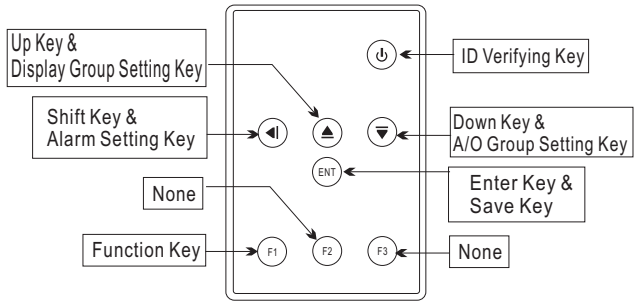
GBMS RS-485 LARGE DISPLAY with 1~4 ALARMS / ANALOG OUTPUT MANUAL

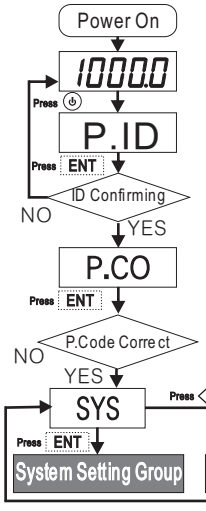
✻ Please understand key indicators & functions at the first operation.

FRONT PANEL & KEY FUNCTIONS

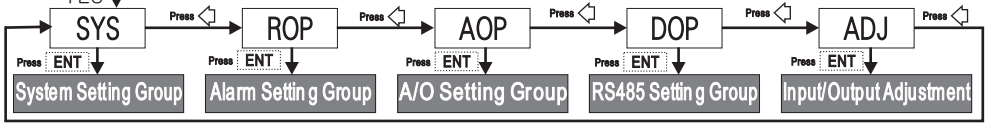


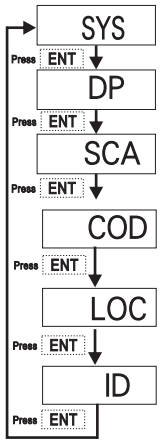
Key Name	Symbol	Descriptions
ID Confirmed Key	⏻	1. In the measuring status, press this key can enter to ID confirmed page. 2. In the parameter setting, press this key can back to the measuring page.
Enter Key & Save Key	ENT	1. In the measuring status, press this key can enter to parameter pages. 2. In 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

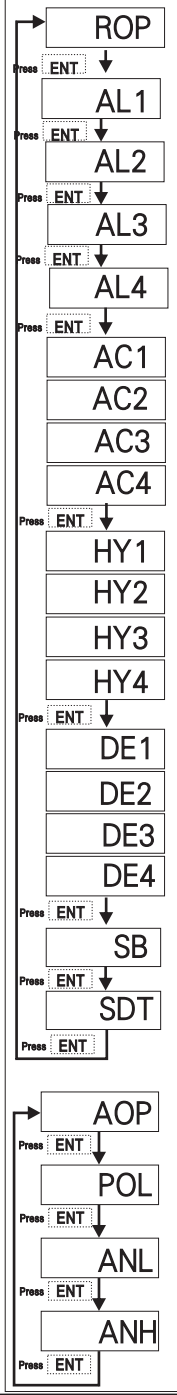


Display	Descriptions	Default
	Parameter Group Setting Procedures	
Measuring Status	Present value for measurement	
ID Code (P.ID)	Press ◁ △ ▽ to enter ID code.	0000
	ID code is correct that will enter to pass code page. ID code is wrong that will back to measuring status.	
Pass Code (P.Cod)	Press ◁ △ ▽ to enter pass code.	0000
	Pass code is correct that will enter to parameter groups. Pass code is wrong that will back to measuring status.	

