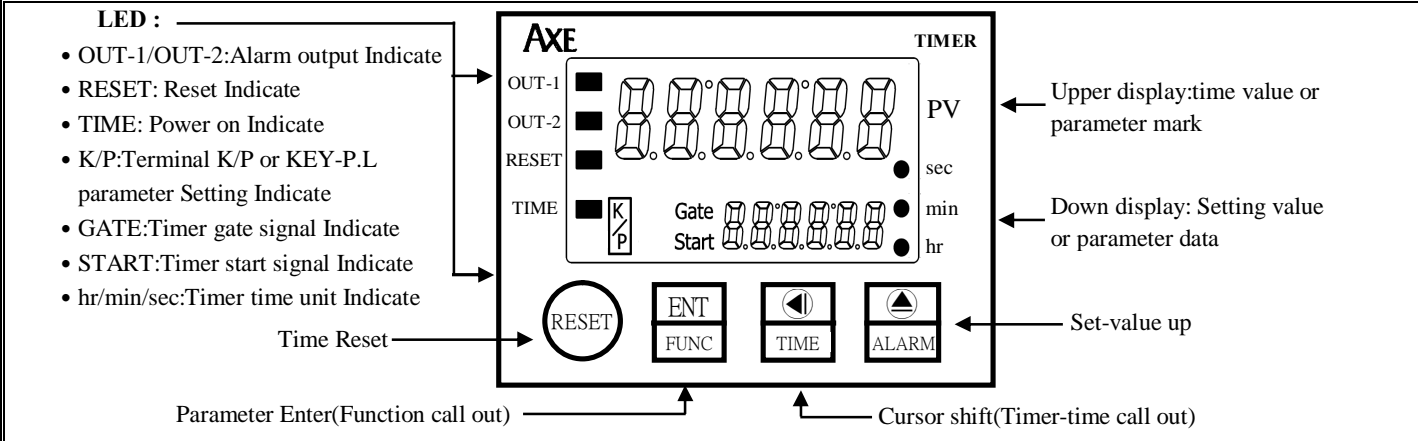


Features

- ⊙ PV display auto switched between red,green, and orange when out-2 status changed
- ⊙ Timing range : 0~999999 digit
- ⊙ Twelve time range(999.999 sec. to 999999 hr.) can be modified
- ⊙ Twelve output mode(A/A1/A2/A3/A5/B/B1/B2/C/D/E/F)can be modified
- ⊙ Input signal type NPN/PNP can be modified
- ⊙ Input signal width 1mS/20mS can be modified
- ⊙ Time direction Up/Down can be modified
- ⊙ Reset by panel or connect terminal
- ⊙ EEPROM Saving, data safekeeping about 10 years

Name of Parts



Key Introduce

⊕ Key Function	1.In normal display, The key function is call out setting item 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 Timer-time setting page,Can be modify Timer-time value with ◀ & ▲ key 2.Into parameter setting page,Can be modify parameter data with ◀ & ▲ key
▲ Key Function	1.Into parameter setting page,Can be modify parameter data with ◀ & ▲ key
◀ & ▲ Key Function	1.In any setting page,Press ◀ & ▲ key return normal display,and save the modify parameter data
RESET Key Function	1.In any Time status,Press RESET key will be reset time status
No Key in anything	1.In any page no key in anything about 2 minutes,return normal display,and the modify parameter data will be lost

