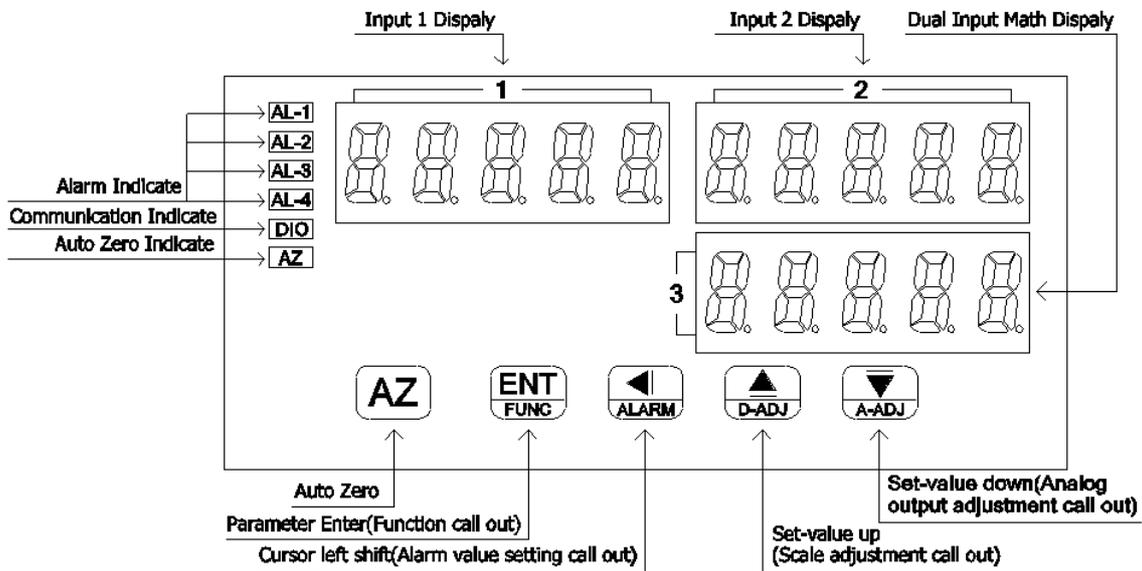


Features

Accuracy 0.03% FS±1 digit(IN-1)/0.05% FS±1 digit(IN-2)	16 bit DAC analog output function(optional)
Dual input Measuring and display DCA/DCV/Potentiometer/Transmitter/ Pt-100/Thermocouple/Load Cell/etc.....	Digit RS485 interface function(optional)
Dual input math function A+B/A-B/A*B/A/B	BAUD RATE : 19200/9600/4800/2400
Programmable rate -19999~99999 digit	Man-machine interface ,easy to operate
Four alarm function(optional)	EEPROM Saving ,data safekeeping about 10 years

Name Of Parts



Alarm Function Diagram

When ACT=HI,DEL= 0 : Display value > Setting value(AL) + Hysteresis (HYS) → (Relay on)
 Display value ≤ Setting value(AL) - Hysteresis (HYS) → (Relay off)

When ACT=LO,DEL= 0 : Display value ≥ Setting value(AL) + Hysteresis (HYS) → (Relay off)
 Display value < Setting value(AL) - Hysteresis (HYS) → (Relay on)

When ACT=HI,DEL= 1 ~ 99 sec.: Display value > Setting value(AL) + Hysteresis (HYS) + Delay time(DEL) → (Relay on)
 Display value ≤ Setting value(AL) - Hysteresis (HYS) → (Relay off)

When ACT=LO,DEL= 1 ~ 99 sec.: Display value ≥ Setting value(AL) + Hysteresis (HYS) → (Relay off)
 Display value < Setting value(AL) - Hysteresis (HYS) + Delay time(DEL) → (Relay on)

When ACT=HI,DEL= -1 ~ -99 sec.: Display value > Setting value(AL) + Hysteresis (HYS) → (Relay one shoot(DEL) and then off)
 Display value ≤ Setting value(AL) - Hysteresis (HYS) → (Relay restore normal after the procedure)

