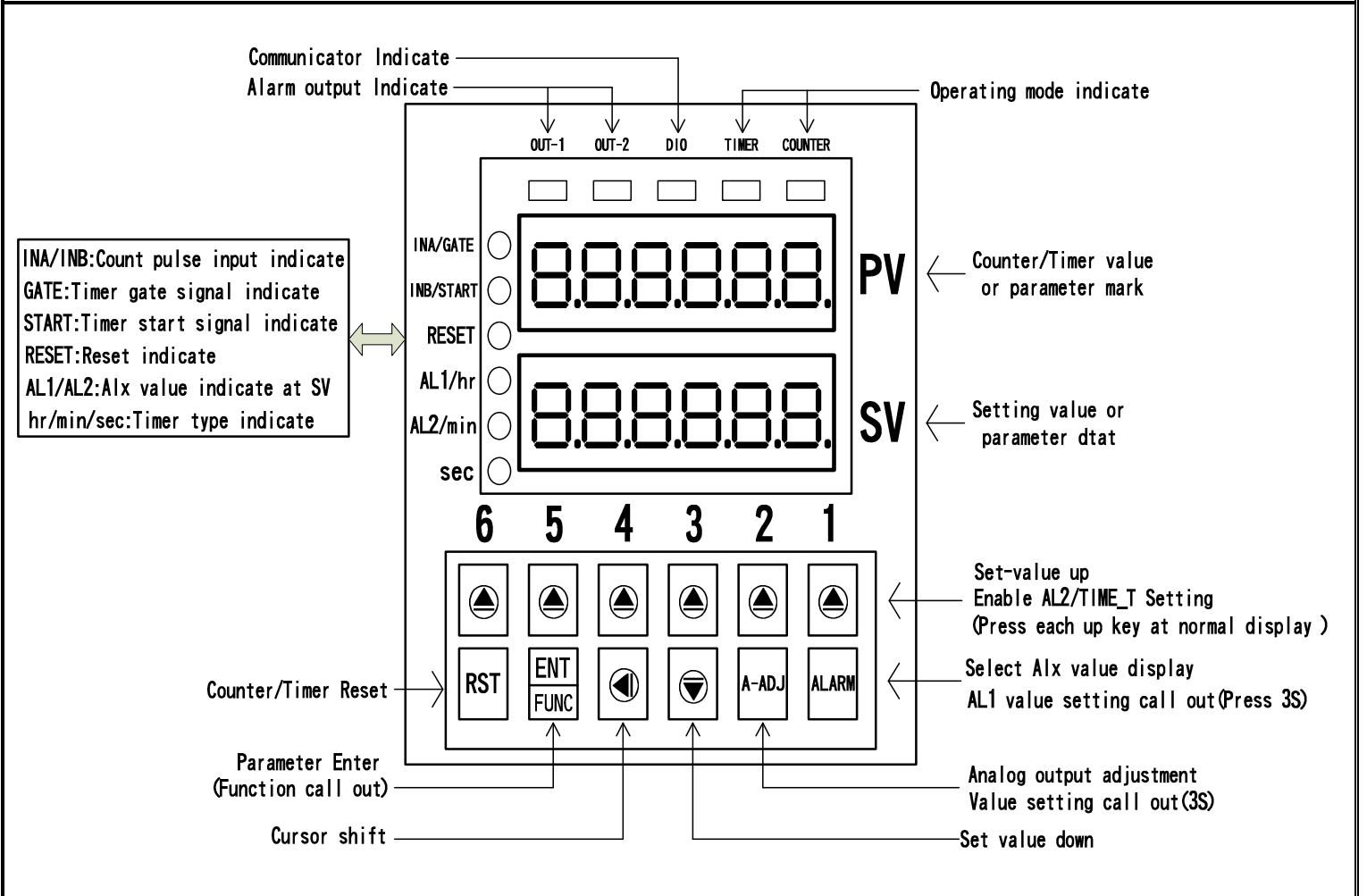


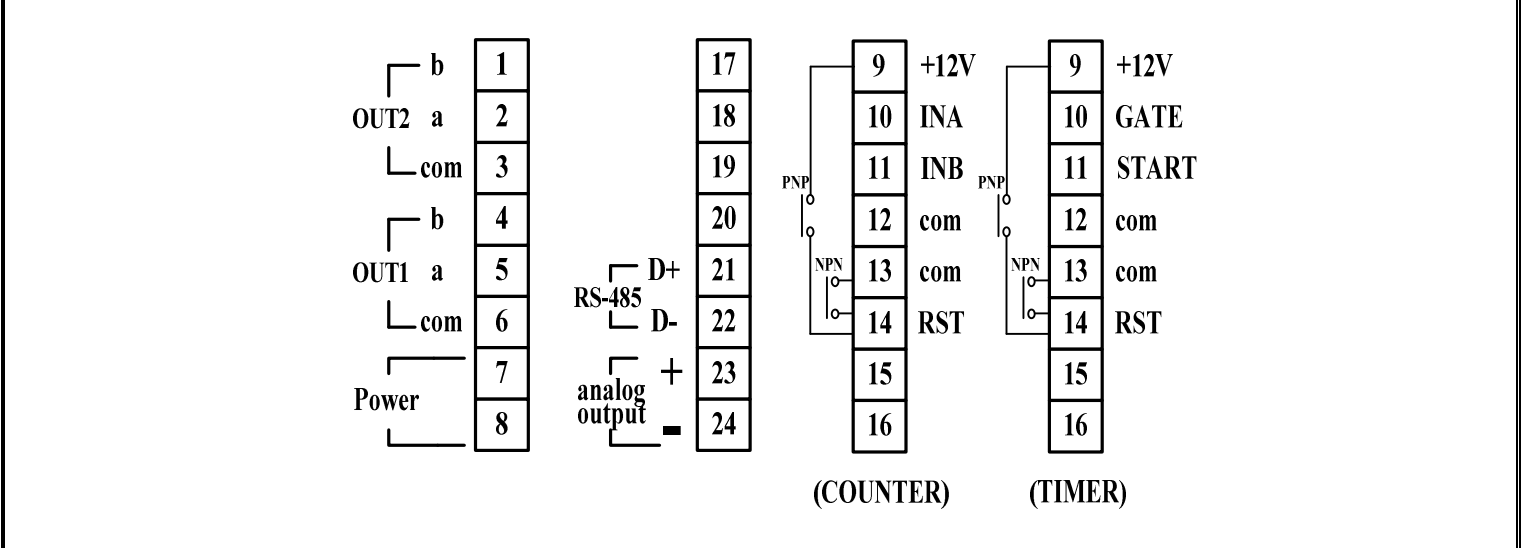
**■ Features**

- ⊙ Counter and timer function can be selective
- ⊙ Pulse input type NPN/PNP can be modified
- ◇ Counting range -199999~999999 digit
- ◇ Reset by panel or connect terminal and Overflow auto zero
- ◇ Five counting input modes: Front/after edge Up, Down, Up/Down, direct-Up/Down and Quadrature-Up/Down can be modified
- ◇ Input scaling multiplied(0.00001~9.99999) can be modified
- ◇ Quadrature sensing up to 4 times resolution
- ◇ Ten alarm output mode (N/F/R/Q/C/P/K/A/L/H) can be modified
- Twelve time range(999.999 sec. to 999999 hr.) can be modified
- Eleven output mode(A/A1/A2/A3/B/B1/B2/C/D/E/F)can be modified
- ⊙ 16BIT DAC analog output can be modified,
- ⊙ Two alarm function
- ⊙ RS485 Communication interface, Protocol MODBUS RTU MODE
- ⊙ BAUD RATE: 19200/9600/4800/2400
- ⊙ Man-machine interface, easy to operate
- ⊙ EEPROM Saving, data safekeeping about 10 years
- ⊙ Protection class NEMA4/IP67
- Note: ⊙ Both counter and timer function  
 ◇ Counter function, □ Timer function

