

## DTSU666 Meter Communication Protocol

### 1. Communication Requirements

Items	Parameters	Remark
Communication forms	RS485	
Communication protocol	Modbus-RTU	No check bit, 1 stop bit
Communication Address (ID)	254	Factory default
Baud rate	9600bps	Factory default
function code	03H、10H	03H: Read registers (R and R/W); 10H: Set a set of multiple registers
Device type coding	0x20D5	Add the value 0x20D5 (hexadecimal) to the address of the 0x5000 register, which is used for our equipment to identify the electricity meter. This register is read-only

### 2. Address List

MODBUS-RTU protocol has 03H and 10H command to read and write registers respectively. The following chart is registers' address list:

数据地址 Address	数据名称 Variable	长度 Length	读/写 R/W	备注 Notes
0000H	当前总有功电能 Current total electricity	4	R	
0002H	当前总有功尖电能 Current spike electric energy	4	R	
0004H	当前总有功峰电能 Current peak electric energy	4	R	
0006H	当前总有功平电能 Current flat electric energy	4	R	
0008H	当前总有功谷电能 Current valley electric energy	4	R	
000AH	当前正向总有功电能 Current forward active total electric energy	4	R	
000CH	当前正向有功尖电能 Current forward active spike electric energy	4	R	

000EH	当前正向有功峰电能 Current forward active peak electric energy	4	R	
0010H	当前正向有功平电能 Current forward active flat electric energy	4	R	
0012H	当前正向有功谷电能 Current forward active valley electric energy	4	R	
0014H	当前反向有功总电能 Current reversing active total electric energy	4	R	
0016H	当前反向有功尖电能 Current reversing active spike electric energy	4	R	
0018H	当前反向有功峰电能 Current reversing Active peak electric energy	4	R	
001AH	当前反向有功平电能 Current reversing active flat electric energy	4	R	
001CH	当前反向有功谷电能 Current reversing Active valley electric energy	4	R	
001EH	当前总无功电能 Current total reactive electric energy	4	R	
0020H	当前总无功尖电能 Current total reactive spike electric energy	4	R	
0022H	当前总无功峰电能 Current total reactive peak electric energy	4	R	
0024H	当前总无功平电能 Current total reactive flat electric energy	4	R	
0026H	当前总无功谷电能 Current total reactive valley electric energy	4	R	
0028H	当前正向无功总电能 Current forward reactive total electric energy	4	R	
002AH	当前正向无功尖电能 Current forward reactive spike electric energy	4	R	

002CH	当前正向无功峰电能 Current forward reactive spike electric energy	4	R	
002EH	当前正向无功平电能 Current forward reactive flat electric energy	4	R	
0030H	当前正向无功谷电能 Current forward reactive valley electric energy	4	R	
0032H	当前反向无功总电能 Current reversing reactive total electric energy	4	R	
0034H	当前反向无功尖电能 Current reversing reactive spike electric energy	4	R	
0036H	当前反向无功峰电能 Current reversing reactive peak electric energy	4	R	
0038H	当前反向无功平电能 Current reversing reactive flat electric energy	4	R	
003AH	当前反向无功谷电能 Current reversing reactive valley electric energy	4	R	
003CH	日期时间 Date, time	6	R/W	
003FH 高字节	第一路通讯通信地址 First communication path: Address	1	R/W	1~247
003FH 低字节	第一路通讯波特率 First communication path: Baud rate	1	R/W	1: 9600pbs 2: 4800pbs 3: 2400pbs 4: 1200pbs
0040H	脉冲常数 Pulse constant	2	R	
0041H ... 0046H	4个时区 4 time zones	3×4	R/W	时区表 Time zone table
0047H ... 0052H	1-8时段参数设置信息 1-8period of time Parameters setting information	3×8	R/W	第一套时段表 The first time list

0053H ... 0060H	1-9时段参数设置信息 1-9period of time Parameters setting information	3x9	R/W	第二套时段表 The second time list
0061H	A 相电压 Voltage of A phase	2	R	
0062H	B 相电压 Voltage of B phase	2	R	
0063H	C 相电压 Voltage of C phase	2	R	
0064H	A 相电流 Electricity of A phase	2	R	
0065H	B 相电流 Electricity of B phase	2	R	
0066H	C 相电流 Electricity of C phase	2	R	
0067H-0076H	保留 Reserve	2	R	
0077H	频率 Frequency	2	R	
0078H	A-B 线电压 Voltage between A-B	2	R	
0079H	C-B 线电压 Voltage between C-B	2	R	
007AH	A- C 线电压 Voltage between A-C	2	R	
007BH	正向有功最大需量 Forward active maximum demand	2	R	
007CH	发生时间 Time of occurrence for the forward active maximum amount	4	R	
007EH	反向有功最大需量 Reversing active maximum demand	2	R	
007FH	发生时间 Time of occurrence for the reversing active maximum amount	4	R	
0081H	正向无功最大需量 Maximum forward demand for reactive power	2	R	

