

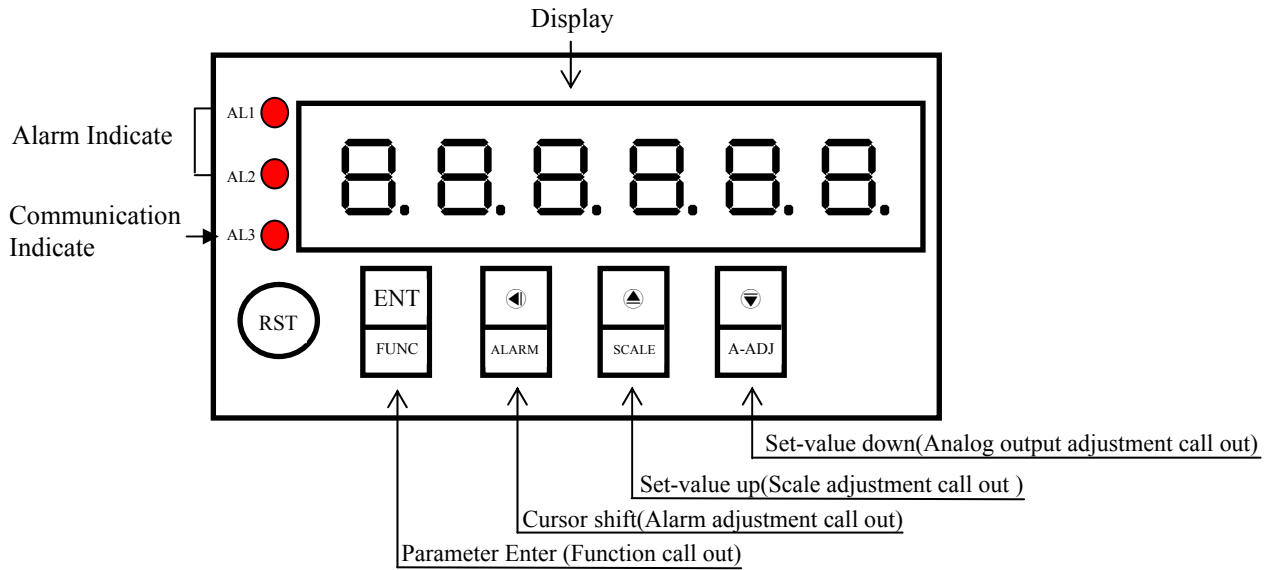
# AXE 6 AXE 6 Digit Microprocess Counter

MC series

## ■ FEATURES

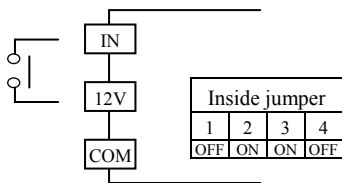
<p>Accept more type sensors(switch, encoder, proximity switch ,...etc)finish length/flow control                  Readout Range from -199999~999999                  Four counting modes Up, Down, Up/Down, Quadrature                   Power down saving                  Decimal point can be modified                  Input scaling multiplied 0.0001 to 9.9999 can be modified                  Reset by panel or connect terminal                  Quadrature sensing up to 4 times resolution</p>	<p>15BIT DAC analog output can be modified, 0~10V/4~20 mA by inside switch jumper                  N,R,C alarm control mode                  RS485 Communication interface, Protocol 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</p>
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## ■ Name of Parts

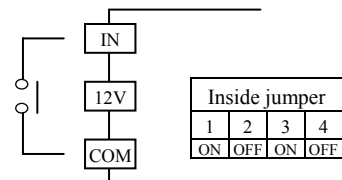


## ■ Connect Diagram

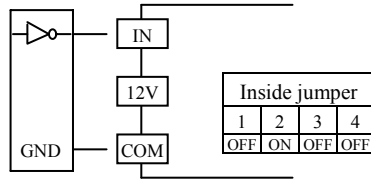
Contact input (PNP)



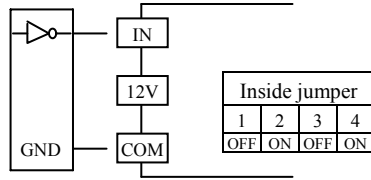
Contact input (NPN)



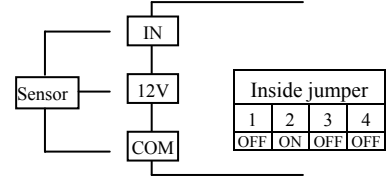
CMOS input (12V or 15V)



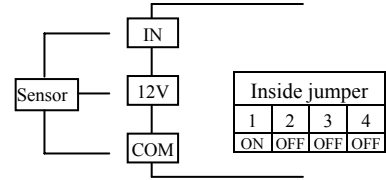
TTL input (5V)

