



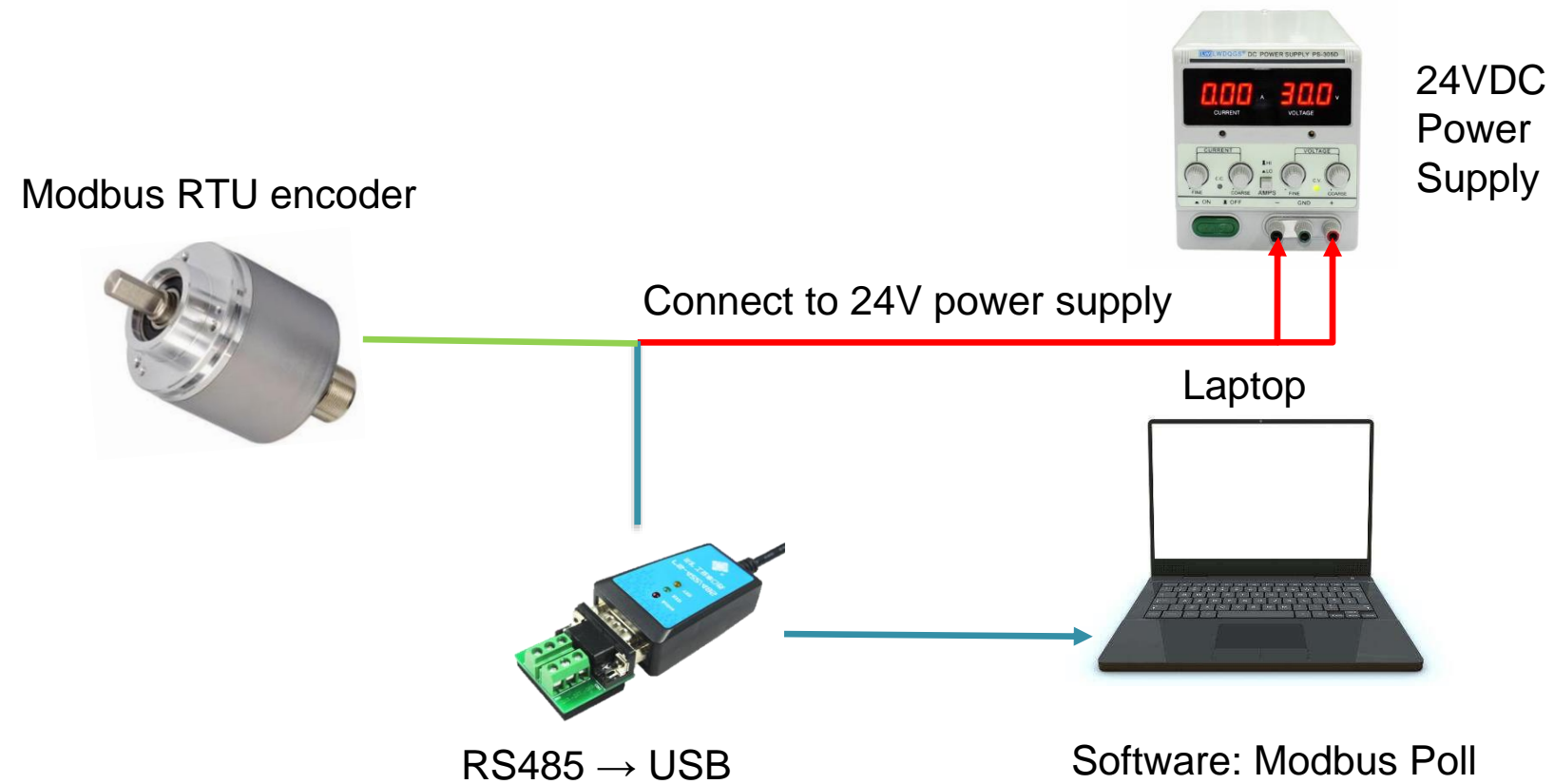
QUICK START MANUAL OF MODBUS RTU ENCODER





