AXE MICROPROCESS PANEL CONTROLLER METER (DISPLAY 0.4") MM2S Series
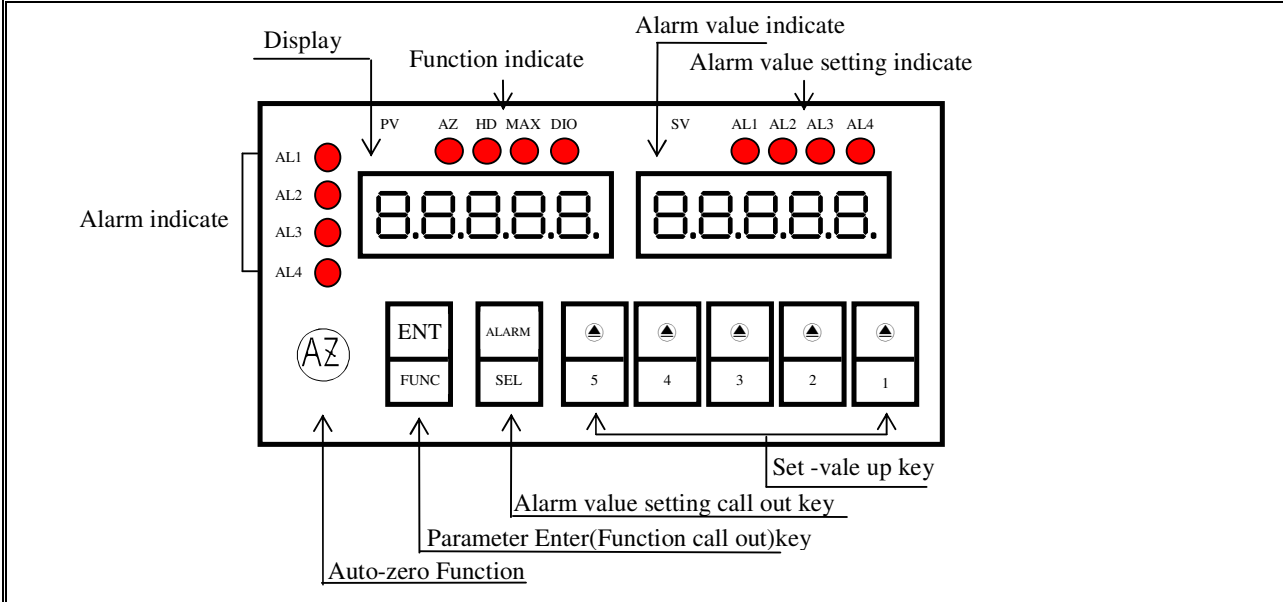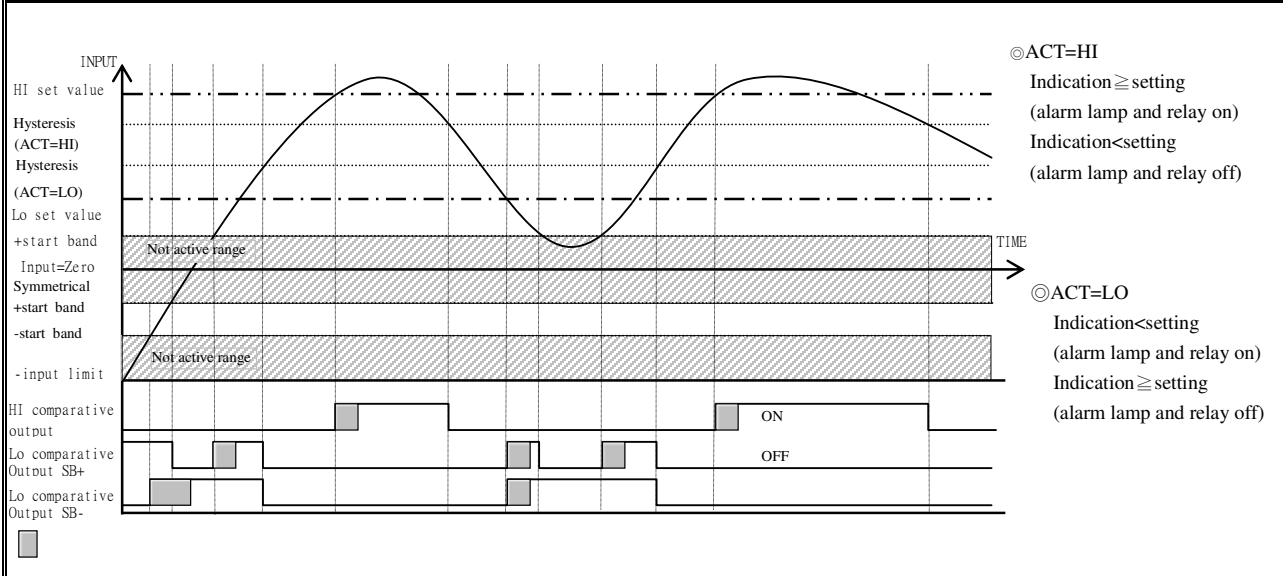
■ Features

