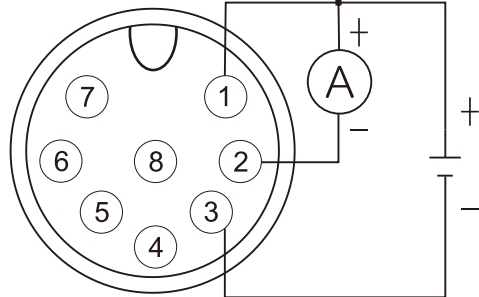
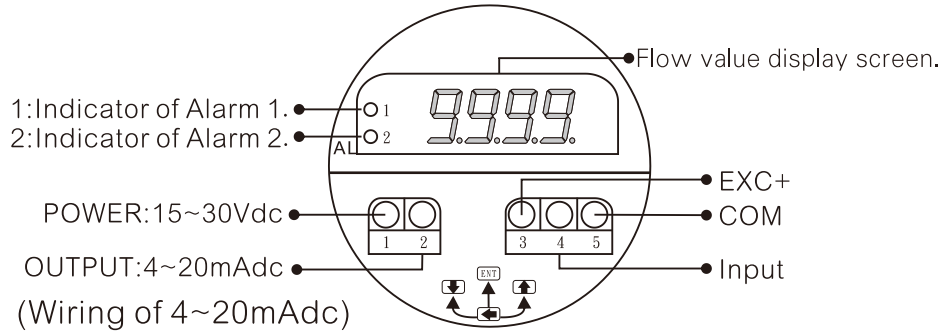


★Please Read This Manual When Your First Time To Use The Transmitter.

INDICATOR AND KEY DESCRIPTION



M12 Connector Wiring :

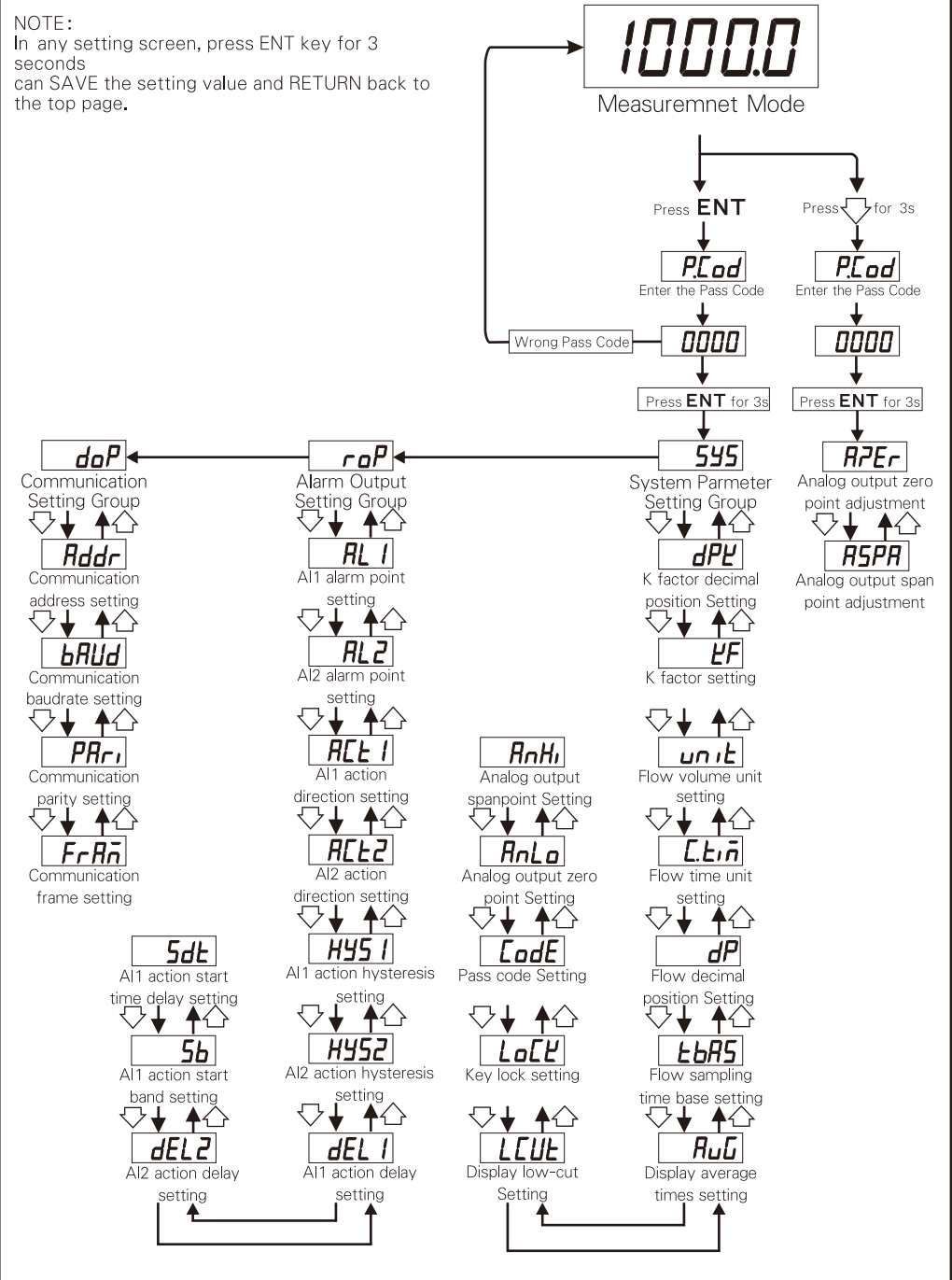
- 1:POWER: 15~30V
- 2:OUTPUT: 4~20mA
- 3:COMMON
- 4:RX:D+
- 5:TX:D-
- 6:C1 / E1
- 7:C2 / E2
- 8:Ecom / Ccom