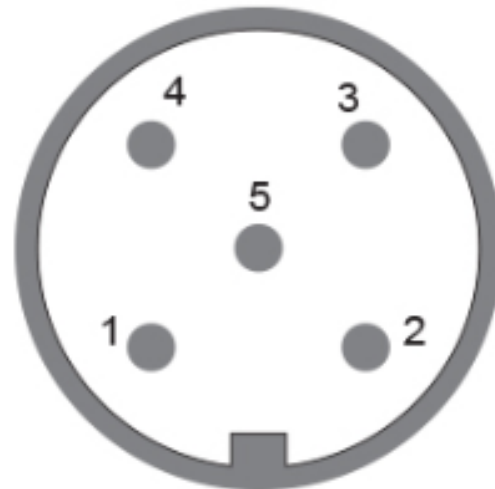
DEVICE CONNECTION

Cable Connection



Encoder Setting

Pin Definition



Connection Plan

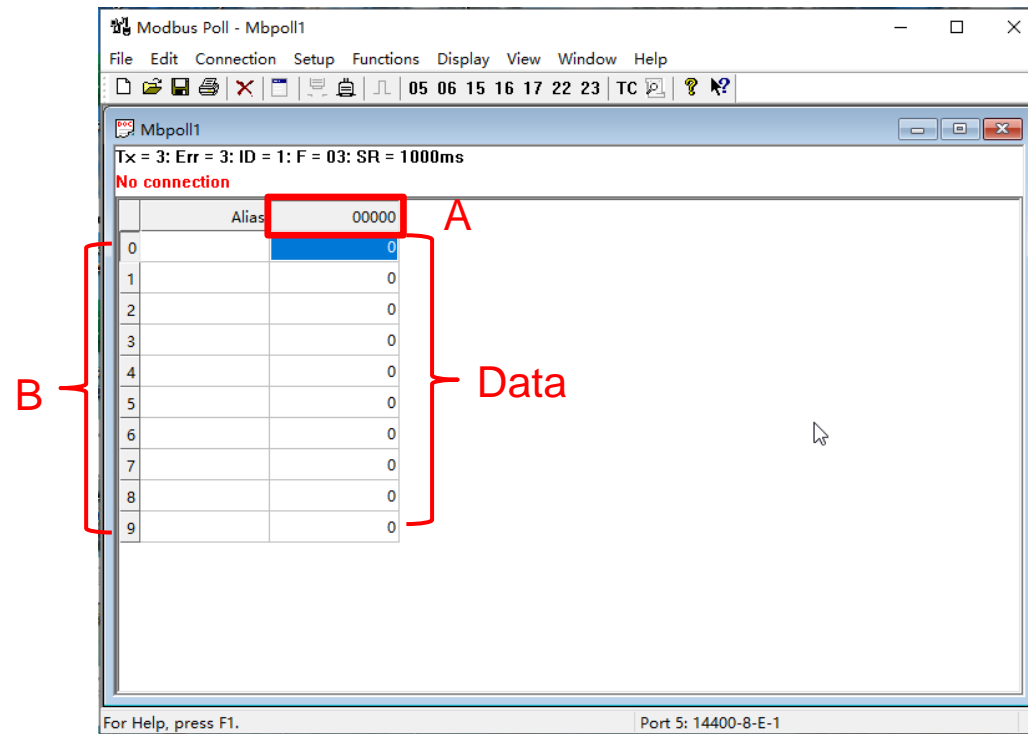
SIGNAL	PIN NUMBER
Power Supply	2
GND	3
RS485 A +	4
RS485 B -	5
Signal GND	1

