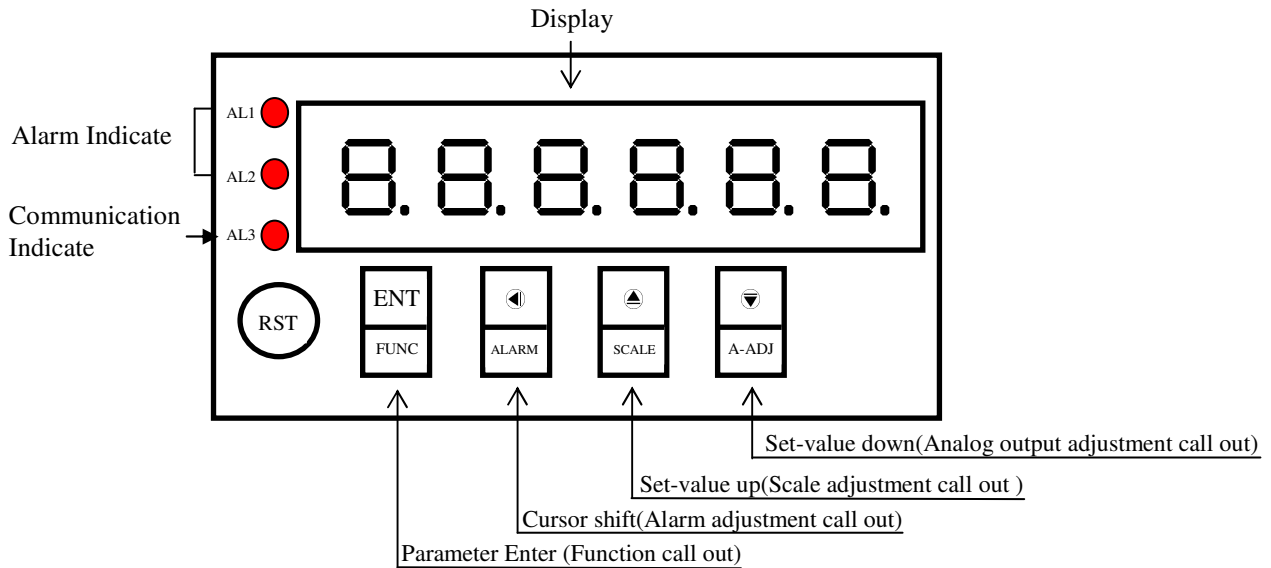# AXE 6 AXE 6 Digit Microprocess Counter

■ FEATURES

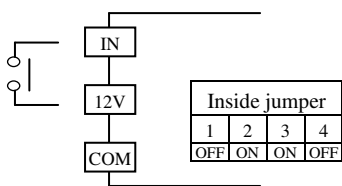◎Accept more type sensors(switch, encoder, proximity switch ,…etc)finish length/flow control
◎Readout Range from -199999~999999
◎Four counting modes Up. Down, Up/Down, Quadrature
◎Power down saving
◎Decimal point can be modified
◎Input scaling multiplied 0.0001 to 9.9999 can be modified
◎Reset by panel or connect terminal
◎Quadrature sensing up to 4 times resolution

◎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

■ Name of Parts

Display
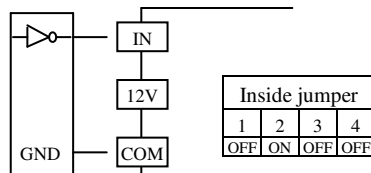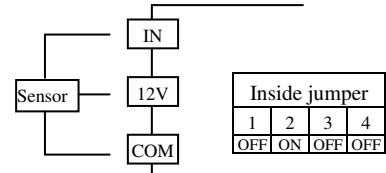
Alarm Indicate
AL1
AL2

Communication Indicate
AL3

RST | ENT / FUNC | ◀ / ALARM | ▲ / SCALE | ▼ / A-ADJ

Set-value down(Analog output adjustment call out)
Set-value up(Scale adjustment call out)
Cursor shift(Alarm adjustment call out)
Parameter Enter (Function call out)

■ Connect Diagram

◎ Contact input (PNP)

IN
12V
COM

Inside jumper			
1	2	3	4
OFF	ON	ON	OFF

◎Contact input (NPN)

IN
12V
COM

Inside jumper			
1	2	3	4
ON	OFF	ON	OFF

◎CMOS input (12Vor15V)

IN
12V
GND
COM

Inside jumper			
1	2	3	4
OFF	ON	OFF	OFF

◎TTL input (5V)

IN
12V
GND
COM

Inside jumper			
1	2	3	4
OFF	ON	OFF	ON

◎Sensor input (PNP 12V)

Sensor
IN
12V
COM

Inside jumper			
1	2	3	4
OFF	ON	OFF	OFF

◎Sensor input (NPN 12V)