◎Measuring DCA/DCV/ACA/ACV/Potentiometer/Pt-100/ Transmitter/Load Cell/Resistor….etc
◎Accuracy 0.1% F.S.±1 digit
◎Display range -19999~19999 can be modified
◎Decimal point can be modified
◎Display value can Auto-zero and Hold function
◎Display value can Max. hold function
◎4 Alarm function
◎Display average can be modified(1~99)

◎15BIT DAC analog output can be modified
◎RS485communication interface,Photocol MODBUS RTU MODE
◎BAUD RATE:19200/9600/4800/2400
◎0.56" highlight display
◎Man-machine interface ,easy to operate
◎EEPROM Saving,data safekeeping about 10 years
◎Modified inside parameter,must have pass code
◎Simulation push wheel digit switches,easy to operate

■ Name Of Parts

■ Alarm Function Diagram

◎ACT=HI
Indication ≧ setting
(alarm lamp and relay on)
Indication<setting
(alarm lamp and relay off)

◎ACT=LO
Indication<setting
(alarm lamp and relay on)
Indication ≧ setting
(alarm lamp and relay off)

■ Analog Output Function Jumper Table

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
ALARM SEL Key Function	1. In normal display,The key function is change alarm value & alarm indicate display 2.Into setting group with alarm sel key can selection SYS->ROP->AOP->DOP.(key response 0.2Sec.)