**■ Name Of Parts**



**■ Connection Diagram**



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
RST key Function	In any status, Press RST key will be reset counter/timer value and status
ALARM key Function	Counting mode in normal display, 1. call out AL1 setting page(Press key about 3 sec) 2. select AL1~AL2 alarm value display in SV(Press key about 0.2 sec)
A-ADJ key Function	In normal display, call out Azero & Aspan setting page(Press key about 3 sec)
⏪ key Function	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)
Each ▲ key Function	Into parameter setting page, the parameter mark&data is alternate display, If need modify data can press each ▲ 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	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	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

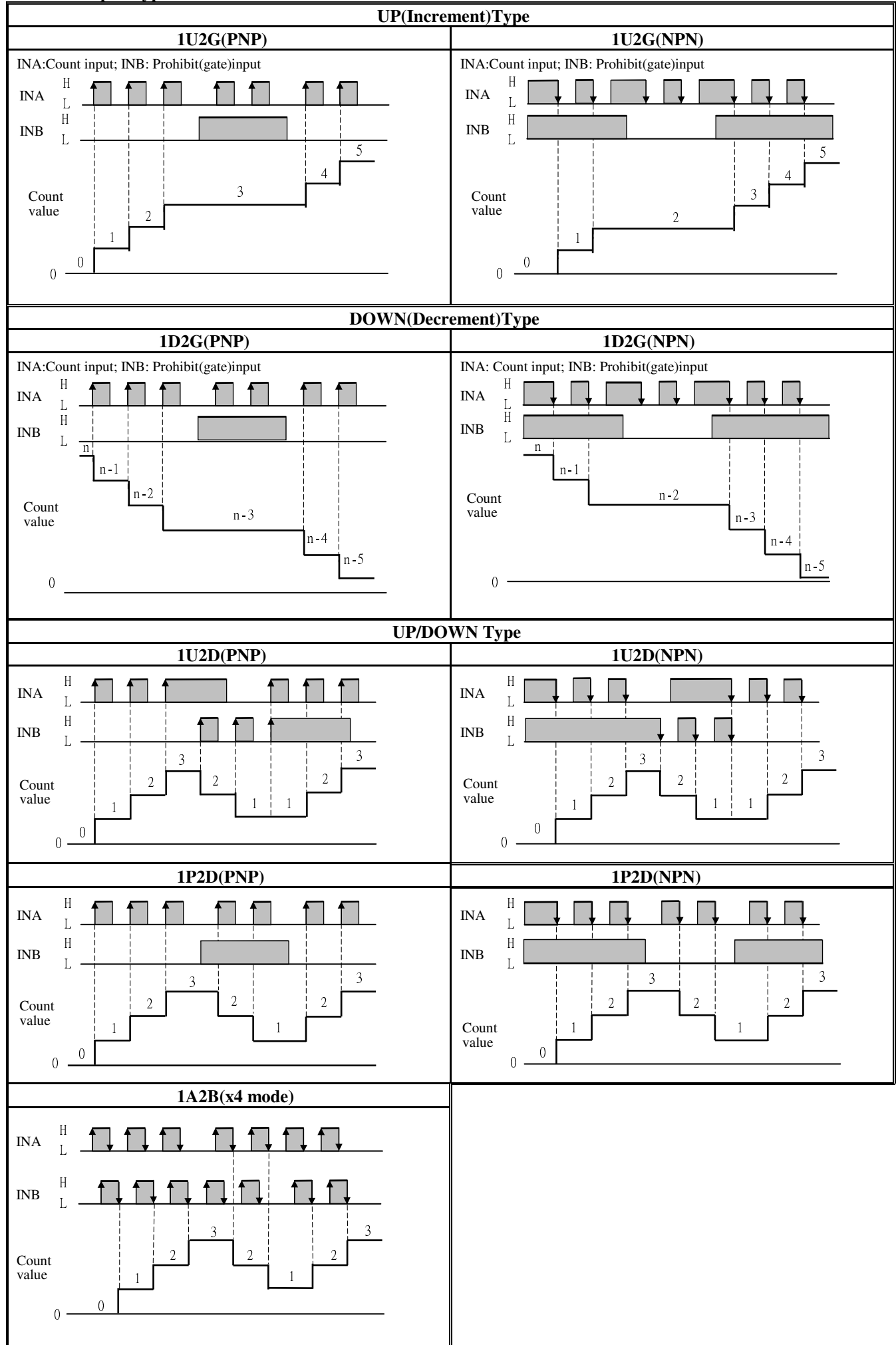
**■Counter/Timer inside parameter operate procedure**

Step	Parameter Mark Description	Parameter Mark	Operation Manual
1	Normal display	1 2 3 4 5 6	Press ☰/FUNC key into P.CODE setting page
2	P.CODE(Pass code input page) Default=0	P . C O D E	1.Key in 6 digit pass code with per digit ▲&▼&⏪ key 2.Press ☰ key, If the pass code is correct then into TYPE setting page, otherwise return normal display
		0 0 0 0 0 0	
3	TYPE(Type) Default=COUNT	TYPE	1.Decide Type with digit 1 ▲ or ▼ key (counter/timer) 2.Press ☰ key enter data and into SYS setting group
		C O U N T	
4	SYS(System Setting Group)	S Y S	1.Select setting group with ⏪ key 2.Press ☰ key into setting page of selection setting group PS. Timer don't have ROP setting group
	ROP(Alarm output Setting Group)	r o p	
	AOP(Analog output Setting Group)	A o p	
	DOP(Communication setting group)	d o p	
4A	SYS(System Setting Group for Counter)	S Y S	1.Press ⏪ key decide SYS for Counter Setting Group, Press ☰ key into DP setting Page
4A-1	DP(Decimal Point setting page) Default = 0	d P	1.Decide decimal point position with digit 1 ▲ or ▼ key (0 to 5) 2.Press ☰ key enter data and into C-I-T setting page
		□	
4A-2	C-I-T(Count Input Type) Default = NPN	C - I - T	1.Decide Count Input Type with digit 1 ▲ or ▼ key (NPN, PNP) 2. Press ☰ key enter data and into I-MODE setting page
		r p n	
4A-3	I-MODE(Input Mode) Default = 1U2D	I - M O D E	1. Decide input mode with digit 1 ▲ or ▼ key (1U2G/1D2G/1U2D/1P2D/1A2B) 2. Press ☰ key enter data and into C-R-S setting page
		1 U 2 G	
4A-4	C-R-S(Count Rates Select) Default = 50KHz	C - R - S	1. Decide Count Rates Select with digit 1 ▲ or ▼ key (50Hz,50KHz) 2. Press ☰ key enter data and into RST-T setting page
		S 0 H z	
4A-5	RST-T(Reset Time) Default = 20mS	r S T - T	1.Decide reset time with digit 1 ▲ or ▼ key(1mS, 20mS) 2.Press ☰ key enter data and into SCALE setting page
		2 0 m S	
4A-6	SCALE (Scale ) Default = 1.00000	S C A L E	1. Decide scale with per digit ▲&▼&⏪ key (0.00001~9.99999) 2. Press ☰ key enter data and into P-OFF.M setting page
		1 . 0 0 0 0 0	
4A-7	P-OFF.M(Power Off Mode) Default=RESET	P - O F F . M	1. Decide reset time with digit 1 ▲ or ▼ key (Reset or Memory) 2. Press ☰ key enter data and into CODE setting page (4C-1) Note:Reset:Reset after power off Memory:Keep save after power off
		r E S E T	
4B	SYS (System Setting Group for Timer)	S Y S	1.Press⏪key decide SYS for Timer Setting Group , Press☰key into T-RANG setting Page
4B-1	T-RANG(Time Range) Default = 999.999 sec.	T - R A N G	1.Decide Time Range with digit 1 ▲ or ▼ key (999.999sec/9999.99sec/99999.9sec/999999sec/99min59.99sec/999min59.9sec/99999.9min/999999min/ 99hr59min59sec/9999hr59min/99999.9hr/999999hr) 2. Press ☰ key enter data and into C-I-T setting page Note: While T-RANG change, Timer value will reset
		9 9 9 . 9 9 9	

