

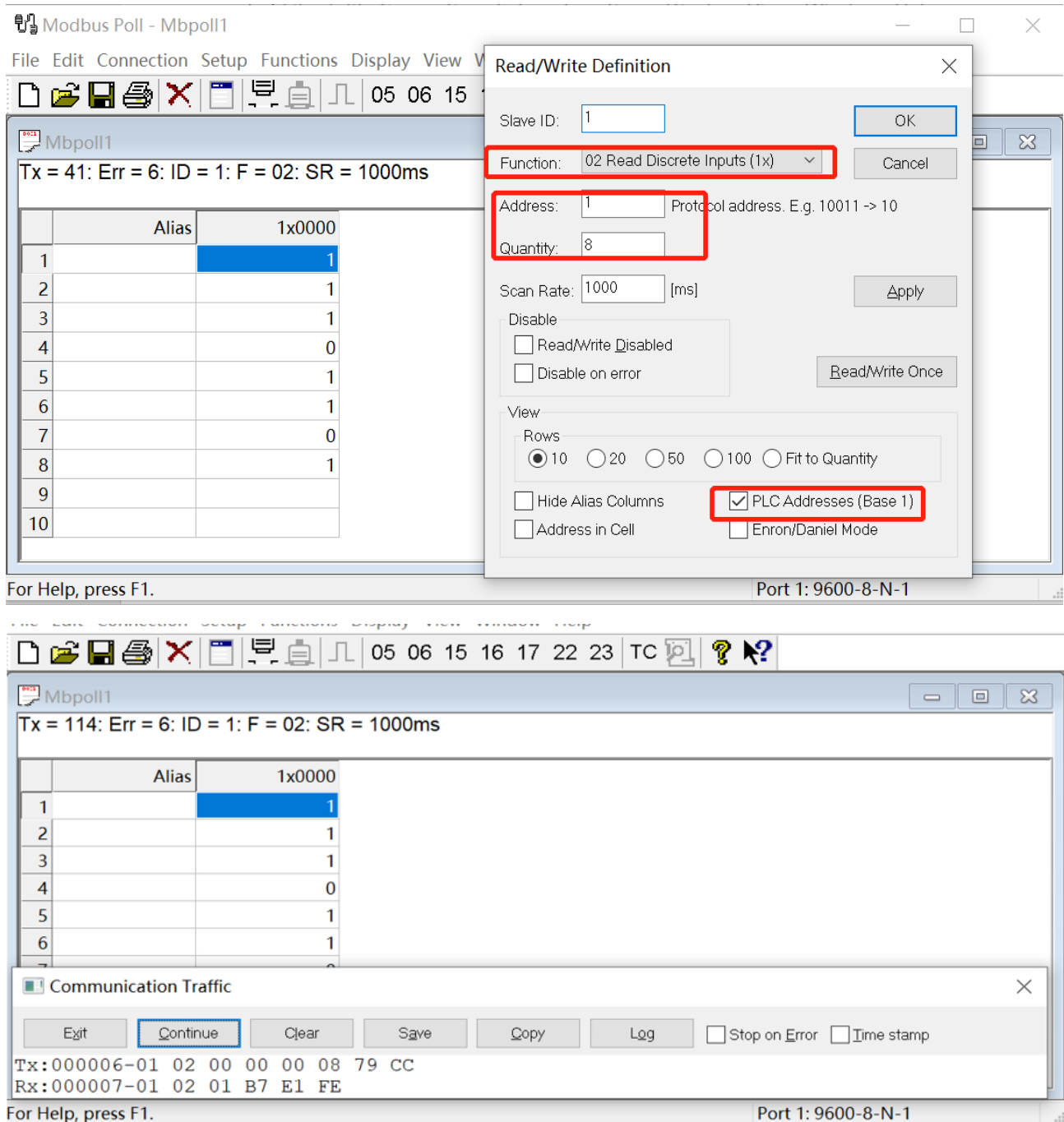
# Read and write testing by modbus poll

## MODBUS REGISTER MAP

IO Port	PLC address	Function code	Format	Read/Write	Scaling
Di0 ~ Di7	10001~10008	02	UINT16	R	1
Do0 ~ Do5	00001~00006	01/05	UINT16	R/W	1
PT0 ~ PT7	40051-40058	03	UINT16	R	0.1