Default Setting

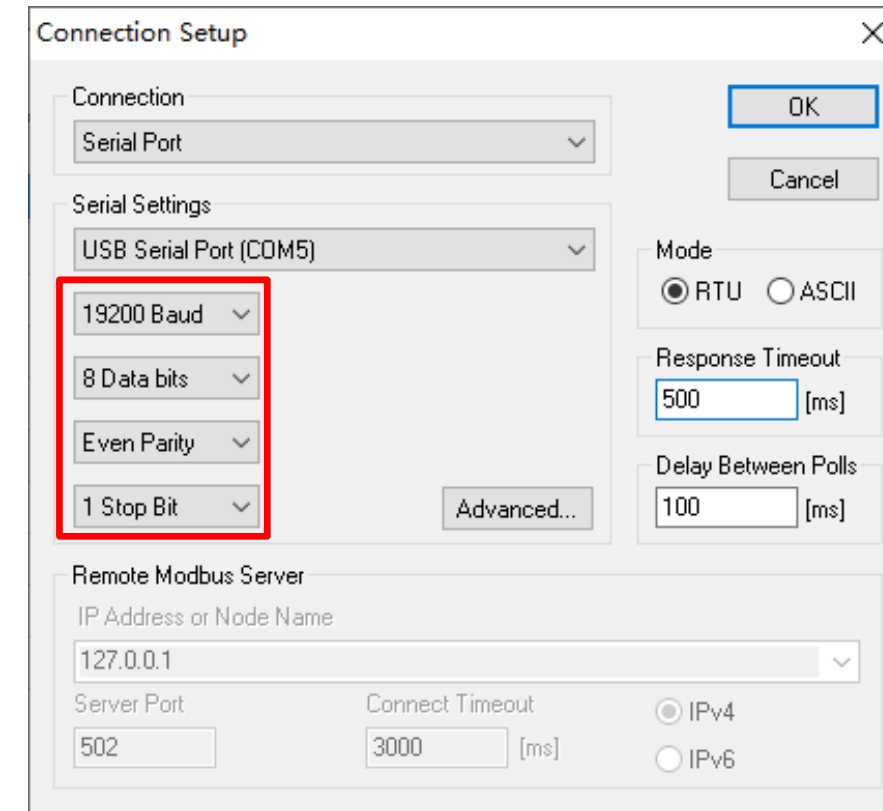
- Baud rate: 19200
- Slave ID: 7Fh(127d)
- Even parity check
- 8 data bits.
- 1 stop bit

POSITAL

COMMUNICATION SETTING



➤ Register Address = A + B



➤ Press F3 to make connection setup. If it is the first time to use, select it according to the original settings.

POSITAL

COMMUNICATION SETTING

Read/Write Definition

Slave ID: OK

Function: 03 Read Holding Registers (4x) Cancel

Address: Protocol address. E.g. 40011 -> 10

Quantity:

Scan Rate: [ms] Apply

Disable

☐ Read/Write Disabled

☐ Disable on error

Read/Write Once

View

Rows

☒ 10 ☐ 20 ☐ 50 ☐ 100 ☐ Fit to Quantity

☐ Hide Alias Columns ☐ PLC Addresses (Base 1)

☐ Address in Cell ☐ Enron/Daniel Mode

Register	Data name	Order	Attribute	Value	Default
40002	Position	MSB	RO	Position Value Bit 17-32	
40003	Position	LSB	RO	Position Value Bit 1-16	
40004	Actual Reverse State	MSB	RO	Actual State CW = 0, CCW = 1	0
40005	Term Rest State	MSB	RO	Termination on = 1, off = 0	1
40006	Speed	MSB	RO	Speed Value Bit 17-32	
40007	Speed	LSB	RO	Speed Value Bit 1-16	
40008	Limit switch state		RO		

- > Press F8 to make read/write definition. The original slave ID is 127. According to register list, choosing Address and Quantity.

- > Address: The first register address you need to view.
- > Quantity: The number of continuous registers you need to view.

