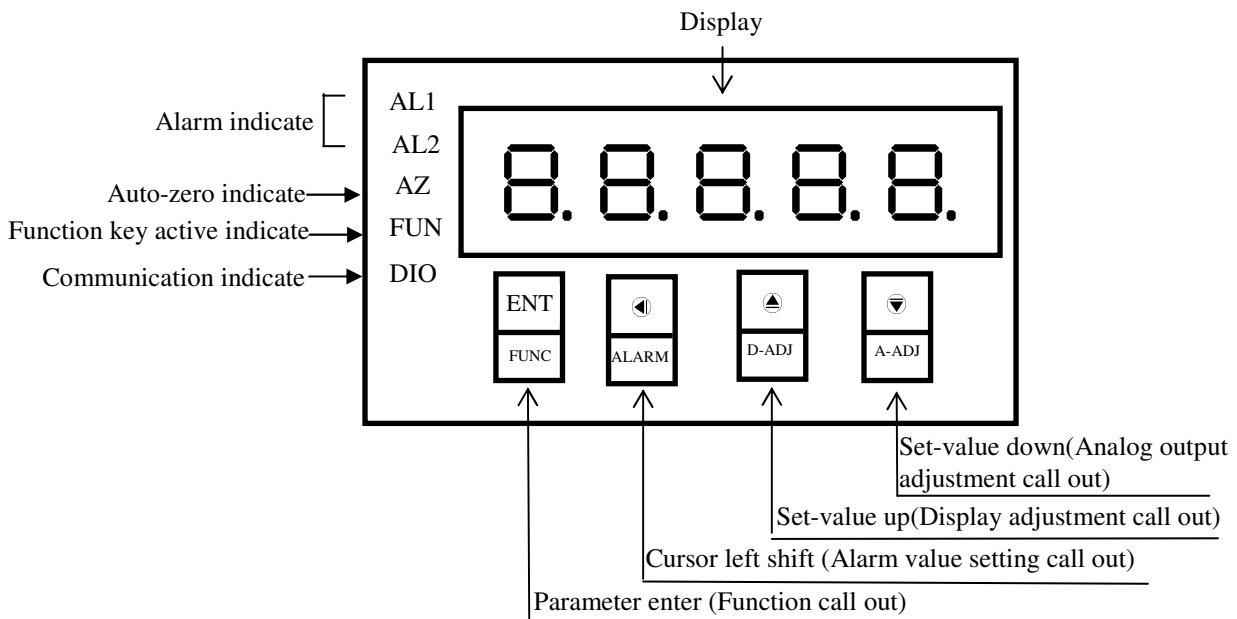


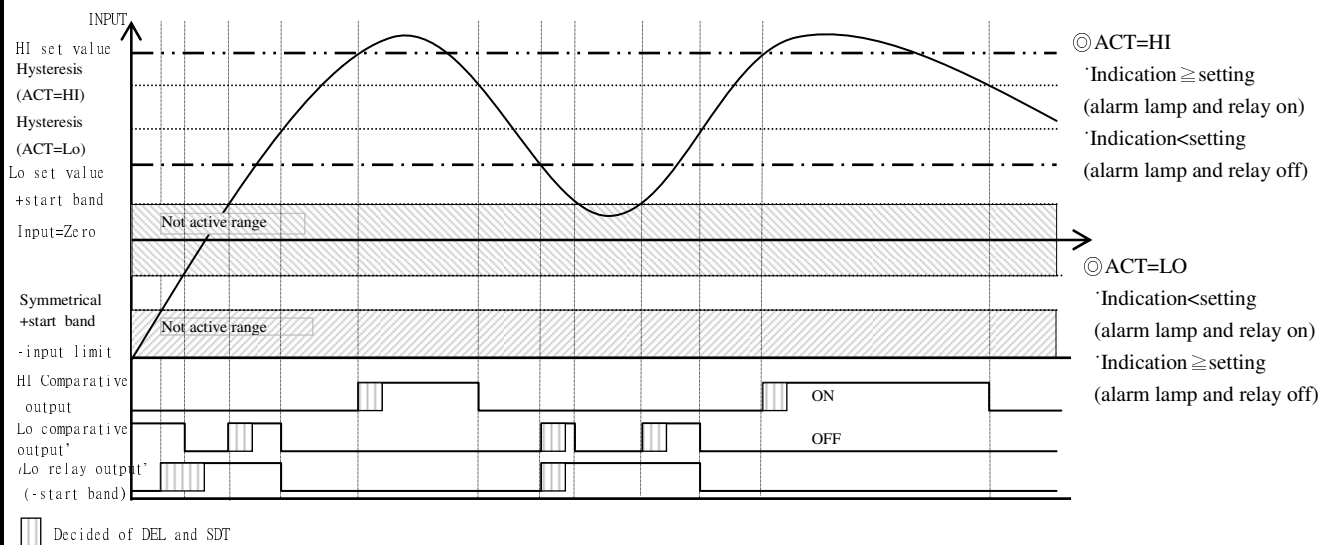
■ Features

- ⊙ Measuring DCA/DCV/ACA/ACV/Potentiometer/Pt-100/ Transmitter/Load Cell/Resistor....etc
- ⊙ Accuracy 0.05% F.S.±1 digit
- ⊙ Display range -19999~99999 can be modified
- ⊙ Decimal point can be modified
- ⊙ Display value can Auto-zero
- ⊙ Display value can Max. Hold and SQRT function
- ⊙ 2 Alarm function
- ⊙ Display average can be modified (1~99)
- ⊙ 16BIT DAC analog output
- ⊙ RS485 communication interface, Protocol MODBUS RTU MODE
- ⊙ BAUD RATE : 19200/9600/4800/2400
- ⊙ 0.4" highlight display
- ⊙ Man-machine interface ,easy to operate
- ⊙ EEPROM Saving ,data safekeeping about 10 years
- ⊙ Modified inside parameter must have pass code

■ Name Of Parts



■ Alarm Function Diagram



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, The ◀ key function is call out alarm value setting page 2. Into parameter setting page, the parameter mark&data is alternate display, If need modify data can press shift 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/right. (Key Response about 0.2 sec)	
▲ Key Function		1. In normal display,The key function is call out adjustment display value(DZERO&DSPAN)page 2. Into parameter setting page, the parameter mark&data is alternate display, If need modify data can press up 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 increment. (Key Response about 0.2 sec)	
▼ Key Function		1. In normal display,The key function is call out adjustment analog output(AZERO&ASpan)page 2. Into parameter setting page, the parameter mark&data is alternate display, If need modify data can press down 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 decrement. (Key Response about 0.2 sec)	
▲&▼ Key Function		In setting group or setting page press ▲&▼ key return normal display, but if in setting page the modify data will be lost	
No Key in anything		In setting group or setting page no key in anything about 2 minutes, return normal display	
Step	Parameter Mark Description	Parameter Mark	Operation Manual
1	Normal display	1 2 3 4 5	Press ☼/FUNC key into P.COD setting page