### 1. Read digital input

DI start address is 10001, For example, read Di0-Di7



The screenshot shows the Modbus Poll software interface. The main window displays a table of digital inputs (Di0 ~ Di7) with their corresponding PLC addresses (10001~10008). The status bar shows 'Tx = 41: Err = 6: ID = 1: F = 02: SR = 1000ms'. A 'Read/Write Definition' dialog box is open, showing the configuration for reading discrete inputs. The dialog box has the following fields:

- Slave ID: 1
- Function: 02 Read Discrete Inputs (1x)
- Address: 1
- Quantity: 8
- Scan Rate: 1000 [ms]
- Disable: ☐ Read/Write Disabled, ☐ Disable on error
- View: Rows (10, 20, 50, 100, Fit to Quantity), ☐ Hide Alias Columns, ☒ PLC Addresses (Base 1), ☐ Enron/Daniel Mode

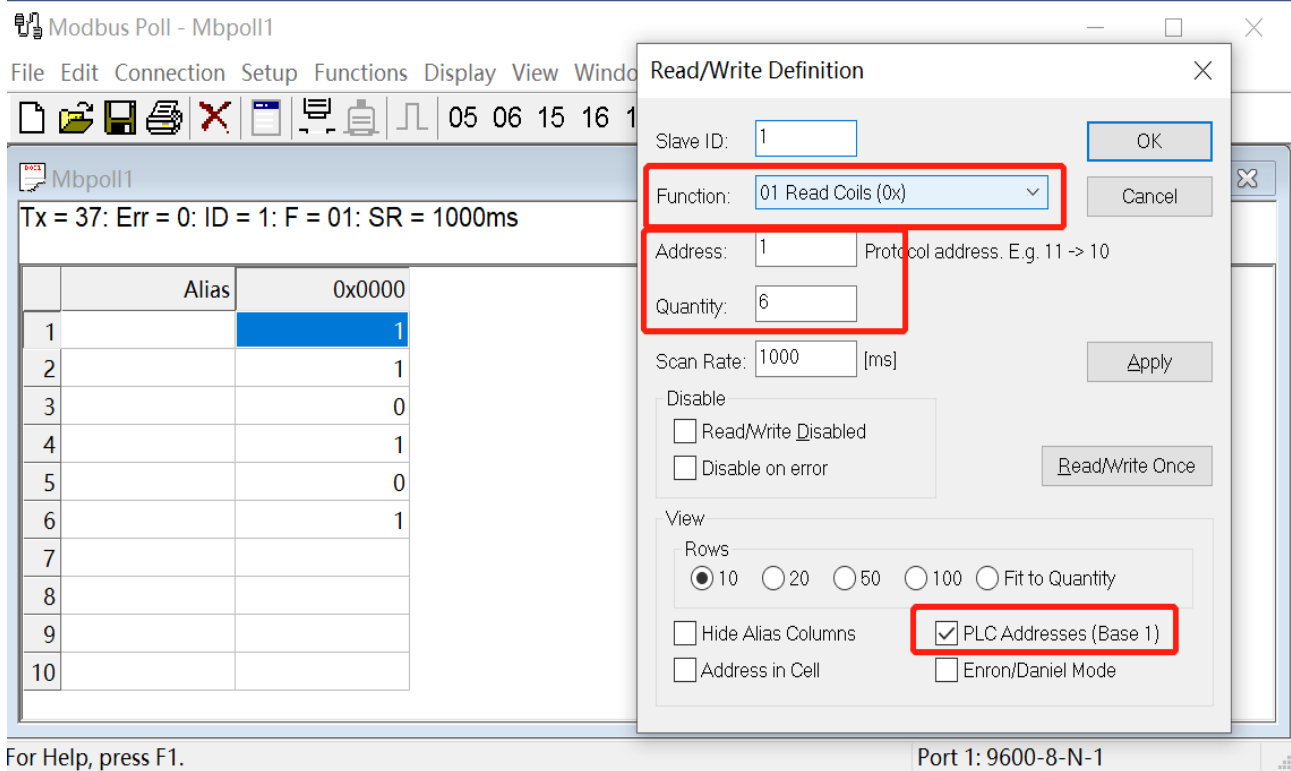
The 'Communication Traffic' window at the bottom shows the following data:

```

Tx: 000006-01 02 00 00 00 08 79 CC
Rx: 000007-01 02 01 B7 E1 FE
    
```