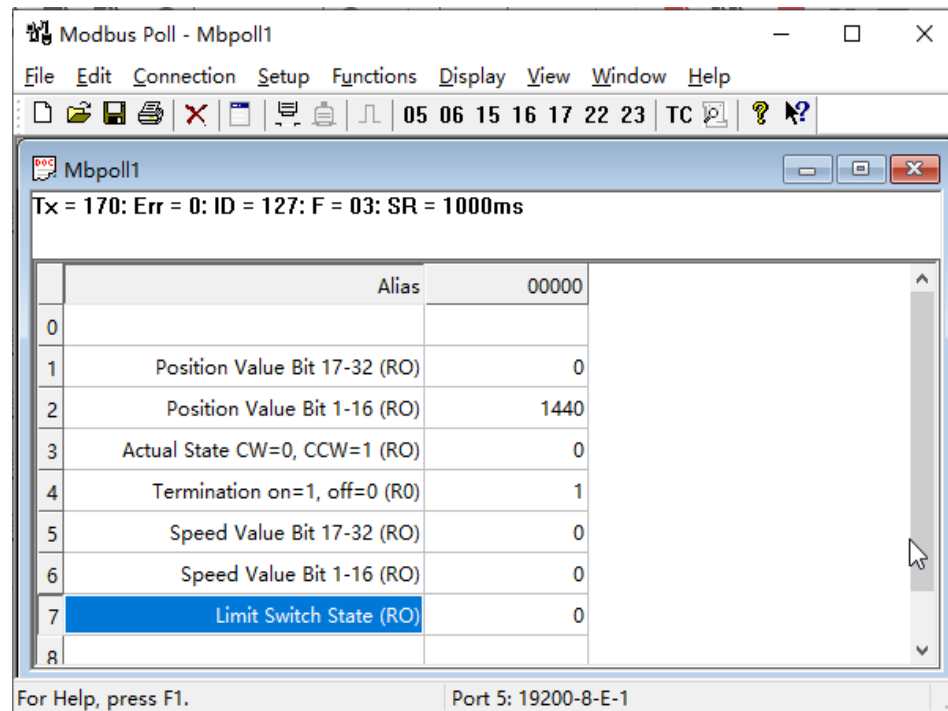
For example: If you want to check the position data.

- > Address: Protocol address. E.g. 40011→10.
So Position Register address 40002 should be reduced 40001 = 1.
- > Quantity blank should be filled 2.
- > Note: If the register being queried is not in use, an error is reported.

POSITAL

REGISTER DESCRIPTION

Register 0 - 19



Modbus Poll - Mbpoll1

File Edit Connection Setup Functions Display View Window Help

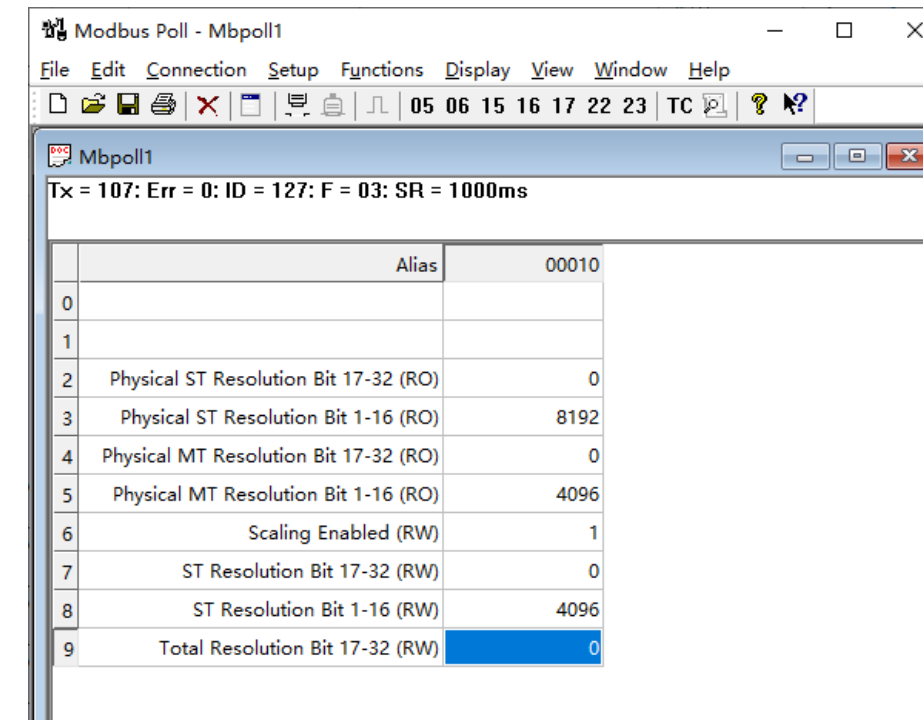
05 06 15 16 17 22 23 TC ? ?

