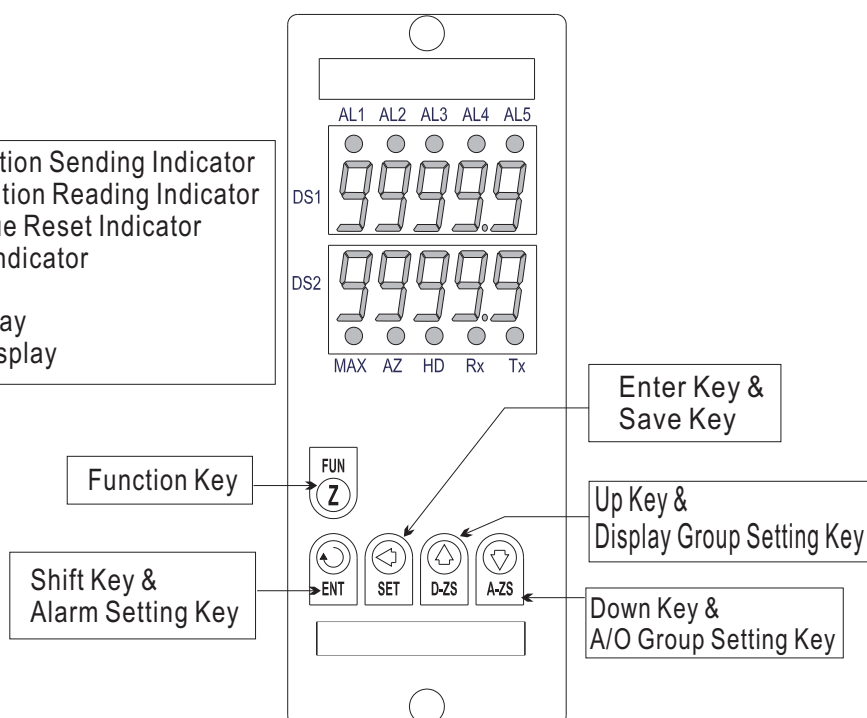


* Please understand key indicators & functions at the first operation.

1.1 FRONT PANEL

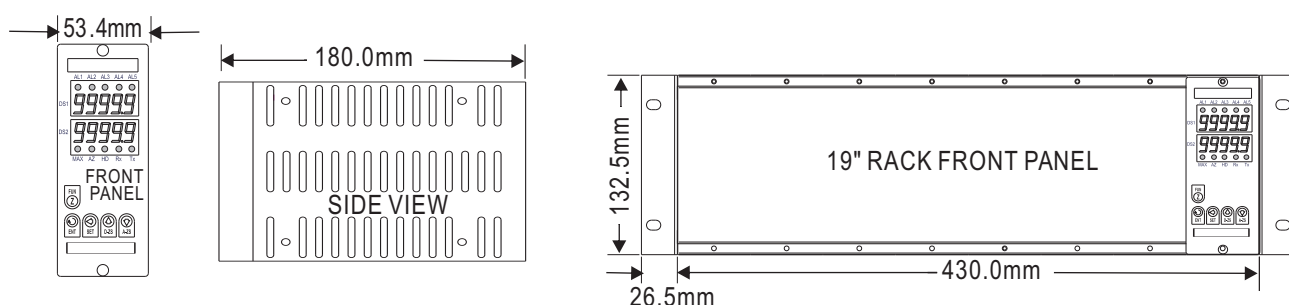
AL1: Alarm 1 Indicator TX: Communication Sending Indicator
AL2: Alarm 2 Indicator RX: Communication Reading Indicator
AL3: Alarm 3 Indicator AZ: Display Value Reset Indicator
AL4: Alarm 4 Indicator HD: Data Hold Indicator
MAX BRIGHT: Max. Hold Indicator
MAX DARK: Alarm 1 Setpoint Value Display
MAX FLASH: Simulation Output Value Display



1.2 KEY FUNCTIONS

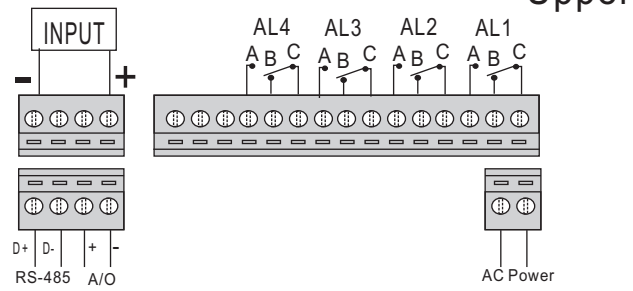
Symbol	Key Name	Descriptions
	Function Key	1. In the measuring status, press this key can enable the setting function. (AZ or MrSt or HD)
ENT	Enter Key & Save Key	1. In the measuring status, press this key can enter to parameter groups. 2. In the parameter setting, press this key can save the value & go to the next parameter.
	Shift Key & Alarm Setting Key	1. In the measuring status, press this key for 3 sec can enter to Alarm Setpoint Modification. 2. In the parameter page, press this key can enter to parameter setting. 3. In the parameter setting, press this key can move the cursor left.
	Up Key & Display Group Setting Key	1. In the measuring status, press this key for 3 sec can enter to Display Group Setting. 2. In the parameter page, press this key can back to the last parameter page. 3. In the parameter setting, press this key can increase the digit.
	Down Key & A/O Group Setting Key	1. In the measuring status, press this key for 3 sec can enter to A/O Group Setting. 2. In the parameter page, press this key can go to the next parameter page. 3. In the parameter setting, press this key can decrease the digit.
	Compound Key	1. In any status, press this key can back to measuring status. 2. While the buzzer acts, press this key can mute the buzzer.