2	P.COD(Pass code input page) Default=0	P. C O D □ □ □ □ □	1. Key in 5 digit pass code with ◀&▲&▼key 2. Press ☼key, the pass code is right into setting group , otherwise return normal display
3	SYS(System setting group) ROP(Alarm setting group) AOP(Analog output setting group) DOP(Communication setting group)	S Y S r o p A o p d o p	1. Select setting group with ◀key 2. Press ☼key into setting page of selection setting group
4	SYS(System setting group)	S Y S	1. Press ◀key decide SYS setting group, 2. press ☼key into DP setting page
4-1	DP(Decimal Point) Default=0	d P □	1. Decide decimal point position with▲&▼ key (0 to 4) 2. Press ☼key enter data and into DSPL setting page
4-2	DSPL(Display Low Scale) Default=0	d S P L □ □ □ □ □	1. Decide display low scale with ◀&▲&▼key (-19999~99999) 2. Press ☼key enter data and into DSPH setting page
4-3	DSPH(Display High Scale) Default=99999	d S P H 9 9 9 9 9	1. Decide display high scale with ◀&▲&▼key (-19999~99999) 2. Press ☼key enter data and into AVG setting page
4-4	AVG (Average) Default=1	A v g □ □ □ □ □	1. Decide display Average times with ◀&▲&▼key (1~99) 2. Press ☼key enter data and into LCUT setting page
4-5	LCUT (Low Cut) Default=0	L C U T □ □ □ □ □	1. Decide display low cut with ◀&▲&▼key (0~99) 2. Press ☼key enter data and into CODE setting page
4-6	CODE(Pass Code) Default=0	C o d e □ □ □ □ □	1. Decide Pass code with ◀&▲&▼key (0~19999) 2. Press ☼key enter data and into LOCK setting page
4-7	LOCK(Panel Lock) Default=NO	L o c k r o	1. Decide panel lock with▲&▼ key (NO or YES) 2. Press ☼key enter data and return SYS setting group
4-8	SYS(System setting group)	S Y S	Press ◀key decide setting group, Press ☼key into DP setting page
5	ROP(Alarm setting group)	r o p	Press ◀key decide ROP setting group, press ☼key into ACT1 setting page
5-1	ACT1(Alarm Active 1 setting page)Default=HI	A c t 1 H I	1. Decide active 1 with ▲&▼key(HI or LO) 2. Press ☼key enter data and into ACT2 setting page
5-2	ACT2(Alarm Active 2 setting page)Default=HI	A c t 2 H I	1. Decide active 2 with ▲&▼key(HI or LO) 2. Press ☼key enter data and into HYS1 setting page
5-3	HYS1(Alarm Hysteresis 1 setting page1)Default=0	H y s 1 □ □ □ □ □	1. Decide HYS1 with ◀&▲&▼key (0~99) 2. Press ☼key enter data and into HYS2 setting page

