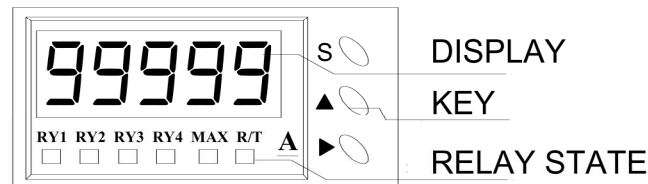


MMG Manual

1.Panel and Keys



2.Keys Function

S	:	Setting / Select
Δ	:	Change number / Enter
>	:	Change position

3.Parameter Setting

Basic Setting

In the below setting instruction, P means Press.

Long press “S” to enter menu. Press “S” to enter setting. Press > and Δ to set.

Display	Function	Instruction
	(MENU)	
	Mode	Press > to select Master(MAS) / Slave(SLA)
	Form	Press> to select UnSl / Sl Unsigned Int 0-65535 ; Signed Int -32767-32767
	Address	Press > and Δ to set Range: 0-999 Preset as: 00
	Decimal Point	Press > to set decimal point position
	Output Signal	Press> to select 4-20mA/0-20mA or 0-10V/1-5V/0-5V Press S to enter OP_HI to set corresponding value(high) Press S to enter OP_LO to set corresponding value(low) (Note: mA and V can't exchange)
	Address Baud rate Format	Press>andΔ to set address Press S and Press>to select 4800-9600-19200-38400 Press S and Press>to select None/Odd/Even/ 8n1-8n2....
	Save	Press S to enter no. 1.Press S to leave without saving. 2.Press> to select YES. Press S to enter C 00 Press S to finish setting.

4. Communication Protocol

MODBUS – RTU MODE

Data Format

(ID Number) 1Byte	(Function Code) 1Byte	(Data) N Byte	CRC 2 Byte
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Function Code

03 (03H)	Read parameters of the meter
06 (06H)	Set parameter.

EX.1 PC sends data 1000 to meter

Meter setting

Mode : SLAVE

ID : 01 ,

Address : 02

Form : Unsigned Int 0-65535

Master sends meaasge Tx: 01 06 00 02 03 E8 28 B4				
ID Number 1Byte (01H)	Function 1Byte (06H)	Address 2Byte (00 02H)	DATA number 2Byte (03 E8H)	CRC 2Byte (28 B4H)

EX.2. PC sends data -19999 to meter

Meter setting

Mode : SLAVE

ID : 01 ,

Address : 02

Form : Signed Int (-32767~32767)

Master sends meaasge TX : 01 06 00 02 BE E1 9C 12				
ID Number 1Byte (01H)	Function 1Byte (06H)	Address 2Byte (00 02H)	DATA number 2Byte (BE E1 H)	CRC 2Byte (9C 12H)

EX.3. Meter requires to read data of the instrument. Data number:2Byte

Meter setting

Mode : MASTER

ID : 01-255 (baudrate,parity check set the same as the instrument's)

Address : 00-99

Form : Signed Int (-32767~32767) / Unsigned Int (0-65535) 2Byet

Master sends message				
ID Number 1Byte (xxH)	Function 1Byte (03H)	Address 2Byte (xx,xxH)	DATA number 2Byte (00 01H)	CRC 2Byte (xx,xxH)

5. Relay Setting (Alarm) *In the below setting instruction,P means Press.*

Display	Function	Instruction
	(MENU)	
	Relay alarm setting HI or LO	Press△to select HI_Alarm or LO_Alarm. Press>to change position. (HHHH means 4 relays)
	Relay 1 Setting	Press S to set action point:-19999~99999Count Press S to set deadband: 9999Count Press S to set delay time:0-999 Seconds
	Relay 2 Setting	Press S to set action point:-19999~99999Count Press S to set deadband: 9999Count Press S to set delay time:0-999 Seconds
	Relay 3 Setting	Press S to set action point:-19999~99999Count Press S to set deadband: 9999Count Press S to set delay time:0-999 Seconds
	Relay 4 Setting	Press S to set action point:-19999~99999Count Press S to set deadband: 9999Count Press S to set delay time:0-999 Seconds
	Start delay time	Press>and△ to set 0-999 seconds
	Save	Press S to enter no/YES Press> to select YES. Press S to finish setting.

6. Meter setting example:

EX1. Display: 0~1000.0A Output:4-20mA(0-1000.0)
Relay: 4 sets HI-Alarm
Alarm action point: RY1 =800A ; RY2=600A ; RY3=400A ; RY4=200A

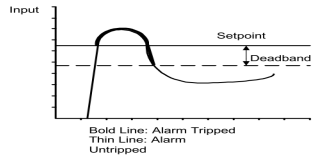
Parameter			
MODE	No need	OP	4-20
DS-LO	0000.0		OP-hi 1000.0
DS-HI	1000.0		OP-lo 0000.0
Dot	8888.8	ADJ	No need setting

Relay alarm setting			
H-L	HHHH		
RY1	800.0	Delay time	0000
RY2	600.0	Dead band	000
RY3	400.0	**Please refer to title 9 for alarm function explanation.	
RY4	200.0		

7. Alarm Function Explanation

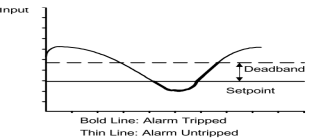
1.HIGH ALARM : (Deadband)

When input signal is over setpoint, Relay is activated until signal is under Deadband



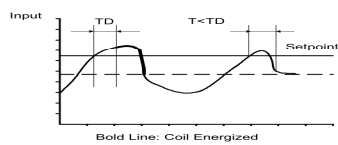
2.LOW ALARM : (Deadband)

When Input signal is under setpoint, Relay is activated until signal is over Deadband



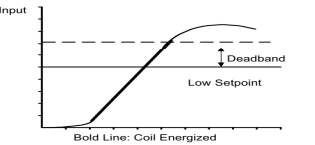
3.ON DELAYTIME :

When input signal is over setpoint, relay will be activated after the set time.



4.ZERO NO ALARM :

When input signal is under 0.3%,no low alarm function
Set 58 >0 to activate this function.



5.START DELAY TIME :

Input signal starts from 0. No alarm function within TS.