## 2. Read digital output

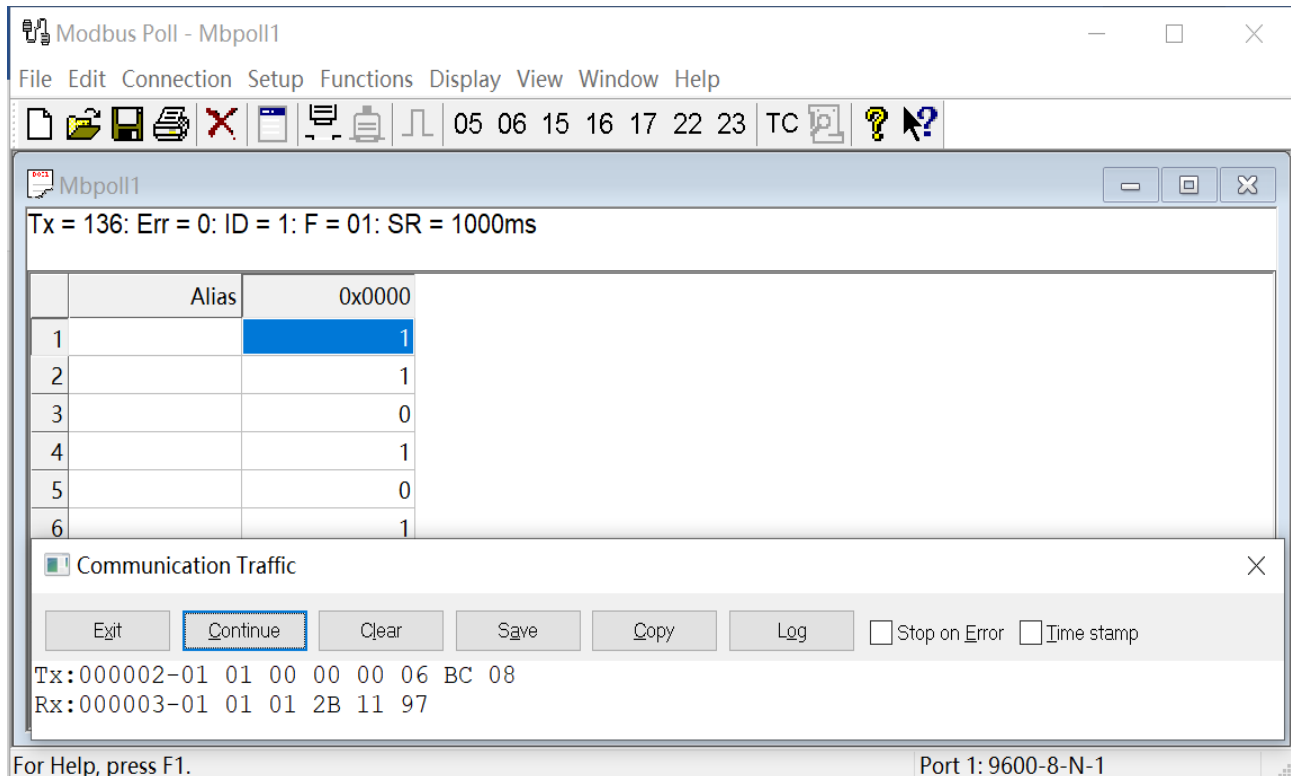
DO start address is 00001, For example, read DO0-DO5



The screenshot shows the Modbus Poll - Mbpoll1 application window. The main window displays a table of digital outputs (DOs) with columns for Alias and Address (0x0000). The status bar at the bottom indicates "Port 1: 9600-8-N-1". A "Read/Write Definition" dialog box is open, showing the configuration for reading coils. The dialog box has the following fields and options:

- Slave ID: 1
- Function: 01 Read Coils (0x) (highlighted with a red box)
- Address: 1
- Quantity: 6
- Scan Rate: 1000 [ms]
- Disable:
  - ☐ Read/Write Disabled
  - ☐ Disable on error
- View:
  - Rows: ☒ 10 ☐ 20 ☐ 50 ☐ 100 ☐ Fit to Quantity
  - ☐ Hide Alias Columns
  - ☒ PLC Addresses (Base 1) (highlighted with a red box)
  - ☐ Address in Cell
  - ☐ Enron/Daniel Mode

Buttons: OK, Cancel, Apply, Read/Write Once.