When ACT=LO,DEL= -1 ~ -99 sec.: Display value ≥ Setting value(AL) + Hysteresis (HYS) → (Relay restore normal after the procedure)
 Display value < Setting value(AL) - Hysteresis (HYS) → (Relay one shoot(DEL) and then off)

Key Introduce	Operation Manual
Ⓜ key function	1. In normal display,the key function is call out setting group 2. In parameter setting page,the key function is data ENTER and goto next page
⏪ key function	1.In normal display,Press ⏪ key Keep beyond 3 seconds, will call out alarm value setting page 2.Into parameter setting page,the parameter mark & data is alternate display,If need modify data can press ⏪ key into setting procedure,The display is lock parameter data,this time must let off key about 0.2 sec, press again,the cursor (twinkle express)is cycle moving left.(Key response about 0.2 sec.)
▲ key function	1.In normal display,Press ▲ key Keep beyond 3 seconds, will call out adjustment display value page 2.Into parameter setting page,the parameter mark & data is alternate display,If need modify data can press ▲ key into setting procedure,The display is lock parameter data,this time must let off key about 0.2 sec, press again,the parameter data will be increment.(Key response about 0.2 sec.)
▼ key function	1.In normal display,Press ▼ key Keep beyond 3 seconds, will call out adjustment analog output page 2.Into parameter setting page,the parameter mark & data is alternate display,If need modify data can press ▼ key into setting procedure,The display is lock parameter data,this time must let off key about 0.2 sec, press again,the parameter data will be decrement.(Key response about 0.2 sec.)
▲&▼ key function	1.In setting group or setting page,Press ▲ & ▼ key will return normal display,but if in setting page the modify data will lost

AZ key function	1.Press AZ key will be Auto zero value which chose by AZ.SEL		
No key in anything	1.In setting group or setting page,No key in anything about 30 sec. will return normal display		
Inside parameter operate procedure			
Step	Parameter Mark Description	Parameter Mark	Operation Manual
1	Normal display	0 1234	1. Press /FUNC key into P.CODE setting page
2	P.CODE(Pass Code) Default = 0	P.C o d E	1.Key in 5 digit pass code with & & key 2.Press key,If the pass code is correct then into setting group, otherwise,return normal display
		00000	
3	SYS(System Setting Group)	S Y S	1.Select setting group with key 2.Press key into setting page of selection setting group
	ROP(Alarm output Setting Group)	r o P	
	DOP(Communication setting group)	d o P	
	AOP(Analog output Setting Group)	A o P	
4	SYS(System setting group)	S Y S	1.Press key decide SYS setting group 2.Press key into DP1 setting page
4-1	DP1(Decimal Point IN-1) Default = 0	d P 1	1. Decide Decimal Point IN-1 position with & key (0 to 4) 2. Press key enter data and into DSPL1 setting page 3.
		0.	
4-2	DSPL1(Display Lo Scale IN-1) Default = 0	d S P L 1	1.Decide Display Lo Scale IN-1 with & & key(-19999~99999) 2.Press key enter data and into DSPH1 setting page
		00000	
4-3	DSPH1(Display Hi Scale IN-1) Default = 99999	d S P H 1	1.Decide Display Hi Scale IN-1 with & & key(-19999~99999) 2.Press key enter data and into DP2 setting page
		99999	
4-4	DP2(Decimal Point IN-2) Default = 0	d P 2	1.Decide Decimal Point IN-2 position with & key (0 to 4) 2.Press key enter data and into DSPL2 setting page
		0.	
4-5	DSPL2(Display Lo Scale IN-2) Default = 0	d S P L 2	1.Decide Display Lo Scale IN-2 with & & key(-19999~99999) 2.Press key enter data and into DSPH2 setting page
		00000	
4-6	DSPH2(Display Hi Scale IN-2) Default = 99999	d S P H 2	1.Decide Display Hi Scale IN-2 with & & key(-19999~99999) 2.Press key enter data and into MATH setting page
		99999	
4-7	MATH(Mtah) Default = 1ADD2	M A T H	1. Decide Math mode with & key(1ADD2,1SUB2,1MUL2, 1DIV2) 2. Press key enter data and into DP3 setting page
		1 A d d 2	
4-8	DP3(Decimal Point 3) Default = 0	d P 3	1.Decide Decimal Point 3 position with & key (0 to 4) 2.Press key enter data and into DRSP setting page
		0.	
4-9	DRSP(Display update rate) Default = 1.0	d r s p	1. Decide Display update rate with & key (0.1 sec./0.5 sec./1.0 sec./2.0 sec./ 3.0 sec./4.0 sec./5.0 sec.) 2.Press key enter data and into DF setting page
		1.0	
4-10	DF(Analog Output Digital Filter) Default = 1	d F	1. Decide Analog Output Digital Filter with & & key(1~16) 2.Press key enter data and into LCUT setting page
		0000 1	
4-11	LCUT(Low cut) Default = 0	L C U T	1. Decide Low cut with & & key (-99~99) 2. Press key enter data and into AZ.SEL setting page
		00000	
4-12	AZ.SEL (Auto Zero Select) Default = IN1 2	A Z S E L	1. Decide Auto Zero Select with & key(0~2)(IN1 2/ IN1/ IN2) 2. Press key enter data and into CODE setting page
		1 2 1 2	
4-13	CODE(Pass Code Setting) Default = 00000	C o d E	1.Decide Pass code with & & key (0~99999) 2.Press key enter data and into LOCK setting page
		00000	
4-14	LOCK(Panel Lock) Default = NO	L o C k	1.Decide panel lock with & key (NO or YES) 2.Press key enter data and return SYS setting group
		00000	
5	ROP(Alarm Output setting group)	r o P	1.Press key decide ROP setting group