4B-2	C-I-T(Count Input Type) Default = NPN	<table border="1"> <tr><td>□ - 1 - E</td></tr> <tr><td>□ P □</td></tr> </table>	□ - 1 - E	□ P □	1. Decide Count Input Type with digit 1 ▲ or ▼ key (NPN, PNP) 2. Press Ⓜ key enter data and into T.D.-SEL setting page
□ - 1 - E					
□ P □					
4B-3	T.D.SEL(Time Direction Select) Default = Up	<table border="1"> <tr><td>E, d, - S E L</td></tr> <tr><td>U P</td></tr> </table>	E, d, - S E L	U P	1. Decide Time Direction Select with digit 1 ▲ or ▼ key (UP/DOWN) 2. Press Ⓜ key enter data and into IN.TIME setting page Note:Up:PV display the elapsed time, Down:PV display the remaining time
E, d, - S E L					
U P					
4B-4	IN.TIME(Input Signal Time) Default=20mS	<table border="1"> <tr><td>□ □ □ □ □ □</td></tr> <tr><td>2 0 m S</td></tr> </table>	□ □ □ □ □ □	2 0 m S	1. Decide Input Signal Time with digit 1 ▲ or ▼ key (1mS/20mS) 2. Press Ⓜ key enter data and into OP.MODE setting page
□ □ □ □ □ □					
2 0 m S					
4B-5	OP.MODE(Output Mode) Default=A	<table border="1"> <tr><td>□ P, □ □ □ □ □</td></tr> <tr><td>A</td></tr> </table>	□ P, □ □ □ □ □	A	1. Decide Input Signal Time with digit 1 ▲ or ▼ key (A/A1/A2/A3/B/B1/B2/C/D/E/F) 2. Press Ⓜ key enter data and into OP.TIME setting page Note 1: While TYPE change, OP.MODE return to default value Note 2: While OP.MODE change, timer value reset
□ P, □ □ □ □ □					
A					
4B-6	OP.TIME(Output Active Time) Default=0	<table border="1"> <tr><td>□ P, E, □ □ □ □ □</td></tr> <tr><td>□ □</td></tr> </table>	□ P, E, □ □ □ □ □	□ □	1. Decide Output Active Time with digit 1~3 (00.0~99.9)Sec 2. Press Ⓜ key enter data and into OP-C-T setting page Note:OP.TIME=0 denote self-holding output,OP.TIME=0.1~99.9 is one-shot output Note:OP.MODE=C,D,E mode is unconcerned with OP.TIME
□ P, E, □ □ □ □ □					
□ □					
4B-7	OP-C-T(Output Contact Type) Default = 2t	<table border="1"> <tr><td>□ P - □ - E</td></tr> <tr><td>2 E</td></tr> </table>	□ P - □ - E	2 E	1. 1. Decide Output Contact Type with digit 1 ▲ or ▼ key (2t/1c2t) 2. Press Ⓜ key enter data and into CODE setting page(4C-1) Note:2t:out-1 & out-2=time-limit, 1c2t:out-2=time-limit,out-1=instantaneous contact
□ P - □ - E					
2 E					
4C-1	CODE(Code) Default=0	<table border="1"> <tr><td>□ □ □ □ □</td></tr> <tr><td>□ □ □ □ □ □</td></tr> </table>	□ □ □ □ □	□ □ □ □ □ □	1. Decide pass code with per digit ▲&▼&◀ key (0~999999) 2. Press Ⓜ key enter data and into LOCK setting page
□ □ □ □ □					
□ □ □ □ □ □					
4C-2	LOCK(Panel Lock) Default=NO	<table border="1"> <tr><td>□ □ □ □ □</td></tr> <tr><td>□ □</td></tr> </table>	□ □ □ □ □	□ □	1. Decide panel lock with digital 1 ▲&▼ key(NO or YES) 2. Press Ⓜ key enter data and return SYS setting group Note:Lock=Yes, only AL2/ TIME_T can be modified
□ □ □ □ □					
□ □					
5	ROP (Alarm setting group for Counter)	<table border="1"> <tr><td>□ □ □</td></tr> </table>	□ □ □	press ◀ key decide ROP for counter setting group , press Ⓜ key into OP.MODE setting page	
□ □ □					
5-1	OP.MODE(Output Mode) Default=N	<table border="1"> <tr><td>□ P, □ □ □ □ □</td></tr> <tr><td>□</td></tr> </table>	□ P, □ □ □ □ □	□	1. Decide output mode with digital 1 ▲&▼ key (N/F/R/Q/C/P/K/A/L/H) 2. Press Ⓜ key enter data and into ACT1.T setting page Note 1: While TYPE change, OP.MODE return to default value Note 2: While OP.MODE change, counter value reset
□ P, □ □ □ □ □					
□					
5-2	ACT1.T (Active 1 Time ) Default=0	<table border="1"> <tr><td>□ □ □ □ □ □</td></tr> <tr><td>□ □ □ □ □ □</td></tr> </table>	□ □ □ □ □ □	□ □ □ □ □ □	1. Decide Active 1 time with digit 1~3▲&▼&◀key (0.0~99.9)Sec 2. Press Ⓜ key enter data and into ACT2.T setting page Note 1:ACT1-T=0 sec. denote self-holding output 1 ACT1-T=0.01~99.99 sec. denote one-shot output 1 Note 2:OP.MODE=L/H, The output mode is unconcerned with ACT1-T
□ □ □ □ □ □					
□ □ □ □ □ □					
5-3	ACT2.T (Active 2 Time ) Default=0	<table border="1"> <tr><td>□ □ □ □ □ □</td></tr> <tr><td>□ □ □ □ □ □</td></tr> </table>	□ □ □ □ □ □	□ □ □ □ □ □	1. Decide Active 2 time with digit 1~3▲&▼&◀key (0.0~99.9)Sec 2. Press Ⓜ key enter data and return ROP setting group Note 1:ACT2-T=0 sec. denote self-holding output 2 ACT2-T=0.01~99.99 sec. denote one-shot output 2 Note 2:OP.MODE=L/H, The output mode is unconcerned with ACT2-T
□ □ □ □ □ □					
□ □ □ □ □ □					
6	AOP(Analog output setting group)	<table border="1"> <tr><td>□ □ □</td></tr> </table>	□ □ □	Press ◀ key decide AOP setting group , press Ⓜ key into ANLO setting page	
□ □ □					
6-1	ANLO(Analog Output Zero-According to Display) Default=0	<table border="1"> <tr><td>□ □ □ □ □ □</td></tr> <tr><td>□ □ □ □ □ □</td></tr> </table>	□ □ □ □ □ □	□ □ □ □ □ □	1. Decide ANLO with per digit ▲&▼&◀ key (-199999~999999) 2. Press Ⓜ key enter data and into ANHI setting page
□ □ □ □ □ □					
□ □ □ □ □ □					
6-2	ANHI(Analog Output Span-According to Display ) Default=999999	<table border="1"> <tr><td>□ □ □ □ □ □</td></tr> <tr><td>9 9 9 9 9 9</td></tr> </table>	□ □ □ □ □ □	9 9 9 9 9 9	1. Decide ANHI with per digit ▲&▼&◀ key(-199999~999999) 2. Press Ⓜ key enter data and return AOP setting page
□ □ □ □ □ □					
9 9 9 9 9 9					
7	DOP(Communication setting group)	<table border="1"> <tr><td>□ □ □</td></tr> </table>	□ □ □	Press ◀ key decide DOP setting group, press Ⓜ key into ADDR setting page	
□ □ □					
7-1	ADDR(Communication -Address ) Default=0	<table border="1"> <tr><td>□ □ □</td></tr> <tr><td>□ □ □</td></tr> </table>	□ □ □	□ □ □	1. Decide address with digit 1~3 ▲&▼&◀ key(0~255) 2. Press Ⓜ key enter data and into BAUD setting page
□ □ □					
□ □ □					
7-2	BAUD(Communication Baud Rate) Default=19200	<table border="1"> <tr><td>□ □ □ □ □ □</td></tr> <tr><td>1 9 2 0 0</td></tr> </table>	□ □ □ □ □ □	1 9 2 0 0	1. Decide baud rate with digital 1 ▲&▼ key(19200,9600,4800,2400) 2. Press Ⓜ key enter data and into PARI setting page
□ □ □ □ □ □					
1 9 2 0 0					
7-3	PARI(Communication Parity Check) Default=n82	<table border="1"> <tr><td>□ □ □ □ □ □</td></tr> <tr><td>□ □ □ □ □ □</td></tr> </table>	□ □ □ □ □ □	□ □ □ □ □ □	1. Decide parity check with digital 1 ▲&▼ key(n82,n81,even,odd) 2. Press Ⓜ key enter data and return DOP setting group
□ □ □ □ □ □					
□ □ □ □ □ □					
<b>■Outside function key operate procedure (alarm value setting for Counter mode)</b>					
Step	Parameter mark description	Parameter mark	Operation manual		
8A-1	AL1 (Alarm 1) Default=0	<table border="1"> <tr><td>□ □ □ □ □ □</td></tr> <tr><td>□ □ □ □ □ □</td></tr> </table>	□ □ □ □ □ □	□ □ □ □ □ □	1. In normal display, press ALARM key(about 3S),into AL1 setting page 2. Decide AL1 with per digit ▲&▼&◀ key (0~999999) 3. No key in anything 5S or Press Ⓜ key enter data and return normal display
□ □ □ □ □ □					
□ □ □ □ □ □					