1.3 DIMENSIONS

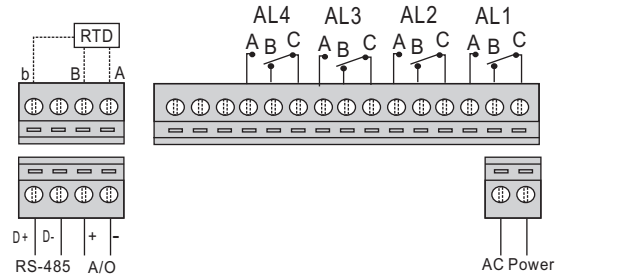


1.4 WIRING CONNECTION

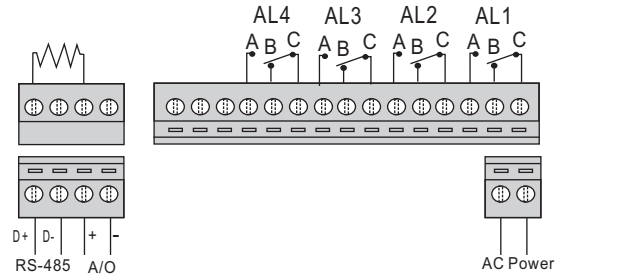
● Voltage, Current (AC, DC)



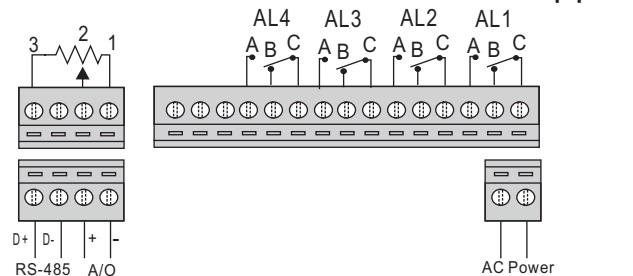
● Temperature (RTD)