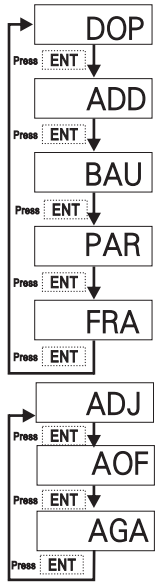




Display	Descriptions	Default
	System Setting Group Procedures	
Decimal Point Setting (dP)	Press △ ▽ to select decimal point (0, 1, 2, 3, 4). EX: if the value shows "0.00" that means the decimal point is 2 digits.	Customers specify
Scale Coefficient Adjustment (SCA)	Press ◁ △ ▽ to modify scale coefficient 1 (0.0001 ~9.9999).	1.000
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	
Alarm Setting Page (roP)	**The following steps are only available for alarm output.**	
Alarm 1 Setpoint (AL1)	Press◁△▽ to modify alarm 1 setpoint.	0000
Alarm 2 Setpoint (AL2)	Press◁△▽ to modify alarm 2 setpoint.	0000
Alarm 3 Setpoint (AL3)	Press◁△▽ to modify alarm 3 setpoint.	0000
Alarm 4 Setpoint (AL4)	Press◁△▽ to modify alarm 4 setpoint.	0000
Alarm 1 (ACt1) / Alarm 2 (ACt2) — Alarm Action Setting	Press △▽ to modify alarm value that is ≧(Hi) or <(Lo) for alarm action.	HI
Alarm 3 (ACt3) — Alarm Action Setting	Press △▽ to modify alarm value that is ≧(Hi) or <(Lo) or (Go) for alarm action.	HI
Alarm 4 (ACt4) — Alarm Action Setting	Press △▽ to modify alarm value that is (Hi) or <(Lo) or (Err) for alarm action.	HI
Hysteresis 1 (HYS1) / Hysteresis 2 (HYS2) / Hysteresis 3 (HYS3) / Hysteresis 4 (HYS4) — 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
Delay Time 1 (dEL1) / Delay Time 2 (dEL2) / Delay Time 3 (dEL3) / Delay Time 4 (dEL4) — 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
Alarm Start Band Setting (Sb)	Press◁△▽ to modify the value (-99~+99), if the display value don't over this range; the alarm will not be act.	00
Alarm Start Band Time Setting (Sdt)	Press◁△▽ to modify the value (0~99 sec), if the display value reach alarm start band value; the alarm will be act after this value (sec).(The function is used with "Sb" function.)	00
	A/O Setting Group Procedures	
A/O Setting Page (AoP)	**The following steps are only available for analog output.**	
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
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
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 output1 0V, this value must be set for 90.0.	9999



Display	Descriptions	Default
	RS485 Setting Group Procedures	
RS485 Setting Page (doP)	**The following steps are only available for RS-485.**	
Address Setting (Addr)	Press◁△▽ to modify address (0~255).	0000
Baud Rate Setting (bAUd)	Press △▽to select baud rate (38400/19200/9600/4800).	384
Parity Setting (PAri)	Press △▽ to select parity (n.8.2/n.8.1/even/odd).	n.8.2.
Frame Setting (FrAmE)	Press △▽ to select frame type. (NO:Hi→Lo , YES:Lo→Hi)	NO
	Input / Output Adjustment Procedures	
A/O Offset Setting (AoF)	Press◁△▽to analog output offset value (-1999~9999).	0000
A/O Gain Setting (AGA)	Press◁△▽ to analog output gain value (-1999~9999).	0000