8A-2	AL2 (Alarm 2) Default=0	1 2 3 4 5 6	1. In normal display, press each ▲ key to enable setting AL2 value. 2. Decide AL2 value with per digital ▲&▼&◀key (0~999999) 3. No key in anything 5S or Press Ⓜ key enter data and return normal display
		□ □ □ □ □ □	
<b>■Outside function key operate procedure (Timer time setting for Timer mode)</b>			
Step	Parameter mark description	Parameter mark	Operation manual
8B-1	Time-T (Timer-Time ) Default=0	Ⓜ , Ⓜ E - Ⓜ	1. In normal display, press each ▲ key to enable setting Time_T value 2. Decide TIME_T value with per digital ▲&▼&◀key (0~999999) 3. No key in anything 5S or Press Ⓜ key enter data and return normal display
		□ □ □ □ □ □	
<b>■Outside function key operate procedure (analog output adjust)</b>			
Step	Parameter mark description	Parameter mark	Operation manual
9	Normal display	1 2 3 4 5 6	1.Press A-ADJ key about 3 sec, into AZERO setting page
9-1	AZERO(Analog Output Zero Adjustment page) Default=0	Ⓜ Ⓜ E Ⓜ □	1.Adjustment analog output zero with digit 1~4 ▲&▼&◀ key(±6000) 2. Press Ⓜ key enter data and into ASPAN adjustment page
		□ □ □ □ □ □	
9-2	ASPAN(Analog Output Span Adjustment page) Default=0	Ⓜ Ⓜ Ⓜ Ⓜ □	1. Adjustment analog output span with digit 1~4 ▲&▼&◀ key (±6000) 2. Press Ⓜ key enter data and return normal display
		□ □ □ □ □ □	
Appendix	Error Mark description	Error Mark	Analyze & Description
1	EEPROM error detect	E - □ □	1.External interference when EEPROM read/write 2.EEPROM write over 100000 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 ▲&▼ key,press Ⓜ key return normal display 3.EEPROM was reset,Please follow step 1~9 setting again
		□ □	
		Ⓜ E Ⓜ	

■ Counter Input Type and Count Value



■ Counter Alarm Output Mode

		Input Mode			Operation Description
		UP	DOWN	UP/DOWN	
Counter Alarm Output Mode setting	<b>N</b>				<p>The display value continues to increase/decrease. The OUT-2 output are held until Reset is input.</p>
	<b>F</b>				<p>As soon as OUT-2 has active, the display value are held until Reset is input. The OUT-1 output time is independent of OUT-2.</p>
	<b>R</b>				<p>The display value continues to increase/decrease during the OUT-2 one-shot output time. but return to the reset start status after the OUT-2 one-shot output time has elapsed. The output repeat OUT-2 one-shot operation. OUT-1 self-holding output turns OFF after the OUT-2 one-shot output time. The OUT-1 one-shot output time is independent of OUT-2.</p>
	<b>Q</b>				<p>The display value return to the reset start status after the OUT-2 one-shot output time. The output repeat OUT-2 one-shot operation. OUT-1 self-holding output turns OFF after the OUT-2 one-shot output time. The OUT-1 one-shot output time is independent of OUT-2.</p>
	<b>C</b>				<p>As soon as the count reaches AL2, the display value return to the reset start status. The output repeat OUT-2 one-shot operation. OUT-1 self-holding output turns OFF after the OUT-2 one-shot output time. The OUT-1 one-shot output time is independent of OUT-2.</p>

Note : 1. Self-holding output , One-shot output , Self-holding output or One-shot output 