			2.Press key into AL1-S setting page
5-1	AL1-S(Alarm 1 Select) Default = DISP1	AL1-S d. SP1	1. Decide Alarm 1 Select with & key(DISP1/DISP2/DISP3) 2. Press key enter data and into ACT1 setting page
5-2	ACT1(Active 1) Default = HI	ACT1 H,	1.Decide active 1 with & key (HI or LO) 2.Press key enter data and into HYS1 setting page
5-3	HYS1(Hysteresis 1) Default = 0	HYS1 00000	1. Decide Hysteresis 1 with & & key (0~999) 2. Press key enter data and into DEL1 setting page
5-4	DEL1(Delay 1) Default = 0	DEL1 00000	1. Decide Delay 1 with & & key (-99~99 sec.) 2. Press key enter data and into AL2-S setting page Note: -1~-99 is alarm time,1~99 is delay time
5-5	AL2-S(Alarm 2 Select) Default = DISP2	AL2-S d. SP2	1. Decide Alarm 2 Select with & key(DISP1/DISP2/DISP3) 2. Press key enter data and into ACT2 setting page
5-6	ACT2(Active 2) Default = HI	ACT2 H,	1.Decide active 2 with & key (HI or LO) 2.Press key enter data and into HYS2 setting page
5-7	HYS2(Hysteresis 2) Default = 0	HYS2 00000	1. Decide Hysteresis 2 with & & key (0~999) 2. Press key enter data and into DEL2 setting page
5-8	DEL2(Delay 2) Default = 0	DEL2 00000	1. Decide Delay 2 with & & key (-99~99 sec.) 2. Press key enter data and into AL3-S setting page Note: -1~-99 is alarm time,1~99 is delay time
5-9	AL3-S(Alarm 3 Select) Default = DISP3	AL3-S d. SP3	1. Decide Alarm 3 Select with & key(DISP1/DISP2/DISP3) 2. Press key enter data and into ACT3 setting page
5-10	ACT3(Active 3) Default = HI	ACT3 H,	1.Decide active 3 with & key (HI or LO) 2.Press key enter data and into HYS3 setting page
5-11	HYS3(Hysteresis 3) Default = 0	HYS3 00000	1. Decide Hysteresis 3 with & & key (0~999) 2. Press key enter data and into DEL3 setting page
5-12	DEL3(Delay 3) Default = 0	DEL3 00000	1. Decide Delay 3 with & & key (-99~99 sec.) 2. Press key enter data and into AL4-S setting page Note: -1~-99 is alarm time,1~99 is delay time
5-13	AL4-S(Alarm 4 Select) Default = DISP1	AL4-S d. SP1	1. Decide Alarm 4 Select with & key(DISP1/DISP2/DISP3) 2. Press key enter data and into ACT4 setting page
5-14	ACT4(Active 4) Default = HI	ACT4 H,	1.Decide active 4 with & key (HI or LO) 2.Press key enter data and into HYS4 setting page
5-15	HYS4(Hysteresis 4) Default = 0	HYS4 00000	1. Decide Hysteresis 4 with & & key (0~999) 2. Press key enter data and into DEL4 setting page
5-16	DEL4(Delay 4) Default = 0	DEL4 00000	1. Decide Delay 4 with & & key (-99~99 sec.) 2. Press key enter data and into SB setting page Note: -1~-99 is alarm time,1~99 is delay time
5-17	SB(Start band) Default = 0	SB 00000	1.Decide SB with & & key (-99~99) 2.Press key enter data and into SDT setting page Note:Input below SB,Alarm will disable compare&active
5-18	SDT(Start Delay Time) Default = 0	SDT 00000	1.Decide SDT with & & key (0~99 sec) 2.Press key enter data and return ROP setting group Note:Input over the SB and reach SDT,Alarm will restore compare & active
6	DOP(Communication setting group)	dop	1.Press key decide DOP setting group 2.Press key into ADDR setting page
6-1	ADDR(Communication Address) Default = 0	ADDR 00000	1.Decide address with & & key (0~255) 2.Press key enter data and into BAUD setting page

