

## DM56A04 DM36B06 MODBUS RTU Command

MODBUS commands (Function Code, 06/16 control, 03 read status)

Notice:

- 1 data must be HEX format
- 2 The slave address (device address) must be the same as the one set, or you can use this command to query the current device address: FF 03 00 FD 00 01 00 24;
- 3 Consistent baud rate and parity

### 1、Instruction introduction

Function code:

| Function code | MODBUS address (PLC) | Register address        | Remark   |
|---------------|----------------------|-------------------------|--|
| 03            | 40001                |                         |  |
|               |                      | 0x0080-0x00FF (128-255) | Read special function register (baud rate, 485 address, etc.)            |
| 06            | 40001                |                         |  |
|               |                      | 0x0080-0x00FF (128-255) | Write a single special function register (baud rate, 485 address, etc.)  |
| 16(0x10)      | 40001                |                         |  |
|               |                      | 0x0080-0x00FF (128-255) | Write multiple special function registers (baud rate, 485 address, etc.) |

All states are mapped to the 4xxx interval register. The user can read or modify the value of the 4xxx interval register to monitor the module input and output status (03 06 16 function code).

| Address    | Parameter name | Setting range | Description of parameters                    | Read/write |
|------------|----------------|---------------|--|------------|
| 0x0000 (0) | ASCII code     |               | The first digit tube displays the contents.  | R/W        |
| 0x0001 (1) |                |               | The second digit tube displays the content.  | R/W        |
| 0x0002 (2) |                |               | The third digit tube displays the content.   | R/W        |
| 0x0003 (3) |                |               | The fourth digit tube displays the contents. | R/W        |
| 0x0004 (4) |                |               | The fifth digit tube displays the contents.  | R/W        |
| 0x0005 (5) |                |               | The sixth digit tube displays the contents.  | R/W        |

|                |   |     |
|----------------|---|-----|
| 0x0006<br>(6)  | <p>Data format. Used in combination with register 7 (0xFFFFFFF), cannot be used alone.</p> <p>High 4 bits of the high byte (0xFFFFFFF).</p> <p>0: Positive number</p> <p>1: negative number</p> <p>Lower 4 bits of the high byte (0xFFFFFFF): number of decimal places, range 0 to 5</p> <p>Low byte.</p> <p>Together with register 7 indicates the data to be displayed (for displaying data above 65535, 3 bytes are required, 0xFFFFFFF), this byte indicates the highest 8 bits of the data. (0xFFFFF)</p> <p>Note: This register should be used in conjunction with register 7 to write data to these two registers using the write multiple holding register (16 function code) when displaying data.</p>   | R/W |
| 0x0007<br>(7)  | <p>Display data. Can be used in combination with register 6 (0xFFFFFFF), or separately.</p> <p>(1) Together with register 6, this register indicates the data to be displayed (the data is represented by 3 bytes, 0xFFFFFFF), the high byte of this register indicates the middle 8 bits of the data (0xFFFFF) and the low byte indicates the lowest 8 bits of the data (0xFFFFF).</p> <p>The high byte comes first and the low byte comes second. (0xFFFF)</p> <p>Note: This register is used in conjunction with register 6 to write data to these two registers using the Write Multiple Holding Register (16 function code) when displaying data.</p> <p>(2) When used independently, write a hexadecimal number into the register and the digital tube will be converted into a decimal number for display.</p> | R/W |
| 0x0008<br>(8)  | <p>Blink control register. Each bit represents one digital tube, the lowest bit represents the first digital tube, and so on.</p> <p>0: no blinking (default).</p> <p>1: Blinking.</p> <p>Note: This parameter is not saved when power is lost.</p>   | R/W |
| 0x0009<br>(9)  | <p>Digital tube brightness level, 1~8, 6 digits default 4, 4 digits default 8.</p> <p>Note: This parameter is saved at power down.</p>  | R/W |
| 0x000A<br>(10) | <p>Display content is saved.</p> <p>0: No saving (default)</p> <p>1: Save all digital tube display contents</p> <p>Note: This parameter is saved at power down.</p>   | R/W |
| 0x000B         | Digital tube power-on initial display mode setting.   | R/W |

