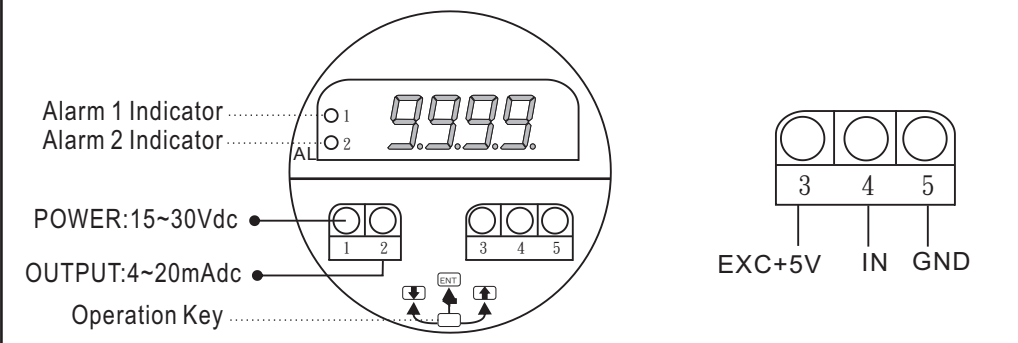
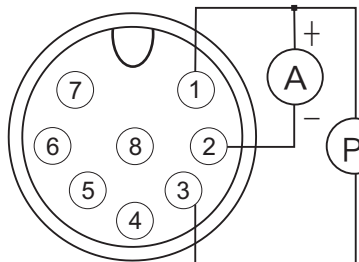


* Please understand key indicators & functions at the first operation.

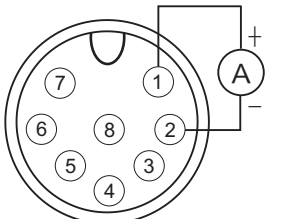
FRONT PANEL, KEY FUNCTIONS & WIRING CONNECTION



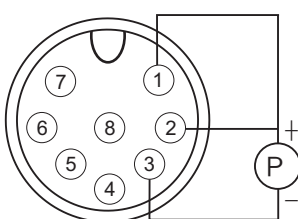
Wiring connection



Power wiring connection for analog output



Power wiring connection for RS-485



M12 Connector

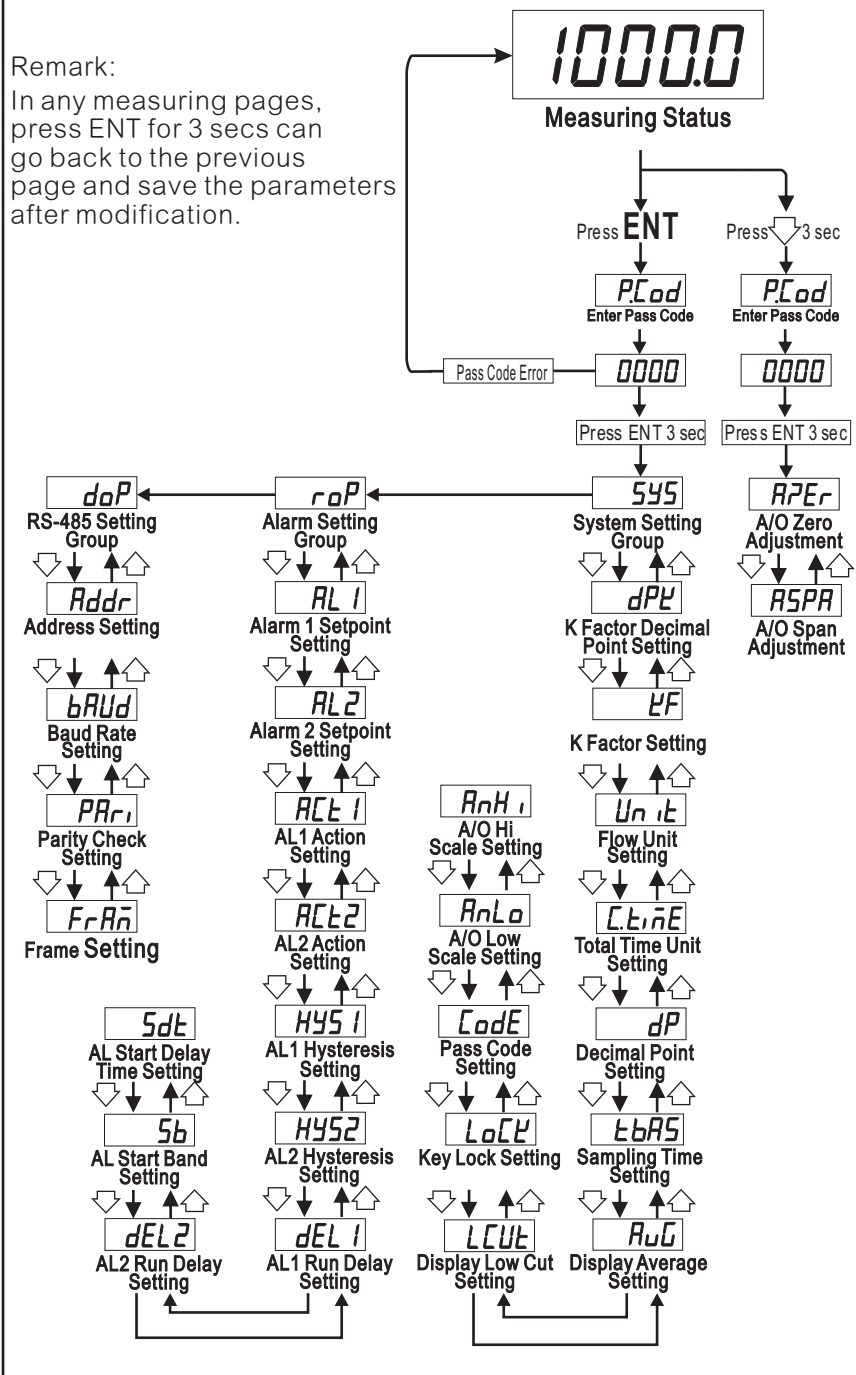
PIN	COLOR	DESCRIPTION
1	Brown	Power : 15~30V
2	Red	Output :4~20mA
3	White	Common
4	Blue	RX : D+
5	Green	TX : D-
6	Yellow	C1 / E1
7	Purple	C2 / E2
8	Black	Ecom / Ccom