One-shot output

Self-holding output

		Input Mode			Operation Description
		UP	DOWN	UP/DOWN	
Counter Alarm Output Mode setting	<b>P</b>				The display value does not change during the OUT-2 one-shot output time, but the actual count returns to the reset start status. The output repeats OUT-2 one-shot operation. OUT-1 self-holding output turns OFF after the OUT-2 one-shot output time. The OUT-1 one-shot output time is independent of OUT-1.
	<b>K</b>				The display value continues to increase/decrease. OUT-1 self-holding output turns OFF after the OUT-2 one-shot output time. The OUT-1 one-shot output time is independent of OUT-2.
	<b>A</b>				As soon as OUT-2 has active, the display value is held until Reset is input. The OUT-1 output time is independent of OUT-2.
	<b>L</b>				The display continues to increase/decrease until the overflow or underflow value is reached. OUT-1 is held while the present value is less than or equal to AL1. At the UP or UP/DOWN mode, OUT-2 is held while the present value is greater than or equal to AL2. At the DOWN mode, OUT-2 is held while the present value is less than or equal to zero.
	<b>H</b>				The display continues to increase/decrease until the overflow or underflow value is reached. OUT-1 is held while the present value is greater than or equal to AL1. At the UP or UP/DOWN mode, OUT-2 is held while the present value is greater than or equal to AL2. At the DOWN mode, OUT-2 is held while the present value is less than or equal to zero.

Note: 2.Counting cannot be performed during Reset input.

3.When count value reaches 99999, it returns to 0; Count value below -199999, at Down mode returns to AL1, at Up/Down mode returns to 0

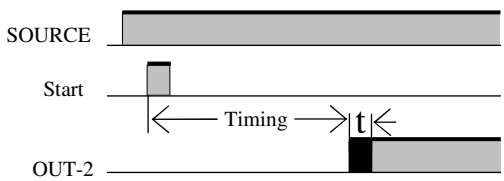
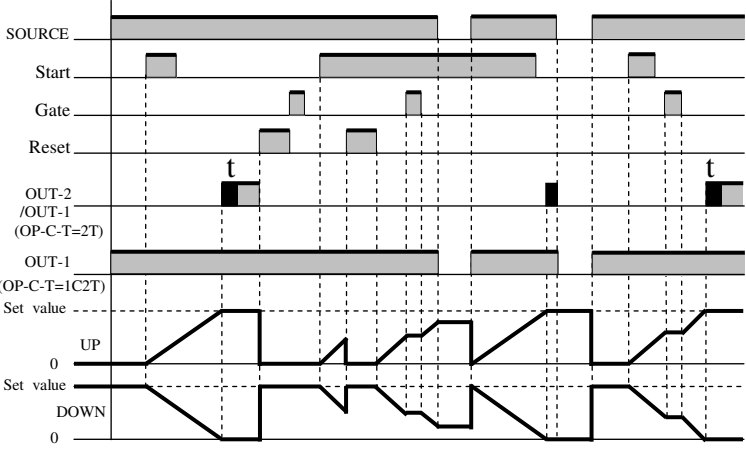
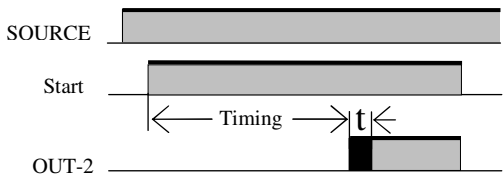
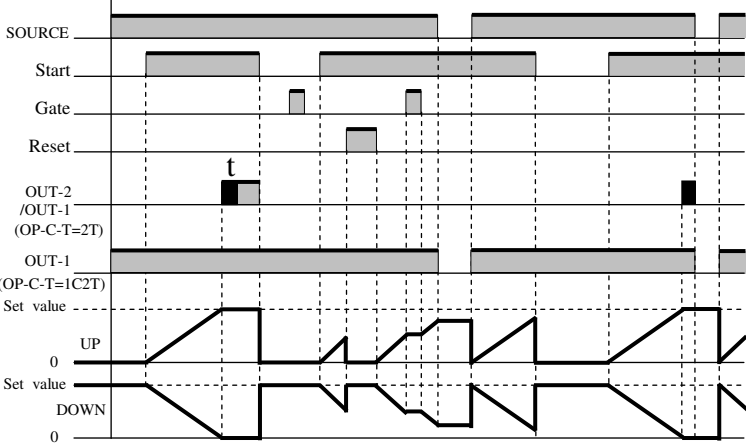
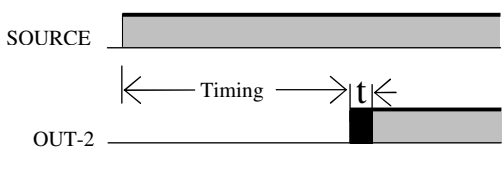
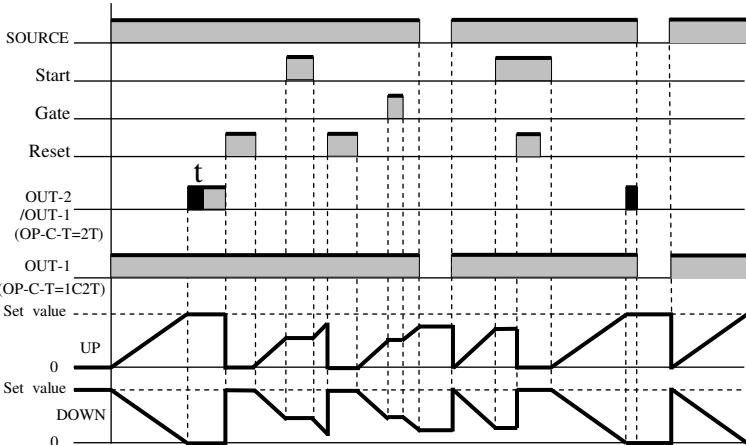
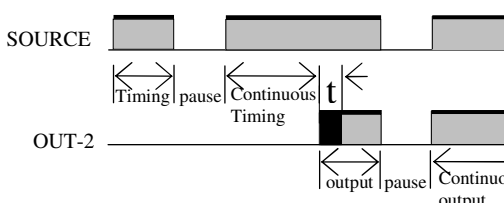
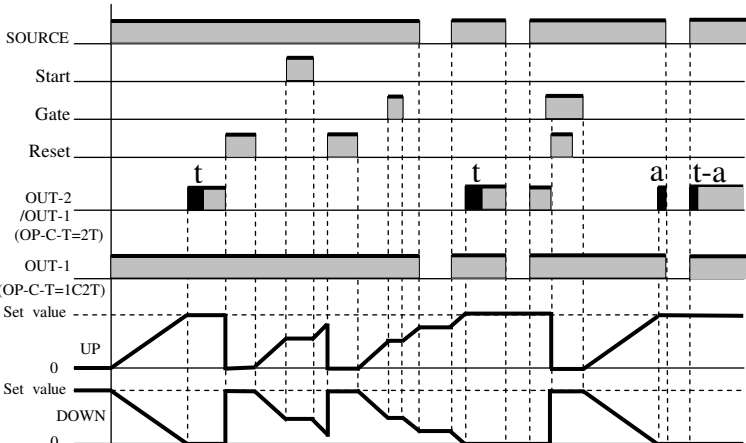
4.If Reset is input while one-shot output is ON, one-shot output turns OFF.