6-2	BAUD(Communication Baud Rate) Default = 19200	BAUD	1.Decide baud rate with ▲&▼ key (19200,9600,4800,2400) 2.Press ENT key enter data and into PARI setting page
		19200	
6-3	PARI(Communication Parity Check) Default = n.8.2.	PARI	1.Decide parity check with ▲&▼ key(n.8.2,n.8.1,even,odd) 2.Press ENT key enter data and return DOP setting group
		n.8.2.	
7	AOP(Analog Output setting group)	AOP	1.Press ◀ key select AOP setting group, 2.Press ENT key into AO-SEL setting page
7-1	AO-SEL(Analog Output Select) Default = DISP3	AOSEL	1.Decide Analog Output Select with ▲&▼ key (DISP1/DISP2/DISP3) 2.Press ENT key enter data and into ANLO setting page
		DISP3	
7-2	ANLO(Analog Output Zero- According to Display) Default = 0	ANLO	1.Decide Analog Output Zero-According to Display with ◀&▲&▼ key (-19999~99999) 2.Press ENT key enter data and into ANHI setting page
		00000	
7-3	ANHI(Analog Output Span- According to Display) Default = 10000	ANHI	1.Decide Analog Output Span-According to Display with ◀&▲&▼ key (-19999~99999) 2.Press ENT key return AOP setting group
		10000	

Outside parameter operate procedure

Step	Parameter Mark Description	Parameter Mark	Operation Manual
8	Normal display	12345	1.Press ◀/ALARM about 3 sec, into AL1 setting page
8-1	AL1 (Alarm 1) Default = 0	AL1	1.Decide alarm 1 value with ◀&▲&▼ key (-19999~99999) 2.Press ENT key enter data and into AL2 setting page
		00000	
8-2	AL2 (Alarm 2) Default = 0	AL2	1.Decide alarm 2 value with ◀&▲&▼ key (-19999~99999) 2.Press ENT key enter data and into AL3 setting page
		00000	
8-3	AL3 (Alarm 3) Default = 0	AL3	1.Decide alarm 3 value with ◀&▲&▼ key (-19999~99999) 2.Press ENT key enter data and into AL4 setting page
		00000	
8-4	AL4 (Alarm 4) Default = 0	AL4	1.Decide alarm 4 value with ◀&▲&▼ key (-19999~99999) 2.Press ENT key enter data and return normal display
		00000	

