AXE DC MULTI-POWER METER(LOW POWER)　　　MMX-D

■ FEATURES

◎Accuracy 0.05% FS ± 1 digit	◎RS485 communication interface,Protocol MODBUS RTU MODE
◎Measuring and display DCV/DCA/W(KW)/WH(KWH)	◎BAUD RATE:19200/9600/4800/2400
◎Auto range(DC 0~99.99V/0~600.0V)for voltage input	◎Man-machine interface,easy to operate
◎Programmable rate 0 to 9999 digit(DCA/W(KW)),0 to	◎EEPROM saving data safekeeping about 10 years
99999999 digit(WH(KWH))	◎Protection class NEMA4/IP64

■ Name of Parts
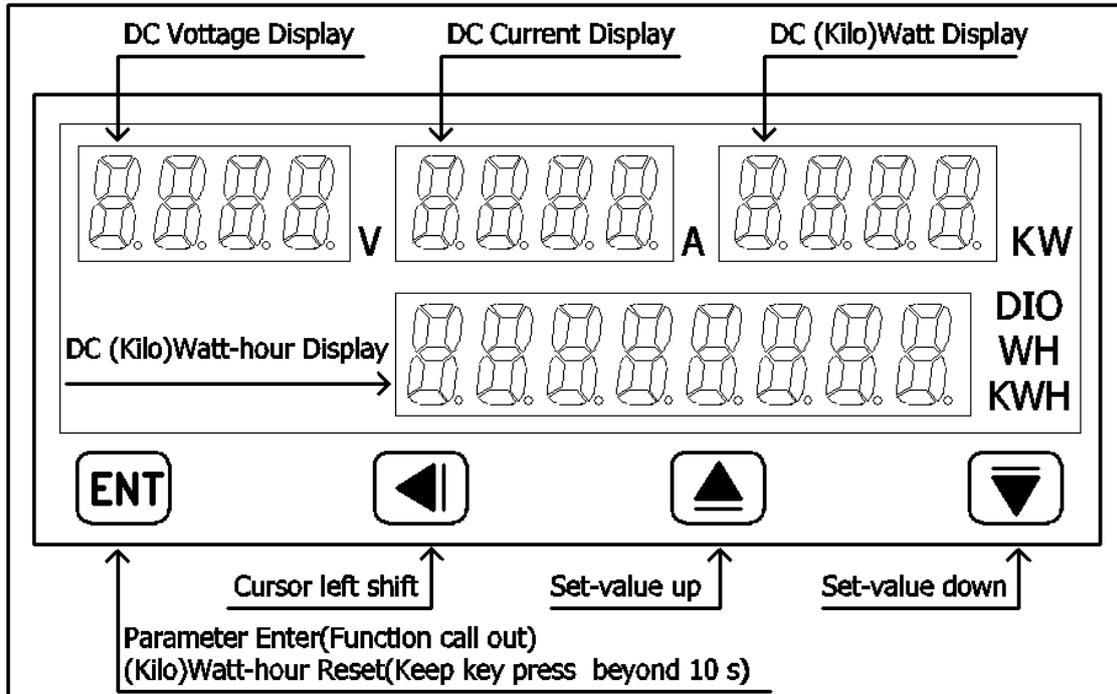
Key Introduce	Operation Manual
⊞ key function	1.In normal display,the key function is call out setting group 2.In parameter setting page,the key function is data ENTER and goto next page 3.When RST=0,Keep ⊞key press beyond 10 seconds,Reset the (Kilo)Watt-hour accumulate value to zero
◀ key function	1.Into 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.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 increment.(Key response about 0.2 sec.)
▼ key function	1.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 decrement.(Key response about 0.2 sec.)
▲&▼ key function	1.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	1.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	1234	1.Press ⊞ key into A.DP setting page