5.If power failure while output is ON, output will turn ON again (P.OFF.M=1) or Reset (P.OFF.M=0) when the power supply has recovered.

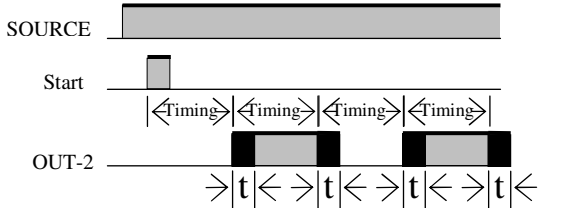
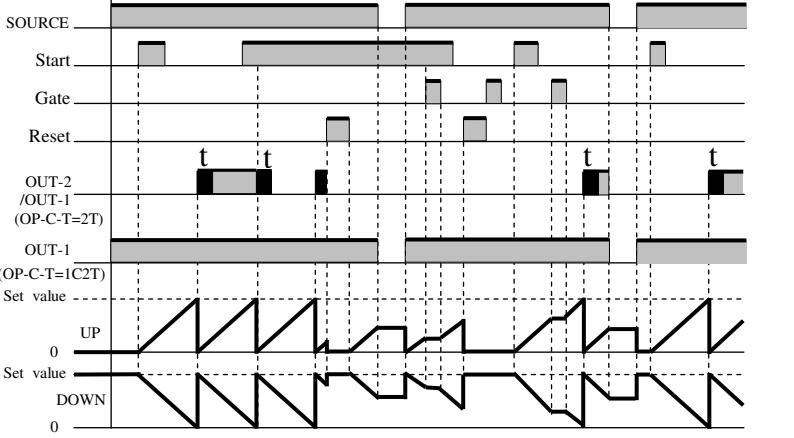
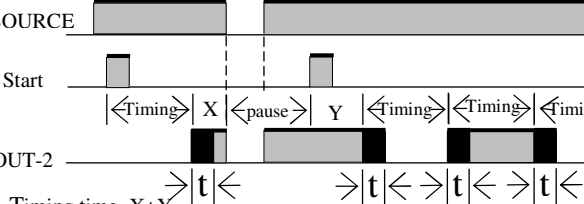
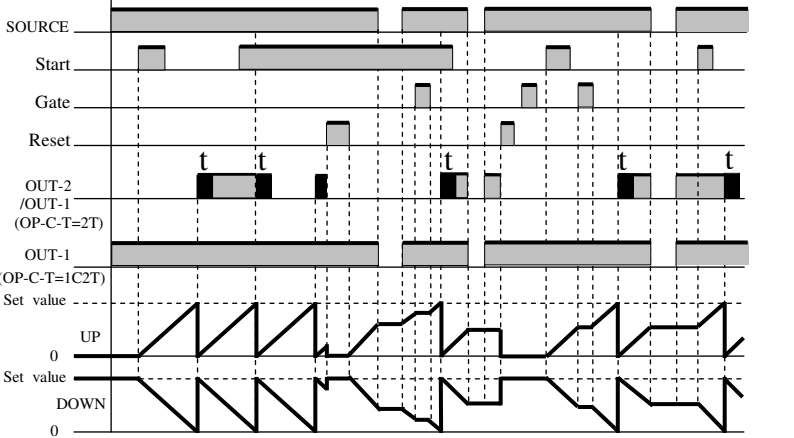
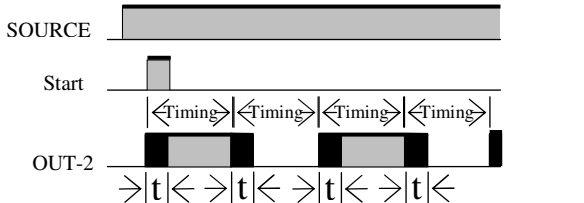
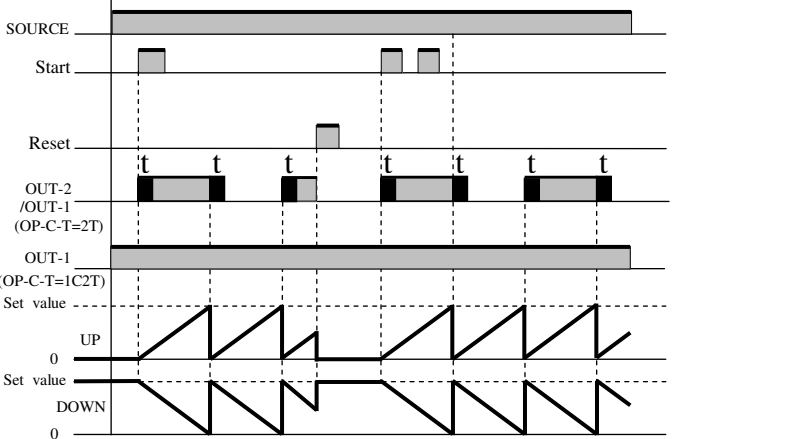
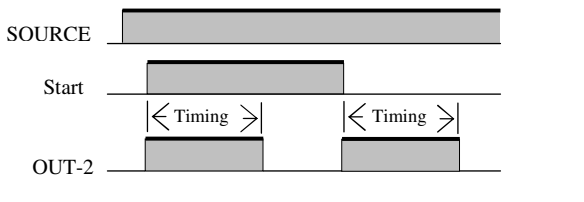
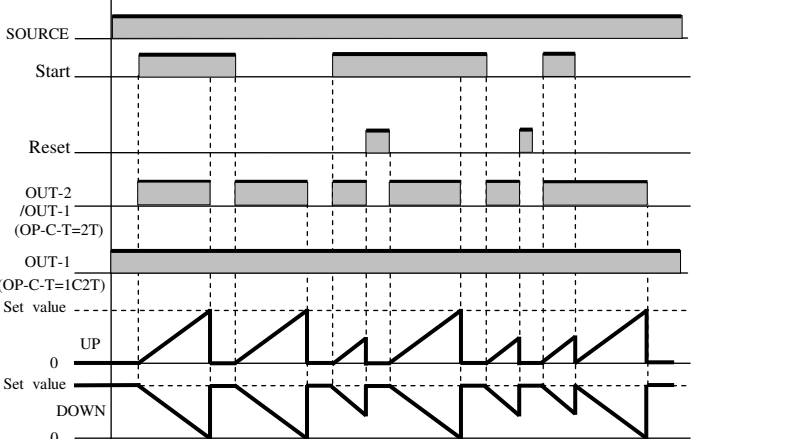
6.When count value reaches to alarm again during the One-shot output, the One-shot output time will be restarted.