Step	Parameter Mark Description	Parameter Mark	Operation Manual
9	Normal display	12345	1.Press ▲/D-ADJ key about 3 sec,into D1-Z adjustment page
9-1	D1-Z (IN-1 Display Zero Adjust)	D1-Z	1.Adjust IN-1 Display Zero with ▲&▼ key 2.Press ENT key enter data and into D1-S adjustment page
		00000	
9-2	D1-S (IN-1 Display Span Adjust)	D1-S	1.Adjust IN-1 Display Span with ▲&▼ key 2.Press ENT key enter data and into D2-Z adjustment page
		99999	
9-3	D2-Z (IN-2 Display Zero Adjust)	D2-Z	1.Adjust IN-2 Display Zero with ▲&▼ key 2.Press ENT key enter data and into D2-S adjustment page
		00000	
9-4	D2-S (IN-2 Display Span Adjust)	D2-S	1.Adjust IN-2 Display Span with ▲&▼ key 2.Press ENT key enter data and return normal display
		99999	

Step	Parameter Mark Description	Parameter Mark	Operation Manual
10	Normal display	12345	1.Press ▼/A-ADJ key about 3 sec, into AZERO adjustment page
10-1	AZERO(Analog Output Zero Adjust) Default = 0	AZERO	1.Adjust analog output zero with ◀&▲&▼ key (±6000) 2.Press ENT key enter data and into ASPAN adjustment page
		00000	
10-2	ASPAN(Analog Output Span Adjust) Default = 0	ASPAN	1.Adjust analog output span with ◀&▲&▼ key (±6000) 2.Press ENT key enter data and return normal display
		00000	

Appendix	Error Mark Description	Error Mark	Analyze & Description
1	Input over error detect	1 oFL	1.Input signal over range
2	Input below rerror detect	- 1 oFL	1.Input signal below range
3	Display over error detect	d oFL	1.Display over range(99999)
4	Display under error detect	- d oFL	1.Display under range (-19999)
5	EEPROM error detect	E-00	1.External interference when EEPROM read/write 2.EEPROM write over 1 million times(guarantee 10 years)
		no	Please power reset,if still display E-00, doing below step: a.E-00 & No alternate display for inquire reset EEPROM
		YES	b.Decide Yes with ▲ or ▼ key,press Ⓜ key return normal display c.EEPROM was reset,Please follow step 1~10 set again

MM2D-D Modbus RTU Mode Protocol Address Map

Data format 16Bit/32Bit,sign bit 8000~7FFF(-32768~32767),80000000~7FFFFFFF(-2147483648~2147483647)

