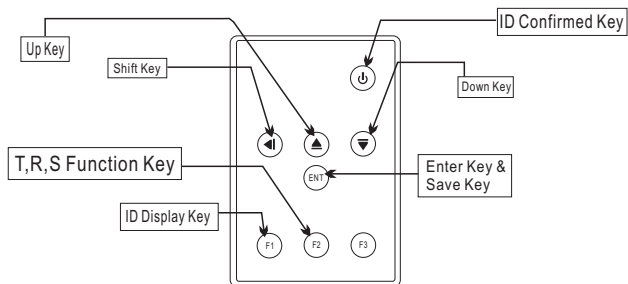


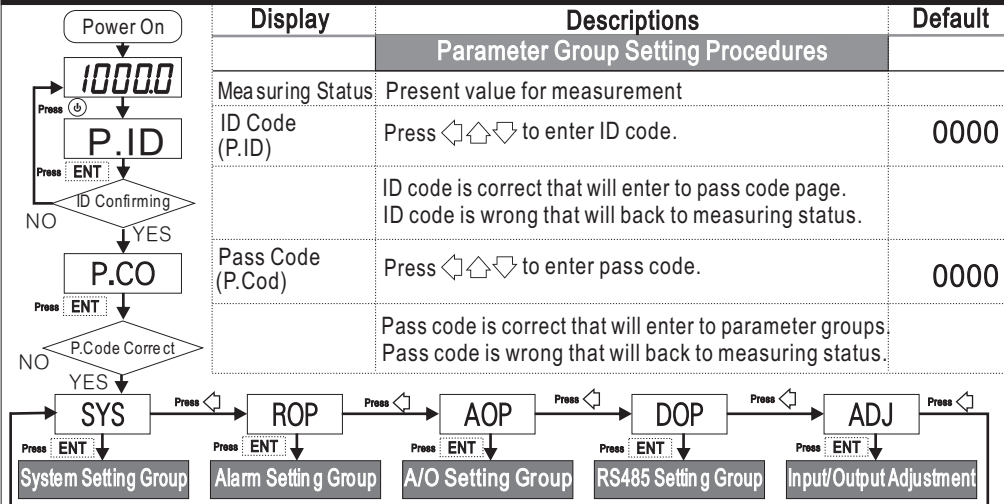
* Please understand key indicators & functions at the first operation.

FRONT PANEL & KEY FUNCTIONS



Key Name	Symbol	Descriptions
ID Confirmed Key		1. In the measuring status, press this key can enter to ID confirmed page. 2. In the parameter setting, press this key can back to the measuring page.
Enter Key & Save Key	ENT	1. In the measuring status, press this key can enter to parameter pages. 2. In the parameter setting, press this key can save the value & go to next parameter.
Shift Key		1. In the parameter setting, press this key can move the cursor left.
Up Key		1. In the parameter setting, press this key can increase the digits.
Down Key		1. In the parameter setting, press this key can decrease the digits.

PROGRAMMING MODE OPERATING PROCEDURES



Display	Descriptions	Default
System Setting Group Procedures		
1A2B Accurate Setting (ACCU)	Press to modify 1A2B accurate (X1, X4).	X1
Function Key Setting (TRS)	Press to modify function key. (Reset, Gin)	RST
Decimal Point Setting (C.dP)	Press to select cover decimal point (YES, NO)	YES
Input Filter Setting (FIL)	Press to modify input filter setting. (Off, 4, 40, 400, 4KHz).	OFF
Pass Code Setting (Cod)	Press to modify pass code (0~19999). PS: Please don't forget the new pass code after modification.	0000
Key Lock Setting (LoC)	Press to lock the keys, using key lock function only can view the parameters, but cannot modify any values. PS: no (unlock), YES ("ENT" unlock, others lock).	NO
Identification Setting (id)	Press to modify identification (00~99). PS: If the ID is 00; Meter can received any Infrared Control.	0000