|  |  |        |  |     |
|--|--|--------|--|-----|
| (11)   | 0: Display "0"; (default)<br>1: Display the RS485 address of the module ;<br>2: Display of saved data.<br>Note: This parameter is saved at power down. |        |  |     |
| 0x000C~0x000F<br>(12~15)                         | Reserved, default value 0  |        |  | R   |
|  |  |        |  |     |
| The following parameters are saved at power down |  |        |  |     |
| 0x00FB<br>(251)                                  | Restore factory settings   | 00     | Restore factory settings:<br>Enter the following command at the current baud rate:FF 06 00 FB 00 00 ED E5  | R/W |
| 0x00FC<br>(252)                                  | Data return delay  | 0-1000 | Return data interval time after receiving the command (unit 40MS )<br>Set values:0-25  | R/W |
| 0x00FD<br>(253)                                  | RS485 Address / Slave Address  | 1-247  | FF 03 00 FD 00 01 00 24<br>Query current device address<br>You can also use the command:<br>FF 06 00 FD 00 02 8C 25 to set the device address to 0x02. | R/W |
| 0x00FE<br>(254)                                  | Baud rate  | 0-255  | 0:1200<br>1:2400 2:4800<br>3:9600 (default)<br>4:19200 5: 38400<br>6: 57600 7: 115200<br>Other: Restore factory settings                               | R/W |
| 0x00FF<br>(255)                                  | parity bit   | 0-2    | 0 :None(default)<br>1 :Even Parity<br>2 :Odd Parity  | R/W |

The baud rate is 9600 , 8 data bits, 1 stop bit, and no parity bit. Each data frame contains 8 bytes.

The data between 00H and 1FH in the ASCII code are control characters, which are not displayable, and 20H indicates the space character. 21H to 7EH are visible ASCII characters. The characters that can be correctly displayed by the digital tube screen are listed below.

|        |        |         |        |        |        |        |        |        |        |
|--------|--------|---------|--------|--------|--------|--------|--------|--------|--------|
|        | !      | "       | #      | '      | ,      | -      | .      | /      | =      |
| (20H)  | !(21H) | " (22H) | #(23H) | '(27H) | ,(2cH) | -(2dH) | .(2eH) | /(2fH) | =(3dH) |
| ?      | [      | \       | ]      | _      | `      | {      |        | }      | ~      |
| ?(3fH) | [(5bH) | \(5cH)  | ](5dH) | _(5fH) | `(60H) | {(7bH) | (7cH)  | }(7dH) | ~(7eH) |
| 0      | 1      | 2       | 3      | 4      | 5      | 6      | 7      | 8      | 9      |
| 0(30H) | 1(31H) | 2 (32H) | 3(33H) | 4(34H) | 5(35H) | 6(36H) | 7(37H) | 8(38H) | 9(39H) |
| A      | b      | C       | d      | E      | F      | G      | H      | I      | J      |
| A(41H) | B(42H) | C(43H)  | D(44H) | E(45H) | F(46H) | G(47H) | H(48H) | I(49H) | J(4aH) |
| K      | L      | M       | N      | O      | P      | Q      | R      | S      | T      |
| K(4bH) | L(4cH) | M(4dH)  | N(4eH) | O(4fH) | P(50H) | Q(51H) | R(52H) | S(53H) | T(54H) |
| U      | V      | Y       | Z      | a      | b      | c      | d      | e      | f      |
| U(55H) | V(57H) | Y(59H)  | Z(5aH) | a(61H) | b(62H) | c(63H) | d(64H) | e(65H) | f(66H) |
| g      | h      | i       | j      | k      | l      | m      | n      | o      | p      |
| g(67H) | h(68H) | i(69H)  | j(6aH) | k(6bH) | l(6cH) | m(6d)  | n(6eH) | o(6fH) | p(70H) |
| q      | r      | s       | t      | u      | v      | y      | z      |        |        |
| q(71H) | r(72H) | s(73H)  | t(74H) | u(75H) | v(78H) | y(79H) | z(7aH) |        |        |