Per digit▲Key Function			1.In normal display,according to alarm indicate press per digit ▲ key setting per alarm value 2.Into parameter setting page,If need modify data can press per digit ▲ key into setting produce,The parameter data will increment/decrement (key response about 0.2 sec)
Digit 1&2▲Key Function			In setting group or setting page press1&2▲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	¡2345	Press ⑩/FUNC key into P.COD setting page
2	P.COD(Pass code input page) Default=0	P.Cod 00000	1.以 Key in 5 digit pass code with ◀&▲&▼key 2.Press ⑩key,the pass code is right into setting group , otherwise return normal display
3	SYS(System setting group)	SYS	1. Select setting group with ALARM SEL key
	ROP(Alarm setting group)	roP	2. Press ⑩key into setting page of selection setting group
	AOP(Analog output setting group)	AoP	
	DOP(Communication setting group)	doP	
4	SYS(System setting group)	SYS	Select setting group with ALARM SEL key, press ⑩key into DP setting page
4-1	DP(Decimal Point) Default=0	dP 0	1. Decide decimal point with digit 1▲key(0~4) 2. Press ⑩key enter data and into DSPL setting page
4-2	DSPL(Display Low Scale) Default=0	dSPL 00000	1. Decide display low scale with▲key (-19999~19999) 2. Press ⑩key enter data and into DSPH setting page
4-3	DSPH(Display High Scale) Default=19999	dSPH ¡9999	1. Decide display high scale with▲key (-19999~19999) 2. Press ⑩key enter data and into AVG setting page
4-4	AVG (Average) Default=1	AuG 0000¡	1. Decide display Average times with 1~2▲key (1~99) 2. Press ⑩key enter data and into LCUT setting page
4-5	LCUT (Low Cut) Default=0	LCUt 00000	1. Decide display low cut with 1~2▲key (0~99) 2. Press ⑩key enter data and into CODE setting page
4-6	CODE(Pass Code) Default=0	CodE 00000	1. Decide Pass code with▲key (0~19999) 2. Press ⑩key enter data and into LOCK setting page
4-7	LOCK(Panel Lock) Default=NO	LoCk no	1. Decide panel lock with DP1▲key (NO or YES) 2. Press ⑩key enter data and return SYS setting group
4-8	SYS(System setting group)	SYS	Press ALARM SEL key decide setting group, press ⑩key into setting group
5	ROP(Alarm setting group)	roP	Press ALARM SEL key decide ROP setting group, press ⑩key into ACT1 setting page
5-1	ACT1(Alarm Active 1 setting page)Default=HI	ACt¡ Hi	1.Decide active 1 with 以 DP1▲Key(HI or LO) 2.Press ⑩key enter data and into ACT2 setting page
5-2	ACT2(Alarm Active 2 setting page)Default=HI	ACt2 Hi	1. Decide active 2 with 以 DP1▲Key (HI or LO) 2. Press ⑩key enter data and into ACT3 setting page
5-3	ACT3(Alarm Active 3 setting page)Default=HI	ACt3 Hi	1. Decide active 3 with 以 DP1▲Key (HI or LO) 2. Press ⑩key enter data and into ACT4 setting page
5-4	ACT4(Alarm Active 4 setting page)Default=HI	ACt4 Hi	1. Decide active 4 with 以 DP1▲Key (HI or LO) 2. Press ⑩key enter data and into HYS1 setting page
5-5	HYS1(Alarm Hysteresis 1 setting page)Default=0	HYS¡ 00000	1. Decide active 1 with DP1~3▲Key(0~999) 2. Press ⑩key enter data and into HYS2 setting page
5-6	HYS2(Alarm Hysteresis 2 Setting page) Default =0	HYS2 00000	1. Decide active 2 with DP1~3▲Key(0~999)2. Press ⑩key enter data and into HYS3 setting page
5-7	HYS3(Alarm Hysteresis 3 setting page)Default=0	HYS3 00000	1. Decide active 3 with DP1~3▲Key(0~999) 2. Press ⑩key enter data and into HYS4 setting page
5-8	HYS3(Alarm Hysteresis 3 setting page)Default=0	HYS4 00000	1. Decide active 4 with DP1~3▲Key(0~999) (0~999) 2. Press ⑩key enter data and into DEL1 setting page
5-9	DEL1(Alarm Delay 1	dEL¡	1. Decide delay 1 with DP1~2▲key (0~99)