Mbpoll1

Tx = 170: Err = 0: ID = 127: F = 03: SR = 1000ms

	Alias	00000
0		
1	Position Value Bit 17-32 (RO)	0
2	Position Value Bit 1-16 (RO)	1440
3	Actual State CW=0, CCW=1 (RO)	0
4	Termination on=1, off=0 (RO)	1
5	Speed Value Bit 17-32 (RO)	0
6	Speed Value Bit 1-16 (RO)	0
7	Limit Switch State (RO)	0
8		

For Help, press F1. Port 5: 19200-8-E-1



Modbus Poll - Mbpoll1

File Edit Connection Setup Functions Display View Window Help

05 06 15 16 17 22 23 TC ? ?

Mbpoll1

Tx = 107: Err = 0: ID = 127: F = 03: SR = 1000ms

	Alias	00010
0		
1		
2	Physical ST Resolution Bit 17-32 (RO)	0
3	Physical ST Resolution Bit 1-16 (RO)	8192
4	Physical MT Resolution Bit 17-32 (RO)	0
5	Physical MT Resolution Bit 1-16 (RO)	4096
6	Scaling Enabled (RW)	1
7	ST Resolution Bit 17-32 (RW)	0
8	ST Resolution Bit 1-16 (RW)	4096
9	Total Resolution Bit 17-32 (RW)	0

Remark:

- > RO: Read only, not modifiable.
- > RW: Read and write.



REGISTER DESCRIPTION

Register 20 - 32

Modbus Poll - Mbpoll1

File Edit Connection Setup Functions Display View Window Help

05 06 15 16 17 22 23 TC ? ?

Mbpoll1

Tx = 242: Err = 0: ID = 127: F = 03: SR = 1000ms

	Alias	00020
0	Total Resolution Bit 1-16 (RW)	16384
1	Preset Bit 17-32 (RW)	0
2	Preset Bit 1-16 (RW)	0
3	Offset Bit 17-32 (RO)	0
4	Offset Bit 1-16 (RO)	6420
5	Count Direction (RW)	0
6	Speed Mode (RW)	0
7	Speed Filter (RW)	0
8	Limit Switch Enable (RW)	0
9	Limit Switch Low Bit 17-32 (RW)	0

For Help, press F1. Port 5: 19200-8-E-1

Modbus Poll - Mbpoll1

File Edit Connection Setup Functions Display View Window Help

05 06 15 16 17 22 23 TC ? ?

Mbpoll1

Tx = 68: Err = 0: ID = 127: F = 03: SR = 1000ms

	Alias	00030
0	Limit Switch Low Bit 1-16 (RW)	0
1	Limit Switch High Bit 17-32 (RW)	0
2	Limit Switch High Bit 1-16 (RW)	0
3		
4		
5		
6		
7		
8		
9		

For Help, press F1. Port 5: 19200-8-E-1

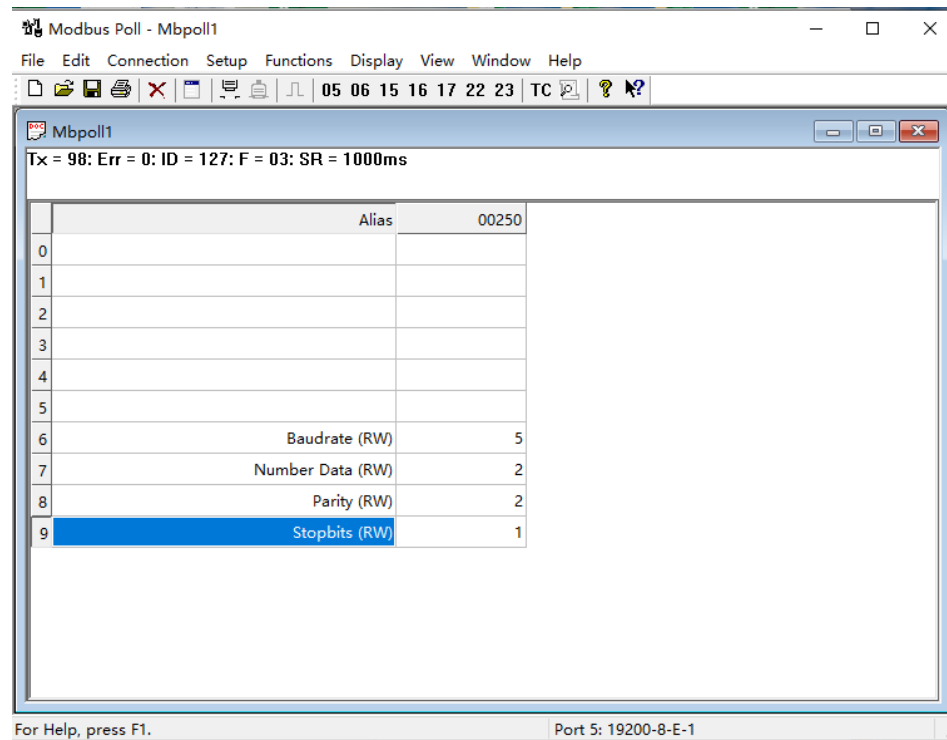
Remark:

- > RO: Read only, not modifiable.
- > RW: Read and write.

POSITAL

REGISTER DESCRIPTION

Register 256 - 262



Modbus Poll - Mbpoll1

File Edit Connection Setup Functions Display View Window Help

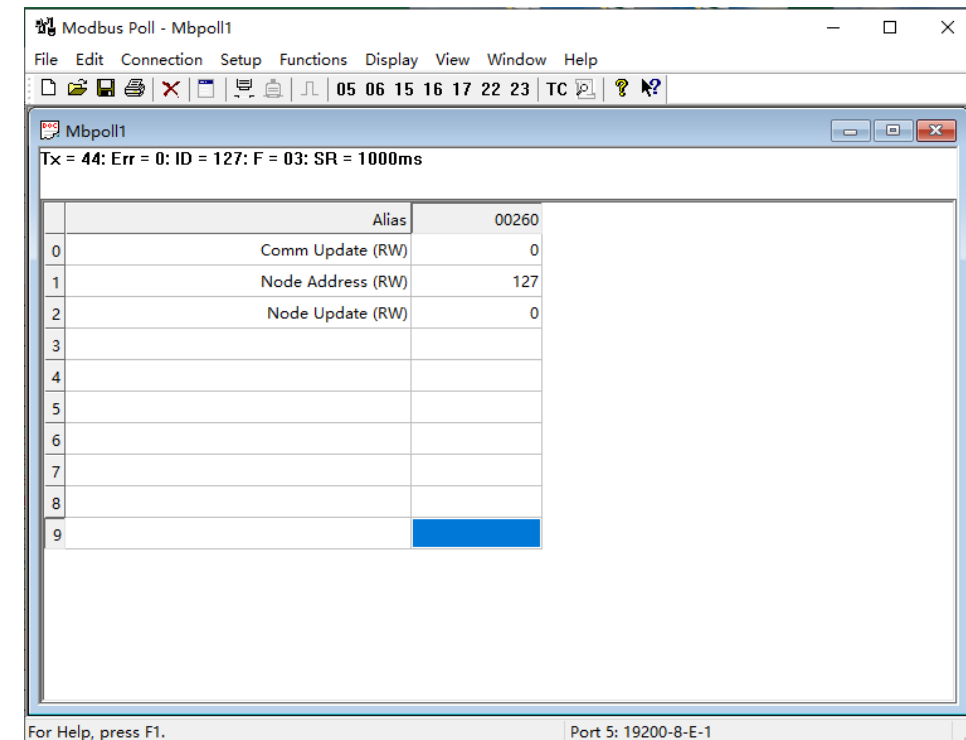
05 06 15 16 17 22 23 TC ? ?

Mbpoll1

Tx = 98: Err = 0: ID = 127: F = 03: SR = 1000ms

	Alias	00250
0		
1		
2		
3		
4		
5		
6	Baudrate (RW)	5
7	Number Data (RW)	2
8	Parity (RW)	2
9	Stopbits (RW)	1

For Help, press F1. Port 5: 19200-8-E-1



Modbus Poll - Mbpoll1

File Edit Connection Setup Functions Display View Window Help

05 06 15 16 17 22 23 TC ? ?