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; GBMS is "38H"	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	POLAR	Analog output polarity setting; range: 0000~0001 (0~1)0:NO, 1:YES	R/W
40005	0004	ACT1	Alarm 1 act setting; range: 0000~0001 (0~1) 0:HI, 1:LO	R/W
40006	0005	ACT2	Alarm 2 act setting; range: 0000~0001 (0~1) 0:HI, 1:LO	R/W
40007	0006	ACT3	Alarm 3 act setting; range: 0000~0002 (0~2) 0:HI, 1:LO, 2:GO	R/W
40008	0007	ACT4	Alarm 4 act setting; range: 0000~0001 (0~1) 0:HI, 1:LO, 2:ERROR	R/W
40009	0008	PARI	Parity setting; range: 0000~0003 (0~3)0:N.8.2., 1:N.8.2., 2:EVEN, 3:ODD	R/W
40010	0009	BAUD	Baud rate setting; range: 0000~0003 (0~3) 0:38400,1:19200, 2:9600, 3:4800	R/W
40011	000A	FRAME	Frame setting; range 0000~0001(0~1) 0:NO, 1:YES	R/W
40012	000B			R/W
40013	000C			R/W
40014	000D			R/W
40015	000E			R/W
40016	000F	DP	Present Value decimal point setting; range: 0000~0003 (0~3)0:10^0; 1:10^{-1};2:10^{-2};3:10^{-3}	R/W
40017	0010			R/W
40018	0011	IDNO	Indicator setting; range 0000~0063(0~99)	R/W
40019	0012	DIG	DIG setting; range: 8DF1~270F(-9999~9999)	R/W
40020	0013	ADDR	Address setting; range: 0000~00FF (0~255)	R/W
40021	0014			R/W
40022	0015			R/W
40023	0016	DEL1	Alarm 1 run delay setting; range: 0001~0063 (1~99)	R/W
40024	0017	DEL2	Alarm 2 run delay setting; range: 0001~0063 (1~99)	R/W
40025	0018	DEL3	Alarm 3 run delay setting; range: 0001~0063 (1~99)	R/W
40026	0019	DEL4	Alarm 4 run delay setting; range: 0001~0063 (1~99)	R/W
40027	001A	SB	Alarm start band setting; range: FF9D~0063 (0~99)	R/W
40028	001B	SDT	Alarm start delay setting; range: 0001~0063 (0~99)	R/W
40029	001C	SC.T	Alarm start delay setting; range: 0001~0063 (0~99)	R/W
40030	001D	CODE	Pass code setting; range: 0000~270F(0~9999)	R/W
40031	001E	HYS1	Alarm 1 hystersis setting; range: 0000~0270F (0~9999)	R/W
40032	001F	HYS2	Alarm 2 hystersis setting; range: 0000~0270F (0~9999)	R/W
40033	0020	HYS3	Alarm 3 hystersis setting; range: 0000~0270F (0~9999)	R/W
40034	0021	HYS4	Alarm 4 hystersis setting; range: 0000~0270F (0~9999)	R/W
40035	0022	AOFST	Analog offset setting; range: D8F1~270F(-9999~9999)	R/W

Modbus	HEX	Name	Descriptions	Act
40036	0023	AGAIN	Analog gain setting; range: D8F1~270F(-9999~9999)	R/W
40037	0024			
40038	0025			
40039	0026			
40040	0027			
40041	0028			
40042	0029			
40043	002A	SCALE	Total scale setting; range: 0000~270F (0~9999) Hi Bit	R/W
40044	002B		Total scale setting; range: 0000~270F (0~9999)Lo Bit	R/W
40045	002C	ANLO	Analog output low scale setting; range: 0000~270F (0~9999)Hi Bit	R/W
40046	002D		Analog output low scale setting; range: 0000~270F (0~9999) Lo Bit	R/W
40046	002E	ANHI	Analog output hi scale setting; range: 0000~270F (0~9999)Hi Bit	R/W
40047	002F		Analog output hi scale setting; range: 0000~270F (0~9999) Lo Bit	R/W
40048	0030	AL1	Present value alarm 1 setpoint setting; range: 0000~270F (0~9999) Hi Bit	R/W
40049	0031		Present value alarm 1 setpoint setting; range: 0000~270F (0~9999) Lo Bit	R/W
40050	0032	AL2	Present value alarm 2 setpoint setting; range: 0000~270F (0~9999) Hi Bit	R/W
40051	0033		Present value alarm 2 setpoint setting; range: 0000~270F (0~9999) Lo Bit	R/W
40052	0034	AL3	Present value alarm 3 setpoint setting; range: 0000~270F (0~9999) Hi Bit	R/W
40053	0035		Present value alarm 3 setpoint setting; range: 0000~270F (0~9999) Lo Bit	R/W
40054	0036	AL4	Present value alarm 4 setpoint setting; range: 0000~270F (0~9999) Hi Bit	R/W
40055	0037		Present value alarm 4 setpoint setting; range: 0000~270F (0~9999) Lo Bit	R/W
40056	0035			
40057	0039			
40059	003A			
40060	003B			
40061	003C			
40062	003D			
40063	003E	DISPLAY	Display selection setting; range: FFFFF831~0000270F(-1999~9999) Hi Bit	R/W
40064	003F		Display selection setting; range: FFFFF831~0000270F(-1999~9999) Lo Bit	R/W