Display	Descriptions	Default
Alarm Setting Group Procedures		
ROP Press ENT ↓	Alarm Setting Page (roP) The following steps are only available for alarm output.	
AL1 Press ENT ↓	Alarm 1 Setpoint (AL1) Press ◀▶↕ to modify alarm 1 setpoint.	0000
AL2 Press ENT ↓	Alarm 2 Setpoint (AL2) Press ◀▶↕ to modify alarm 2 setpoint.	0000
AL3 Press ENT ↓	Alarm 3 Setpoint (AL3) Press ◀▶↕ to modify alarm 3 setpoint.	0000
AL4 Press ENT ↓	Alarm 4 Setpoint (AL4) Press ◀▶↕ to modify alarm 4 setpoint.	0000
AC1 Press ENT ↓	Alarm Action Setting Press ▲▼ to modify alarm value that is ≥(Hi) or <(Lo) for alarm action.	HI
AC2		HI
AC3		HI
AC4		HI
HY1 Press ENT ↓	Alarm Hysteresis Setting Press ◀▶↕ to modify the value, when alarm runs lower or higher display value (depends on alarm action). Alarm setpoint ± this range (0~999) will turn off the alarm. PS: 1. There are 4 alarms output optional. 2. This page is exist without alarm output, but the function will be disabled. 3. Press ENT to save the value and go to the next parameter.	0000
HY2		
HY3		
HY4		
OPM Press ENT ↓	Alarm Mode Setting (oP.ModE) Press ▲▼ to modify alarm output mode. N: manual; R: return; C: continue, SA: Semi-Auto CP: Compare, Gin: Gin	n
OP1 Press ENT ↓	Alarm Run Delay Setting Press ◀▶↕ to modify the value, when the display value reach the alarm value that need to wait for this time (0~99 sec) for alarm action. PS: 1. There are 4 alarms output optional. 2. This page is exist without alarm output, but the function will be disabled. 3. Press ENT to save the value and go to the next parameter.	00
OP2		
OP3		
OP4		
A/O Setting Group Procedures		
AOP Press ENT ↓	A/O Setting Page (AoP) The following steps are only available for analog output.	
POL Press ENT ↓	A/O Polarity Setting (PoLAr) Press ▲▼ to select output for positive or negative pole. PS: Voltage output, NO: positive pole output (0~+10V) YES: positive & negative pole output (-10~+10V)	NO
ANL Press ENT ↓	A/O Low Scale Setting (AnLo) Press ◀▶↕ to adjust A/O low scale to correspond to the display value (programmable). EX: A/O is 0~10V, the display is 10.0 to output 0V, this value must be set for 10.0.	0000
ANH Press ENT ↓	A/O Hi Scale Setting (AnHi) Press ◀▶↕ to adjust A/O hi scale to correspond to the display value (programmable). EX: A/O is 0~10V, the display is 90.0 to output 10V, this value must be set for 90.0.	9999

Display	Descriptions	Default
RS485 Setting Group Procedures		
DOP Press ENT ↓	RS485 Setting Page (doP) The following steps are only available for RS-485.	
ADD Press ENT ↓	Address Setting (Addr) Press ◀▶↕ to modify address (0~255).	0000
BAU Press ENT ↓	Baud Rate Setting (bAUd) Press ▲▼ to select baud rate (38400/19200/9600/4800).	384
PAR Press ENT ↓	Parity Setting (PAri) Press ▲▼ to select parity (n.8.2/n.8.1/even/odd).	n.8.2.
FRA Press ENT ↓	Frame Setting (FrAmE) Press ▲▼ to select frame type. (NO:Hi→Lo, YES:Lo→Hi)	NO
Input / Output Adjustment Procedures		
ADJ Press ENT ↓		
SCA Press ENT ↓	Scale Coefficient Adjustment (SCALE) Press ◀▶↕ to modify scale coefficient (0.0001~9.9999).	01.000
div Press ENT ↓	Pre-Division Setting (div) Press ▲▼ to modify pre-division (1~99999).	00001
dp Press ENT ↓	Decimal Point Setting (dP) Press ▲▼ to select decimal point (0, 1, 2, 3, 4). EX: if the value shows "0.00" that means the decimal point is 2 digits.	0
TYP Press ENT ↓	Input Type Setting (tYPE) Press ▲▼ to modify the input type. (1U2D / 1P2D / 1A2B)	1U2
AOF Press ENT ↓	A/O Offset Setting (AoF) Press ◀▶↕ to analog output offset value (-1999~9999).	0000
AGA Press ENT ↓	A/O Gain Setting (AGA) Press ◀▶↕ to analog output gain value (-1999~9999).	0000

Error Code of Self-Diagnosis

Display	Descriptions
E-00	EEPROM reading/writing suffers the interference (about 1 million times).

**Please check the wiring connection is correct first, if the problem still exist, please return the meter to the factory.

Modbus RTU Mode Protocol Address Table

Data: 16Bit / 32Bit, +/- is 8000~7FFF (-32768~32767), 80000000~7FFFFFFF(-2147483648~2147483647)