Address	Name	Description	Accept
0000	LOCK	Panel Lock,Input Range 0000~0001(0~1) (0:NO,1:YES)	R/W
0001	ACT1	Active 1,Input Range 0000~0001(0~1) (0:HI,1:LO)	R/W
0002	ACT2	Active 2,Input Range 0000~0001(0~1) (0:HI,1:LO),	R/W
0003	ACT3	Active 3,Input Range 0000~0001(0~1) (0:HI,1:LO)	R/W
0004	ACT4	Active 4,Input Range 0000~0001(0~1) (0:HI,1:LO)	R/W
0005	AL1_S	Alarm 1 Select,Input Range 0000~0002 (0~2) (0:DISP1,1:DISP2,2:DISP3)	R/W
0006	AL2_S	Alarm 2 Select,Input Range 0000~0002 (0~2) (0:DISP1,1:DISP2,2:DISP3)	R/W
0007	AL3_S	Alarm 3 Select,Input Range 0000~0002 (0~2) (0:DISP1,1:DISP2,2:DISP3)	R/W
0008	AL4_S	Alarm 4 Select,Input Range 0000~0002 (0~2) (0:DISP1,1:DISP2,2:DISP3)	R/W
0009	AO_SEL	Analog Output Select,Input Range 0000~0002 (0~2) (0:DISP1,1:DISP2,2:DISP3)	R/W
000A	AZ_SEL	Auto Zero Select,Input Range 0000~0002 (0~2)(0:IN1 2,1: IN1,2: IN2)	R/W
000B	MATH	Mtath,Input Range 0000~0003 (0~3)(0:1ADD2,1:1SUB2,2:1MUL2,3:1DIV2)	R/W
000C	BAUD	Communication Baud Rate,Input Range 0000~0003 (0~3)(0:19200,1:9600,2:4800,3:2400)	R/W
000D	PARI	Communication Parity Check,Input Range 0000~0003 (0~3)(0:N82,1:N81,2:EVEN,3:ODD)	R/W
000E	DP1	IN-1 Decimal Point,Input Range 0000~0004 (0~4)(0:10 ⁰ ,1:10 ⁻¹ ,2:10 ⁻² ,3:10 ⁻³ ,4:10 ⁻⁴)	R/W
000F	DP2	IN-2 Decimal Point,Input Range 0000~0004 (0~4)(0:10 ⁰ ,1:10 ⁻¹ ,2:10 ⁻² ,3:10 ⁻³ ,4:10 ⁻⁴)	R/W
0010	DP3	Decimal Point 3,Input Range 0000~0004 (0~4)(0:10 ⁰ ,1:10 ⁻¹ ,2:10 ⁻² ,3:10 ⁻³ ,4:10 ⁻⁴)	R/W
0011	DRSP	Display update rate,Input Range 0000~0006 (0~6)(0:0.1,1:0.5,2:1.0,3:2.0,4:3.0,5:4.0,6:5.0)	R/W
0012	DF	Analog Output Digital Filter,Input Range 0001~0010 (1~16)	R/W
0013	SDT	Start Delay Time,Input Range 0000~0063 (0~99)	R/W
0014	SB	Start band,Input Range FF9D~0063 (-99~99)	R/W
0015	DEL1	Delay 1,Input Range FF9D~0063 (-99~99)	R/W
0016	DEL2	Delay 2,Input Range FF9D~0063 (-99~99)	R/W
0017	DEL3	Delay 3,Input Range FF9D~0063 (-99~99)	R/W
0018	DEL4	Delay 4,Input Range FF9D~0063 (-99~99)	R/W
0019	LCUT	Lcut,Input Range FF9D~0063 (-99~99)	R/W
001A	ADDR	Communication Address,Input Range 0000~00FF(0~255)	R/W
001B	HYS1	Hysteresis 1,Input Range 0000~03E7 (0~999)	R/W
001C	HYS2	Hysteresis 2,Input Range 0000~03E7 (0~999)	R/W
001D	HYS3	Hysteresis 3,Input Range 0000~03E7 (0~999)	R/W
001E	HYS4	Hysteresis 4,Input Range 0000~03E7 (0~999)	R/W
001F	AZERO	Analog Output Zero Adjust,Input Range E890~1770(-6000~6000)	R/W
0020	ASPAN	Analog Output Span Adjust,Input Range E890~1770(-6000~6000)	R/W
0021	CODE	Pass Code Setting,Input Range 00000000~0001869F(0~99999)high word	R/W
0022		Pass Code Setting,Input Range 00000000~0001869F(0~99999)low word	R/W
0023	DSPL1	Display Lo Scale IN-1,Input Range FFFFB1E1~0001869F (-19999~99999)high word	R/W
0024		Display Lo Scale IN-1,Input Range FFFFB1E1~0001869F (-19999~99999)low word	R/W
0025	DSPL2	Display Lo Scale IN-2,Input Range FFFFB1E1~0001869F (-19999~99999)high word	R/W
0026		Display Lo Scale IN-2,Input Range FFFFB1E1~0001869F (-19999~99999)low word	R/W
0027	DSPH1	Display Hi Scale IN-1,Input Range FFFFB1E1~0001869F (-19999~99999)high word	R/W
0028		Display Hi Scale IN-1,Input Range FFFFB1E1~0001869F (-19999~99999)low word	R/W
0029	DSPH2	Display Hi Scale IN-2,Input Range FFFFB1E1~0001869F (-19999~99999)high word	R/W
002A		Display Hi Scale IN-2,Input Range FFFFB1E1~0001869F (-19999~99999)low word	R/W
002B	AL1	Alarm 1,Input Range FFFFB1E1~0001869F (-19999~99999)high word	R/W
002C		Alarm 1,Input Range FFFFB1E1~0001869F (-19999~99999)low word	R/W
002D	AL2	Alarm 2,Input Range FFFFB1E1~0001869F (-19999~99999)high word	R/W