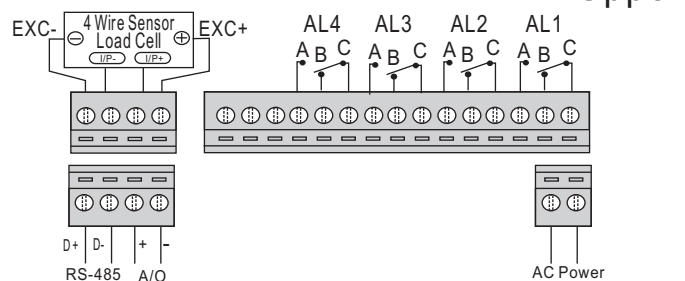
● 2 Wire Resistor



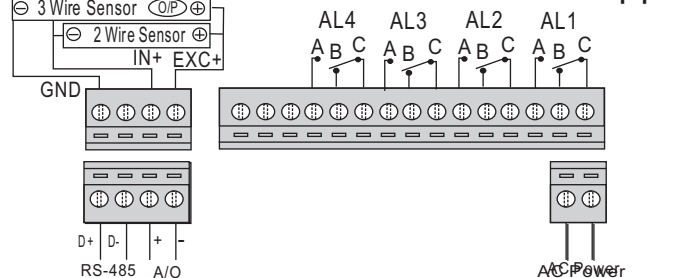
● 3 Wire Potentiometer



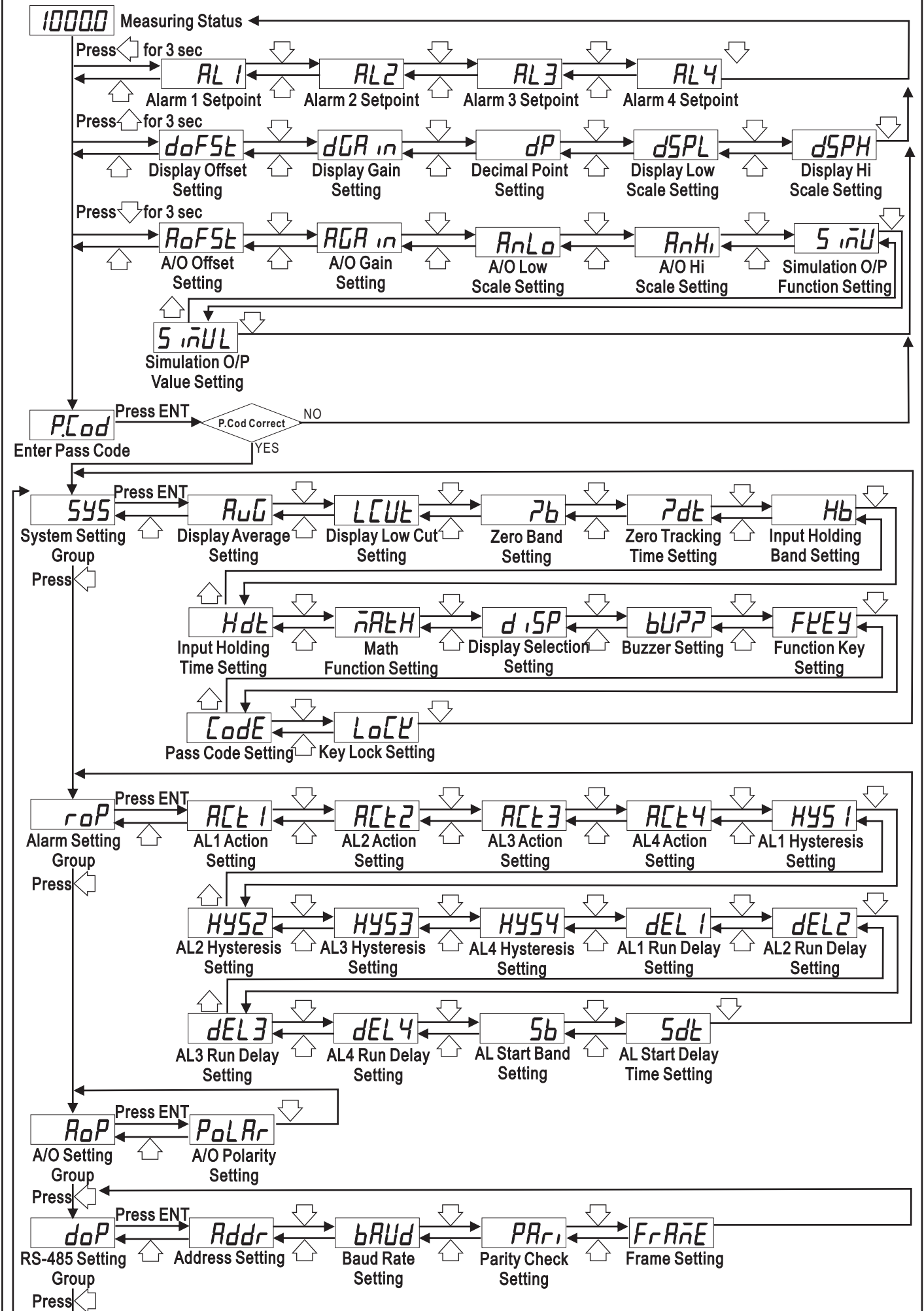
● 4 Wire Sensor or Load cell



● 2,3 Wire Sensor



2.1 OPERATING SEQUENCE



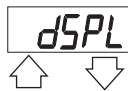
2.2 ALARM SETPOINT MODIFICATION

* In the measuring status, press  for 3 sec can enter to Alarm Setpoint Modification.

Display	Default	Name	Descriptions
	00000	Alarm 1 Setpoint (AL1)	1. Press  to enter the parameter setting, the digit will be flashed. 2. Press  or  can modify Alarm Setpoint. Range: -199999~999999 3. Press ENT to save the value and go to the next parameter.
	00000	Alarm 2 Setpoint (AL2)	
	00000	Alarm 3 Setpoint (AL3)	
	00000	Alarm 4 Setpoint (AL4)	

2.3 DISPLAY SETTING

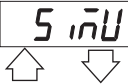
* In the measuring status, press  for 3 sec can enter to Display Group Setting.