Mbpoll1

Tx = 44: Err = 0: ID = 127: F = 03: SR = 1000ms

	Alias	00260
0	Comm Update (RW)	0
1	Node Address (RW)	127
2	Node Update (RW)	0
3		
4		
5		
6		
7		
8		
9		

For Help, press F1. Port 5: 19200-8-E-1

Remark:

- > RO: Read only, not modifiable.
- > RW: Read and write.

POSITAL

ENCODER CONFIGURATION

Position Preset

16: Write Multiple Registers

Slave ID: 127

Address: 21

Quantity: 2

Type: Unsigned

021 = 0

022 = 0

Send

Cancel

Edit

Open

Save

Modbus Poll - Mbpoll1

File Edit Connection Setup Functions Display View Window Help

05 06 15 16 17 22 23 TC ? ?

Mbpoll1

Tx = 455: Err = 0: ID = 127: F = 03: SR = 1000ms

	Alias	00020
0	Tot Resolution Bit 1-17 (W/R)	8192
1	Preset Bit 17-32 (W/R)	0
2	Preset Bit 1-16 (W/R)	0
3	Offset Bit 17-32 (RO)	478
4	Offset Bit 1-16 (RO)	26382
5	Count Direction (W/R)	0
6	Speed Mode (W/R)	0
7	Speed Filter (W/R)	0
8	Limit Switch Low Bit 17-32 (W/R)	0
9	Limit Switch Low Bit 1-16 (W/R)	0

For Help, press F1.

Port 5: 19200-8-E-1

- Press Alt + F8 to write multiple registers.
- Filling in "Slave ID", "Address", "Quantity" and "Type".
- Set the corresponding register data.
- Press "Send".

- According to the figure above, we can find:
- Register Address of preset are 21 and 22.
- Address should be filled in 21.
- Quantity should be filled in 2.

POSITAL

ENCODER CONFIGURATION

Direction Setting

16: Write Multiple Registers

Slave ID: 127

Address: 25

Quantity: 1

Type: Unsigned

025 = 0

Send

Cancel

Edit

Open

Save

Modbus Poll - Mbpoll1

File Edit Connection Setup Functions Display View Window Help

05 06 15 16 17 22 23 TC ? ?

Mbpoll1

Tx = 455: Err = 0: ID = 127: F = 03: SR = 1000ms

	Alias	00020
0	Tot Resolution Bit 1-17 (W/R)	8192
1	Preset Bit 17-32 (W/R)	0
2	Preset Bit 1-16 (W/R)	0
3	Offset Bit 17-32 (RO)	478
4	Offset Bit 1-16 (RO)	26382
5	Count Direction (W/R)	0
6	Speed Mode (W/R)	0
7	Speed Filter (W/R)	0
8	Limit Switch Low Bit 17-32 (W/R)	0
9	Limit Switch Low Bit 1-16 (W/R)	0

For Help, press F1.

Port 5: 19200-8-E-1

- Press Alt + F8 to write multiple registers.
- Filling in "Slave ID", "Address", "Quantity" and "Type".
- Set the corresponding register data.
- Press "Send".

- According to the figure above, we can find:
- Register address of count direction is 25.
- Address should be filled in 25.
- Quantity should be filled in 1.

POSITAL

ENCODER CONFIGURATION

ST Resolution Setting

16: Write Multiple Registers

Slave ID: 127

Address: 17

Quantity: 2

Type: Unsigned

017 = 0
018 = 4096

Send

Cancel

Edit

Open

Save

Modbus Poll - Mbpoll1

File Edit Connection Setup Functions Display View Window Help

05 06 15 16 17 22 23 TC ? ?

Mbpoll1

Tx = 196: Err = 0: ID = 127: F = 03: SR = 1000ms

	Alias	00010
0		
1		
2	Physical ST Resolution Bit 17-32 (RO)	0
3	Physical ST Resolution Bit 1-16 (RO)	8192
4	Physical MT Resolution Bit 17-32 (RO)	0
5	Physical MT Resolution Bit 1-16 (RO)	4096
6	Scaling Enabled (RW)	1
7	ST Resolution Bit 17-32 (W/R)	0
8	ST Resolution Bit 1-16 (W/R)	4096
9	Tot Resolution Bit 17-32 (W/R)	0

For Help, press F1.