Key Name	Symbol	Descriptions
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 for 3 sec 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 & A/O Adjusting Key	↓	1. In the measuring status, press this key for 3 sec can enter to analog output adjustment. 2. In the parameter setting, press this key can decrease the digits.

PROGRAMMING MODE OPERATING PROCEDURES

Remark:

In any measuring pages, press ENT for 3 secs can go back to the previous page and save the parameters after modification.



SYSTEM (SYS) SETTING GROUP PROCEDURE

* While Pass Code is correct, Press ENT for 3 sec can select SYS Setting Group.

Display	Default	Name	Descriptions
	0	K Factor Decimal Point Setting (dPK)	1. Press ENT to enter this parameter, press ↑ or ↓ can modify the K Factor decimal point. 2. Press ENT for 3 SEC to save the parameter and go to the next parameter
	0	K Factor Setting (kF)	1. Press ENT to enter this parameter, press ↑ or ↓ can modify the K Factor range 2. Press ENT for 3 SEC to save the parameter and go to the next parameter
	L, tE	Flow Unit Setting (unit)	1. Press ENT to enter this parameter, press ↑ or ↓ can modify the flow unit: Leter, Gal, M3, CC 2. Press ENT for 3 SEC to save the parameter and go to the next parameter
	SEC	Total Time Unit Setting (C.tiME)	1. Press ENT to enter this parameter, press ↑ or ↓ can modify the time unit: sec, min, hour, day, month 2. Press ENT for 3 SEC to save the parameter and go to the next parameter
	0	Rate Decimal Point Setting (dP)	1. Press ENT to enter this parameter, press ↑ or ↓ can modify the rate decimal point. 2. Press ENT for 3 SEC to save the parameter and go to the next parameter
	0	Sampling Time Setting (tbASE)	1. Press ENT to enter this parameter, press ↑ or ↓ can modify the sampling time. 2. Press ENT for 3 SEC to save the parameter and go to the next parameter
	10	Display Average Setting (AvG)	1. Press ENT to enter this parameter, press ↑ or ↓ can modify the display average. (1~99) 2. Press ENT for 3 SEC to save the parameter and go to the next parameter
	0	Display Low Cut Setting (LCUt)	1. Press ENT to enter this parameter, Press ↑ or ↓ can modify the value, range: 0~99 2. Press ENT for 3 SEC to save the parameter and go to the next parameter
	no	Key Lock Setting (LoCk)	1. Press ENT to enter this parameter, press ↑ or ↓ can modify the value, range: no(unlock), YES(lock) 2. Press ENT for 3 SEC to save the parameter and go to the next parameter
	0000	Pass Code Setting (CodE)	1. Press ENT to enter this parameter, press ↑ or ↓ can modify the value, range: 0~9999 2. Press ENT for 3 SEC to save the parameter and go to the next parameter
	0000	A/O Low Scale Setting (AnLo)	Example: 1. The display is 4.0 to output 4mA, this value must be 4.0. Press ENT to enter this parameter, Press ENT again to move the digit. Press ↑ or ↓ can modify the value, range: 0~9999 2. Press ENT for 3 SEC to save the parameter and go to the next parameter
	9999	A/O Hi Scale Setting (AnHi)	Example: 1. The display is 100.0 to output 20mA, this value must be 100.0. Press ENT to enter this parameter, Press ENT again to move the digit. Press ↑ or ↓ can modify the value, range: 0~9999 2. Press ENT for 3 SEC to save the parameter and go to the next parameter