5-4	HYS2(Alarm Hysteresis 2 setting page)Default=0	H Y S 2 □ □ □ □ □	1. Decide HYS2 with ◀&▲&▼key (0~99) 2. Press Ⓜkey enter data and into DEL1 setting page
5-5	DEL1(Alarm Delay 1 setting page)Default=0	Δ E L 1 □ □ □ □ □	1. Decide DEL1 with ◀&▲&▼key (0~99 sec) 2. Press Ⓜkey enter data and into DEL2 setting page
5-6	DEL2(Alarm Delay 2 setting page)Default=0	Δ E L 2 □ □ □ □ □	1. Decide DEL2 with ◀&▲&▼key (0~99 sec) 2. Press Ⓜkey enter data and into SB setting page
5-7	SB(Start band) Default=0	S B □ □ □ □ □	1. Decide SB with ◀&▲&▼key (-99~99) 2. Press Ⓜkey enter data and into SDT setting page
5-8	SDT(Start Delay Time) Default=0	S Δ T □ □ □ □ □	1. Decide SDT with ◀&▲&▼key (0~99 sec) 2. Press Ⓜkey return Alarm Active setting group
5-9	ROP(Alarm setting group)	r o p	Press ◀key decide setting group.
6	AOP(Analog output setting group)	A o p	1. Press ◀key select Analog output setting group, 2. Press Ⓜkey into ANLO setting page
6-1	ANLO(Analog Output Zero-According to Display) Default=0	A n l o □ □ □ □ □	1. Decide ANLO with ◀&▲&▼key (-19999~99999) 2. Press Ⓜkey enter data and into ANHI setting page
6-2	ANHI(Analog Output Span-According to Display) Default=99999	A n h i 9 9 9 9 9	1. Decide ANHI with ◀&▲&▼key(-19999~99999) 2. Press Ⓜkey return Analog output setting group
6-3	AOP(Analog output setting group)	A o p	Press ◀key decide setting group.
7	DOP(Communication setting group)	d o p	Press ◀key decide DOP setting group, press Ⓜkey into ADDR setting page
7-1	ADDR(Communication –Address) Default=0	A d d r □ □ □ □ □	1. Decide address with ◀&▲&▼key (0~255) 2. Press Ⓜkey enter data and into BAUD setting page
7-2	BAUD(Communication Baud Rate) Default=19200	b a u d 1 9 2 0 0	1. Decide baud rate with ▲&▼key (19200,9600,4800,2400) 2. Press Ⓜkey enter data and into PARI setting page
7-3	PARI(Communication Parity Check) Default=n.8.2.	p a r i n . 8 . 2	1. Decide parity check with ▲&▼key(n.8.2,n.8.1,even,odd) 2. Press Ⓜkey enter data and return DOP setting group
7-4	DOP(Communication setting group)	d o p	Press ◀key decide setting group.
Step	Parameter mark description	Parameter mark	Operation manual
8	Normal display	1 2 3 4 5	Press ◀/ALARM about 3 sec, into AL1 setting page
8-1	AL1 (Alarm value 1 setting page) Default=0	A L 1 □ □ □ □ □	1. Decide alarm value 1 with ◀&▲&▼key 1(-19999~99999) 2. Press Ⓜkey enter data and into AL2 setting page
8-2	AL2 (Alarm value 2 setting page) Default=0	A L 2 □ □ □ □ □	1. Decide alarm value 2 with ◀&▲&▼key (-19999~99999) 2. Press Ⓜkey enter data and return normal display
Step	Parameter mark description	Parameter mark	Operation manual
9	Normal display	1 2 3 4 5	Press ▲/D-ADJ key about 3 sec, into DZERO adjustment page
9-1	DZERO(Display Zero Adjust) Default=0	d z e r o □ □ □ □ □	1. Adjustment display zero with ▲&▼key 2. Press Ⓜkey enter data and into DSPAN adjustment page
9-2	DSPAN(Display Span Adjust) Default=0	d s p a n □ □ □ □ □	1. Adjustment display span with ▲&▼key 2. Press Ⓜkey enter data and return normal display
Step	Parameter mark description	Parameter mark	Operation manual
10	Normal display	1 2 3 4 5	Press ▼/A-ADJ key about 3 sec, into AZERO adjustment page
10-1	AZERO(Analog Output Zero Adjustment page) Default=0	A z e r o □ □ □ □ □	1. Adjustment analog output zero with ◀&▲&▼key(±9999) 2. Press Ⓜkey enter data and into ASPAN adjustment page
10-2	ASPAN(Analog Output Span Adjustment page) Default=0	A s p a n □ □ □ □ □	1. Adjustment analog output span with ◀&▲&▼key (±9999) 2. Press Ⓜkey enter data and return normal display