Display	Default	Name	Descriptions
	00000	Display Offset Setting (doFSt)	1. Press  to enter the parameter setting, the digit will be flashed. 2. Press  or  can modify Display Offset. Range: 199999~999999 3. Press ENT to save the value and go to the next parameter.
	00000	Display Gain Setting (dGAin)	1. Press  to enter the parameter setting, the digit will be flashed. 2. Press  or  can modify Display Gain. Range: 0.00001~9.99999 Display = dSPH * dGAin 3. Press ENT to save the value and go to the next parameter.
	00000	Decimal Point Setting (dp)	1. Press  to enter the parameter setting, the digit will be flashed. 2. Press  or  can select Decimal Point. Range: 0, 1, 2, 3, 4, 5 (DP) 3. Press ENT to save the value and go to the next parameter.
	00000	Display Low Scale Setting (dSPL)	1. Press  to enter the parameter setting, the digit will be flashed. 2. Press  or  can modify Display Low Scale. Range: -199999~999999 3. Press ENT to save the value and go to the next parameter. P.S.: Press Z in this page can calibrate Zero Point of input signal.
	00000	Display Hi Scale Setting (dSPH)	1. Press  to enter the parameter setting, the digit will be flashed. 2. Press  or  can modify Display Hi Scale. Range: -199999~999999 3. Press ENT to save the value and back to Display Setting. P.S.: Press Z in this page can calibrate Span Point of input signal.

2.4 A/O SETTING

* In the measuring status, press  for 3 sec can enter to A/O Group Setting.

Display	Default	Name	Descriptions
	00000	A/O Offset Setting (AoFSt)	1. Press  to enter the parameter setting, the digit will be flashed. 2. Press  or  can modify A/O Offset. Range: -9999~9999 3. Press ENT to save the value and go to the next parameter.
	00000	A/O Gain Setting (AGaIn)	1. Press  to enter the parameter setting, the digit will be flashed. 2. Press  or  can modify A/O Gain. Range: -9999~9999 3. Press ENT to save the value and go to the next parameter.

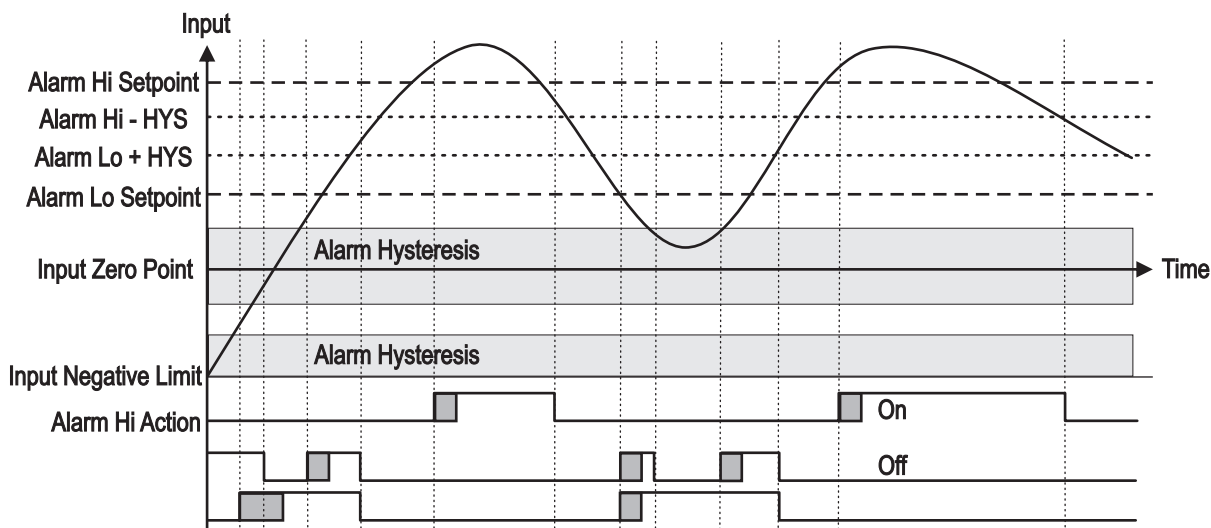
Display	Default	Name	Descriptions
	00000	A/O Low Scale Setting (AnLo)	1. Press  to enter the parameter setting, the digit will be flashed. 2. Press  or  can modify A/O Low Scale. Range: -199999~999999 If this value is 0, while display is 0, output signal will be 4 mAdc. 3. Press ENT to save the value and go to the next parameter.
	99999	A/O Hi Scale Setting (AnHi)	1. Press  to enter the parameter setting, the digit will be flashed. 2. Press  or  can modify A/O Hi Scale. Range: -199999~999999 If this value is 100, while display is 100, output signal will be 20 mAdc. 3. Press ENT to save the value and go to the next parameter.
	no	Simulation O/P Function Setting (SiMU)	1. Press  to enter the parameter setting, the digit will be flashed. 2. Press  or  can select Simulation O/P Function. Range: no (do not open), YES (open) 3. Press ENT to save the value and go to the next parameter.
	99999	Simulation O/P Value Setting (SiMUL)	1. Press  to enter the parameter setting, the digit will be flashed. 2. Press  or  can modify Simulation O/P Value. Range: -199999~999999 3. Press ENT to save the value and back to A/O Setting.

2.5 ERROR CODE OF SELF-DIAGNOSIS

Display	Descriptions
	Input signal is over 120% of input range.
	Input signal is under -10% of input range.
	Input signal is over 180% of input range or meter error.
	Input signal is over display range (999999).
	Input signal is under display range (-199999).
	EEPROM reading / writing suffers the interference (about 1 million times).