ALARM (roP) SETTING GROUP PROCEDURE

* While Pass Code is correct, Press ENT for 3 sec can select ROP Setting Group.

Display	Default	Name	Descriptions
	500	Alarm 1 Setpoint Setting (Al1)	Example: 1. The alarm is on while the display is 50.0, the value must be set for 50.0 Press ENT to enter this parameter, Press ENT again to move the digit. Press ↑ or ↓ can modify the value, range: 0~9999 2. Press ENT for 3 SEC to save the parameter and go to the next parameter
	500	Alarm 2 Setpoint Setting (Al2)	
	Lo	AL1 Action Setting (Act1)	Description: Hi: Alarm on while the display higher than setpoint. Lo: Alarm on while the display lower than setpoint. Range: Hi (≥ Alarm setpoint), Lo (< Alarm setpoint) 1. Press ENT to enter this parameter, press ↑ or ↓ can modify the value. 2. Press ENT for 3 SEC to save the parameter and go to the next parameter
	Hi	AL2 Action Setting (Act2)	
	0000	AL1 Hysteresis Setting (HYS1)	Description: 1. If the Alarm actions is Hi, the display must lower than (Setpoint-HYS) value, the Alarm will be off. 2. If the Alarm actions is Lo, the display must lower than (Setpoint+HYS) value, the Alarm will be off.
	0000	AL2 Hysteresis Setting (HSY2)	3. Press ENT to enter this parameter. Press ENT again to move the digit. Press ↑ or ↓ can modify the value, range: 0~99 4. Press ENT for 3 SEC to save the parameter and go to the next parameter
	0000	AL1 Run Delay Setting (dEL1)	Description: 1. If the value is 5, while the display reaches the Alarm setpoint, Alarm will be on after 5 sec. 2. Press ENT to enter this parameter. Press ENT again to move the digit.
	0000	AL2 Run Delay Setting (dEL2)	Press ↑ or ↓ can modify the value, range: 0~99(sec) 3. Press ENT for 3 SEC to save the parameter and go to the next parameter
	0000	AL Start Band Setting (Sb)	Description: 1. If the value is 5, if the display is under 5, Alarm will not be ON. 2. If this value is 5, while the display reaches the Alarm start band range, the Alarm will be on after Sdt time. 3. Press ENT to enter this parameter. Press ENT again to move the digit. Press ↑ or ↓ can modify the value, range: 0~99(sec) 3. Press ENT for 3 SEC to save the parameter and go to the next parameter ※This function can prevent the wrong action by starting current
	0000	AL Start Delay Time Setting (Sdt)	Description: 1. While the display reach the Alarm start band range, the Alarm will be on after this time. (P.S. :This parameter must be use with Sb together) 3. Press ENT to enter this parameter. Press ENT again to move the digit. Press ↑ or ↓ can modify the value, range: 0~99(sec) 3. Press ENT for 3 SEC to save the parameter and go to the next parameter

RS-485 (doP) SETTING GROUP PROCEDURE

* While Pass Code is correct, Press ENT for 3 sec can select RS-485 Setting Group.

Display	Default	Name	Descriptions
<i>Addr</i>	0	Address Setting (Addr)	1. Press ENT to enter this parameter, Press ENT again to move the digit. Press ↑ or ↓ can modify the value, range: 0~255 2. Press ENT for 3 SEC to save the parameter and go to the next parameter
<i>bAud</i>	2400	Baud Rate Setting (bAud)	1. Press ENT to enter this parameter, Press ↑ or ↓ can modify the value, range: 96400,4800, 2400(bps) 2. Press ENT for 3 SEC to save the parameter and go to the next parameter
<i>PAri</i>	n82	Parity Check Setting (PAri)	1. Press ENT to enter this parameter, Press ↑ or ↓ can modify the value, range: n.8.2., n.8.1., EvEn, odd 2. Press ENT for 3 SEC to save the parameter and go to the next parameter
<i>FrAn</i>	oFF	Frame Setting (FrAM)	1. Press ENT to enter this parameter, Press ↑ or ↓ can modify the value, range: on (Hi->Lo), off (Lo->Hi) 2. Press ENT for 3 SEC to save the parameter and go to the next parameter

A/O SETTING

* Press ↓ for 3 sec can enter to P.Cod page, if the pass code is correct, Press ENT for 3 sec can enter to DISPLAY SETTING.

