Parameter Setting

1. Communication Parameter:

Baud Rate: 115200
Data Bit: 8
Stop Bit: 1
Parity Check: No check

MR688B is Slave, external equipment is Host.
Use MODBUS protocol to read and write parameter register

2. Function Code 03H：Read Register

Host reads the data packet：

Address Code	Function Code	Start Address	Register Number N	CRC Check code
1 Byte	1 Byte	2 Bytes	2 Bytes	2 Bytes
01H	03H		0001H	

MR688B responses data packet：

Address Code	Function Code	Bytes Number	Register Data	CRC Check Code
1 Byte	1 Byte	1 Byte	Nx2 Byte	2 Bytes
01H	03H	02H	High byte. Low byte	

3. Function Code 10H：Write Register

Host writes the data packet：

Address Code	Function Code	Start Address	Register Number N	Bytes Number	Write in Data	Write in Data	CRC Check code
					High Byte	Low Byte	
1 Byte	1 Byte	2 Bytes	2 Bytes	1 Byte	1 Byte	1 Byte	2 Bytes
01H	10H		0001H	02H			

MR688B responses data packet:

Address Code	Function Code	Start Register Address	Register Number N	CRC Check Code
1 Byte	1 Byte	2 Bytes	2 Bytes	2 Bytes
01H	10H		0001H	

4. Register Setting

(please do not modify other registers, otherwise will influence the use of the product)

Address (decimal system)	Meaning of Address	Meaning of Value	Default Value
D3	Data latching	0 lock state, 1 open state, start up default 0	0
D4	Distraction sensitivity	2-11/255, 255 means according to DIP setting	255
D5	No portrait sensitivity	0-225	15
D9	Dip fatigue sensitivity HL	The low 8 bit of hexadecimal stands for the sensitivity value when DIP chooses sensitivity L The high 8 bit stands for the sensitivity value when DIP chooses sensitivity H E.g.: H0203, means level 2 high sensitivity, level 3 low sensitivity	H0203
D10	Dip distraction sensitivity HL	Low byte stands for the sensitivity value when DIP chooses sensitivity L High byte stands for the sensitivity value when DIP chooses sensitivity H E.g.: H0406, means level 4 high sensitivity, level 6 low sensitivity	H0406
D13	Fatigue alarm sensitivity	2-11 255 means according to DIP setting	255
D14	Alarm volume	0-2 255 means according to DIP setting	255
D15	Fatigue alarm star-up speed	0-255, 255 means according to DIP setting	255
D16	Over speed	0-255	150
D25	Picture storage On/Off	0 turn on alarm picture storage 1 turn on alarm picture storage	1
D29	Video output system option	0 NTSC, 1 PAL default is PAL	1
D11	Alarm picture size	0 capture 640*480, 1 capture 320*240, 2 capture 160*120	2

For example:

Read distraction sensitivity, register D4
SedHex:01 03 00 04 00 01 C5 CB
RecHex:01 03 02 00 FF F8 04

Return value &HFF, distraction sensitivity is 255 (according to DIP setting)

Read overspeeding value, register D16
SedHex:01 03 00 10 00 01 85 CF
RecHex:01 03 02 00 96 38 2A
Return value &H96, overspeeding value is 150

Set overspeeding value at 60km/h (&H3C)
SedHex:01 10 00 10 00 01 02 00 3C A4 D1
RecHex:01 10 00 10 00 01 00 0C

Read overspeeding value (to check whether the modification is successful or not)
SedHex:01 03 00 10 00 01 85 CF
RecHex:01 03 02 00 3C B8 55
Return value &H3C, overspeeding value is 60

crc calculation can use the following online calculator to verify
Choose HEX input mode, CRC-16 (Modbus) calculation result. The use of result needs to exchange high byte and low byte
https://www.lammertbies.nl/comm/info/crc-calculation.html