0082H	发生时间 Time of occurrence for the forward reactive maximum amount	4	R	
0083H	反向无功最大需量 Maximum reversing demand for reactive power	2	R	
0085H	发生时间 Time of occurrence for the reversing reactive maximum amount	4	R	
0087H	A 相正向有功电能 Forward active electric energy of A phase	4	R	
0089H	B 相正向有功电能 Forward active electric energy of B phase	4	R	
008BH	C 相正向有功电能 Forward active electric energy of C phase	4	R	
008DH	电压变比 PT Voltage transfer	2	R/W	
008EH	电流变比 CT Current transfer	2	R/W	
008FH 高字节	失压阈值 Threshold of voltage	1	R/W	
008FH 低字节	失压状态 State of loss voltage	1	R	
0090H	保留 Reserve	2	R	
0091H 高字节	运行状态 1 Running state 1	1	R/W	
0091H 低字节	运行状态 2 Running state 2	1	R/W	
0092H	零序电流 Zero sequence current	2	R	
0093H	电压不平衡度	2	R	单位 unit 0.1%

	Voltage imbalance			
0094H	电流不平衡度 Current imbalance	2	R	
0095H	第一路通讯 First communication path: 校验位 Testing byte (高 8 位 High 8 bytes) 停止位 Stop byte (低 8 位 Low 8 bytes)	2	R/W	校验位 testing byte: 0: 无校验 none 2: 偶校验 even 停止位 stop byte: 0: 1 位停止位 0: 1 stop byte 1: 2 位停止位 1: 2 stop bytes
0096H	第二路通讯 Second communication path: 通信地址 Address (高 8 位 High 8 bytes) 波特率 Baud rate (低 8 位 Low 8 bytes)	2	R/W	同第一路通讯设置 Same as the first communication path
0097H	第二路通讯 Second communication path: 校验位 Testing byte (高 8 位 High 8 bytes) 停止位 Stop byte (低 8 位 Low 8 bytes)	2	R/W	同第一路通讯设置 Same as the first communication path
0098H-00B1	保留 Reserved			
00B2H ... 00BAH	9-14 时段参数设置信息 9-14 period of time Parameters setting information			第一套时段表 The first time list
00BBH ... 00C3H	9-14 时段参数设置信息 9-14 period of time Parameters setting information			第二套时段表 The second time list
00C4H ... 0163H	保留 Reserved			

0164H	A 相有功功率 Active power of A phase	4	R	
0166H	B 相有功功率 Active power of B phase	4	R	
0168H	C 相有功功率 Active power of C phase	4	R	
016AH	总有功功率 Total active power	4	R	
016CH	A 相无功功率 Reactive power of A phase	4	R	
016EH	B 相无功功率 Reactive power of B phase	4	R	
0170H	C 相无功功率 Reactive power of C phase	4	R	
0172H	总无功功率 Total reactive power	4	R	
0174H	A 相视在功率 Apparent power of A phase	4	R	
0176H	B 相视在功率 Apparent power of b phase	4	R	
0178H	C 相视在功率 Apparent power of c phase	4	R	
017AH	总视在功率 Total apparent power	4	R	
017CH	A 相功率因数 Power factor of A phase	2	R	
017DH	B 相功率因数 Power factor of B phase	2	R	
017EH	C 相功率因数 Power factor of C phase	2	R	
017FH	总功率因数 Total power factor	2	R	
0180H	当日正向有功最大需量 Maximum forward active demand a day	2	R	

0181H	发生时间：分、时 Occur time	2	R	
0182H	当日反向有功最大需量 Maximum reversing active demand a day	2	R	
0183H	发生时间：分、时 Occur time	2	R	
0184H	当日正向无功最大需量 Maximum forward reactive demand a day	2	R	
0185H	发生时间：分、时 Occur time	2	R	
0186H	当日反向无功最大需量 Maximum reversing reactive demand a day	2	R	
0187H	发生时间：分、时 Occur time	2	R	
0188H	上 1 日正向有功最大需量 Maximum forward active demand last day	2	R	
0189H	发生时间：分、时 Occur time	2	R	
018AH	上 1 日反向有功最大需量 Maximum reversing active demand last day	2	R	
018BH	发生时间：分、时 Occur time	2	R	
018CH	上 1 日正向无功最大需量 Maximum forward reactive demand last day	2	R	
018DH	发生时间：分、时 Occur time	2	R	
018EH	上 1 日反向无功最大需量 Maximum reversing reactive demand last day	2	R	
018FH	发生时间：分、时 Occur time	2	R	
0190H	上 2 日正向有功最大需量 Maximum forward active demand last 2 days	2	R	
0191H	发生时间：分、时 Occur time	2	R	
0192H	上 2 日反向有功最大需量 Maximum reversing active demand last 2 days	2	R	