Display	Default	Name	Descriptions
<i>APEr</i>	0000	A/O Zero Adjustment (AZEr)	1. Press ENT to enter this parameter, the digit will be flashed. 2. Press ENT again to move the digit, Press ↑ or ↓ can modify the value, Move the digit to the 3rd or 4th digit to increase the speed of adjustment. 3. Press ENT for 3 SEC to save the parameter and go to the next parameter
<i>ASPA</i>	0000	A/O Span Adjustment (ASPA)	

Error Code of Self-Diagnosis

Display	Descriptions
<i>dot</i>	Input signal is over display range (Max 9999)
<i>-doF</i>	Input signal is under display range (Min -1999)
<i>Err 7</i>	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.

GSFL51 Modbus RTU Mode Protocol Address Map

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

Modbus	HEX	Name	Nescriptions	Act
40001	0000	DISPLY	Current display, range:0000~270F(0000~9999)	R
40002	0001	KF	K factor setting, range:0001~270F(0001~9999)	R/W
40003	0002	ANLO	Analog output low scale setting; range: 000~270F(0000~9999)	R/W
40004	0003	ANHI	Analog output hi scale setting; range: 000~270F(0000~9999)	R/W
40005	0004	TBASE	Sampling time base setting; range: 0001~270F (0001~9999)	R/W
40006	0005	AL1	Alarm 1 setpoint setting; range : 000~ 270F(0000~9999)	R/W
40007	0006	AL2	Alarm 2 setpoint setting; range : 000~ 270F(0000~9999)	R/W
40008	0007	TOTAL	Alarm total, range:0000~5F5E0FF(0000~9999)Hi Bit	R/W
40009	0008		Alarm total, range:0000~5F5E0FF(0000~9999)Low Bit	R/W
40010	0009	AVG	Display average setting; range: 0001~0063 (1~99)	R/W
40011	000A	LCUT	Display low cut setting; range: 0000~0063 (00~99)	R/W
40012	000B	HYS1	Alarm 1 hysteresis setting; range: 0000~0063 (00~99)	R/W
40013	000C	HYS2	Alarm 2 hysteresis setting; range: 0000~0063 (00~99)	R/W
40014	000D	DEL1	Alarm 1 act delay time setting; range: 0000~0063 (0~99)	R/W
40015	000E	DEL2	Alarm 2 act delay time setting; range: 0000~0063 (0~99)	R/W
40016	000F	SB	Alarm start band setting; range: 000~0063 (0~99)	R/W
40017	0010	SDT	Alarm 1 start delay time setting; range: 0000~0063 (0~99)	R/W
40018	0011	ADDR	Address setting; range: 0000~00FF (0~255)	R/W
40019	0012	DPK	AlarmK factor decimal point setting, range:0000~0003(0~1) 0:0, 1:1, 2:2, 3:3	R/W
40020	0013	DP	Decimal point settin g; range: 0000~0003 (0~1) 0:0, 1:1, 2:2, 3:3	R/W
40021	0014	Unit	Linear-Speed unit setting: 0:M3, 1:Liter, 2:C.C, 3:GAL	R/W
40022	0015	CTIME	Total time unit setting; range: 0000~0004(0~4) 0:SEC,1: Min, 2:HoUr, 3:dAY, 4:Month	R/W
40023	0016	ACT1	Alarm 1 act setting; ran ge 0000~0001(0~1) 0:Lo, 1:Hi, 2:P-ON	R/W
40024	0017	ACT2	Alarm 2 act setting; ran ge 0000~0001(0~1) 0:Lo, 1:Hi	R/W
40025	0018	BAUD	Baud rate setting; range: 0000~0002 (0~2) 0:2400, 1:4800, 2:9600	R/W
40026	0019	PARI	Parity setting; range: 0000~0003 (0~3), 0:N.8.2., 1:N.8.1., 2:EVEN, 3:ODD	R/W
40027	001A	FRAME	Fram e setting; rang e 0000~0001 (0~1) 0:off, 1:on	R/W