AXE MICROPROCESS DUAL DISPLAY PANEL CONTROLLER METER MM2D Series
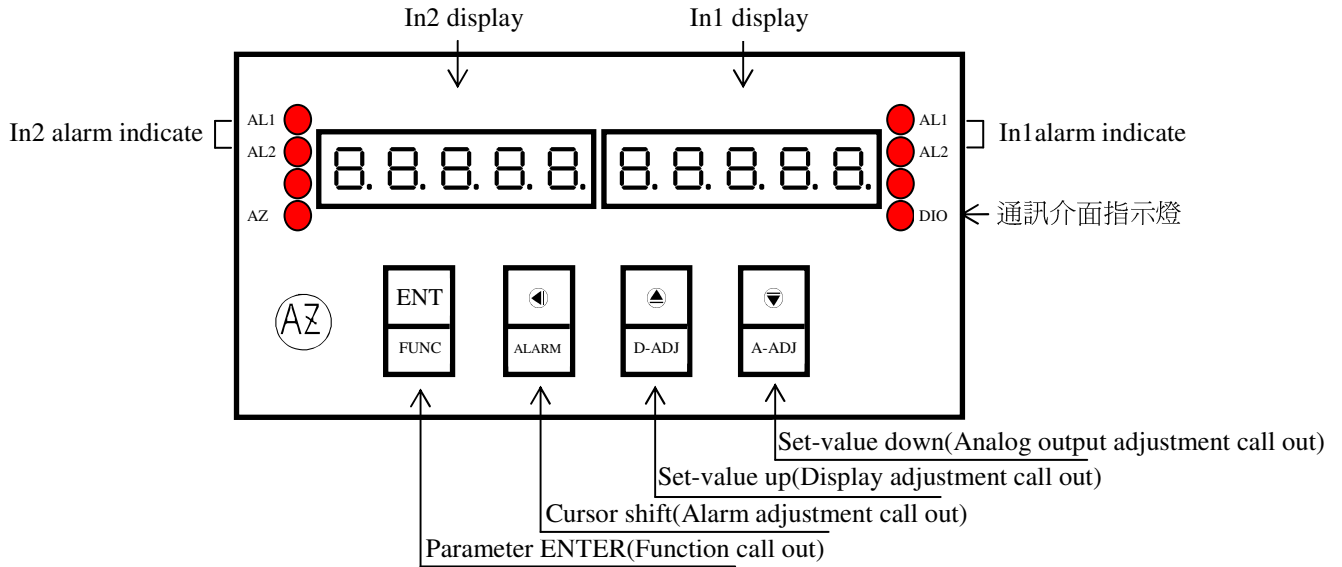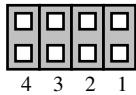
■Features

◎Dual input measuring & display (DCA/DCV/ACA/ACV)

◎Accuracy 0.1% F.S.±1 digit

◎Display range -19999~19999 can be modified

◎Decimal point can be modified

◎Per input have 2 Alarm function

◎Display average can be modified(1~99)

◎15BIT DAC analog output can be modified,0~10V /4~20mA by inside switch jumper

◎RS485communication interface,Photocol 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

■Name Of Parts

In2 display   In1 display

In2 alarm indicate — AL1 AL2 AZ

AL1 AL2 DIO — In1 alarm indicate

通訊介面指示燈

AZ

ENT / FUNC

◀ / ALARM

▲ / D-ADJ

▼ / A-ADJ

Set-value down(Analog output adjustment call out)

Set-value up(Display adjustment call out)

Cursor shift(Alarm adjustment call out)

Parameter ENTER(Function call out)

■Analog Output Function Jumper Table

4 3 2 1

Position 1&3 ON: DC 4~20 mA OUTPUT

Position 2&4 ON: DC 0~10V OUTPUT

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. (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,but if in Setting page the modify data will be lost