0193H	发生时间：分、时 Occur time	2	R	
0194H	上 2 日正向无功最大需量 Maximum forward reactive demand last 2 days	2	R	
0195H	发生时间：分、时 Occur time	2	R	
0196H	上 2 日反向无功最大需量 Maximum reversing reactive demand last 2 days	2	R	
0197H	发生时间：分、时 Occur time	2	R	
0198H	当前正向有功需量 Current forward active demand	2	R	
0199H	当前反向有功需量 Current reversing active demand	2	R	
019AH	当前正向无功需量 Current forward reactive demand	2	R	
019BH	当前反向无功需量 Current reversing reactive demand	2	R	
019BH-01FFH	保留 Reserved			
0200H	A 相电压极大值 Maximum voltage on A phase	2	R	
0201H	发生时间：月、日 Occur date	2	R	
0202H	发生时间：时、分 Occur time	2	R	
0203H	B 相电压极大值及发生时间 Maximum voltage on B phase and occur time	6	R	
0206H	C 相电压极大值及发生时间 Maximum voltage on C phase and occur time	6	R	
0209H	A 相电流极大值及发生时间 Maximum current on A phase and occur time	6	R	
020CH	B 相电流极大值及发生时间 Maximum current on B phase and occur time	6	R	
020FH	C 相电流极大值及发生时间 Maximum current on C phase and occur time	6	R	
0212H	A 相有功功率极大值 Maximum active power on A phase	4	R	
0214H	发生时间：月、日	2	R	

	Occur date		
0215H	发生时间：时、分 Occur time	2	R
0216H	B相有功功率极大值及发生时间 Maximum active power on B phase and occur time	8	R
021AH	C相有功功率极大值及发生时间 Maximum active power on C phase and occur time	8	R
021EH	总有功功率极大值及发生时间 Maximum active power and occur time	8	R
0222H	A相无功功率极大值及发生时间 Maximum reactive power on A phase and occur time	8	R
0226H	B相无功功率极大值及发生时间 Maximum reactive power on B phase and occur time	8	R
022AH	C相无功功率极大值及发生时间 Maximum reactive power on C phase and occur time	8	R
022EH	总无功功率极大值及发生时间 Maximum reactive power and occur time	8	R
0232H	A相视在功率极大值及发生时间 Maximum apparent power on A phase and occur time	8	R
0236H	B相视在功率极大值及发生时间 Maximum apparent power on B phase and occur time	8	R
023AH	C相视在功率极大值及发生时间 Maximum apparent power on C phase and occur time	8	R
023EH	总视在功率极大值及发生时间 Maximum apparent power and occur time	8	R
0242H	A相电压极小值及发生时间 Minimum voltage on A phase and occur time	6	R
0245H	B相电压极小值及发生时间 Minimum voltage on B phase and occur time	6	R
0248H	C相电压极小值及发生时间 Minimum voltage on C phase and occur time	6	R
024BH	A相电流极小值及发生时间 Minimum current on A phase and occur time	6	R
024EH	B相电流极小值及发生时间 Minimum current on B phase and occur time	6	R

0251H	C 相电流极小值及发生时间 Minimum current on C phase and occur time	6	R
0254H	A 相有功功率极小值及发生时间 Minimum active power on A phase and occur time	8	R
0258H	B 相有功功率极小值及发生时间 Minimum active power on B phase and occur time	8	R
025CH	C 相有功功率极小值及发生时间 Minimum active power on C phase and occur time	8	R
0260H	总有功功率极小值及发生时间 Minimum active power and occur time	8	R
0264H	A 相无功功率极小值及发生时间 Minimum reactive power on A phase and occur time	8	R
0268H	B 相无功功率极小值及发生时间 Minimum reactive power on B phase and occur time	8	R
026CH	C 相无功功率极小值及发生时间 Minimum reactive power on C phase and occur time	8	R
0270H	总无功功率极小值及发生时间 Minimum reactive power and occur time	8	R
0274H	A 相视在功率极小值及发生时间 Minimum apparent power on A phase and occur time	8	R
0278H	B 相视在功率极小值及发生时间 Minimum apparent power on B phase and occur time	8	R
027EH	C 相视在功率极小值及发生时间 Minimum apparent power on C phase and occur time	8	R
0280H	总视在功率极小值及发生时间 Minimum apparent power and occur time	8	R
0285H-1FFFH	保留 Reserve		
2000H	T1 温度 T1 temperature	2	R
2001H	T2 温度 T2 temperature	2	R
2002H	T3 温度 T3 temperature	2	R