Appendix	Error Mark Description	Error Mark	Analyze & Description
1	Input over error detect	□ F L	Input signal over range(120%)
2	Input under error detect	- □ F L	Input signal under range(-20%)
3	Display over error detect	□ F L	Display over range(99999)
4	Display under error detect	- □ F L	Display over range (-19999)
5	A/D Converter error detect	ADER	1.Input signal over range (180%) 2.Inside circuit damage Please moving input signal if still display ADER, please contact us
6	EEPROM error detect	E - □ □	1.External interference when EEPROM read/write 2.EEPROM write over 100 million times(guarantee 10 years) Please power reset,if still display E-00,doing following step: 1.E-00 & No alternate display for inquire reset EEPROM 2.Decide Yes with ▲ or ▼ key,press Ⓜ key return normal display EEPROM was reset,Please follow step 1~10 set again
		□ □	
		YES	

MMX-AS 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	ID	Judge type code MMX-A IS 00	R
0001	STATUS	STATUS, range 0000~000F(0~15)(0:OFF,1:ON) (Bit0:AL1,Bit1:AL2)	R
0002	ACT	ACT, range 0000~000F(0~15)(0:HI,1:LO.) (Bit0:ACT1,Bit1:ACT2)	R/W
0003	FUNC	FUNC, range 0000~0003(0~3)(0:NON,1:HD,2:MAX,3:SQRT)	R/W
0004	DP	DP, range 0000~0004(0~4)0:10 ⁰ ,1:10 ⁻¹ ,2:10 ⁻² ,3:10 ⁻³ ,4:10 ⁻⁴	R/W
0005	LOCK	LCUT, range 0000~0001(0~1)0:NO,1:YES	R/W
0006	BAUD	BAUD, range 0000~0003(0~3)0:19200,1:9600,2:4800,3:2400	R/W
0007	PARI	PARI, range 0000~0003(0~3)0:N.8.2.,1:N.8.1.,2:EVEN,3:ODD	R/W
0008	AVG	AVG, range 0001~0063(1~99)	R/W
0009	LCUT	LCUT, range 0000~0063(0~99)	R/W
000A	ADDR	ADDR, range 0000~00FF(0~255)	R/W
000B	HYS1	HYS1,range 0000~0063(0~99)	R/W
000C	HYS2	HYS2,range 0000~0063(0~99)	R/W
000D	DEL1	DEL1,range 0000~0063(0~99)	R/W
000E	DEL2	DEL2,range 0000~0063(0~99)	R/W
000F	SB	SB, range FF9D~0063(-99~99)	R/W
0010	SDT	SDT, range 0000~0063(0~99)	R/W
0011	CODE	CODE, range 0000~4E1F(0~19999)	R/W
0012	AZERO	AZERO, range D8F1~270F(-9999~9999)	R/W
0013	ASPAN	ASPAN, range D8F1~270F(-9999~9999)	R/W
0014	DSPL	DSPL, range FFFF1E1~0001869F(-19999~99999) high byte	R/W
0015		DSPL, range FFFF1E1~0001869F(-19999~99999) low byte	R/W
0016	DSPH	DSPH, range FFFF1E1~0001869F(-19999~99999) high byte	R/W
0017		DSPH, range FFFF1E1~0001869F(-19999~99999) low byte	R/W
0018	AL1	AL1,range FFFF1E1~0001869F(-19999~99999) high byte	R/W
0019		AL1,range FFFF1E1~0001869F(-19999~99999) low byte	R/W
001A	AL2	AL2,range FFFF1E1~0001869F(-19999~99999) high byte	R/W
001B		AL2,range FFFF1E1~0001869F(-19999~99999) low byte	R/W
001C	ANLO	ANLO, range FFFF1E1~0001869F(-19999~99999) high byte	R/W
001D		ANLO, range FFFF1E1~0001869F(-19999~99999) low byte	R/W
001E	ANHI	ANHI, range FFFF1E1~0001869F(-19999~99999) high byte	R/W
001F		ANHI, range FFFF1E1~0001869F(-19999~99999) low byte	R/W
0020	DISPLAY	DISPLAY, range FFFF1E1~0001869F(-19999~99999) high byte	R
0021		DISPLAY, range FFFF1E1~0001869F(-19999~99999) low byte	R