Step	Parameter Mark Description	Parameter Mark	Operation Manual
1	Normal display	12345	Press ㊌/FUNC key into P.COD setting page
2	P.COD(Pass code input page)	P.Cod	1.Key in 5 digit pass code with ◀ or ▲ or ▼ key
		00000	2.Press ㊌ key,the pass code is right into setting group , otherwise return normal display
3	SYS(System setting group)	SYS	1.Select setting group with ◀ key
	ROP(Alarm setting group)	roP	2.Press ㊌ key into setting page of selection setting group
	AOP(Analog output setting group)	AoP	
	DOP(Communication setting group)	doP	
4	SYS(System setting group)	SYS	Press ◀ key decide SYS setting group , press ㊌ key into DP1 setting page
4-1	DP1(Decimal Point 1) Default=0	dP 1	1.Decide decimal point 1 position with ▲ or ▼ key (0 to 4)
		0	2.Press ㊌ key enter data and into DSPL1 setting page
4-2	DSPL1(Display1 Low Scale) Default=0	dSPL 1	1.Decide display1 low scale with ◀&▲&▼ key (-19999~19999)
		00000	2.Press ㊌ key enter data and into DSPH1 setting page
4-3	DSPH1(Display1 High Scale)Default=19999	dSPH 1	1.Decide display1 high scale with ◀&▲&▼ key (-19999~19999)
		19999	2.Press ㊌ key enter data and into DP2 setting page
4-4	DP2(Decimal Point 2) Default=0	dP 2	3.Decide decimal point 2 position with ▲ or ▼ key (0 to 4)
		0	4.Press ㊌ key enter data and into DSPL2 setting page
4-5	DSPL2(Display2 Low Scale) Default=0	dSPL 2	1.Decide display2 low scale with ◀&▲&▼ key (-19999~19999)
		00000	2.Press ㊌ key enter data and into DSPH2 setting page
4-6	DSPH2(Display2 High Scale)Default=19999	dSPH 2	1.Decide display2 high scale with ◀&▲&▼ key (-19999~19999)
		19999	2.Press ㊌ key enter data and into AVG setting page
4-7	AVG (Average) Default=1	AuG	1.Decide display Average times with ◀&▲&▼ key (1~99)
		00001	2.Press ㊌ key enter data and into LCUT setting page
4-8	LCUT (Low Cut) Default=0	LCUt	1.Decide display low cut with ◀&▲&▼ key (0~99)
		00000	2.Press ㊌ key enter data and into CODE setting page
4-9	CODE(Pass Code) Default=0	CodE	1.Decide Pass code with ◀&▲&▼ key (0~19999)
		00000	2.Press ㊌ key enter data and into LOCK setting page
4-10	LOCK(Panel Lock) Default=NO	LoCk	1.Decide panel lock with ▲ or ▼ key (NO or YES)
		no	2.Press ㊌ key enter data and into AZ.SEL setting page
4-11	AZ.SEL(AZ select) Default=IN12	AZ.SEL	1.Decide AZ select with ▲ or ▼ key (IN12 or IN1 or IN2)
		in12	2.Press ㊌ key enter data and return SYS setting group
5	ROP(Alarm setting group)	roP	Press ◀ key decide ROP setting group,press ㊌ key into ACT11 setting page
5-1	ACT11(IN1 Alarm Active1 setting page)Default=HI	ACt 11	1.Decide IN1 active 1 with ▲ or ▼ key(HI or LO)
		Hi	2.Press ㊌ key enter data and into ACT12 setting page
5-2	ACT12(IN1 Alarm Active2 setting page)Default=HI	ACt 12	1.Decide IN1 active 2 with ▲ or ▼ key(HI or LO)
		Hi	2.Press ㊌ key enter data and into ACT21 setting page
5-3	ACT21(IN2 Alarm Active1 setting page)Default=HI	ACt 21	1.Decide IN2 active 1 with ▲ or ▼ key(HI or LO)
		Hi	2.Press ㊌ key enter data and into ACT22 setting page
5-4	ACT22(IN2 Alarm Active2 setting page)Default=HI	ACt 22	1.Decide IN2 active 2 with ▲ or ▼ key(HI or LO)
		Hi	2.Press ㊌ key enter data and into HYS11 setting page
5-5	HYS11(IN1 Alarm Hysteresis1 setting page)Default=0	HYS 11	1.Decide IN1 Hysteresis 1 with◀ or ▲ or ▼ key(0~999)
		00000	2.Press ㊌ key enter data and into HYS12 setting page
5-6	HYS12(IN1 Alarm Hysteresis2 setting page)Default=0	HYS 12	1.Decide IN1 Hysteresis 2 with◀ or ▲ or ▼ key(0~999)
		00000	2.Press ㊌ key enter data and into HYS21 setting page

