MODBUS RTU PROTOCAL

Software version No：0x12(18)

➢ Basic information

Read data function code: 03, write data function code: 10.

No	Name	Register address
1	Weighing data	0001
2	Zero data	0001
3	Acceleration of gravity	0009

No	Name	Register address
4	Identification rate	000B
5	Filter parameter	000D
6	Address Setting	000F

➢ Data Format

1: Read data command (function code 03, weighing data register address=0001): n 03 00 01 00 02 crc16

Return data format: n 03 04 HG FE DC BA crc16

❖ **Data format（4）：n 03 04 HG FE DC BA crc16**

Note：**H=0 positive number, H=1 negative number; G=0 unstable, G=1 stable; F=number of decimal places; E, DC, BA data is 2.5 bytes, weight value, no decimal point (E is the highest byte).**

E.g 1：Address=01,Weight data=-1.000（1000=00 03 E8H(HEX)）,Data is stable.

Command：01 03 00 01 00 02 95 CB (FF 03 00 01 00 02 80 15)

Return data：01 03 04 11 30 03 E8 FF BE

E.g 2：Address=01,Weight data=120.000（120000=01D4C0(HEX)）,Data is stable.

Return data：01 03 04 01 31 D4 C0 F5 50

2: Zero calibration command: (function code 10, zero data register address=0001)

n 10 00 01 00 02 04 00 00 00 01 crc16

Return data format： **n 10 00 01 00 02 crc16**

❖ E.g：Address=01，Zero calibration command：

Send：01 10 00 01 00 02 04 00 00 00 01 F3 A3

Return data：01 10 00 01 00 02 10 08

3: Change the use of gravity acceleration: (function code 10, gravity acceleration register address = 0009)

n 10 00 09 00 02 04 xx xx xx xx crc16

Note：**xx xx xx xx=Acceleration of gravity, after keeping the decimal point 4 digits, remove the decimal point and turn it into an integer.**

❖ E.g：Address=01,Acceleration of gravity=**9.7946（=> 97946 = 00 01 7E 9A(HEX)）**

Send：01 10 00 09 00 02 04 00 01 7E 9A C3 CE

Return Data：01 10 00 09 00 02　91 CA

4: Identification rate　setting command: (function code 10, authentication rate register address=000B)

n　10　00 0B　00 02　04　00 00 00 xx　crc16

Return data format：　**n　10　00 0B　00 02　crc16**

Note：**xx =0-99,**The identification rate is a multiple of the division value.

Can read identification rate,Send **n　03　00 0B　00 02　crc16**

Return data ：**n　03　04　VV 00 00 xx　crc16**

Note：VV is the version number (0x0F), xx = 00-99, is the identification rate.

5:　Filter parameter setting command: (function code 10, filter parameter register address=000D)

n　10　00 0D　00 02　04　xx xx xx xx　crc16

Return data format：　**n　10　00 0D　02　crc16**

❖ Note：**xx xx xx xx=00 00 00 0F, F=0-3，Filter parameter.**

Read filter parameter，Send **n　03　00 0D　00 02　crc16**

Return data：**n　03　04　xx xx xx xx　crc16**

6:　Load cell address setting command: (function code 10, sensor address register address=000F)

FF　10　00 0F　00 02　04　00 00 00　nn　crc16

Return data format：　**n　10　00 0F　00 02　crc16**

❖ Note：**nn is the address. (nn=\=0)**

Special Note1：When this command is used, only one digital load cell is allowed.

7: Tare zero setting command (subtraction): (function code 10, tare data register address = 00 07, parameter = 00 00 00 01)

n　10　00 07　00 02　04　00 00 00 01　crc16

Return data format：　**n　10　00 07　00 02　crc16**

❖ **This command explains: No matter how much the weight is, no matter whether the weight is stable or not, the zero point is forced to be set, and the zero point will not be saved after restarting.**

❖ E.g：Address=01, Tare zero command：

Send：01 10 00 07 00 02 04 00 00 00 01 73 89

Return data：01 10 00 07 00 02 F0 09

Special note: Address=FF is a universal address, valid for all addresses, equivalent to a broadcast command.

Use universal address, zero calibration, gravity acceleration, filter parameters, discrimination rate settings, all can be set at once.