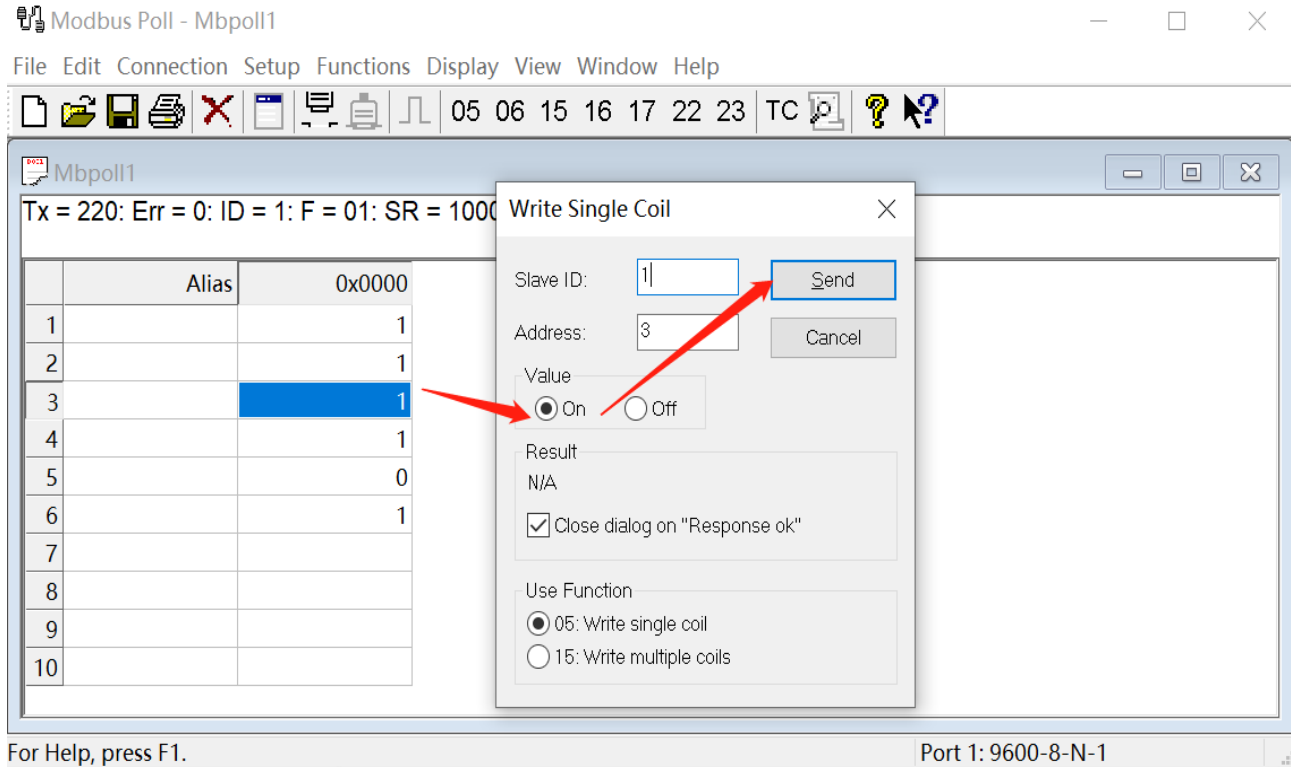
The screenshot shows the Modbus Poll - Mbpoll1 application window after a successful read operation. The status bar at the bottom indicates "Port 1: 9600-8-N-1". A "Communication Traffic" window is open, showing the transaction details:

- Tx: 000002-01 01 00 00 00 06 BC 08
- Rx: 000003-01 01 01 2B 11 97

Buttons: Exit, Continue, Clear, Save, Copy, Log, ☐ Stop on Error, ☐ Time stamp.

### 3. Write digital output

Do start address is 00001, For example, read Do0-Do5



Modbus Poll - Mbpoll1

File Edit Connection Setup Functions Display View Window Help

05 06 15 16 17 22 23 TC ? ?

