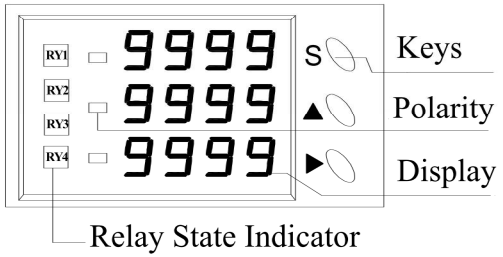
DMCA Manual

1.Panel and Keys



S ：Setting/Confirm
△ ：Selection/Change number
> ：Change position
S +> ：Rcsct

2.Parameter Setting

2-1 Basic Setting

***In below Display section,P means Press.**

Press〝S〞to enter mEnU-01-02-03-04-05-06-07-08-09 Press〝△〞to set.

Display	Function	Instruction
mEnU Press S	(MENU)	
01 → 4-20	Operation	Press△to select Add-SUb-MUL-dIU-AUG-LO'-HI-otHE (add-subtract-multiply-divide-avg.-low-high-other)
02 → dS-1	Display1 Value	Press＞and △ to set. Range:0-9999 Press S to enter 03
03 → dS-2	Display2 Value	Press＞and△to set. Range:0-9999 Press S to enter 04
04 → dS-3	No Function	No need setting
05 → A888 / b888 / C888	**Decimal Point Setting**	Press＞ to set decimal point for display 1. Press △. Press＞ to set decimal point for display 2. Press △. Press＞ to set decimal point for display 3. **Press S to 06**
06 → 4-20 / 9999 / 9999 / CH1	**O/P Signal and Corresponding to :**	Press△ to select 4-20ma/0-20ma/0-5V/1-5V/0-10V Press＞and△ to set ZERO :0-9999Count Press＞and△ to set SPAN :0-9999Count Press S to select corresponding channel:CH1-CH2-CH3 **Press S to enter 07**
07 → 9600 / Ad31 / 8n1	Baud rate Address Format	Press△ to select :9600-19200-38400-2400-4800 Press＞and △ to select :1-99 Press＞and △ to select :8N1-8N2-8E1-8E2-8O1-8O2 Press S to enter 08
08	No Function	No need to set. Press S to enter 09
09 → 00	Save	Press＞ and △ to key in password 99. Press **S**to finish setting

2-2 Relay Setting (Alarm)

***In below Display section,P means Press.**

Press〝S〞to enter mEnU Press〝＞〞to enter ry1-ry2-ry3-ry4-dELAY-SAVE function

Display	Function	Instruduction
mEnU Press>	(MENU)	
H-L → HHHH / 1111	HI or LOW Correspond to	Press△and＞to select HI_Alarm / LO_Alarm Press△and＞to select corresponding channel: CH1-CH2-CH3
ry-1 → 9999 / 9999 / 999	Relay 1 Deadband Delay Time	Press＞and△to set action point :0-9999 Press＞and△to set Deadband : 0-9999Count Press＞and△to set Delay Time : 0-999 sec
ry-2 → 9999 / 9999 / 999	Relay 2 Deadband Delay Time	Press＞and△to set action point :0-9999 Press＞and△to set Deadband : 0-9999Count Press＞and△to set Delay Time : 0-999 sec
ry-3 → 9999 / 9999 / 999	Relay 3 Deadband Delay Time	Press＞and△to set action point :0-9999 Press＞and△to set Deadband : 0-9999Count Press＞and△to set Delay Time : 0-999 sec
ry-4 → 9999 / 9999 / 999	Relay 4 Deadband Delay Time	Press＞and△to set action point :0-9999 Press＞and△to set Deadband : 0-9999Count Press＞and△to set Delay Time : 0-999 sec
dELA → 999	Start delay time (1-999 sec)	Press＞and△to set start delay time 0-999 sec
SAVE → 00	Save	Press S to enter no/YES Press＞to select YES Press **S**to finish setting.