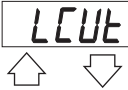
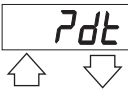
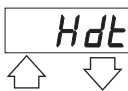
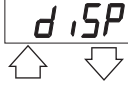
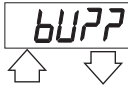
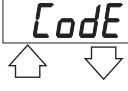
** Please check the wiring connection is correct first, if the problem still exist, please return the meter to the factory.

2.6 ALARM OUTPUT ACTION SEQUENCE



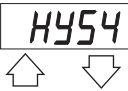
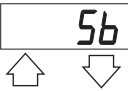
3.1 SYSTEM (SYS) SETTING GROUP PROCEDURE

* While Pass Code is correct, Press  can select System Setting Group.

Display	Default	Name	Descriptions
	00005	Display Average Setting (AvG)	1. Press  to enter the parameter setting, the digit will be flashed. 2. Press  or  can modify Display Average. Range: 1~99 If this value is large, display will be stable & smooth. 3. Press ENT to save the value and go to the next parameter.
	00000	Display Low Cut Setting (LCut)	1. Press  to enter the parameter setting, the digit will be flashed. 2. Press  or  can modify Display Low Cut. Range: 0~99 If this value is 10, while display is under 10, display value will show 0. 3. Press ENT to save the value and go to the next parameter.
	00000	Zero Band Setting (Zb)	1. Press  to enter the parameter setting, the digit will be flashed. 2. Press  or  can modify Zero Band. Range: 0~99 If display reach this value, the display value will track 0. 3. Press ENT to save the value and go to the next parameter.
	00000	Zero Tracking Time Setting (Zdt)	1. Press  to enter the parameter setting, the digit will be flashed. 2. Press  or  can modify Zero Tracking Time. Range: 0~99 (sec) If display reach Zero Band, the display value will track 0 after this setting (sec). P.S.: This function must use with "Zb" together. 3. Press ENT to save the value and go to the next parameter.
	00000	Input Holding Band Setting (Hb)	1. Press  to enter the parameter setting, the digit will be flashed. 2. Press  or  can modify Input Holding Band. Range: 0~99 If display reach this value, the display value will stabilize input signal. 3. Press ENT to save the value and go to the next parameter.
	00000	Input Holding Time Setting (Hdt)	1. Press  to enter the parameter setting, the digit will be flashed. 2. Press  or  can modify Input Holding Time. Range: 0~99 (sec) If display reach Input Holding Band, the display value will stabilize input signal after this setting (sec). P.S.: This function must use with "Hb" together. 3. Press ENT to save the value and go to the next parameter.
	non	Math Function Setting (MATH)	1. Press  to enter the parameter setting, the digit will be flashed. 2. Press  or  can select Math Function. Range: non (No Math), Sqrt (Roof Suqaure), AbS (Absolute) 3. Press ENT to save the value and go to the next parameter.
	AL 1	Display Selection Setting (diSP)	1. Press  to enter the parameter setting, the digit will be flashed. 2. Press  or  can select lower Display Selection. Range: AL1 (Alarm1 Setpoint), MAX (Max Hold), SiMUL (A/O Simulation value) 3. Press ENT to save the value and go to the next parameter.
	no	Buzzer Setting (bUZZ)	1. Press  to enter the parameter setting, the digit will be flashed. 2. Press  or  can close Buzzer. Range: no (Do Not Close), YES (Close) 3. Press ENT to save the value and go to the next parameter.
	AP	Function Key Setting (FKEY)	1. Press  to enter the parameter setting, the digit will be flashed. 2. Press  or  can select Function Key. Range: AZ (Display Reset to Zero), MrSt (Max Hold Reset), HD (Data Hold) 3. Press ENT to save the value and go to the next parameter.
	00000	Pass Code Setting (P.Cod)	1. Press  to enter the parameter setting, the digit will be flashed. 2. Press  or  can modify Pass Code. Range: 0~19999 (Please do remember new Pass Code) 3. Press ENT to save the value and go to the next parameter.
	no	Key Lock Setting (LoCK)	1. Press  to enter the parameter setting, the digit will be flashed. 2. Press  or  can close Key Lock. Range: no (Do Not Close), YES (Close) 3. Press ENT to save the value and back to System Setting Group.

3.2 ALARM (roP) SETTING GROUP PROCEDURE

* While Pass Code is correct, Press  can select Alarm Output Setting Group.