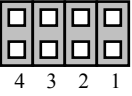
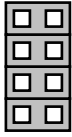


Sensor input (PNP 12V)



Sensor input (NPN 12V)



■ Analog output function jumper table	■ Input function jumper table
 <p>Position 1&amp;3 ON: DC 4~20 mA OUTPUT Position 2&amp;4 ON: DC 0~10V OUTPUT</p>	 <p>4 Position 4 ON: TTL OFF:CMOS 3 Position 3 ON: 0~50Hz OFF:0~10KHz 2 Position 2 ON: PNP 1 Position 1 ON: NPN</p>

### ■ Alarm output control mode description

N(MANUAL): When count value equal setting value the relay ON & continue count until reset by panel or connect terminal then relay OFF & count value return to RST setting value

R(RETURN): When count value equal setting value the relay ON & continue count until relay action time out then relay OFF & count value return to RST setting value

C(CONTINUE): When count value equal setting value the relay ON & count value return to RST setting value then continue count & relay action time out the relay OFF

N/R/C control mode is according to AL1 setting value

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 go to 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 scale 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 ZERO&SPAN 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	1 2 3 4 5 6	Press Ⓜ/FUNC key into P.COD setting page
2	P.COD(Pass code input page)	P. C o d 0 0 0 0 0 0	1.Key in 6 digit pass code with ⏪ or ⬆ or ⬇ key 2.Press Ⓜkey, the pass code is right into setting group , otherwise return normal display
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 setting group)	r o P	
	AOP(Analog output setting group)	A o P	
	DOP(Communication setting group)	d o P	

Step	Parameter mark description	Parameter mark	Operation manual
4	SYS(System setting group)	S Y S	Press ⏪ key decide SYS setting group , press Ⓜ key into DP setting page
4-1	DP(Decimal Point setting page) Value on EEPROM reset=0	d P 0	1. Decide decimal point position with ⬆ or ⬇ key (0 to 4) 2. Press Ⓜ key enter data and into TYPE setting page

4-2	TYPE(Input Type setting page) Value on EEPROM reset=1U2D	TYPE	1.Decide input type with ▲ or ▼ key (1U2D/1P2D/1A2B) 2.Press Ⓜ key enter data and into RST setting page
		1U2D	
4-3	RST(Reset Value) Default=0	RST	1.Decide reset value with per digit ▲&▼key(-199999~999999) 2.Press Ⓜ key enter data and into CODE setting page
		000000	
4-4	CODE(Pass Code setting page) Value on EEPROM reset=0	CODE	1.Decide pass code with ◀ or ▲ or ▼ key(0~999999) 2.Press Ⓜ key enter data and into LOCK setting page
		000000	
4-5	LOCK(Panel Lock setting page) Value on EEPROM reset=NO	LOCK	1.Decide panel lock with ▲ or ▼ key(NO or YES) 2.Press Ⓜ key enter data and return SYS setting group
		no	
Step	Parameter mark description	Parameter mark	Operation manual
5	ROP(Alarm setting group)	ROP	Press ◀ key decide ROP setting group, press Ⓜ key into OP.MODE setting page
5-1	OP.MODE(Output Mode) Default=N	OP.MODE	1.Decide output mode with digit 1▲&▼key(N,R,C) 2.Press Ⓜ key enter data and into ACT.T setting page
		n	
5-2	ACT.T(Active Time ) Default=0.1	ACT.T	1.Decide active time with digit 1~3▲&▼key(0.1~99.9 sec.) 2.Press Ⓜ key enter data and return ROP setting group
		00000.1	
Step	Parameter mark description	Parameter mark	Operation manual
6	AOP(Analog output setting group)	AOP	Press ◀ key decide AOP setting group , press Ⓜ key into ANLO setting page
6-1	ANLO(A/O Zero According to Display setting page)Value on EEPROM reset=0	ANLO	1.Decide ANLO with ◀ or ▲ or ▼ key(-199999~999999) 2.Press Ⓜ key enter data and into ANHI setting page
		000000	
6-2	ANHI(A/ O Span According to Display setting page)Value on EEPROM reset=99999	ANHI	1.Decide ANHI with ◀ or ▲ or ▼ key(-199999~999999) 2.Press Ⓜ key enter data and return AOP setting group
		999999	
Step	Parameter mark description	Parameter mark	Operation manual
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 ) Value on EEPROM reset=0	ADDR	1.Decide address with ◀ or ▲ or ▼ key(0~255) 2.Press Ⓜ key enter data and into BAUD setting page
		000000	
7-2	BAUD(Communication Baud Rate setting page)Value on EEPROM reset=19200	BAUD	1.Decide baud rate with ▲ or ▼ key(19200,9600,4800,2400) 2.Press Ⓜ key enter data and into PARI setting page
		19200	
7-3	PARI(Communication Parity Check setting page)Value on EEPROM reset=n82	PARI	1.Decide parity check with ▲ or ▼ key(n82,n81,even,odd) 2.Press Ⓜ key enter data and return DOP setting group *If parity check setting is non , sometime STOP BIT must set 2 BIT
		n.8.2	
Step	Parameter mark description	Parameter mark	Operation manual
8	Normal display	123456	Press◀/ALARM key about 3 sec, into AL1 1 setting page
8-1	AL1 (Alarm value 1 setting page) Value on EEPROM reset=0	AL1	1.Decide alarm value 1 with ◀ or ▲ or ▼ key(-199999~999999) 2.Press Ⓜ key enter data and into AL2 setting page
		000000	
8-2	AL2 (Alarm value 2 setting page) Value on EEPROM reset=0	AL2	1.Decide alarm value 2 with ◀ or ▲ or ▼ key(-199999~999999) 2.Press Ⓜ key enter data and return normal display
		000000	