## 1. Set the first digit tube display content:

Sending frames:

| Address<br>Code(1) | Function<br>Code(1) | Register<br>Address(2) | Setting<br>values (2) | CRC16 checksum<br>(2) |
|--------------------|---------------------|------------------------|-----------------------|-----------------------|
|--------------------|---------------------|------------------------|-----------------------|-----------------------|

Return frames:

| Address<br>Code(1) | Function<br>Code(1) | Register<br>Address(2) | Setting<br>values (2) | CRC16 checksum<br>(2) |
|--------------------|---------------------|------------------------|-----------------------|-----------------------|
|--------------------|---------------------|------------------------|-----------------------|-----------------------|

PLC Register Address: 40001

Address Code 0x01~0xF7

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

Register Address: 0x0000

Setting content: 2 bytes (values 32-126)

Example 1: Set current display content to "1"

Sending frames (address 1): 01 06 00 00 00 31 48 1E

Return frames: 01 06 00 00 00 31 48 1E

Sending frames (unknown address): FF 06 00 00 00 31 5D C0

Return frames: FF 06 00 00 00 31 5D C0

Example 2: Read the current display:

Sending frames: FF 03 00 00 00 01 91 D4

Return frames: FF 03 02 00 31 50 44

FF address code, 03 function code, 02 length, 31 current display content "1", 50 44 crc16 checksum.

## 2. Set the second digit tube display content:

Sending frames:

| Address<br>Code(1) | Function<br>Code(1) | Register<br>Address(2) | Setting<br>values (2) | CRC16 checksum<br>(2) |
|--------------------|---------------------|------------------------|-----------------------|-----------------------|
|--------------------|---------------------|------------------------|-----------------------|-----------------------|

Return frames:

| Address<br>Code(1) | Function<br>Code(1) | Register<br>Address(2) | Setting<br>values (2) | CRC16 checksum<br>(2) |
|--------------------|---------------------|------------------------|-----------------------|-----------------------|
|--------------------|---------------------|------------------------|-----------------------|-----------------------|

PLC Register Address: 40002

Address Code 0x01~0xF7

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

Register Address: 0x0001

Setting content: 2 bytes (values 32-126)

Example 1: Set current display content to "1"

Sending frames (address 1): 01 06 00 01 00 31 19 DE

Return frames: 01 06 00 01 00 31 19 DE

Sending frames (unknown address): FF 06 00 01 00 31 0C 00

Return frames: FF 06 00 01 00 31 0C 00

Example 2: Read the current display:

Sending frames: FF 03 00 00 00 01 C0 14

Return frames: FF 03 02 00 31 50 44

FF address code, 03 function code, 02 length, 31 current display content "1", 50 44 crc16 checksum.

### 3. Set the third digit tube display content:

Sending frames:

| Address<br>Code(1) | Function<br>Code(1) | Register<br>Address(2) | Setting<br>values (2) | CRC16 checksum<br>(2) |
|--------------------|---------------------|------------------------|-----------------------|-----------------------|
|--------------------|---------------------|------------------------|-----------------------|-----------------------|

Return frames:

| Address<br>Code(1) | Function<br>Code(1) | Register<br>Address(2) | Setting<br>values (2) | CRC16 checksum<br>(2) |
|--------------------|---------------------|------------------------|-----------------------|-----------------------|
|--------------------|---------------------|------------------------|-----------------------|-----------------------|

PLC Register Address: 40003

Address Code 0x01~0xF7

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

Register Address: 0x0002

Setting content: 2 bytes (values 32-126)

Example 1: Set current display content to "1"

Sending frames (address 1): 01 06 00 02 00 31 E9 DE

Return frames: 01 06 00 02 00 31 E9 DE

Sending frames (unknown address): FF 06 00 02 00 31 FC 00

Return frames: FF 06 00 02 00 31 FC 00

Example 2: Read the current display:

Sending frames: FF 03 00 00 00 01 30 14

Return frames: FF 03 02 00 31 50 44

FF address code, 03 function code, 02 length, 31 current display content "1", 50 44 crc16 checksum.

