Parity	2	0 None Parity 1 Odd Parity 2 Even Parity	

Serial port rate: 9600 (Default) , 8, N, 1

1. Modbus RTU Communication protocols:

Read the current 1-3 channel frequency

Send data

RS485 address (Station address) (1)	Function (1)	Register address (2)	Read number (2)	CRC16(2)
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Return data

RS485 address (Station address) (1)	Function (1)	Register address (2)	Read number (2)	CRC16(2)
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RS485 address(Slave ID): 0x01~0xF8

Function code: 0x03

Register address: 0x0000-0x0002, Corresponds to the frequency of channels 1-3

Number of reads: 0x0001-0x0003

The length of the returned frequency data is two bytes, with the highest value at the beginning and the lowest value at the end, as illustrated below:

Send data (Address is 1) : 01 03 00 00 01 84 0A(00 indicates channel 1)

Return data: 01 03 02 07 D0 BB E8

01 address code, **03**function code, **02**length, **BB E8** crc16

07D0 is the frequency value 2000Hz;

2. Set the current frequency of channels 1-3:

Send data

RS485 address (Station address) (1)	Function (1)	Register address (2)	Read number (2)	CRC16(2)
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Return data

RS485 address (Station address) (1)	Function (1)	Register address (2)	Read number (2)	CRC16(2)
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Address code : 0x01~0xF8

Function code: 0x06/0x10

Register address: 0x0000-0x0002, Corresponds to the frequency of channels 1-3

Set content: 2bytes (value 1~20000)

For example, to set channel 1 frequency to 1000Hz:

Send data (address is 1) : 01 06 00 00 03 E8 89 74

Return data: 01 06 00 00 03 E8 89 74

3. Read duty cycle:

Duty cycle refers to the value of positive duty cycle.

Send data

RS485 address (Station address) (1)	Function (1)	Register address (2)	Read number (2)	CRC16(2)
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Return data

RS485 address (Station address) (1)	Function (1)	Register address (2)	Read number (2)	CRC16(2)
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Address code: 0x01~0xF8

Function code: 0x0003

Register address: 0x0070-0x0072, Corresponding to 1-3 channel duty ratio

Number of reads: 0x0001-0x0003

Such as 1:

Send data: 01 03 00 70 00 01 85 D1, 70 indicates channel 1

Return data: 01 03 02 00 32 39 91, 0032 is the scale value, expressed in decimal that is 50/100=0.5; The duty cycle of channel 1 is 0.5;

Such as 2:

发送帧: 01 03 00 71 00 01 D4 11, 71 indicates channel 2

返回帧: 01 03 02 00 16 39 8A, 0016 is the scale value, expressed in decimal notation is 22/100=0.22; Indicates that the duty cycle of channel 2 is 0.22.

4. Set duty cycle:

Send data

RS485 address (Station address) (1)	Function (1)	Register address (2)	Read number (2)	CRC16 (2)
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Return data

RS485 address (Station address) (1)	Function (1)	Register address (2)	Read number (2)	CRC16 (2)
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Address code: 0x01~0xF8

Function code: 0x06/0x10

Register address: 0x0070-0x0072, Corresponding to 1-3 channel duty ratio

Set content: 2bytes (value 0-100)

For example, set the duty cycle of channel 1 to 0.5

Send data (address is 1): 01 06 00 70 00 32 09 C4

Return data: 01 06 00 70 00 32 09 C4

The return frame is the same as the send frame. 70 indicates channel 1 and 0032 indicates duty cycle=50/100=0.5

5. Set the 485 address(Slave ID)

Send data

RS485 address (Station address) (1)	Function (1)	Register address (2)	Read number (2)	CRC16 (2)
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Return data

RS485 address (Station address) (1)	Function (1)	Register address (2)	Read number (2)	CRC16 (2)
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Modbus Address(PLC): 40254

RS485 address :0x01~0Xf8/0XFF

Function code:Write 0x06/0x10,Read 0x03

Register address:0x00FD(253)

Value: 2 bytes (values 1-248)

For example 1: Set the current device address to 0x02

Send data(address is 1): 01 06 00 FD 00 02 99 FB

Return data : 01 06 00 FD 00 02 99 FB

Send data(don't know the address): FF 06 00 FD 00 02 8C 25

Return data : FF 06 00 FD 00 02 8C 25

For example 2: Read device address(0X0001)

Send data : FF 03 00 FD 00 01 00 24

Return data : 01 03 02 00 01 79 84

Note: With this command, there can be only one module on the bus 485,
More than one will go wrong!