KEY	SYMBOL	DESCRIPTION
ENTER KEY SHIFT KEY SAVE KEY RETURN KEY	ENT	1. In measurement mode, press this key will jump to SETTING GROUP page. 2. In setting value mode, press this key to shift the setting digit. 3. In setting mode, press this key for 3 seconds can save the setting and jump to next setting page, or jump out the setting page.
LEFT SHIFT KEY	←	1. In setting mode, press this key can select the setting group/page.
UP KEY	↑	1. In setting mode, press this key can increase the setting value.
DOWN KEY ANALOG OUTPUT ADJUST KEY	↓	1. In setting mode, press this key can decrease the setting value. 2. In measurement mode, press this key for 3 seconds can jump to analog output adjustment setting group.

OPERATION FLOW CHART

NOTE:

In any setting screen, press ENT key for 3 seconds can SAVE the setting value and RETURN back to the top page.



SYSTEM PARAMETER (SYS) SETTING GROUP DESCRIPTION

** Enter the correct pass code then start to setting the parameters.

DISPLAY	DEFAULT	NAME	DESCRIPTION
dPE	0	K factor decimal position setting (dPK)	Setting the K factor decimal position, if K factor is set 4,000, and need to set to 40.00, please change this parameter from 3. to 2.. Setting Range: 0, 1, 2, 3
KF	1	K factor setting (KF)	Setting the K factor value, please refer the manual of flow sensor, the K factor is issued. Setting Range: 1-9999
unit	LitE	Flow volume unit setting (unit)	Setting the flow volume unit. Setting Range: LitEr (Liter), Gal (Gallon), C.C. (Milliliter), M3 (Cubic meter)
C.tiM	SEC	Flow time unit setting (C.tiM)	Setting the flow time unit. Setting Range: SEC (Second), Min (Minute), HoUr (Hour), dAY (Day), Month (Month)
dP	0	flow decimal position setting (dPr)	Setting the flow decimal position, if the display shown 100.0, and need to set to 10.00, please change this parameter from 3. to 2.. Setting Range: 0, 1, 2, 3
tbAS	0.1	Flow sampling time base setting (tbAS)	Setting the flow sampling time base, if the time period of pulse signal is 1s, please set this value to 10s or higher. This setting will affect the display refresh time. Setting Range: 0.1~999.9 (s)
AvG	10	Display average times setting (AvG)	Setting the display average times can reduce the instability of the signal measurement. This setting will affect the display reaction time. Setting Range: 1-99
LCUt	0	Display low-cut setting (LCUt)	Setting the display low-cut value, if setting to 10, the display will show 0 when measurement value less than 10. Setting Range: 0-99
LoCK	no	Key lock setting (LoCK)	Setting the key lock to lock the function of the keys except ENT key. Setting Range: no (unlock), YES (lock)
CodE	0000	Pass code Setting (CodE)	Setting the pass code. *Please remember this setting value. Setting range: 0-9999
AnLo	0000	Analog output zero point Setting (AnLo)	Setting the analog output zero point, if need to output 4mA when display show 4.0, set this value to 4.0. Setting range: 0-9999
AnHi	9999	Analog output spanpoint Setting (AnHi)	Setting the analog output span point, if need to output 20mA when display show 20.0, set this value to 20.0. Setting range: 0-9999