Step	Parameter mark description	Parameter mark	Operation manual
	setting page)Default=0	0 0 0 0.0	2. Press Ⓝ key enter data and into DEL2 setting page
5-10	DEL2(Alarm Delay 2 setting page)Default=0	d E L 2	1. Decide delay 2 with DP1~2▲key (0~99)
		0 0 0 0.0	2. Press Ⓝ key enter data and into DEL3 setting page
5-11	DEL3(Alarm Delay 3 setting page)Default=0	d E L 3	1. Decide delay 3 with DP1~2▲key (0~99)
		0 0 0 0.0	2. Press Ⓝ key enter data and into DEL4 setting page
5-12	DEL4(Alarm Delay 4 setting page)Default=0	d E L 4	1. Decide delay 4 with DP1~2▲key (0~99)
		0 0 0 0.0	2. Press Ⓝ key enter data and into SB setting page
5-13	SB(Start band) Default=0	5 b	1. Decide start band with DP1~3&5▲Key(-999~999)
		0 0 0 0 0	2. Press Ⓝ key enter data and into SDT setting page
5-14	SDT(Start Delay Time) Default=0	5 d t	1. Decide start band with DP1~2▲Key(0~99)
		0 0 0 0 0	2.Press Ⓝ key enter data and return ROP setting group
5-15	ROP(alarm setting group)	r o P	Press ALARM SEL key decode setting group,press Ⓝ key into ACT1 setting group
6	AOP(Analog output setting group)	A o P	Press ALARM SEL key decide AOP setting group , 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 pre digit ▲ key (-19999~19999)
		0 0 0 0 0	2.Press Ⓝ key enter data and into ANHI setting page
6-2	ANHI(A/ O Span According to Display setting page) Default=0	A n H i	1.Decide ANHI with pre digit ▲ key (-19999~19999)
		1 9 9 9 9	2. Press Ⓝ key enter data and into AZERO setting page
6-3	AZERO(Analog Output Zero Adjust) Default=0	A 2 E r o	1. Adjustment analog output zero with pre digit ▲key (-19999~19999)
		0 0 0 0 0	2. Press Ⓝ key enter data and into ASPAN setting page
6-4	ASPAN(Analog Output Span Adjust) Default=0	A 5 P A n	1. Adjustment analog output span with pre digit ▲key (-19999~19999)
		0 0 0 0 0	2. Press Ⓝ key enter data and return AOP setting page
6-5	AOP(Analog output setting group)	A o P	Decide ALARM SEL key decode setting group,Press Ⓝ key into ANLO setting page
7	DOP(Communication setting group)	d o P	Press ALARM SEL key decide DOP setting group ,press Ⓝ key into ADDR setting page
7-1	ADDR(Communication –Address setting page) Default=0	A d d r	1. Decide address with DP 1~3▲key (0~255)
		0 0 0 0 0	2. Press Ⓝkey enter data and into BAUD setting page
7-2	BAUD(Communication Baud Rate setting page)Value on Default=19200	b A U d	1. Decide baud rate wit DP1▲key (19200,9600,4800,2400)
		1 9 2 0 0	2. Press Ⓝkey enter data and into PARI setting page
7-3	PARI(Communication Parity Check setting page)Default=n82	P A r i	1. Decide parity check with DP1▲key(n82,n81,even,odd)
		n.8.2.	2.Press Ⓝkey enter data and return DOP setting group
7-4	DOP(Communication setting group)	d o P	Press ALARM SEL key decide DOP setting group ,press Ⓝ key into ADDR setting page
Step	Parameter mark description	Parameter mark	Operation manual
8-1	AL1 (Alarm value 1 setting page) Default=0	1 2 3 4 5	1.Press ALARM SEL key until AL1 indicate is light
		0 0 0 0 0	2.Decide alarm 1 value with per digit ▲ key(-19999~19999) no key in any key 5 sec Auto save data
8-2	AL2 (Alarm value 2 setting page) Default=0	1 2 3 4 5	1.Press ALARM SEL key until AL2 indicate is light
		0 0 0 0 0	2.Decide alarm 2 value with per digit ▲ key(-19999~19999) no key in any key 5 sec Auto save data
8-3	AL3 (Alarm value 3 setting page) Default=0	1 2 3 4 5	1.Press ALARM SEL key until AL3 indicate is light
		0 0 0 0 0	2.Decide alarm 3 value with per digit ▲ key(-19999~19999) no key in any key 5 sec Auto save data
8-4	AL4 (Alarm value 4 setting page) Default=0	1 2 3 4 5	1.Press ALARM SEL key until AL4 indicate is light
		0 0 0 0 0	2.Decide alarm 4 value with per digit ▲ key(-19999~19999) no key in any key 5 sec Auto save data
Appendix	Error Mark Description	Error Mark	Analyze & Description