6. Set serial port Baud rate:

Send data

RS485 address (Station address) (1)	Function (1)	Register address (2)	Read number (2)	CRC16(2)
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Return data

RS485 address (Station address) (1)	Function (1)	Register address(2)	Read number (2)	CRC16(2)
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Modbus Address(PLC): 40255

RS485 address :0x01~0x3F

Function code:Write 0x06/0x10;Read 0x03

Register address:0x00FE(254)

Value: 2 bytes (values 0-4)

For example 1, Change the baud rate to 4800bps:

Send data(address 1):01 06 00 FE 00 02 69 FB

Return data :01 06 00 FE 00 02 69 FB

Baud rate corresponds to the number: 0:1200 1:2400 2:4800 3:9600

4:19200 5:38400 6:57600 7:115200 8: Factory reset

Note:

1 The baud rate will be updated only when the module is powered on again when this command is used!

2 When the number corresponding to the baud rate is 8, the factory settings can be restored

For example: 01 06 00 FE 00 05 28 39

For example 2 Read the current baud rate:

Send data(address 1):01 03 00 FE 00 01 E5 FA

Return data :01 03 02 00 03 F8 45

01 RS485 address, 03 Function,02 length,F8 45 crc16,03 means the current baud rate is 9600bps

7. Set Parity

Send data

RS485 address (Station address) (1)	Function (1)	Register address (2)	Read number (2)	CRC16 (2)
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Returns data

RS485 address (Station address) (1)	Function (1)	Number of bytes (1)	data (n)	CRC16 (2)
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Modbus Address(PLC): 40256

RS485 address :0x01~0x3F

Function code:Write 0x06/0x16;Read 0x03

Register address:0x00FF(255)

Value: 2 bytes (values 0-2)

For example, set the parity to even parity

Send data(address 1):01 06 00 FF 00 01 78 3A

Return data :01 06 00 FF 00 01 78 3A

0 None Parity 1 Odd Parity 2 Even Parity

Note:

1. When using this command, the module is powered on again, and the check digit will be updated!
2. When the setting is greater than 2, the default value will be restored to 0 after powering on again, and there will be no verification.

8. Set Command(Date) Return Time

Send data

RS485 address (Station address) (1)	Function (1)	Register address (2)	Read number (2)	CRC16 (2)
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Return data

RS485 address (Station address) (1)	Function (1)	Register address (2)	Read number (2)	CRC16 (2)
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Modbus Address(PLC): 40253

RS485 address :0x01~0x3F

Function code:Write 0x06/0x10;Read 0x03

Register address:0x00FC(252)

Value: 2 bytes (values 0-25)

Setting content: 2 bytes (0-25) setting content 1=40ms, so 0-25 (0000~0025) corresponds to 0~1000ms

For example, set data return delay 400ms, set content value = 400/40 = 10

Send data(address 1): 01 06 00 FC 00 0A C9 FD

Return data : 01 06 00 FC 00 0A C9 FD

Return the delay time calculation formula: $X = 40 * 10 = 400MS$

Note: The maximum can be set to 1000MS. If it exceeds 1000MS, that is, the setting value is greater than 25, and the data return delay will be initialized. That is: 01 06 00 FC 00 20 48 22 can make the data return delay to restore initialization 0

9. Factory data reset:

Send data

RS485 address (Station address) (1)	Function (1)	Register address (2)	Read number (2)	CRC16 (2)
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Return data

RS485 address (Station address) (1)	Function (1)	Register address (2)	Read number (2)	CRC16 (2)
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Modbus Address(PLC): 40252

RS485 address : 0x01~0x3F

Function code:Write 0x06;Read 0x03

Register address:0x00FB(251)

Send data(address 1) :FF 06 00 FB 00 00 ED E5

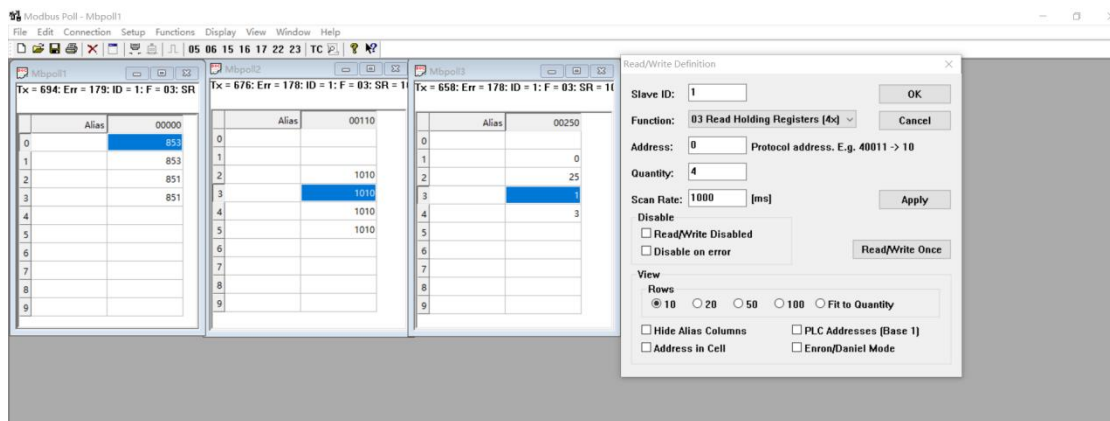
Return data :FF 06 00 FB 00 00 ED E5

Notes:

1 Short the RESET jumper for 5 seconds;

2 When using this command, the module needs to be powered on again.

The MODBUS instruction can be entered with "Modbus Poll", in the figure below



You can also use the serial port super-terminal input, as shown in the figure below