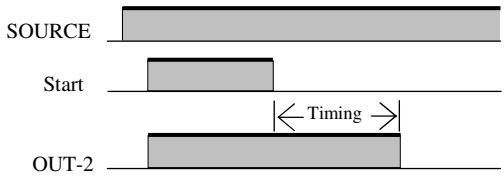
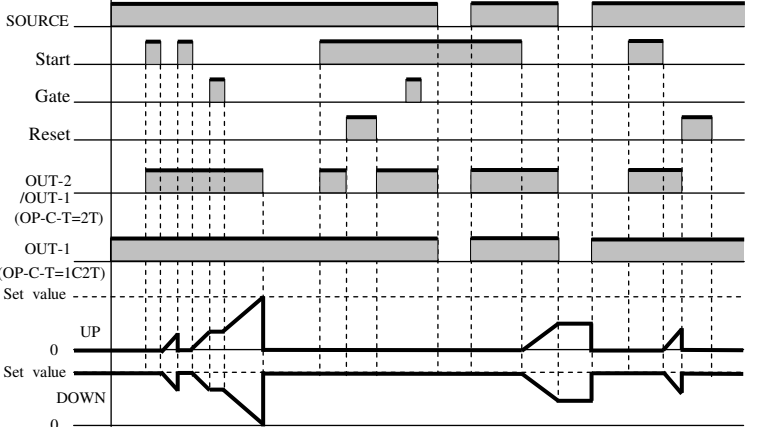
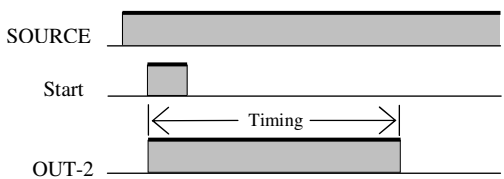
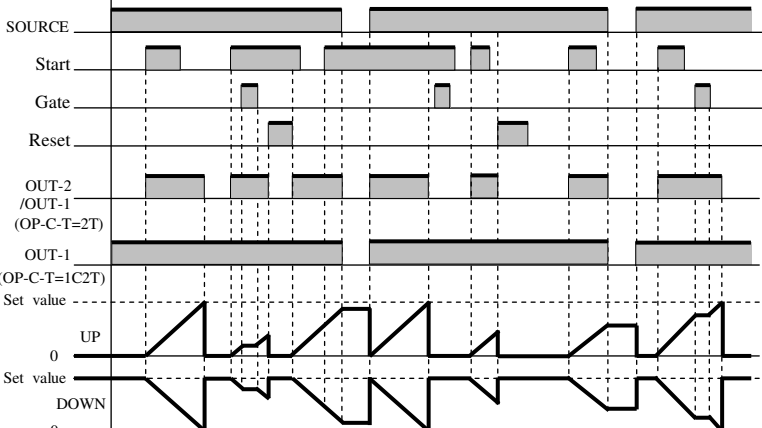
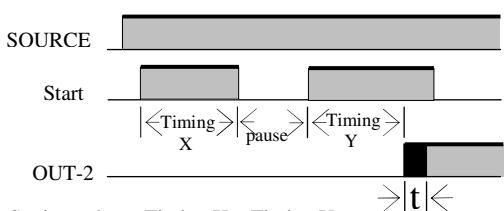
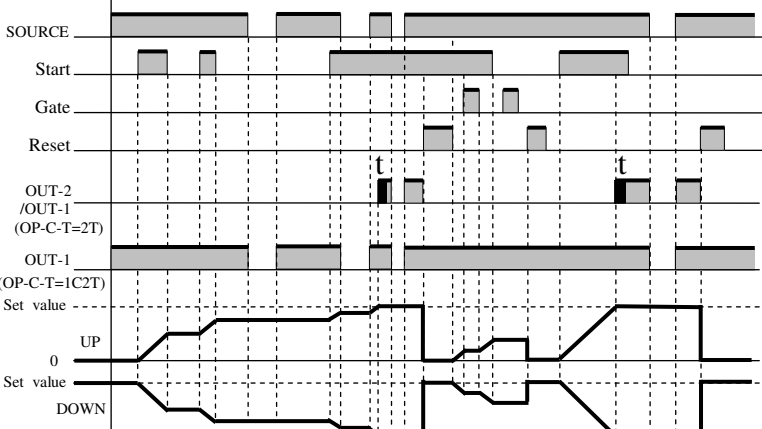
7.Ten alarm output mode is according to AL2 setting value.

## ■ Timer Output Mode

Basic Operation Description	Detailed operation Description
<p><b>◎ Mode A: Signal ON delay 1 (Timer resets when power comes ON)</b></p>  <ul style="list-style-type: none"> <li>• START ON start the timing, Once reach setting value, OUT-2 enable self-holding or one-shot, Present value will be hold until RESET ON or power supply recovered, and then Present value reset.</li> <li>• During the START ON, the timer starts when the power comes ON or when the RESET OFF.</li> <li>• Start signal input is disabled during timing.</li> <li>• Once START ON, OUT-2 is instantaneous when setting value is 0.</li> </ul>	
<p><b>◎ Mode A-1: Signal ON delay 2 (Timer resets when power comes ON)</b></p>  <ul style="list-style-type: none"> <li>• START ON start the timing, Once reach setting value, OUT-2 enable self-holding or one-shot, Present value will be hold until START OFF or RESET ON or power supply recovered, and then Present value reset.</li> <li>• During the START ON, the timer starts when the power comes ON or when the RESET OFF.</li> <li>• Once START ON, OUT-2 is instantaneous when setting value is 0.</li> </ul>	
<p><b>◎ Mode A-2: Power ON delay 1 (Timer resets when power comes ON)</b></p>  <ul style="list-style-type: none"> <li>• Both power on and RESET OFF start the timing, Once reach setting value, OUT-2 enable self-holding or one-shot, Present value will be hold until RESET ON or power supply recovered, and then Present value reset.</li> <li>• The start signal disables the timing function as the gate input.</li> <li>• During the power on, the timer starts when the RESET OFF</li> <li>• Once power on, OUT-2 is instantaneous when setting value is 0.</li> </ul>	
<p><b>◎ Mode A-3: Power ON delay 2 (Timer does not reset when power comes ON)</b></p>  <ul style="list-style-type: none"> <li>• Both power on and RESET OFF start the timing. If power off, the timing and OUT-2 will be pause until power supply recovered. Once reach setting value, OUT-2 enable self-holding or one-shot. Present value will be hold until RESET ON.</li> <li>• The start signal disables the timing function as the gate input.</li> <li>• Once power on, OUT-2 is instantaneous when setting value is 0.</li> </ul>	



Basic Operation Description	Detailed operation Description
<p><b>◎ Mode B: Repeat cycle 1 (Timer resets when power comes ON)</b></p>  <ul style="list-style-type: none"> <li>• START ON start the timing,Once reach setting value,the Present value reset and restart timing,OUT-2 enable one-shot or self-holding until next time reach again.Repeat timing and output until RESET ON or power supply recovered,and then Present value reset.</li> <li>• During the START ON, the timer starts when the power comes ON or when the RESET OFF.</li> <li>• Setting value must be at least 100 ms. (Relay output mode)</li> </ul>	
<p><b>◎ Mode B-1: Repeat cycle 2 (Timer does not reset when power comes ON)</b></p>  <ul style="list-style-type: none"> <li>• Timing time=X+Y</li> <li>• START ON start the timing,Once reach setting value,the Present value reset and restart timing,OUT-2 enable one-shot or self-holding until next time reach again.Repeat timing and output until RESET ON. During the START ON,if power off,the timing will be pause until power supply recovered.</li> <li>• Setting value must be at least 100 ms. (Relay output mode)</li> </ul>	
<p><b>◎ Mode B-2: Repeat cycle ON START (Timer resets when power comes ON)</b></p>  <ul style="list-style-type: none"> <li>• START ON start the timing and enable OUT-2 one-shot or self-holding,Once reach setting value,both present value and OUT-2 reset .Repeat the timing and output until RESET ON.</li> <li>• Setting value must be at least 100 ms. (Relay output mode)</li> </ul>	
<p><b>◎ Mode C: Signal ON/OFF START (Timer resets when power comes ON)</b></p>  <ul style="list-style-type: none"> <li>• START ON or START OFF start the timing and enable OUT-2 self-holding until reach setting value</li> <li>• During START ON,Present value will be reset and pause OUT-2 period of the RESET ON</li> <li>• START ON or START OFF must greater than TIME-T</li> </ul>	