Tx = 220: Err = 0: ID = 1: F = 01: SR = 1000

	Alias	0x0000
1		1
2		1
3		1
4		1
5		0
6		1
7		
8		
9		
10		

**Write Single Coil**

Slave ID: 1

Address: 3

Value: ☒ On ☐ Off

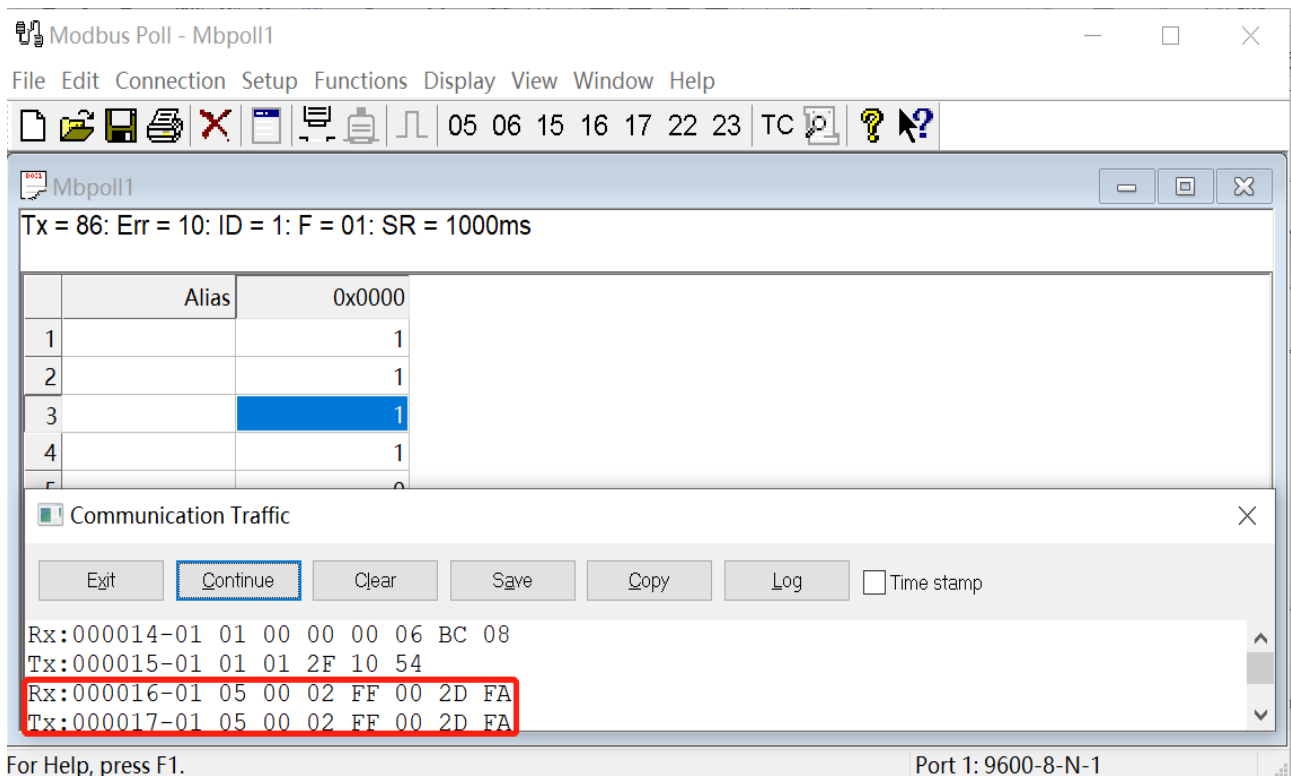
Result: N/A

☒ Close dialog on "Response ok"

Use Function: ☒ 05: Write single coil ☐ 15: Write multiple coils

Send Cancel

For Help, press F1. Port 1: 9600-8-N-1



Modbus Poll - Mbpoll1

File Edit Connection Setup Functions Display View Window Help

05 06 15 16 17 22 23 TC ? ?