2	A.DP (Current Decimal Point) Default = 3	A.dP 3.	1.Decide Current Decimal Point location with ▲&▼ key(0~3) 2.Press ⓔ key enter data and into A.DSP setting page
3	A.DSP (Current Display High) Default = 2000	A.dSP 2.000	1.Decide Current Display High value with ◀&▲&▼ key(0~9999) 2.Press ⓔ key enter data and into UNIT setting page
4	UNIT (Unit) Default = W	Unit ᵤ	1.Decide Watt or Kilowatt Unit select with ▲&▼ key(W/KW) 2.If UNIT = W(Watt),Press ⓔ key enter data and into Step 5-1 W.DP setting page 3.If UNIT = KW(Kilowatt),Press ⓔ key enter data and into Step 6-1 KW.DP setting page
5-1	W.DP(Watt Decimal Point) Default = 0	u.dP 0.	1.Decide Watt Decimal Point location with ▲&▼ key(0~3) 2.Press ⓔ key enter data and into WH.DP setting page
5-2	WH.DP(Watt-hour Decimal Point) Default = 1	uH.dP 1.	1.Decide Watt-hour Decimal Point location with ▲&▼ key(0~1) 2.Press ⓔ key enter data and into Step 7 RST setting page
6-1	KW.DP(Kilowatt Decimal Point) Default = 0	ᵤu.dP 0.	1.Decide Kilowatt Decimal Point location with ▲&▼ key(0~3) 2.Press ⓔ key enter data and into KWH.D setting page
6-2	KWH.D(Kilowatt-hour Decimal Point) Default = 1	ᵤuH.d 1.	1.Decide Kilowatt-hour Decimal Point location with ▲&▼ key(0~1) 2.Press ⓔ key enter data and into Step 7 RST setting page
7	RST(Reset Mode Select) Default = 0	rSt 0000	1.Decide Reset Mode with ▲&▼ key(0~2) RST=0: Panel ⓔkey/Terminal(RST)/RS-485(communication) have Reset function RST=1:Terminal(RST)/RS-485(communication) have Reset function RST=2:Only RS-485(communication) have Reset function 2.Press ⓔ key enter data and into ADDR setting page
8	ADDR(Communication Address) Default = 0	Addr 0000	1.Decide Communication Address with ◀&▲&▼ key(0~255) 2.Press ⓔ key enter data and into BAUD setting page
9	BAUD(Communication Baud Rate) Default = 19K2	bAud 19ᵤ2	1.Decide Communication Baud Rate with ▲&▼ key(19K2/9600/4800/2400) 2.Press ⓔ key enter data and into PARI setting page
10	PARI(Communication Parity Check) Default = n.8.2.	PAri n.8.2.	1.Decide Communication Parity Check with ▲&▼ key (n.8.2/n.8.1/even/odd) 2.Press ⓔ key enter data and into DS-V setting page
11	DS-V(Voltage Display Span Adjust)	dS-u 600.0	1.Adjustment Voltage display span with ▲&▼key 2.Press ⓔkey enter data and into DS-A setting page Note:Adjust DS-V while Voltage maximum display value error
12	DS-A(Current Display Span Adjust)	dS-A 2.000	1.Adjustment Current display span with ▲&▼key 2.Press ⓔkey enter data and return normal dispaly Note:Adjust DS-A while Current maximum display value error

Appendix	Error Mark description	Error Mark	Analyze & Description
1	Display over range error detect	doFL	1.Input signal over display range or over measurable range
2	EEPROM error detect	E-00 no YES	1.External interference when EEPROM read/write 2.EEPROM write over 1,000,000 cycles(guarantee 10 years) Please power reset,if still display E-00,doing below step: a.E-00 & No alternate display for inquire reset EEPROM b.Decide Yes with ▲&▼ key,press ⓔ key return normal display c.EEPROM was reset,Please follow step 1~10 setting again

Note:Voltage/Current value below the 0.1% of maximum display value will auto low cut to zero

Rev.1.0

MMX-D Modbus RTU Mode Protocol Address Map
Data format 16Bit/32Bit Unsign bit,i.e. 0000~FFFF(0~65536)/00000000~FFFFFFFF(0~4294967295)

Address	Name	Description	Accept
0000	ADP	Current Decimal Point location, Input Range 0000~0003(0~3)	R/W
0001	ADSP	Current Display High value,Input Range 0000~270F(0~9999)	R/W
0002	UNIT	Watt or Kilowatt Unit Select,Input Range 0000~0001(0~1) 0:W,1:KW	R/W
0003	WDP	Watt Decimal Point location,Input Range 0000~0003(0~3)	R/W
0004	KWDP	Kilowatt Decimal Point location,Input Range 0000~0003(0~3)	R/W
0005	WHDP	Watt-hour Decimal Point location,Input Range 0000~0001(0~1)	R/W
0006	KWHDP	Kilowatt-hour Decimal Point location,Input Range 0000~0001(0~1)	R/W
0007	RST	Reset Mode,Input Range 0000~0002(0~2)	R/W
0008	ADDR	Communication Address,Input Range 0000~00FF(0~255)	R/W
0009	BAUD	Communication Baud Rate,Input Range 0000~0003(0~3) 0:19200,1:9600,2:4800,3:2400	R/W
000a	PARI	Communication Parity Check,Input Range 0000~0003(0~3)0:N82,1:N81,2:EVEN,3:ODD	R/W
0013	wh_lvalue	Watt-hour accumulate value(per 0.1 wh),Range 00000000~3B9AC9FF(0~999999999)high word	R
0014		Watt-hour accumulate value(per 0.1 wh),Range 00000000~3B9AC9FF(0~999999999)low word	R
0015	wh_hvalue	Watt-hour accumulate value(per 100M wh),Range 0000~FFFF(0~65535)	R
0016	DISPLAY_V	Voltage Display Value,Range 0000~270F(0~9999)	R
0017	DISPLAY_A	Current Display Value,Range 0000~270F(0~9999)	R
0018	DISPLAY_W	(Kilo)Watt Display Value,Range 0000~270F(0~9999)	R
0019	DISPLAY_WH	(Kilo)Watt-hour Display Value,Range 00000000~5F5E0FF(0~99999999)high word	R
001A		(Kilo)Watt-hour Display Value,Range 00000000~5F5E0FF(0~99999999)low word	R
001B	RST	Write = 0001(Function 06),Reset the (Kilo)Watt-hour accumulate value to zero	W
001C	VDP	Voltage Decimal Point location, Range 0001~0002(1~2) 1:High range , 2:Low range	R