3. Operation

Add	DS3=D1+DS2	Average	DS3=(DS1+DS2)÷2
Subtract	DS3=/D1-DS2/	High selector	IF DS1>DS2 ； DS3=DS1
Multiply	DS3=DS1×DS2÷1000	Low selector	IF DS1<DS2 ； DS3=DS1
Divide	DS3=DS1÷DS2×100	Special	DS3=((I/P1-1)*(I/P2-1)/4)+1

4. Example

EX1: Operation: subtraction Input:4-20mA (2units)
Display1: 10.00KG Display2: 10.00KG
Parameter setting:

01	Set as Sub	05	Decimal pointA8.88 / B8.88 / C8.88
02	Set as 1000	06	No need setting
03	Set as 1000	07	No need setting
04	No need setting	08	No need setting

4. Communication Protocol MODBUS – RTU MODE

Data Format

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

Function Code

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

Ex1. Read the Voltage display value

Master sends message TX：01 03 00 01 00 01 D5 CA				
ID Number 1Byte (01H)	**Function** 1Byte (03H)	**Address** 2Byte (00 01H)	**DATA number** 2Byte (00 01H)	**CRC** 2Byte (D5 CAH)

Instruction: Master calls meter ID No.1 to read address 0002.Data number 0001

If the meter displays 1000

Meter responses to Master RX：01 03 02 03 E8 B8 FA				
ID Number (01H)	**Function** (03H)	**Byte** (02H)	**Data** (03E8H)	**CRC** (B8 FAH)

Ex2. Read parameters of the Meter

Master sends message to Meter				
ID Number 1Byte (01H)	**Function** 1Byte (03H)	**Address** 2Byte (00 02H)	**DATA number** 2Byte (xxH,xxH = N)	**CRC** 2Byte (xxH,xxH)

Meter responses to Master				
ID Number (01H)	**Function** (03H)	Byte (XXH = N)	**Data** (N*2Byte) XxH,xxH.xxH.....	**CRC** (xxH,xxH)

Address (Dec)	Length	Name	Instruction	(Read/Write)
01 (40002)	2Byte	Display 1	Range -1999-9999	R
02 (40003)	2Byte	Display 2	Range -1999-9999	R
03 (40004)	2Byte	Display 3	Range -1999-9999	R
08 (40009)	2Byte	Decimal Point	0000 0000 0000 0000 DS3 DS2 DS1	R
09 (40010)	2Byte	Relay State	Bit0=RY1 0001 ON Bit1=RY2 0010 ON Bit2=RY3 0100 ON Bit3=RY4 1000 ON	R
10 (40011)	2Byte	DS1 setting	Range 0-9999	R
11 (40012)	2Byte	DS2 setting	Range 0-9999	R
12 (40013)	2Byte	DS3 setting	Range 0-9999	R
13 (40014)	2Byte	OP_HI	Range 0-9999	R
14 (40015)	2Byte	OP_LO	Range 0-9999	R
15 (40016)	2Byte	RY1	Range 0-9999	R
16 (40017)	2Byte	RY2	Range 0-9999	R
17 (40018)	2Byte	RY3	Range 0-9999	R

5. Buffer Size (The number of measurements for RMS sliding averaging)

1. High speed (8 entries)
2. Medium speed (16 entries)
3. Low speed (32 entries)

Preset as medium:(MEd)

Setting：In 09-00,key in 11 and press S to set. Press △ to select High(HIGH) Medium(MEd) Low(LOW) Key in 99 to confirm and save.

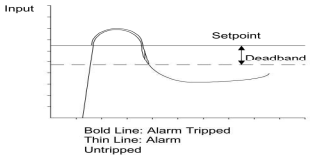
6. Error

Display	Problem
Err	No input signal connected/wrong input connection/incorrect input signal
FULL	Display range is over 9999 Incorrect CT ratio / Wrong input signal

7. Alarm Function Illustration

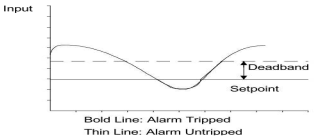
1.HIGH ALARM：(Deadband)

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



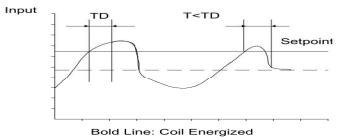
2.LOW ALARM：(Deadband)

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



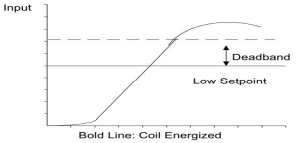
3.ON DELAYTIME：

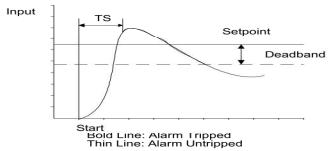
When input signal is over setpoint, relay will be activated after the set time.



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.