Tx = 86: Err = 10: ID = 1: F = 01: SR = 1000ms

	Alias	0x0000
1		1
2		1
3		1
4		1
5		0

**Communication Traffic**

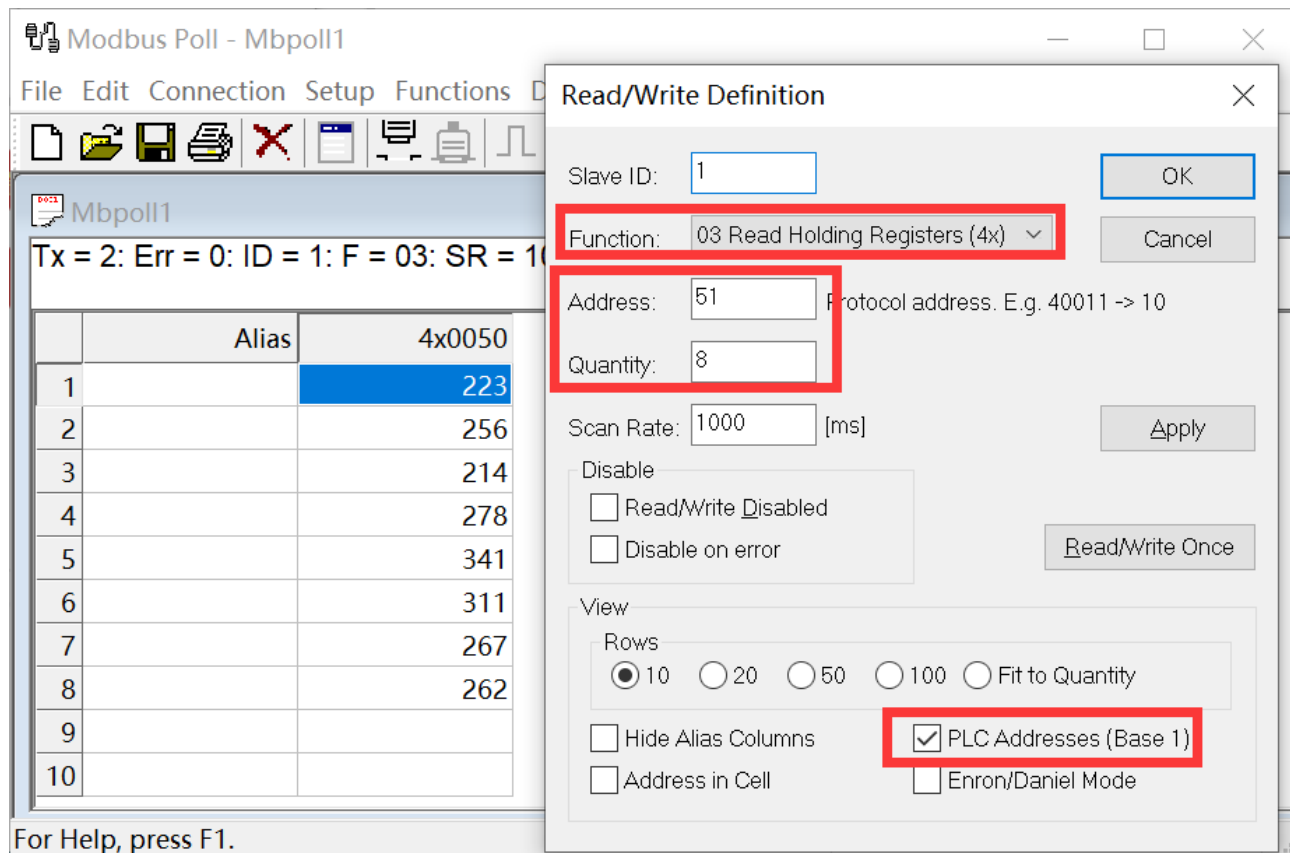
Exit Continue Clear Save Copy Log ☐ Time stamp

Rx:000014-01 01 00 00 00 06 BC 08  
 Tx:000015-01 01 01 2F 10 54  
 Rx:000016-01 05 00 02 FF 00 2D FA  
 Tx:000017-01 05 00 02 FF 00 2D FA

For Help, press F1. Port 1: 9600-8-N-1

#### 4. Read PT100 input

PT input start address is 40051, For example, read PT0-PT7



**Modbus Poll - Mbpoll1**

File Edit Connection Setup Functions D

Mbpoll1

Tx = 2: Err = 0: ID = 1: F = 03: SR = 10

	Alias	4x0050
1		223
2		256
3		214
4		278
5		341
6		311
7		267
8		262
9		
10		

For Help, press F1.

**Read/Write Definition**

Slave ID: 1

Function: 03 Read Holding Registers (4x)

Address: 51 Protocol address. E.g. 40011 -> 10

Quantity: 8

Scan Rate: 1000 [ms]

Disable

☐ Read/Write Disabled

☐ Disable on error

View

Rows

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

☐ Hide Alias Columns

☒ PLC Addresses (Base 1)

☐ Address in Cell

☐ Enron/Daniel Mode

OK Cancel Apply Read/Write Once

Channel 1=DF H=>223 D=22.3  
 Channel 2=100 H=>256 D=25.6  
 Channel 3=D6 H=>214 D=21.4  
 Channel 4=116 H=>278 D=27.8  
 Channel 5=155 H=>341 D=34.1  
 Channel 6=137 H=>311 D=31.1  
 Channel 7=10B H=>267 D=26.7  
 Channel 8=106 H=>262 D=26.2