### 4. Set the fourth digit tube display content:

Sending frames:

| Address | Function | Register   | Setting    | CRC16 checksum |
|---------|----------|------------|------------|----------------|
| Code(1) | Code(1)  | Address(2) | values (2) | (2)            |

Return frames:

| Address | Function | Register   | Setting    | CRC16 checksum |
|---------|----------|------------|------------|----------------|
| Code(1) | Code(1)  | Address(2) | values (2) | (2)            |

PLC Register Address: 40004

Address Code 0x01~0xF7

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

Register Address: 0x0003

Setting content: 2 bytes (values 32-126)

Example 1: Set current display content to "1"

Sending frames (address 1): 01 06 00 03 00 31 B8 1E

Return frames: 01 06 00 03 00 31 B8 1E

Sending frames (unknown address): FF 06 00 03 00 31 AD C0

Return frames: FF 06 00 03 00 31 AD C0

Example 2: Read the current display:

Sending frames: FF 03 00 03 00 01 61 D4

Return frames: FF 03 02 00 31 50 44

FF address code, 03 function code, 02 length, 31 current display content "1", 50 44 crc16 checksum.

## 5. Set the fifth digit digital tube display content:

Sending frames:

| Address | Function | Register   | Setting    | CRC16 checksum |
|---------|----------|------------|------------|----------------|
| Code(1) | Code(1)  | Address(2) | values (2) | (2)            |

Return frames:

| Address | Function | Register   | Setting    | CRC16 checksum |
|---------|----------|------------|------------|----------------|
| Code(1) | Code(1)  | Address(2) | values (2) | (2)            |

PLC Register Address: 40005

Address Code 0x01~0xF7

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

Register Address: 0x0004

Setting content: 2 bytes (values 32-126)

Example 1: Set current display content to "1"

Sending frames (address 1): 01 06 00 04 00 31 09 DF

Return frames: 01 06 00 04 00 31 09 DF

Sending frames (unknown address): FF 06 00 04 00 31 1C 01

Return frames: FF 06 00 04 00 31 1C 01

Example 2: Read the current display:

Sending frames: FF 03 00 04 00 01 D0 15

Return frames: FF 03 02 00 31 50 44

FF address code, 03 function code, 02 length, 31 current display content "1", 50 44 crc16 checksum.

## 6. Set the sixth digit digital tube display content:

Sending frames:

|                    |                     |                        |                       |                       |
|--------------------|---------------------|------------------------|-----------------------|-----------------------|
| Address<br>Code(1) | Function<br>Code(1) | Register<br>Address(2) | Setting<br>values (2) | CRC16 checksum<br>(2) |
|--------------------|---------------------|------------------------|-----------------------|-----------------------|

Return frames:

|                    |                     |                        |                       |                       |
|--------------------|---------------------|------------------------|-----------------------|-----------------------|
| Address<br>Code(1) | Function<br>Code(1) | Register<br>Address(2) | Setting<br>values (2) | CRC16 checksum<br>(2) |
|--------------------|---------------------|------------------------|-----------------------|-----------------------|

PLC Register Address: 40006

Address Code 0x01~0xF7

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

Register Address: 0x0005

Setting content: 2 bytes (values 32-126)

Example 1: Set current display content to "1"

Sending frames (address 1): 01 06 00 05 00 31 58 1F

Return frames: 01 06 00 05 00 31 58 1F

Sending frames (unknown address): FF 06 00 05 00 31 4D C1

Return frames: FF 06 00 00 00 31 4D C1

Example 2: Read the current display:

Sending frames: FF 03 00 05 00 01 81 D5

Return frames: FF 03 02 00 31 50 44

FF address code, 03 function code, 02 length, 31 current display content "1", 50 44 crc16 checksum.