Step	Parameter mark description	Parameter mark	Operation manual
5-7	HYS21(IN2 Alarm Hysteresis1 setting page)Default=0	HYS21 00000	1.Decide IN2 Hysteresis 1 with ◀ or ▲ or ▼ key(0~999) 2.Press ⊛ key enter data and into HYS22 setting page
5-8	HYS22(IN2 Alarm Hysteresis2 setting page)Default=0	HYS22 00000	1.Decide IN2 Hysteresis 2 with ◀ or ▲ or ▼ key(0~999) 2.Press ⊛ key enter data and return ROP setting group
6	AOP(Analog output setting group)	AoP	Press ◀ key decide AOP setting group , press ⊛ key into AO.SEL setting page
6-1	AO.SEL(Analog Output Select) Default=IN1	Ao.SEL in1	1.Decide AO.SEL with ▲ or ▼ key(IN1 or IN2 or 1ADD2 or 1SUB2 or 1MUL2 or 1DIV2) 2.Press ⊛ key enter data and into ANLO setting page
6-2	ANLO(A/O Zero According to Display setting page)Default=0	AnLo 00000	1.Decide ANLO with ◀ or ▲ or ▼ key(-19999~19999) 2.Press ⊛ key enter data and into ANHI setting page
6-3	ANHI(A/O Span According to Display setting page)Default=0	AnHi 19999	1.Decide ANHI with ◀ or ▲ or ▼ key(-19999~19999) 2.Press ⊛ key enter data and return AOP setting group
7	DOP(Communication setting group)	doP	press ◀ key decide DOP setting group,press ⊛ key into ADDR setting page
7-1	ADDR(Communication –Address setting page)Default=0	Addr 00000	1.Decide address with ◀ or ▲ or ▼ key(0~255) 2.Press ⊛ key enter data and into BAUD setting page
7-2	BAUD(Communication Baud Rate setting page)Value on Default=19200	bAUd 19200	1.Decide baud rate with ▲ or ▼ key(19200,9600,4800,2400) 2.Press ⊛ key enter data and into PARI setting page
7-3	PARI(Communication Parity Check setting page)Default=n82	PAri n.8.2.	1.Decide parity check with ▲ or ▼ key(n82,n81,even,odd) 2.Press ⊛ key enter data and return DOP setting group
Step	Parameter mark description	Parameter mark	Operation manual
8	Normal display	12345	Press ◀/ALARM key about 3 sec,into AL11 setting page
8-1	AL11 (IN1 Alarm value 1 setting page) Default=0	AL11 00000	1.Decide IN1 alarm value 1 with ◀ or ▲ or ▼ key(+/-19999) 2.Press ⊛ key enter data and into AL12 setting page
8-2	AL12 (IN1 Alarm value 2 setting page) Default=0	AL12 00000	1.Decide IN1 alarm value 2 with ◀ or ▲ or ▼ key(+/-19999) 2.Press ⊛ key enter data and into AL21 setting page
8-3	AL21 (IN2 Alarm value 1 setting page) Default=0	AL21 00000	1.Decide IN2 alarm value 1 with ◀ or ▲ or ▼ key(+/-19999) 2.Press ⊛ key enter data and into AL22 setting page
8-4	AL22 (IN2 Alarm value 2 setting page) Default=0	AL22 00000	1.Decide IN2 alarm value 2 with ◀ or ▲ or ▼ key(+/-19999) 2.Press ⊛ key enter data and return normal display
Step	Parameter mark description	Parameter mark	Operation manual
9	Normal display	12345	Press ▼/A-ADJkey about 3 sec,into DZER1 adjustment page
9-1	DZER1(IN1 Display Zero Adjust)預設值為0	dZEr1 00000	1.IN1 Adjustment display zero with ▲ or ▼ key 2.Press ⊛ key enter data and into DSPA1 adjustment page
9-2	DSPA1(IN1 Display Span Adjust)預設值為0	dSPA1 00000	1.IN1 Adjustment display span with ▲ or ▼ key 2.Press ⊛ key enter data and into DZER2 adjustment page
9-3	DZER2(IN2 Display Zero Adjust)預設值為0	dZEr2 00000	1.IN2 Adjustment display zero with ▲ or ▼ key 2.Press ⊛ key enter data and into DSPA2 adjustment page
9-4	DSPA2(IN2 Display Span Adjust)預設值為0	dSPA2 00000	1.IN2 Adjustment display span with ▲ or ▼ key 2.Press ⊛ key enter data and return normal display
Step	Parameter mark description	Parameter mark	Operation manual
10	Normal display	12345	Press ▼/A-ADJkey about 3 sec,into AZERO adjustment page
10-1	AZERO(Analog Output Zero Adjustment page) Value on EEPROM reset=0	AZEro 00000	1.Adjustment analog output zero with ◀ or ▲ or ▼ key(±9999) 2.Press ⊛ key enter data and into ASPAN adjustment page

