Meter Modbus Communication Guide (TP613)

The meter model used in this example: TP613

1. RS485 Modbus-RTU Communication Parameters

```
-- 115200 baud, no parity, 1 stop bit, function code "03", address 0xff, max response wait 1000 ms, packet interval 100 ms
com = {"BAUDRATE_115200","NoneParity","StopBit_1","03",0xff,1000,100},
```

Additional notes:

- Modbus address of the meter: 0xff (255)
- Maximum response wait 1000 ms: If this meter is faulty and cannot communicate, Modbus communication will wait up to 1000 ms (1 second).
- Packet interval 100 ms: If the span of register addresses to read exceeds 125, the system will automatically fetch the data in packets; the interval between packets is set to 100 ms (0.1 second).

2. Meter Modbus Data Points (excerpt from the TP613 manual)

地址(hex)	类型	数据定义	数据格式	寄存器长度	备注	
0x0064	R	线电压Uab	FLOAT(ABCD)	2	单位V	
0x0066	R	线电压Ubc	FLOAT(ABCD)	2		
0x0068	R	线电压Uca	FLOAT(ABCD)	2		
0x006A	R	线电压平均值ULLAvg	FLOAT(ABCD)	2		
0x006C	R	相电压Uan	FLOAT(ABCD)	2		
0x006E	R	相电压Ubn	FLOAT(ABCD)	2		
0x0070	R	相电压Ucn	FLOAT(ABCD)	2		
0x0072	R	相电压平均值ULNAvg	FLOAT(ABCD)	2		
0x0074	R	电流Ia	FLOAT(ABCD)	2	单位A	
0x0076	R	电流Ib	FLOAT(ABCD)	2		
0x0078	R	电流Ic	FLOAT(ABCD)	2		
0x007A	R	三相电流平均值IAvg	FLOAT(ABCD)	2		
0x007C	R	零序电流In	FLOAT(ABCD)	2		
0x007E	R	线性频率F	FLOAT(ABCD)	2	Hz	
0x0080	R	总功率因素PF	FLOAT(ABCD)	2		
0x0082	R	总有功功率P	FLOAT(ABCD)	2	kW	
0x0084	R	总无功功率Q	FLOAT(ABCD)	2	kvar	
0x0086	R	总视在功率S	FLOAT(ABCD)	2	kVA	
0x0088	R	A相功率因素PFa	FLOAT(ABCD)	2		

0x008A	R	B相功率因素PFb	FLOAT(ABCD)	2		
0x008C	R	C相功率因素PFc	FLOAT(ABCD)	2		
0x008E	R	A相有功功率Pa	FLOAT(ABCD)	2	kW	
0x0090	R	B相有功功率Pb	FLOAT(ABCD)	2		
0x0092	R	C相有功功率Pc	FLOAT(ABCD)	2		
0x0094	R	A相无功功率Qa	FLOAT(ABCD)	2	kvar	
0x0096	R	B相无功功率Qb	FLOAT(ABCD)	2		
0x0098	R	C相无功功率Qc	FLOAT(ABCD)	2		
0x009A	R	A相视在功率Sa	FLOAT(ABCD)	2	kVA	
0x009C	R	B相视在功率Sb	FLOAT(ABCD)	2		
0x009E	R	C相视在功率Sc	FLOAT(ABCD)	2		