## 7. Setting the data format:

Sending frames:

|                    |                     |                        |                       |                       |
|--------------------|---------------------|------------------------|-----------------------|-----------------------|
| Address<br>Code(1) | Function<br>Code(1) | Register<br>Address(2) | Setting<br>values (2) | CRC16 checksum<br>(2) |
|--------------------|---------------------|------------------------|-----------------------|-----------------------|

Return frames:



| Address<br>Code(1) | Function<br>Code(1) | Register<br>Address(2) | Setting<br>values (2) | CRC16 checksum<br>(2) |
|--------------------|---------------------|------------------------|-----------------------|-----------------------|
|--------------------|---------------------|------------------------|-----------------------|-----------------------|

PLC Register Address: 40007  
Address Code 0x01~0xF7  
Function Code: Write 0x10; Read 0x03  
Register Address: 0x0006  
Setting content: 2 bytes

This register can only be used with register 0x0007 and can only display data, requiring the 0x10 instruction to write registers 0x0006 and 0x0007 simultaneously.

Example 1: (6 digit tube) set the current display to "12.3456"  
Sending frames (address 1): 01 10 00 06 00 02 04 04 01 E2 40 6A 25  
Return frames: 01 10 00 06 00 02 A1 C9  
Sending frames (unknown address): FF 10 00 06 00 02 04 04 01 E2 40 5D CE  
Return frames: FF 10 00 06 00 02 B4 17

Example 2: (6 digit tube) set the current display to "-12.345"  
Sending frames (address 1): 01 10 00 06 00 02 04 13 00 30 39 A3 13  
Return frames: 01 10 00 06 00 02 A1 C9  
Sending frames (unknown address): FF 10 00 06 00 02 04 13 00 30 39 94 F8  
Return frames: FF 10 00 06 00 02 B4 17

## 8. Setting the display format:

Sending frames:

| Address<br>Code(1) | Function<br>Code(1) | Register<br>Address(2) | Setting<br>values (2) | CRC16 checksum<br>(2) |
|--------------------|---------------------|------------------------|-----------------------|-----------------------|
|--------------------|---------------------|------------------------|-----------------------|-----------------------|

Return frames:

| Address<br>Code(1) | Function<br>Code(1) | Register<br>Address(2) | Setting<br>values (2) | CRC16 checksum<br>(2) |
|--------------------|---------------------|------------------------|-----------------------|-----------------------|
|--------------------|---------------------|------------------------|-----------------------|-----------------------|

PLC Register Address: 40008  
Address Code 0x01~0xF7  
Function Code: Write 0x06/0x10; Read 0x03  
Register Address: 0x0007  
Setting content: 2 bytes

This register can be used with register 0x0007 to display data only, requiring the use of the 0x10 instruction to write both registers 0x0006 and 0x0007. This register can also be used alone (value 0 to 65535 when

used alone).

Example 1: (6 digit tube) set the current display to "12.3456"

Sending frames (address 1): 01 10 00 06 00 02 04 04 01 E2 40 6A 25

Return frames: 01 10 00 06 00 02 A1 C9

Sending frames (unknown address): FF 10 00 06 00 02 04 04 01 E2 40 5D CE

Return frames: FF 10 00 06 00 02 B4 17

Example 2: (6 digit tube) set the current display to "-12.345"

Sending frames (address 1): 01 10 00 06 00 02 04 13 00 30 39 A3 13

Return frames: 01 10 00 06 00 02 A1 C9

Sending frames (unknown address): FF 10 00 06 00 02 04 13 00 30 39 94 F8

Return frames: FF 10 00 06 00 02 B4 17

Example 3: (6 digit tube) set the current display to "12345"