002E		Alarm 2,Input Range FFFFB1E1~0001869F (-19999~99999)low word	R/W
002F	AL3	Alarm 3,Input Range FFFFB1E1~0001869F (-19999~99999)high word	R/W
0030		Alarm 3,Input Range FFFFB1E1~0001869F (-19999~99999)low word	R/W
0031	AL4	Alarm 4,Input Range FFFFB1E1~0001869F (-19999~99999)high word	R/W
0032		Alarm 4,Input Range FFFFB1E1~0001869F (-19999~99999)low word	R/W
0033	ANLO	Analog Output Zero-According to Display,Input Range FFFFB1E1~0001869F (-19999~99999)high word	R/W
0034		Analog Output Zero-According to Display,Input Range FFFFB1E1~0001869F (-19999~99999)low word	R/W
0035	ANHI	Analog Output Span-According to Display,Input Range FFFFB1E1~0001869F (-19999~99999)high word	R/W
0036		Analog Output Span-According to Display,Input Range FFFFB1E1~0001869F (-19999~99999)low word	R/W
0037	AZ	Auto zero setting,Input Range 0000~0001(0~1) (0:OFF,1:ON)	R/W
0038	STATUS	Alarm&Display Status,Display range0000~3FFF(0~16383)Bit0:AL1,Bit1:AL2,Bit2:AL3,Bit3:AL4,Bit4:dofl1, Bit5:-dofl 1,Bit6:iofl 1,Bit7:-iofl 1,Bit8:dofl 2,Bit9:-dofl 2,Bit10:iofl 2,Bit11:-iofl 2,Bit12:dofl 3,Bit13:-dofl 3	R
0039	AZ1	Auto zero value 1, Disolay Range FFFFB1E1~0001869F(-19999~99999)high word	R
003A		Auto zero value 1, Disolay Range FFFFB1E1~0001869F(-19999~99999)low word	R
003B	AZ2	Auto zero value 2, Disolay Range FFFFB1E1~0001869F(-19999~99999)high word	R
003C		Auto zero value 2, Disolay Range FFFFB1E1~0001869F(-19999~99999)low word	R
003D	DISP_IN1	IN1 Display Value, Disolay Range FFFFB1E1~0001869F(-19999~99999)high word	R
003E		IN1 Display Value, Disolay Range FFFFB1E1~0001869F(-19999~99999)low word	R
003F	DISP_IN2	IN2 Display Value, Disolay Range FFFFB1E1~0001869F(-19999~99999)high word	R
0040		IN2 Display Value, Disolay Range FFFFB1E1~0001869F(-19999~99999)low word	R
0041	DISP_MATH	Dual Input Math Display Value, Disolay Range FFFFB1E1~0001869F(-19999~99999)high word	R
0042		Dual Input Math Display Value, Disolay Range FFFFB1E1~0001869F(-19999~99999)low word	R