ALARM OUTPUT(ROP) SETTING GROUT DESCRIPTION

** Enter the correct pass code then start to setting the parameters.

DISPLAY	DEFAULT	NAME	DESCRIPTION
AL1	500	AI1 alarm point (AL1)	Setting alarm point, if need to alarm when display 50.0, set this value to 50.0. Setting Range: 0-9999
AL2	500	AI2 alarm point (AL2)	
ACT1	Lo	AI1 action direction setting (ACT1)	Setting the action direction or pulse output, setting Hi to let alarm output when display value > alarm setting point, setting Lo to let alarm output when display value < alarm setting point, setting P-ON to let alarm 1 to be pulse output. Setting Range: Hi (Action by \geq alarm point), Lo (Action by < alarm point), P-ON(Pulse Output)
ACT2	Hi	AI2 action direction setting (ACT2)	Setting the action direction, setting Hi to let alarm output when display value > alarm setting point, setting Lo to let alarm output when display value < alarm setting point. Setting Range: Hi (Action by \geq alarm point), Lo (Action by < alarm point)
HYS1	0000	AI1 action hysteresis setting (HYS1)	Setting the action hysteresis, if ACT set Hi, the alarm will be disable when display value lower then alarm point decreased HYS value, else ACT set Lo, the alarm will be disable when display value higher then alarm point increased HYS value. Setting Range: 0-99
HYS2	0000	AI2 action hysteresis setting (HYS2)	
dEL1	0000	AI1 action delay setting (DEL1)	Setting the action delay, if setting 5s, the alarm action will be execute after 5 sec while display value reach the alarm point. Setting Range: 0-99 (s)
dEL2	0000	AI2 action delay setting (DEL2)	
Sb	0000	AI1 action start band setting (Sb)	Setting the action star band, if setting 5, the alarm do not action when display value is less than 5, when display value is higher than 5, the alarm will start to action after the start time delay(sdt). Setting Range:0-99 ※This function can avoid the wrong action o f the starting status, such as the large starting current of motor.
Sdt	0000	AI1 action start time delay setting (Sdt)	Setting the action start time delay, when display value higher than Sb value, the alarm action after this setting time. Setting Range: 0-99(秒)

COMMUNICATION(doP) SETTING GROUT DESCRIPTION

** Enter the correct pass code then start to setting the parameters.

DISPLAY	DEFAULT	NAME	DESCRIPTION
Addr	0	Communication address setting (Addr)	1. 按ENT進入參數修改, 進入後, 按ENT移動位數, 按↑或↓可修改數值. 可修改通訊位置.可修改範圍: 0~255 2. 按 ENT 3SEC儲存修改後的參數, 並進入下個參數設定頁面.
bAud	2400	Communication baudrate setting (bAud)	1. 按ENT進入參數修改, 按↑或↓可修改位數. 可修改速率:9600、4800、2400 (bps) 2. 按 ENT 3SEC儲存修改後的參數, 並進入下個參數設定頁面.
PARi	n82	Communication parity setting (Pari)	1. 按ENT進入參數修改, 按↑或↓可修改設定. 可修改範圍: n,8,2., n,8,1., EvEn, odd 2. 按 ENT 3SEC儲存修改後的參數, 並進入下個參數設定頁面.
FrAn	oFF	Communication frame setting (FRAME)	1. 按ENT進入參數修改, 按↑或↓可修改設定. 可修改範圍: on (Hi -> Lo), off (Lo -> Hi) 2. 按 ENT 3SEC儲存修改後的參數, 並進入下個參數設定頁面.

類比輸出調整群組流程及顯示

** Enter the correct pass code then start to setting the parameters.

DISPLAY	DEFAULT	NAME	DESCRIPTION
APEr	0000	Analog output zero point adjustment (AZER)	1. 按ENT進入參數修改模式, 該數值會閃爍. 2. 按ENT移動位數、按↑或↓修改調整類比輸出數值 務必將閃爍之游標數值移動到第3或第4位數.
ASPA	0000	Analog output SPAN point adjustment (ASPA)	(可增快數值之調整速度) 3. 按 ENT 3SEC 儲存修改後的參數, 並進入下個參數設定頁面.