10-2	ASPAN(Analog Output Span Adjustment page) Value on EEPROM reset=0	`ASPAn` `00000`	1.Adjustment analog output span with ◀ or ▲ or ▼ key(±9999) 2.Press ⑩ key enter data and return normal display
Appendix	Error Mark Description	Error Mark	Analyze & Description
1	Input over error detect	`ioFL`	Input signal over range(120%)
2	Input under error detect	`-ioFL`	Input signal under range(-20%)
3	Display over error detect	`doFL`	Display over range(19999)
4	Display under error detect	`-doFL`	Display under 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-00` `no` `YES`	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 ⑩ key return normal display 3.EEPROM was reset,Please follow step 1~10 set again

MM2D 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	DSPL1	DSPL1,input range B1E1~4E1F(-19999~19999)	R/W
0002	DSPH1	DSPH1,input range B1E1~4E1F(-19999~19999)	R/W
0004	DSPL2	DSPL2,input range B1E1~4E1F(-19999~19999)	R/W
0006	DSPH2	DSPH2,input range B1E1~4E1F(-19999~19999)	R/W
0008	AVG	AVG,input range 0001~0063(1~99)	R/W
000A	LCUT	LCUT,input range 0000~0063(0~99)	R/W
000C	CODE	CODE,input range 0000~4E1F(0~19999)	R/W
000E	HYS11	HYS11,input range 0000~03E7(0~999)	R/W
0010	HYS12	HYS12,input range 0000~03E7(0~999)	R/W
0012	HYS21	HYS21,input range 0000~03E7(0~999)	R/W
0014	HYS22	HYS22,input range 0000~03E7(0~999)	R/W
0016	AL11	AL11,input range B1E1~4E1F(-19999~19999)	R/W
0018	AL12	A112,input range B1E1~4E1F(-19999~19999)	R/W
001A	AL21	AL21,input range B1E1~4E1F(-19999~19999)	R/W
001C	AL22	AL22,input range B1E1~4E1F(-19999~19999)	R/W
001E	AO.SEL	AO.SEL,input range 0000~0001(0~1)0:IN1,1:IN2	R/W
0020	ANLO	ANLO,input range B1E1~4E1F(-19999~19999)	R/W
0022	ANHI	ANHI,input range B1E1~4E1F(-19999~19999)	R/W
0024	AZERO	AZERO,input range D8F1~270F(-9999~9999)	R/W
0026	ASPAN	ASPAN,input range D8F1~270F(-9999~9999)	R/W
0028	ADDR	ADDR,input range 0000~00FF(0~255)	R/W
002A	BAUD	BAUD,input range 0000~0003(0~3)0:19200,1:9600,2:4800,3:2400	R/W
002C	PARI	PARI,input range 0000~0003(0~3)0:N82,1:N81,2:EVEN,3:ODD	R/W
003E	DP	MSB=DP1,LSB=DP2 per BYTE input range 0~4 0:10^0,1:10^1,2:10^2,3:10^3,4:10^4	R/W
0040	STATUS	MSB BIT7:LOCK(1:YES 0:NO),BIT6:AZ(1:ON,0:OFF)BIT1&BIT0:AZSEL(00:IN12,01:IN1,10:IN2) LSB BIT0:ACT11,BIT1:ACT12,BIT2:ACT21,BIT3:ACT22(0:HI,1:LO)	R/W
0042	AZ1	IN1 AZ value,range B1E1~4E1F(-19999~19999)	R
0044	AZ2	IN2 AZ value,range B1E1~4E1F(-19999~19999)	R
0046	DISP1	IN1 display value,range B1E1~4E1F(-19999~19999)	R
0048	DISP2	IN2 display value,range B1E1~4E1F(-19999~19999)	R