Sensor
IN
12V
COM

Inside jumper			
1	2	3	4
ON	OFF	OFF	OFF
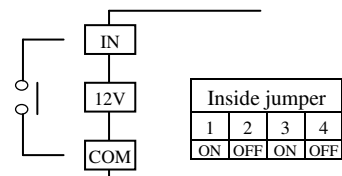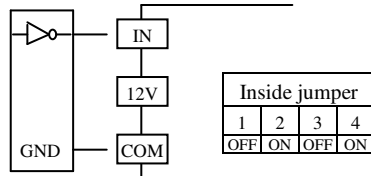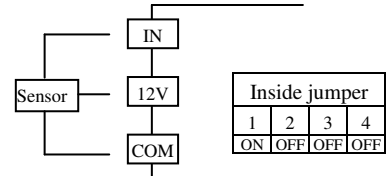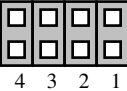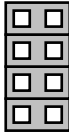
■ Analog output function jumper table	■ Input function jumper table

Position 1&3 ON: DC 4~20 mA OUTPUT
Position 2&4 ON: DC 0~10V OUTPUT

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

■ 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	123456	Press Ⓝ/FUNC key into P.COD setting page
2	P.COD(Pass code input page)	P.Cod 000000	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)	5Y5	1.Select setting group with ◀ key 2.Press Ⓝ key into setting page of selection setting group
	ROP(Alarm setting group)	roP	
	AOP(Analog output setting group)	AoP	
	DOP(Communication setting group)	doP	

Step	Parameter mark description	Parameter mark	Operation manual
4	SYS(System setting group)	5Y5	Press ◀ key decide SYS setting group , press Ⓝ key into DP setting page
4-1	DP(Decimal Point setting page)	dP	1.Decide decimal point position with ▲ or ▼ key (0 to 4) 2.Press Ⓝ key enter data and into TYPE setting page
	Value on EEPROM reset=0	0	

Step	Parameter mark description	Parameter mark	Operation manual
4-2	TYPE(Input Type setting page) Value on EEPROM reset=1U2D	�ヒ Ⴐ ㄹ Ⴐ Ⴐ 1U2d	1.Decide input type with ▲ or ▼ key (1U2D/1P2D/1A2B) 2.Press Ⓝ key enter data and into RST setting page
4-3	RST(Reset Value) Default=0	rSt 000000	1.Decide reset value with per digit ▲&▼key(-199999~999999) 2.Press Ⓝ key enter data and into CODE setting page
4-4	CODE(Pass Code setting page) Value on EEPROM reset=0	CodE 000000	1.Decide pass code with ◀ or ▲ or ▼ key(0~999999) 2.Press Ⓝ key enter data and into LOCK setting page
4-5	LOCK(Panel Lock setting page) Value on EEPROM reset=NO	LoCE no	1.Decide panel lock with ▲ or ▼ key(NO or YES) 2.Press Ⓝ key enter data and return SYS setting group

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.ñodE n	1.Decide output mode with digit 1▲&▼key(N,R,C) 2.Press Ⓝ key enter data and into ACT.T setting page
5-2	ACT.T(Active Time) Default=0.1	ACt.t 00000.1	1.Decide active time with digit 1~3▲&▼key(0.1~99.9 sec.) 2.Press Ⓝ key enter data and return ROP setting group

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 000000	1.Decide ANLO with ◀ or ▲ or ▼ key(-199999~999999) 2.Press Ⓝ key enter data and into ANHI setting page
6-2	ANHI(A/ O Span According to Display setting page)Value on EEPROM reset=99999	AnHi 999999	1.Decide ANHI with ◀ or ▲ or ▼ key(-199999~999999) 2.Press Ⓝ key enter data and return AOP setting group

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 000000	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 EEPROM reset=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)Value on EEPROM reset=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 *If parity check setting is non , sometime STOP BIT must set 2 BIT

Step	Parameter mark description	Parameter mark	Operation manual
8	Normal display	123456	Press ◀/ALARM key about 3 sec, into AL1 1setting page
8-1	AL1 (Alarm value 1 setting page) Value on EEPROM reset=0	AL1 000000	1.Decide alarm value 1 with ◀ or ▲ or ▼ key(-199999~999999) 2.Press Ⓝ key enter data and into AL2 setting page
8-2	AL2 (Alarm value 2 setting page) Value on EEPROM reset=0	AL2 000000	1.Decide alarm value 2 with ◀ or ▲ or ▼ key(-199999~999999) 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 6	Press▲/SCALE key about 3 sec, into SCALE setting page
9-1	SCALE (Display Scale setting page) Value on EEPROM reset=1	5 C A L E 1.0 0 0 0 0	1.Decide scale with ◀ or ▲ or ▼ key(0.00001~9.99999) 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 6	Press▼/A-ADJ key about 3 sec, into AZERO adjustment page
10-1	AZERO(Analog Output Zero Adjustment page) Value on EEPROM reset=0	A P E r o 0 0 0 0 0	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	A S P A n 0 0 0 0 0	1.Adjustment analog output span with ◀ or ▲ or ▼key(±9999) 2.Press Ⓝ key enter data and return normal display
Step	Parameter mark description	Parameter mark	Operation manual
1	EEPROM error detect	E - 0 0 n o Y E 5	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

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)0:10^0,1:10^{-1},2:10^{-2},3:10^{-3},4:10^{-4},5:10^{-5}	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