ERROR SCREEN DESCRIPTION

DISPLAY	DESCRIPTION
doF	Display value over the maximum value(MAX9999)
-doF	Display value less than the minimum value(MIN-1999)
Err 7	EEPROM R/W got noise interference, or over the R/W times(1 million).

※When got the error display, please take off the wiring and check it again. If the screen still shown, please return to the dealer for checking and repairing.

● Universal K factor table for GFS flow sensor.

PIPE	K FACTOR	PIPE	K FACTOR
1/2"	273.4	3"	14.435
3/4"	164.94	4"	7.7433
1"	85.077	5"	4.958
1-1/2"	59.942	6"	3.198
2"	41.213	8"	1.5893
2-1/2"	25.466		

數位通訊協定位址表(Modbus RTU Mode Protocol Address Map)

資料格式 16Bit / 32Bit, 帶正負號即8000~7FFF (-32768~32767), 80000000~7FFFFFFF (-2147483648~2147483647)

Modbus	HEX	名稱	說明	動作
40001	0000	DISPLY	目前顯示值, 顯示範圍:0000~270F(0000~9999)	R
40002	0001	KF	K值設定, 顯示範圍:0001~270F(0001~9999)	R/W
40003	0002	ANLO	最低類比輸出設定值, 顯示範圍:0000~270F(0000~9999)	R/W
40004	0003	ANHI	最高類比輸出設定值, 顯示範圍:0000~270F(0000~9999)	R/W
40005	0004	tbase	取樣時間設定值, 顯示範圍:0001~270F(0001~9999)	R/W
40006	0005	AL1	第一段警報設定值, 顯示範圍:0000~270F(0~9999)	R/W
40007	0006	AL2	第二段警報設定值, 顯示範圍:0000~270F(0~9999)	R/W
40008	0007	TOTAL	累積量顯示值, 範圍:0000~5F5E0FF(0000~99999999)低位元	R/W
40009	0008		累積量顯示值, 範圍:0000~5F5E0FF(0000~99999999)高位元	R/W
40010	0009	AVG	顯示平均次數, 輸入範圍0001~0063(1~99)	R/W
40011	000A	LCUT	顯示低值遮蔽設定值, 輸入範圍0000~0063(0~99)	R/W
40012	000B	HYS1	警報1動作遲滯設定值, 輸入範圍0000~0063(0~99)	R/W
40013	000C	HYS2	警報2動作遲滯設定值, 輸入範圍0000~0063(0~99)	R/W
40014	000D	DEL1	警報1動作延遲時間設定值, 輸入範圍0000~0063(0~99)	R/W
40015	000E	DEL2	警報2動作延遲時間設定值, 輸入範圍0000~0063(0~99)	R/W
40016	000F	SB	警報啟動延遲範圍設定值, 輸入範圍0000~0063(0~99)	R/W
40017	0010	SDT	警報啟動延遲時間設定值, 輸入範圍0000~0063(0~99)	R/W
40018	0011	ADDR	通訊位址, 輸入範圍0000~00FF(0~255)	R/W
40019	0012	DPK	K值小數點位置, 輸入範圍0000~0003(0~1)0:0, 1:1, 2:2, 3:3	R/W
40020	0013	DP	小數點位置, 輸入範圍0000~0003(0~1)0:0, 1:1, 2:2, 3:3	R/W
40021	0014	Unit	單位設定, 0:M3,1: Liter,2: C.C.,3: GAL	R/W
40022	0015	CTIME	時間單位, 輸入範圍0000~0004(0~4) 0:SEC,1: Min,2: HoUr, 3:dAY,4:MontH	R/W
40023	0016	ACT1	警報1動作方向, 輸入範圍0000~0001(0~1)0:LO, 1:Hi, 2:P-ON	R/W
40024	0017	ACT2	警報2動作方向, 輸入範圍0000~0001(0~1)0:LO, 1:Hi	R/W
40025	0018	BAUD	通訊速率, 輸入範圍0000~0002(0~2) 0:2400, 1:4800, 2:9600	R/W
40026	0019	PARI	通訊同步檢測位元, 輸入範圍0000~0003(0~3)0:N.8.2., 1:N.8.1., 2:EVEN, 3:ODD	R/W
40027	001A	FRAME	通訊資料格式, 修改範圍: 0000~0001 (0~1); 0: off, 1: on	R/W