Sending frames (address 1): 01 06 00 07 30 39 EC 19

Return frames: 01 06 00 07 30 39 EC 19

Sending frames (unknown address): FF 06 00 07 30 39 F9 C7

Return frames: FF 06 00 07 30 39 F9 C7

## 9. Set the blinking bit:

Sending frames:

| Address<br>Code(1) | Function<br>Code(1) | Register<br>Address(2) | Setting<br>values (2) | CRC16 checksum<br>(2) |
|--------------------|---------------------|------------------------|-----------------------|-----------------------|
|--------------------|---------------------|------------------------|-----------------------|-----------------------|

Return frames:

| Address<br>Code(1) | Function<br>Code(1) | Register<br>Address(2) | Setting<br>values (2) | CRC16 checksum<br>(2) |
|--------------------|---------------------|------------------------|-----------------------|-----------------------|
|--------------------|---------------------|------------------------|-----------------------|-----------------------|

PLC Register Address: 40008

Address Code 0x01~0xF7

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

Register Address: 0x0007

Setting content: 2 bytes (values 0-63)

Example 1: Set the 1st digit to blinking

Sending frames (address 1): 01 06 00 08 00 01 C9 C8

Return frames: 01 06 00 08 00 01 C9 C8

Sending frames (unknown address): FF 06 00 08 00 01 DC 16

Return frames: FF 06 00 08 00 01 DC 16

Example 2: Set the 5st digit to blinking

Sending frames (address 1): 01 06 00 08 00 10 09 C4

Return frames: 01 06 00 08 00 10 09 C4

Sending frames (unknown address): FF 06 00 08 00 01 1C 1A

Return frames: FF 06 00 08 00 01 1C 1A

Example 3: Reading the current blinking bit:

Sending frames: 01 03 00 08 00 01 05 C8

Return frames: 01 03 02 00 01 79 84

01 address code, 03 function code, 02 length, 01 means the current 1st digit is blinking, 79 84 crc16 checksum

## 10. Set the brightness of the digital tube:

Sending frames:

| Address<br>Code(1) | Function<br>Code(1) | Register<br>Address(2) | Setting<br>values (2) | CRC16 checksum<br>(2) |
|--------------------|---------------------|------------------------|-----------------------|-----------------------|
|--------------------|---------------------|------------------------|-----------------------|-----------------------|

Return frames:

| Address<br>Code(1) | Function<br>Code(1) | Register<br>Address(2) | Setting<br>values (2) | CRC16 checksum<br>(2) |
|--------------------|---------------------|------------------------|-----------------------|-----------------------|
|--------------------|---------------------|------------------------|-----------------------|-----------------------|

PLC Register Address: 40010

Address Code 0x01~0xF7

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

Register Address: 0x0009

Setting content: 2 bytes (values 1-8)

Example 1: Set the brightness of the digital tube to 1

Sending frames (address 1): 01 06 00 09 00 01 98 08

Return frames: 01 06 00 09 00 01 98 08

Sending frames (unknown address): FF 06 00 09 00 01 8D D6

Return frames: FF 06 00 09 00 01 8D D6

Example 2: Read the current digital tube brightness:

Sending frames: 01 03 00 09 00 01 54 08

Return frames: 01 03 02 00 01 79 84

01 address code, 03 function code, 02 length, 01 means current digital tube brightness is 1, 79 84 crc16 checksum.

## 11. Set display content to save:

Sending frames:

| Address | Function | Register   | Setting    | CRC16 checksum |
|---------|----------|------------|------------|----------------|
| Code(1) | Code(1)  | Address(2) | values (2) | (2)            |

Return frames:

| Address | Function | Register   | Setting    | CRC16 checksum |
|---------|----------|------------|------------|----------------|
| Code(1) | Code(1)  | Address(2) | values (2) | (2)            |

PLC Register Address: 40011

Address Code 0x01~0xF7

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

Register Address: 0x000A

Setting content: 2 bytes (values 0-1)

For example, 1: Enable the display content to be saved

Sending frames (address 1): 01 06 00 0A 00 01 68 08

Return frames: 01 06 00 0A 00 01 68 08

Sending frames (unknown address): FF 06 00 0A 00 01 7D D6

Return frames: FF 06 00 0A 00 01 7D D6

Example 2: Read the current display save switch:

Sending frames: 01 03 00 09 00 01 54 08

Return frames: 01 03 02 00 01 79 84

01 Address code, 03 function code, 02 length, 01 indicates that the displayed content is saved, 79 84 crc16 check.

## 12. Set the initial display mode for digital tube power-up:

Sending frames:

| Address | Function | Register   | Setting    | CRC16 checksum |
|---------|----------|------------|------------|----------------|
| Code(1) | Code(1)  | Address(2) | values (2) | (2)            |

Return frames:

| Address | Function | Register   | Setting    | CRC16 checksum |
|---------|----------|------------|------------|----------------|
| Code(1) | Code(1)  | Address(2) | values (2) | (2)            |

PLC Register Address: 40012

Address Code 0x01~0xF7

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

Register Address: 0x000B

Setting content: 2 bytes (values 0-2)

Example 1: Setting the digital tube to display the RS485 address on power up:

Sending frames (address 1): 01 06 00 0B 00 01 39 C8

Return frames: 01 06 00 0B 00 01 39 C8

Sending frames (unknown address): FF 06 00 0B 00 01 2C 16

Return frames: FF 06 00 0B 00 01 2C 16

Example 2: Reading the current digital tube power-up display mode:

Sending frames: 01 03 00 0B 00 01 F5 C8

Return frames: 01 03 02 00 01 79 84

01 address code, 03 function code, 02 length, 01 indicates the current digital tube power-up display RS485 address, 79 84 crc16 checksum.

### 13. Set 485 address:

Sending frames:

| Address | Function | Register   | Setting    | CRC16 checksum |
|---------|----------|------------|------------|----------------|
| Code(1) | Code(1)  | Address(2) | values (2) | (2)            |

Return frames:

| Address | Function | Register   | Setting    | CRC16 checksum |
|---------|----------|------------|------------|----------------|
| Code(1) | Code(1)  | Address(2) | values (2) | (2)            |

PLC Register Address: 40254

Address Code 0x01~0xF7

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

Register Address: 0x00FD (253)

Setting content: 2 bytes (values 1-247)

Example 1: Set the current device address to 0x02

Sending frames (address 1): 01 06 00 FD 00 02 99 FB

Return frames: 01 06 00 FD 00 02 99 FB

Sending frames (unknown address): FF 06 00 FD 00 02 8C 25

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

Example 2: Read the current device address (0x0001), only one RS485 device can be connected:

Sending frames: FF 03 00 FD 00 01 00 24

Return frames: FF 03 02 00 01 50 50

FF address code, 03 function code, 02 length, 01 current module address, 50 50 crc16 checksum.

### 14. Setting the serial port baud rate:

Sending frames:

| Address | Function | Register   | Setting    | CRC16 checksum |
|---------|----------|------------|------------|----------------|
| Code(1) | Code(1)  | Address(2) | values (2) | (2)            |

Return frames:

| Address<br>Code(1) | Function<br>Code(1) | Register<br>Address(2) | Setting<br>values (2) | CRC16 checksum<br>(2) |
|--------------------|---------------------|------------------------|-----------------------|-----------------------|
|--------------------|---------------------|------------------------|-----------------------|-----------------------|

PLC Register Address: 40255  
Address Code: 0x01~0xF7  
Function Code: Write 0x06/0x10; Read 0x03  
Register Address: 0x00FE(254)  
Setting content: 2 bytes (values 0-7)

For example 1, to change the baud rate to 4800:

Sending frames (address 1): 01 06 00 FE 00 02 69 FB

Return frames: 01 06 00 FE 00 02 69 FB

Baud Rate Corresponding Numbers: 0:1200 1:2400 2:4800 3:9600

4:19200 5:38400 6: 57600 7: 115200 8: Restore factory settings

Note: 1 The baud rate will only be updated when the module is re-powered when using this command!