Display	Default	Name	Descriptions
	H ,	AL1 Action Setting (ACT1)	1. Press  to enter the parameter setting, the digit will be flashed. 2. Press  or  can select Alarm Action. Range: Hi ($\geq$ Alarm Setpoint On), Lo ($<$ Alarm Setpoint On) 3. Press ENT to save the value and back to A/O Group Setting.
	H ,	AL2 Action Setting (ACT2)	
	H ,	AL3 Action Setting (ACT3)	1. Press  to enter the parameter setting, the digit will be flashed. 2. Press  or  can select Alarm Action. Range: Hi ($\geq$ Alarm Setpoint On), Lo ($<$ Alarm Setpoint On) Go ($<$ Hi Setpoint & $>$ Lo Setpoint On) 3. Press ENT to save the value and go to the next parameter.
	H ,	AL4 Action Setting (ACT4)	1. Press  to enter the parameter setting, the digit will be flashed. 2. Press  or  can select Alarm Action. Range: Hi ($\geq$ Alarm Setpoint On), Lo ($<$ Alarm Setpoint On) Error (Device error On) 3. Press ENT to save the value and go to the next parameter.
	00000	AL1 Hysteresis Setting (HYS1)	1. Press  to enter the parameter setting, the digit will be flashed. 2. Press  or  can modify Alarm Hysteresis. Range: 0~9999 Alarm will be turned off while display value is higher or lower (depends on Alarm Action) Alarm Setpoint +/- Hysteresis. 3. Press ENT to save the value and go to the next parameter.
	00000	AL2 Hysteresis Setting (HSY2)	
	00000	AL3 Hysteresis Setting (HYS3)	
	00000	AL4 Hysteresis Setting (HYS4)	
	00000	AL1 Run Delay Setting (dEL1)	1. Press  to enter the parameter setting, the digit will be flashed. 2. Press  or  can modify Alarm Run Delay. Range: 0~99 (sec) Alarm will be turned on after this setting (sec). 3. Press ENT to save the value and go to the next parameter.
	00000	AL2 Run Delay Setting (dEL2)	
	00000	AL3 Run Delay Setting (dEL3)	
	00000	AL4 Run Delay Setting (dEL4)	
	00000	AL Start Band Setting (Sb)	1. Press  to enter the parameter setting, the digit will be flashed. 2. Press  or  can modify Alarm Start Band. Range: -99~99 If display value do not over this setting, alarm will not be turned on. 3. Press ENT to save the value and go to the next parameter.
	00000	AL Start Delay Time Setting (Sdt)	1. Press  to enter the parameter setting, the digit will be flashed. 2. Press  or  can modify Alarm Start Delay Time. Range: 0~99 (sec) If display value reach Alarm Start Band, alarm will be turned on after this setting (sec). P.S.: This function must use with "Sb" together. 3. Press ENT to save the value and back to Alarm Setting Group.

3.3 A/O (AoP) SETTING GROUP PROCEDURE

* While Pass Code is correct, Press  can select A/O Setting Group.

Display	Default	Name	Descriptions
	no	A/O Polarity Setting (PoLAr)	1. Press  to enter the parameter setting, the digit will be flashed. 2. Press  or  can select A/O Polarity. Range: no (Positive Pole O/P; 0~10 Vdc), YES (Positive & Negative Pole O/P; -10~+10 Vdc) 3. Press ENT to save the value and back to A/O Setting Group.

3.4 RS-485 (doP) SETTING GROUP PROCEDURE

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

Display	Default	Name	Descriptions
	00000	Address Setting (Addr)	1. Press  to enter the parameter setting, the digit will be flashed. 2. Press  or  can modify Address. Range: 0~255 3. Press ENT to save the value and go to the next parameter.
	38400	Baud Rate Setting (bAUd)	1. Press  to enter the parameter setting, the digit will be flashed. 2. Press  or  can select Baud Rate. Range: 38400, 19200, 9600, 4800 (bps) 3. Press ENT to save the value and go to the next parameter.
	n8.2.	Parity Check Setting (PAri)	1. Press  to enter the parameter setting, the digit will be flashed. 2. Press  or  can select Parity Check. Range: n.8.2., n.8.1., EvEn, odd 3. Press ENT to save the value and go to the next parameter.
	no	Frame Setting (FrAME)	1. Press  to enter the parameter setting, the digit will be flashed. 2. Press  or  can select Frame. Range: no (Hi to Lo), YES (Lo to Hi) 3. Press ENT to save the value and back to RS-485 Setting Group.