1	Input over error detect	$\text{i}\,\text{o}\,\text{F}\,\text{L}$	Input signal over range(120%)
2	Input under error detect	$-\text{i}\,\text{o}\,\text{F}\,\text{L}$	Input signal under range(-20%)
3	Display over error detect	$\text{d}\,\text{o}\,\text{F}\,\text{L}$	Display over range(19999)
4	Display under error detect	$-\text{d}\,\text{o}\,\text{F}\,\text{L}$	Display under range(-19999)
5	A/D Converter error detect	$\text{A}\,\text{d}\,\text{E}\,\text{r}$	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	$\text{E}-\text{O}\,\text{O}$ $\text{n}\,\text{o}$ $\text{Y}\,\text{E}\,\text{S}$	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 DP1 ⬆key press Ⓝ return normal display 3.EEPROM was reset, Please follow step 1~10 set again

MM2S Modbus RTU Mode Protocol Address Map

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

Address	Name	Description	Accept
0000	DP	DP,range 0000~0004(0~4)0:10^{0},1:10^{-1},2:10^{-2},3:10^{-3},4:10^{-4}	R/W
0002	DSPL	DSPL,range B1E1~4E1F(-19999~19999)	R/W
0004	DSPH	DSPH,range B1E1~4E1F(-19999~19999)	R/W
0006	AVG	AVG,range 0001~0063(1~99)	R/W
0008	LCUT	LCUT,range 0000~0063(0~99)	R/W
000A	CODE	CODE,range 0000~4E1F(0~19999)	R/W
000C	HYS1	HYS1,range 0000~03E7(0~999)	R/W
000E	HYS2	HYS2,range 0000~03E7(0~999)	R/W
0010	HYS3	HYS3,range 0000~03E7(0~999)	R/W
0012	HYS4	HYS4,range 0000~03E7(0~999)	R/W
0014	DEL1	DEL1,range 0000~03E7(0~999)	R/W
0016	DEL2	DEL2,range 0000~03E7(0~999)	R/W
0018	DEL3	DEL3,range 0000~03E7(0~999)	R/W
001A	DEL4	DEL4,range 0000~03E7(0~999)	R/W
001C	SB	SB,range FC19~03E7(-999~999)	R/W
001E	SDT	SDT,range 0000~03E7(0~999)	R/W
0020	ANLO	ANLO,range B1E1~4E1F(-19999~19999)	R/W
0022	ANHI	ANHI,range B1E1~4E1F(-19999~19999)	R/W
0024	AZERO	AZERO,range D8F1~270F(-9999~9999)	R/W
0026	ASPAN	ASPAN,range D8F1~270F(-9999~9999)	R/W
0028	ADDR	ADDR,range 0000~00FF(0~255)	R/W
002A	BAUD	BAUD,range 0000~0003(0~3)0:19200,1:9600,2:4800,3:2400	R/W
002C	PARI	PARI,range 0000~0003(0~3)0:N.8.2.,1:N.8.1.,2:EVEN,3:ODD	R/W
002E	INLO	INLO,range 029F16~4EA4A8(171798~5153960)	R/W
0032	INHI	INHI,range 029F16~4EA4A8(171798~5153960)	R/W
0036	ACT	ACT,BIT0:ACT1,BIT1:ACT2,BIT2:ACT3,BIT3:ACT4(0:HI,1:LO)	R/W
0038	AL1	AL1,range B1E1~4E1F(-19999~19999)	R/W
003A	AL2	AL2,range B1E1~4E1F(-19999~19999)	R/W
003C	AL3	AL3,range B1E1~4E1F(-19999~19999)	R/W
003E	AL4	AL4,range B1E1~4E1F(-19999~19999)	R/W
0040	STATUS	STATUS Bit0:LOCK,Bit1:AZ,Bit2:HOLD,Bit3:MAX 0:Disable 1:Enable	R
0042	AZ	AZ VALUE,range B1E1~4E1F(-19999~19999)	R
0044	HOLD	HOLD VALUE,range B1E1~4E1F(-19999~19999)	R
0046	MAX	MAX. VALUE,range B1E1~4E1F(-19999~19999)	R
0048	DISPLAY	DISPLAY,range B1E1~4E1F(-19999~19999)	R