2 The factory settings can be restored when the baud rate corresponds to the number 8

For example: 01 06 00 FE 00 08 E9 FC

1, 115200 : 01 06 00 FE 00 07 A9 F8

Example 2, reading the current baud rate:

Sending frames (address 1): 01 03 00 FE 00 01 E5 FA

Return frames: 01 03 02 00 03 F8 45

01 address code, 03 function code, 02 length, 03 means current baud rate is 9600, F8 45 crc16 checksum.

Baud Rate Corresponding Numbers: 0:1200 1:2400 2:4800 3:9600

4:19200 5:38400 6: 57600 7: 115200

## 15. Set Data return delay:

Sending frames:

| Address<br>Code(1) | Function<br>Code(1) | Register<br>Address(2) | Setting<br>values (2) | CRC16 checksum<br>(2) |
|--------------------|---------------------|------------------------|-----------------------|-----------------------|
|--------------------|---------------------|------------------------|-----------------------|-----------------------|

Return frames:

| Address<br>Code(1) | Function<br>Code(1) | Register<br>Address(2) | Setting<br>values (2) | CRC16 checksum<br>(2) |
|--------------------|---------------------|------------------------|-----------------------|-----------------------|
|--------------------|---------------------|------------------------|-----------------------|-----------------------|

PLC Register Address: 40253

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

Register Address: 0x00FC(252)

Setting content: 2 bytes (values 0-25)

For example, Set the Data return delay to 200ms

Sending frames (address 1): 01 06 00 FC 00 05 89 F9

Return frames: 01 06 00 FC 00 05 89 F9

Return to the delay time calculation formula:  $X = 05 * 40 = 200MS$

Note: The maximum setting can be 1000MS, more than 1000MS i.e. setting

value greater than 25 will initialize the Data return delay.  
i.e.: 01 06 00 FC 00 20 48 22 can make the Data return delay re-initialize to 0

#### 16. Set the parity bit:

Sending frames:

| Address<br>Code(1) | Function<br>Code(1) | Register<br>Address(2) | Setting<br>values (2) | CRC16 checksum<br>(2) |
|--------------------|---------------------|------------------------|-----------------------|-----------------------|
|--------------------|---------------------|------------------------|-----------------------|-----------------------|

Return frames:

| Address<br>Code(1) | Function<br>Code(1) | Register<br>Address(2) | Setting<br>values (2) | CRC16 checksum<br>(2) |
|--------------------|---------------------|------------------------|-----------------------|-----------------------|
|--------------------|---------------------|------------------------|-----------------------|-----------------------|

PLC Register Address: 40256

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

Register Address: 0x00FF(255)

Setting content: 2 bytes (values 0-2)

For example, setting the parity to even parity:

Sending frames (address 1): 01 06 00 FF 00 01 78 3A

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

0: No parity (default) 1: Even parity 2: Odd parity 3: Restore initialization

**Note: 1 、 The parity bit will be updated only when the module is re-powered when using this command!**

**2 、 When the setting is greater than 2, re-powering will restore the default 0, No parity.**

#### 17. Restore factory settings:

Sending frames:

| Address<br>Code(1) | Function<br>Code(1) | Register<br>Address(2) | Setting<br>values (2) | CRC16 checksum<br>(2) |
|--------------------|---------------------|------------------------|-----------------------|-----------------------|
|--------------------|---------------------|------------------------|-----------------------|-----------------------|

Return frames:

| Address<br>Code(1) | Function<br>Code(1) | Register<br>Address(2) | Setting<br>values (2) | CRC16 checksum<br>(2) |
|--------------------|---------------------|------------------------|-----------------------|-----------------------|
|--------------------|---------------------|------------------------|-----------------------|-----------------------|

PLC Register Address: 40252

Address Code 0x01~0xF7

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

Register Address: 0x00FB(251)

Sending frames: FF 06 00 FB 00 00 ED E5

Return frames: FF 06 00 FB 00 00 ED E5

Hardware reset:

Short the RES jumper of the board for 5 seconds, then power on again.