4.1 MODBUS RTU MODE PROTOCOL ADDRESS TABLE

* Data form: 16 / 32 bit, +/-8000~7FFF(-32768~32767), 800000007FFFFFFF(-2147483648~2147483647)

Modbus	Hex	Name	Act	Descriptions
40001	0000	ID	R	Model number identification; GA19 is 24H
40002	0001	STATUS	R	Current alarm output & external control input status, range: 0000~00F0 (0~240) (Bit 7: BZ, Bit 6: AL1, Bit 5: AL2, Bit 4: AL3, Bit 3: AL4, Bit 2: AL5, Bit 1: HD, Bit 0: AZ) 0:Off, 1:On
40003	0002	INDEX	R/W	Index, range: 0000~0037 (0~55) [Please refer section 4.2 for detail.]
40004	0003			
40005	0004	FKEY	R/W	Function key setting, range: 0000~0002 (0~2); 0:AZ, 1:MrSt, 2:Hd
40006	0005	SIMU	R/W	Simulation function O/P setting, range: 0000~0001 (0~1); 0:No, 1:YES
40007	0006	MATH	R/W	Math function setting, range: 0000~0001 (0~1); 0:non, 1:Sqrt, 2:AbS
40008	0007	POLAR	R/W	Polar setting, range: 0000~0001 (0~1); 0:No, 1:YES
40009	0008	DISP	R/W	Display Selection setting, range: 0000~0001 (0~2); 0:AL1, 1:MAX, 2:SiMUL
40010	0009	FRAME	R/W	Frame setting, range: 0000~0001 (0~1); 0:No, 1:YES
40011	000A	LOCK	R/W	Key lock setting, range: 0000~0001 (0~1); 0:No, 1:YES
40012	000B	AL1	R/W	Alarm 1 action setting, range: 0000~0001 (0~1); 0:Hi, 1:Lo
40013	000C	AL2	R/W	Alarm 2 action setting, range: 0000~0001 (0~1); 0:Hi, 1:Lo
40014	000D	AL3	R/W	Alarm 3 action setting, range: 0000~0001 (0~1); 0:Hi, 1:Lo
40015	000E	AL4	R/W	Alarm 4 action setting, range: 0000~0001 (0~1); 0:Hi, 1:Lo
40016	000F	BUZZ	R/W	Buzzer setting, range: 0000~0001 (0~1); 0:No, 1:YES
40017	0010	DP	R/W	Decimal point setting, range: 0000~0005 (0~5); 0:10 ⁰ , 1:10 ⁻¹ , 2:10 ⁻² , 3:10 ⁻³ , 4:10 ⁻⁴ , 5:10 ⁻⁵
40018	0011	BAUD	R/W	Baud Rate setting, range: 0000~0003 (0~3); 0:38400, 1:19200, 2:9600, 3:4800
40019	0012	PARI	R/W	Parity check setting, range: 0000~0003 (0~3); 0:n.8.2., 1:n.8.1., 2:EvEn, 3:odd
40020	0013	AVG	R/W	Display average setting, range: 0001~0063 (1~99)
40021	0014	ADDR	R/W	Address setting, range: 0000~00FF (0~255)
40022	0015	DEL1	R/W	Alarm 1 run delay setting, range: 0000~0063 (0~99)
40023	0016	DEL2	R/W	Alarm 2 run delay setting, range: 0000~0063 (0~99)
40024	0017	DEL3	R/W	Alarm 3 run delay setting, range: 0000~0063 (0~99)
40025	0018	DEL4	R/W	Alarm 4 run delay setting, range: 0000~0063 (0~99)
40026	0019	SB	R/W	Alarm start band setting, range: FF9D~0063 (-99~99)
40027	001A	SDT	R/W	Alarm start delay time setting, range: 0000~0063 (0~99)
40028	001B	ZB	R/W	Zero band setting, range: 0000~0063 (0~99)
40029	001C	ZDT	R/W	Zero tracking time setting, range: 0000~0063 (0~99)
40030	001D	HB	R/W	Input holding band setting, range: 0000~0063 (0~99)
40031	001E	HDT	R/W	Input holding time setting, range: 0000~0063 (0~99)
40032	001F	LCUT	R/W	Display low cut setting, range: 0000~270F (0~9999)
40033	0020	HYS1	R/W	Alarm 1 hysteresis setting, range: 0000~270F (0~9999)
40034	0021	HYS2	R/W	Alarm 2 hysteresis setting, range: 0000~270F (0~9999)
40035	0022	HYS3	R/W	Alarm 3 hysteresis setting, range: 0000~270F (0~9999)
40036	0023	HYS4	R/W	Alarm 4 hysteresis setting, range: 0000~270F (0~9999)
40037	0024	CODE	R/W	Pass code setting, range: 0000~4E1F (0~19999)
40038	0025	AOFST	R/W	A/O offset setting, range: D8F1~270F (-9999~9999)
40039	0026	AGAIN	R/W	A/O gain setting, range: D8F1~270F (-9999~9999)
40040	0027	AZERO	R/W	A/O zero adjustment, range: D8F1~270F (-9999~9999)
40041	0028	ASPAN	R/W	A/O span adjustment, range: D8F1~270F (-9999~9999)
40042	0029	ANLO	R/W	A/O low scale setting, range: FFFCF2C1~000F423F (-199999~999999) Hi Bit
40043	002A		R/W	A/O low scale setting, range: FFFCF2C1~000F423F (-199999~999999) Lo Bit
40044	002B	ANHI	R/W	A/O hi scale setting, range: FFFCF2C1~000F423F (-199999~999999) Hi Bit
40045	002C		R/W	A/O hi scale setting, range: FFFCF2C1~000F423F (-199999~999999) Lo Bit
40046	002D	DSPL	R/W	Display low scale setting, range: FFFCF2C1~000F423F (-199999~999999) Hi Bit
40047	002E		R/W	Display low scale setting, range: FFFCF2C1~000F423F (-199999~999999) Lo Bit
40048	002F	DSPH	R/W	Display hi scale setting, range: FFFCF2C1~000F423F (-199999~999999) Hi Bit
40049	0030		R/W	Display hi scale setting, range: FFFCF2C1~000F423F (-199999~999999) Lo Bit