Port 5: 19200-8-E-1

- Press Alt + F8 to write multiple registers.
- Filling in "Slave ID", "Address", "Quantity" and "Type".
- Set the corresponding register data.
- Press "Send".

- According to the figure above, we can find:
- Register address of ST resolution setting are 17 and 18.
- Address should be filled in 17.
- Quantity should be filled in 2.

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ENCODER CONFIGURATION

Total Resolution Setting

16: Write Multiple Registers

Slave ID: 127

Address: 19

Quantity: 2

Type: Unsigned

019 = 0
020 = 16384

Send
Cancel
Edit
Open
Save

Modbus Poll - Mbpoll1

File Edit Connection Setup Functions Display View Window Help

05 06 15 16 17 22 23 TC ? ?

Mbpoll1

Tx = 196: Err = 0: ID = 127: F = 03: SR = 1000ms

	Alias	00010
0		
1		
2	Physical ST Resolution Bit 17-32 (RO)	0
3	Physical ST Resolution Bit 1-16 (RO)	8192
4	Physical MT Resolution Bit 17-32 (RO)	0
5	Physical MT Resolution Bit 1-16 (RO)	4096
6	Scaling Enabled (RW)	1
7	ST Resolution Bit 17-32 (W/R)	0
8	ST Resolution Bit 1-16 (W/R)	4096
9	Tot Resolution Bit 17-32 (W/R)	0

	Alias	00020
0	Tot Resolution Bit 1-17 (W/R)	8192
1	Preset Bit 17-32 (W/R)	0

- Press Alt + F8 to write multiple registers.
- Filling in "Slave ID", "Address", "Quantity" and "Type".
- Set the corresponding register data.
- Press "Send".

- According to the figure above, we can find:
- Register address of total resolution setting are 19 and 20.
- Address should be filled in 19.
- Quantity should be filled in 2.

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ENCODER CONFIGURATION

Baud Rate Setting

16: Write Multiple Registers

Slave ID: 127

Address: 256

Quantity: 1

Type: Unsigned

256 = 5

Send

Cancel

Edit

Open

Save

- Press Alt + F8 to write multiple registers.
- Filling in "Slave ID", "Address", "Quantity" and "Type".
- Set the corresponding register data.
- Press "Send".
- Baud rate: 0=1200, 1=2400, 2=4800, 3=9600, 4=14400, 5=19200, 6=38400, 7=56000, 8=57600, 9=115200, 10=128000, 11=256000
- Power off and reconnect at the new baud rate after setting.

Modbus Poll - Mbpoll1

File Edit Connection Setup Functions Display View Window Help

05 06 15 16 17 22 23 TC ? ?

Mbpoll1

Tx = 98: Err = 0: ID = 127: F = 03: SR = 1000ms

Address	Alias	Value
0		
1		
2		
3		
4		
5		
6	Baudrate (RW)	5
7	Number Data (RW)	2
8	Parity (RW)	2
9	Stopbits (RW)	1

For Help, press F1.

Port 5: 19200-8-E-1

- According to the figure above, we can find:
- Register Address of baud rate is 256.
- Address should be filled in 256.
- Quantity should be filled in .

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ENCODER CONFIGURATION

Slave ID Setting

16: Write Multiple Registers

Slave ID: 127

Address: 261

Quantity: 1

Type: Unsigned

Send

Cancel

Edit

Open

Save

Modbus Poll - Mbpoll1

File Edit Connection Setup Functions Display View Window Help

05 06 15 16 17 22 23 TC ? ?

Mbpoll1

Tx = 44: Err = 0: ID = 127: F = 03: SR = 1000ms

	Alias	00260
0	Comm Update (RW)	0
1	Node Address (RW)	127
2	Node Update (RW)	0
3		
4		
5		
6		
7		
8		
9		

For Help, press F1.

Port 5: 19200-8-E-1

- Press Alt + F8 to write multiple registers.
- Filling in "Slave ID", "Address", "Quantity" and "Type".
- Set the corresponding register data.
- Press "Send".
- Power off and reconnect at the Slave ID after setting.

- According to the figure above, we can find:
- Register Address of node address is 261.
- Address should be filled in 261.
- Quantity should be filled in 1.



THANK YOU FOR YOUR ATTENTION!



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