Modbus	HEX	Name	Descriptions	Act
40001	0000	ID	Model number identification; GBMC is "3AH"	R
40002	0001	STATUS	Current alarm output & external control input status display; range: (Bit7:AL4, Bit6: AL3, Bit5: AL2, Bit4: AL1)	R
40003	0002	LOCK	Key lock setting; range: 0000~0001 (0~1)Bit0: LOCK (0:NO, 1:YES)	R/W
40004	0003	FILTER	Input FILTER setting; range:0000~0004(0~4); 0:4000, 1:400, 2:40, 3:4, 4:OFF	R/W
40005	0004	ACCU	Accurate setting; range 0000~0001(0~1) 0:X1, 1:X4	R/W
40006	0005	TRS	TRS setting; range 0000~0001(0~1) 0:rESEt, 1:X4	R/W
40007	0006	POLAR	Analog output polarity setting; range: 0000~0001 (0~1)	R/W
40008	0007	ACT1	Alarm 1 act setting; range: 0000~0001 (0~1) 0:HI, 1:LO	R/W
40009	0008	ACT2	Alarm 2 act setting; range: 0000~0001 (0~1) 0:HI, 1:LO	R/W
40010	0009	ACT3	Alarm 3 act setting; range: 0000~0002 (0~2) 0:HI, 1:LO, 2:GO	R/W
40011	000A	ACT4	Alarm 4 act setting; range: 0000~0001 (0~1) 0:HI, 1:LO, 2:ERROR	R/W
40012	000B	OP.MODE	Count mode setting; range 0000~0005(0~5);0:n, 1:r, 2:C, 3:SA, 4:CP, 5:or	R/W
40013	000C	PARI	Parity setting; range: 0000~0003 (0~3)	R/W
40014	000D	BAUD	Baud rate setting; range: 0000~0003 (0~3) 0:38400, 1:19200, 2:9600, 3:4800	R/W
40015	000E	FRAME	Frame setting; range 0000~0001(0~1) 0:NO, 1:YES	R/W
40016	000F	TYPE	Input type setting; range: 0000~0002 (0~1) 0:1U2d, 1:1P2d, 2:1A2b	R/W
40017	0010	CDP	Recover decimal point setting, range:0000~0001(0~1); 0:YES, 1:NO	R/W
40018	0011	DP	Present Value decimal point setting; range: 0000~0005 (0~5)	R/W
40019	0012	DIG	DIG setting; range: 8DF1~270F(-9999~9999)	R/W
40020	0013	IDNO	Indicator setting; range 0000~0063(0~99)	R/W
40021	0014	ADDR	Address setting; range: 0000~00FF (0~255)	R/W
40022	0015	OP TIME1	Present value relay1 output time setting; range: 0001~0063 (1~99)	R/W
40023	0016	OP TIME2	Present value relay2 output time setting; range: 0001~0063 (1~99)	R/W
40024	0017	OP TIME3	Present value relay3 output time setting; range: 0001~0063 (1~99)	R/W
40025	0018	OP TIME4	Present value relay4 output time setting; range: 0001~0063 (1~99)	R/W
40026	0019	CODE	Pass code setting; range: 0000~4E1F(0~19999)	R/W
40027	001A	AOFST	Analog offset setting; range: D8F1~270F(-9999~9999)	R/W
40028	001B	AGAIN	Analog gain setting; range: D8F1~270F(-9999~9999)	R/W
40029	001C	DIV	Pre-division setting; range: 00000001~0001869F (1~99999) Hi Bit	R/W
40030	001D		Pre-division setting; range: 00000001~0001869F (1~99999) Lo Bit	R/W
40031	001E	SCALE	Total scale setting; range: 00000001~0001869F (1~99999) Hi Bit	R/W
40032	001F		Total scale setting; range: 00000001~0001869F (1~99999) Lo Bit	R/W
40033	0020	ANLO	Analog output low scale setting; range: 00000000~0001869F (0~99999) Hi Bit	R/W
40034	0021		Analog output low scale setting; range: 00000001~0001869F (0~99999) Lo Bit	R/W
40035	0022	ANHI	Analog output hi scale setting; range: 00000001~0001869F (0~99999) Hi Bit	R/W

Modbus	HEX	Name	Descriptions	Act
40036	0023		Analog output hi scale setting; range: 00000001~0001869F (0~99999) Lo Bit	R/W
40037	0024	AL1	Present value alarm 1 setpoint setting; range: 00000001~0001869F (0~99999) Hi Bit	R/W
40038	0025		Present value alarm 1 setpoint setting; range: 00000001~0001869F (0~99999) Lo Bit	R/W
40039	0026	AL2	Present value alarm 2 setpoint setting; range: 00000001~0001869F (0~99999) Hi Bit	R/W
40040	0027		Present value alarm 2 setpoint setting; range: 00000001~0001869F (0~99999) Lo Bit	R/W
40041	0028	AL3	Present value alarm 3 setpoint setting; range: 00000001~0001869F (0~99999) Hi Bit	R/W
40042	0029		Present value alarm 3 setpoint setting; range: 00000001~0001869F (0~99999) Lo Bit	R/W
40043	002A	AL4	Present value alarm 4 setpoint setting; range: 00000001~0001869F (0~99999) Hi Bit	R/W
40044	002B		Present value alarm 4 setpoint setting; range: 00000001~0001869F (0~99999) Lo Bit	R/W
40045	002C	RATE	Current display value, range: FFFFB1E1~0001869 (-19999~99999) Hi Bit	R
40046	002D		Current display value, range: FFFFB1E1~0001869 (-19999~99999) Lo Bit	R