Modbus	Hex	Name	Act	Descriptions
40050	0031	DOFST	R/W	Display Offset setting, range: FFFCF2C1~000F423F (-199999~999999) Hi Bit
40051	0032		R/W	Display Offset setting, range: FFFCF2C1~000F423F (-199999~999999) Lo Bit
40052	0033	DGAIN	R/W	Display gain setting, range: 00000001~000F423F (1~999999) Hi Bit
40053	0034		R/W	Display gain setting, range: 00000001~000F423F (1~999999) Lo Bit
40054	0035	SIMUL	R/W	Simulation O/P setting, range: FFFCF2C1~000F423F (-199999~999999) Hi Bit
40055	0036		R/W	Simulation O/P setting, range: FFFCF2C1~000F423F (-199999~999999) Lo Bit
40056	0037	AL1	R/W	Alarm 1 setpoint setting, range: FFFCF2C1~000F423F (-199999~999999) Hi Bit
40057	0038		R/W	Alarm 1 setpoint setting, range: FFFCF2C1~000F423F (-199999~999999) Lo Bit
40058	0039	AL2	R/W	Alarm 2 setpoint setting, range: FFFCF2C1~000F423F (-199999~999999) Hi Bit
40059	003A		R/W	Alarm 2 setpoint setting, range: FFFCF2C1~000F423F (-199999~999999) Lo Bit
40060	003B	AL3	R/W	Alarm 3 setpoint setting, range: FFFCF2C1~000F423F (-199999~999999) Hi Bit
40061	003C		R/W	Alarm 3 setpoint setting, range: FFFCF2C1~000F423F (-199999~999999) Lo Bit
40062	003D	AL4	R/W	Alarm 4 setpoint setting, range: FFFCF2C1~000F423F (-199999~999999) Hi Bit
40063	003E		R/W	Alarm 4 setpoint setting, range: FFFCF2C1~000F423F (-199999~999999) Lo Bit
40064	003F	MAX	R/W	Max hold, range: FFFCF2C1~000F423F (-199999~999999) Hi Bit
40065	0040		R/W	Max hold, range: FFFCF2C1~000F423F (-199999~999999) Lo Bit
40066	0041	HD	R/W	Data hold, range: FFFCF2C1~000F423F (-199999~999999) Hi Bit
40067	0042		R/W	Data hold, range: FFFCF2C1~000F423F (-199999~999999) Lo Bit
40068	0043	AZ	R/W	Display Zeroed, range: FFFCF2C1~000F423F (-199999~999999) Hi Bit
40069	0044		R/W	Display Zeroed: FFFCF2C1~000F423F (-199999~999999) Lo Bit
40070	0045	RATE	R	Current display value, range: FFFCF2C1~000F423F (-199999~999999) Hi Bit
40071	0046		R	Current display value: FFFCF2C1~000F423F (-199999~999999) Lo Bit

4.2 INDEX CODE SUPPLEMENT

* The following codes are for hexadecimal.

Page / Name	Page / Name	Page / Name	Page / Name	Page / Name
00: SYS	01: roP	02: AoP	03: doP	04: P.Cod
05: E-00	06:	07: FKEY	08: SiMU	09: MAtH
0A: PoLAr	0B: diSP	0C: FrAME	0D: LoCK	0E: ACt1
0F: ACt2	10: ACt3	11: ACt4	12: bUZZ	13: dP
14: bAUd	15: PAri	16: AvG	17: Addr	18: dEL1
19: dEL2	1A: dEL3	1B: dEL4	1C: Sb	1D: Sdt
1E: Zb	1F: Zdt	20: Hb	21: Hdt	22: LCUt
23: HYS1	24: HYS2	25: HYS3	26: HYS4	27: CodE
28: AoFSt	29: AGAin	2A: AZEro	2B: ASPAn	2C: AnLo
2D: AnHi	2E: dSPL	2F: dSPH	30: doFSt	31: dGAin
32: SiMUL	33: AL1	34: AL2	35: AL3	36: AL4
37: Current Display				