Basic Operation Description	Detailed operation Description
<p><b>⊙ Mode D: Signal OFF DELAY (Timer resets when power comes ON)</b></p>  <ul style="list-style-type: none"> <li>• START OFF start the timing, Once reach setting value or RESET ON or START ON or power supply recovered, the present value will be reset.</li> <li>• The OUT-2 is ON during START ON (except when the power is OFF or RESET ON)</li> <li>• When setting value is 0, the OUT-2 only ON during the START ON</li> </ul>	
<p><b>⊙ Mode E: Interval (Timer resets when power comes ON)</b></p>  <ul style="list-style-type: none"> <li>• START ON start the timing, Once reach setting value or RESET ON or power supply recovered, the present value will be reset.</li> <li>• START ON start the timing, the OUT-2 is ON until reach setting value or RESET ON or power supply recovered.</li> <li>• OUT-2 is disabled when the setting value is 0.</li> </ul>	
<p><b>⊙ Mode F: Cumulative (Timer does not reset when power comes ON)</b></p>  <ul style="list-style-type: none"> <li>• Setting value = Timing X + Timing Y</li> <li>• START ON start the timing, Once reach setting value, OUT-2 enable self-holding or one-shot, Present value and OUT-2 will be hold until the RESET ON.</li> <li>• During power off, the present value is hold, and OUT-2 pause.</li> <li>• Once START ON, OUT-2 is instantaneous when setting value is 0.</li> <li>• When the power start, there will be a timer error (exceeding 100 ms each time). Use the signal start if timer accuracy is required.</li> </ul>	

## MM726 Modbus RTU Mode Protocol Address Map

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

Address	Name	Description	Address
0000	DISPM	SV display indicate, Input Range 0000~0001(0~1) (0:AL1, 1:AL2)	R/W
0001	TYPE	TYPE,Input Range 0000~0001(0~1) (0:COUNT, 1:TIME)	R/W
0002	C-I-T	Count Input Type, Input Range 0000~0001 (0~1) (0:NPN,1:PNP)	R/W
0003	DP	Decimal Point,Input 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
0004	I-MODE	Input mode, Input Range 0000~0004 (0~4) (0:1U2G, 1:1D2G, 2:1U2D, 3:1P2D, 4:1A2B)	R/W
0005	C-R-S	Count Rates Select,Input Range 0000~0001 (0~1) (0:50Hz,1:50KHz)	R/W
0006	RST_T	Reset time ,Input Range 0000~0001 (0~1) (0:1mS,1:20mS)	R/W
0007	P-OFF.M	Power Off Mode, Input Range 0000~0001 (0~1) (0:Reset , 1:Memory)	R/W
0008	T-RANG	Time Range, Input Range 0000~000B ((0~B), (0:9999.999sec), (1:9999.99sec), (2:99999.9sec), (3:999999sec), (4:99min59.99sec), (5:999min59.9sec), (6:99999.9min), (7:999999min), (8:99hr59min59sec), (9:9999hr59min), (A:99999.9hr), (B:999999hr))	R/W
0009	T.D.SEL	Time Direction Select, Input Range 0000~0001 (0~1)(0:UP, 1:DOWN)	R/W
000A	IN.TIME	Input Signal Time, Input Range 0000~0001 (0~1) (0:1mS, 1:20mS)	R/W
000B	OP-C-T	Output Contact type, Input Range 0000~0001 (0~1) (0:2t, 1:1c2t)	
000C	OP.MODE	<b>Output mode for counter</b> , Input Range 0000~0009(0~9)(0:N, 1:F, 2:R, 3:Q, 4:C, 5:P, 6:K, 7:A, 8:L, 9:H) <b>Output mode for timer</b> , Input Range 0000~000A (0~A) (0:A, 1:A1, 2:A2, 3:A3, 4:B, 5:B1, 6:B2, 7:C, 8:D, 9:E, A:F)	R/W
000D	LOCK	Panel Lock, Input Range 0000~0001 (0~1)(NO/YES)	R/W
000E	OP_TIME	Output Active Time, Input Range 0000~03E7(0.0~99.9)	
000F	ACT1.T	Active 1 Time, Input Range 0000~03E7(0.0~99.9)	R/W
0010	ACT2.T	Active 2 Time, Input Range 0000~03E7(0.0~99.9)	R/W
0011	ADDR	Communication Address, Input Range 0000~00FF (0~255)	R/W
0012	BAUD	Communication Baud Rate, Input Range 0000~0003 (0~3)( 0:19200,1:9600,2:4800,3:2400)	R/W
0013	PARI	Communication Parity Check, Input Range 0000~0003 (0~3)(0:N82,1:N81,2:EVEN,3:ODD)	R/W
0014	AZERO	Analog Output Zero Adjust,Input Range E890~1770 (-6000~6000)	R/W
0015	ASPAN	Analog Output Span Adjust,Input Range E890~1770 (-6000~6000)	R/W
0016	CODE	Pass Code, Input Range 00000000~000F423F (0~999999)high word	R/W
0017		Pass Code, Input Range 00000000~000F423F (0~999999)low word	R/W
0018	SCALE	Display Scale, Input Range 00000001~000F423F (0.00001~9.99999)high word	R/W
0019		Display Scale, Input Range 00000001~000F423F (0.00001~9.99999)low word	R/W
001A	ANLO	Analog Output Zero According to Display, Input Range FFFCF2C1~000F423F (-199999~999999)high word	R/W
001B		Analog Output Zero According to Display, Input Range FFFCF2C1~000F423F (-199999~999999)low word	R/W
001C	ANHI	Analog Output Span According to Display,Input Range FFFCF2C1~000F423F (-199999~999999)high word	R/W
001D		Analog Output Span According to Display,Input Range FFFCF2C1~000F423F (-199999~999999)low word	R/W
001E	AL1	AL1, Input Range 00000000~000F423F (0~999999)high word	R/W
001F		AL1, Input Range 00000000~000F423F (0~999999)low word	R/W
0020	AL2	AL2, Input Range 00000000~000F423F (0~999999)high word	R/W
0021		AL2, Input Range 00000000~000F423F (0~999999)low word	R/W
0022	TIME-T	TIME-T, Input Range 00000000~000F423F (0~999999)high word	R/W
0023		TIME-T, Input Range 00000000~000F423F (0~999999)low word	R/W
0024	DISP	Display Value, Display Range FFFCF2C1~000F423F (-199999~999999)high word	R
0025		Display Value, Display Range FFFCF2C1~000F423F (-199999~999999)low word	R
0026	STATUS	Status, Display Range 0000~0003(0~3) (0:OFF,1:ON)(Bit0:OUT1, Bit1:OUT2, Bit2~Bit6:Reserve)	R
0027	RST	Write = 0001(Function 06), count/time value reset	W