Step	Parameter mark description	Parameter mark	Operation manual
9	Normal display	123456	Press▲/SCALE key about 3 sec, into SCALE setting page
9-1	SCALE (Display Scale setting page) Value on EEPROM reset=1	SCALE	1.Decide scale with ◀ or ▲ or ▼ key(0.00001~9.99999) 2.PressⓂ key enter data and return normal display
		1.00000	
Step	Parameter mark description	Parameter mark	Operation manual
10	Normal display	123456	Press▼/A-ADJ key about 3 sec, into AZERO adjustment page
10-1	AZERO(Analog Output Zero Adjustment page) Value on EEPROM reset=0	AZERO	1.Adjustment analog output zero with ◀ or ▲ or ▼key(±9999) 2.PressⓂ key enter data and into ASPAN adjustment page
		000000	
10-2	ASPAN(Analog Output Span Adjustment page) Value on EEPROM reset=0	ASPAN	1.Adjustment analog output span with ◀ or ▲ or ▼key(±9999) 2.PressⓂ key enter data and return normal display
		000000	
Step	Parameter mark description	Parameter mark	Operation manual
1	EEPROM error detect	E-00	1.External interference when EEPROM read/write 2.EEPROM write over 1 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 3. EEPROM has reset, Please follow step 1~10 set again
		□□	
		YES	

## MC 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	DP	Decimal point position, range 0000~0005(0~5)0:10 <sup>0</sup> ,1:10 <sup>-1</sup> ,2:10 <sup>-2</sup> ,3:10 <sup>-3</sup> ,4:10 <sup>-4</sup> ,5:10 <sup>-5</sup>	R/W
0002	TYPE	Input type, range 0000~0002(0~2)0:1U2D,1:1P2D,2:1A2B	R/W
0004	LOCK	Panel lock, range 0000~0001(0~1)0:NO,1:YES	R/W
0006	OPMODE	Output Mode, range 0000~0002(0~2)0:N,1:R,2:C	R/W
0008	ACT.T1	Alarm 1 Active Time, range 0001~03E7(1~999)	R/W
000A	ACT.T2	Alarm 2 Active Time, range 0001~03E7(1~999)	R/W
000C	ADDR	Communication address, range 0000~00FF(0~255)	R/W
000E	BAUD	Communication baud rate, range 0000~0003(0~3)0:19200,1:9600,2:4800,3:2400	R/W
0010	PARI	Communication parity check, range 0000~0003(0~3)0:N82,1:N81,2:EVEN,3:ODD	R/W
0012	AZERO	AZERO, range D8F1~270F(-9999~9999)	R/W
0014	ASPAN	ASPAN, range D8F1~270F(-9999~9999)	R/W
0016	RST	Display Reset Value, range FFFCF2C1~000F423F(-199999~999999)	R/W
001A	CODE	Pass code, range 00000000~000F423F(0~999999)	R/W
001E	SCALE	Display scale, range 00000001~000F423F(1~999999)	R/W
0022	ANLO	ANLO, range FFFCF2C1~000F423F(-199999~999999)	R/W
0026	ANHI	ANHI, range FFFCF2C1~000F423F(-199999~999999)	R/W
002A	AL1	Alarm value 1, range FFFCF2C1~000F423F(-199999~999999)	R/W
002E	AL2	Alarm value 2, range FFFCF2C1~000F423F(-199999~999999)	R/W
0032	DISPLAY	Display value, range FFFCF2C1~000F423F(-199999~999999)	R
0036	HRST	HRST, input with value 0001(1) will reset Display value, read as 0	R/W