inside parameter data Setting Procedure

Step	Parameter mark description	Parameter mark	Operation manual
1	Normal display	1 2 3 4 5 6	1.Press ⊕/FUNC key into PV.COLR setting page
1-1	PV.COLR(PV Display Color) Default = red	P u . C O L R	1.Decide PV Display Color with ▲ key (red/green/orange/red--g/g--red/red--o/o--red/g--org/org--g) 2.Press ⊕ key enter data and into P-I-T setting page Note:When out-2 changed,red/green/orange=fixed color,other:switch to setting color
		r e d	
1-2	P-I-T(Pulse Input Type) Default = NPN	P - I - T	1.Decide Pulse Input Type with ▲ key(NPN/PNP) 2.Press ⊕ key enter data and into T-RANG setting procedure
		n p n	
1-3	T-RANG(Time Range) Default = 999.999 sec.	t - r a n g	1.Decide Time Range with ▲ key(999.999sec/9999.99sec/99999.9sec/999999sec/99min59.99sec/999min59.9sec/99999.9min/999999min/99hr59min59sec/99999hr59min/99999.9hr/999999hr) 2. Press ⊕ key enter data and into T-D-S setting page
		9 9 9 . 9 9 9	
1-4	T-D-S(Time Direction Select) Default = Up	t - d - s	1.Decide Time Direction Select with ▲ key (Up/Down) 2.Press ⊕ key enter data and into I-S-T setting page Note:Up:PV display the elapsed time, Down:PV display the remaining time
		u p	
1-5	I-S-T(Input Signal Time) Default = 20mS	i - s - t	1.Decide Input Signal Time with ▲ key (1mS/20mS) 2.Press ⊕ key enter data and into OP.MODE setting page
		2 0 m s	
1-6	OP.MODE(Output Mode) Default = A mode	o p . m o d e	1.Decide Output Mode with ▲ key (A/A1/A2/A3/A5/B/B1/B2/C/D/E/F) 2.Press ⊕ key enter data and into OP.TIME setting page
		A	
1-7	OP.TIME(Output Time) Default = 0	o p . t i m e	1.Decide Output Time with ◀ & ▲ key (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
		0 0 . 0	
1-8	OP-C-T(Output Contact type) Default = 2t	o p - c - t	1.Decide Output Contact type with ▲ key (2t/1c2t) 2.Press ⊕ key enter data and into KEY-P.L. setting page Note:2t:out-1 & out-2=time-limit,1c2t:out-2=time-limit,out-1=instantaneous contact
		2 t	
1-9	KEY-P.L.(Key Protection Level) Default = P-not	k e y - p . l	1.Decide Key Protection Level with ▲ key (P-not/P-rst.k/P-s.u.-k/P-all.k) 2.Press ⊕ key enter data and return normal display Note: P-not: Non-Lock any key P-rst.k:Lock RESET key P-s.u.-k: Lock ◀ & ▲ key P-all.k: Lock whole key
		P - n o t	

outside parameter data Setting Procedure

2	Normal display	1 2 3 4 5 6	1.Press ◀/TIME key about 3 sec, into TIME-T setting page
2-1	TIME-T(Timer-Time) Default = 0	t i m e - t	1.Decide Timer-Time with ◀ & ▲ key (0~999999) 2.Press ⊕ key enter data and return normal display
		0 0 0 . 0 0 0	

Appendix	Error Mark Description	Error Mark	Analyze & Description
1	EEPROM error detect	E - 0 0	External interference when EEPROM read/write or write over 100000 times(guarantee 10 years)

		70	Please power reset, if still display E-00, doing following step: 1.E-00 & No display for inquire reset EEPROM 2.Decide Yes with key, press key return normal display 3.EEPROM has reset, Please follow step 1~2 setting again
		YES	

■ Timer Output Mode

Basic Operation Description	Detailed operation Description
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◎ **Mode A: Signal ON delay 1 (Timer resets when power comes ON)**

- 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.
- During the START ON, the timer starts when the power comes ON or when the RESET OFF.
- Start signal input is disabled during timing.
- Once START ON, OUT-2 is instantaneous when setting value is 0.

◎ **Mode A-1: Signal ON delay 2 (Timer resets when power comes ON)**

- 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.
- During the START ON, the timer starts when the power comes ON or when the RESET OFF.
- Once START ON, OUT-2 is instantaneous when setting value is 0.

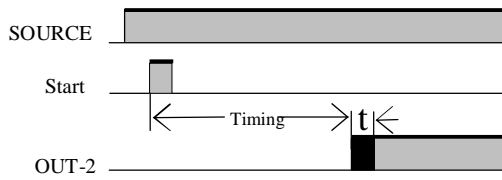
◎ **Mode A-2: Power ON delay 1 (Timer resets when power comes ON)**

- 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.
- The start signal disables the timing function as the gate input.
- During the power on, the timer starts when the RESET OFF
- Once power on, OUT-2 is instantaneous when setting value is 0.

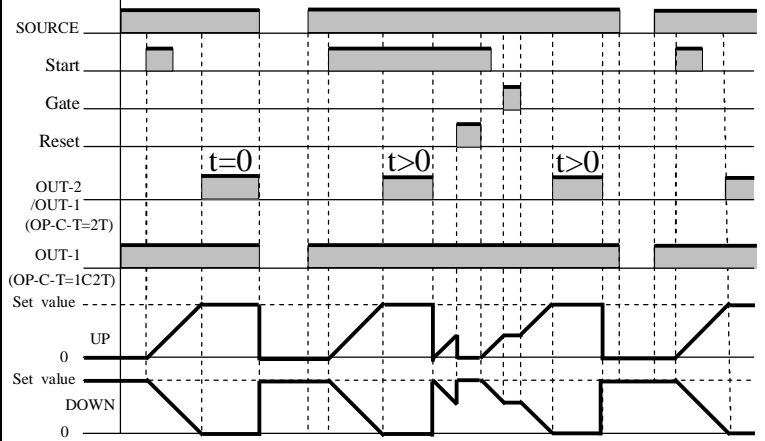
◎ **Mode A-3: Power ON delay 2 (Timer does not reset when power comes ON)**

- 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.
- The start signal disables the timing function as the gate input.
- Once power on, OUT-2 is instantaneous when setting value is 0.

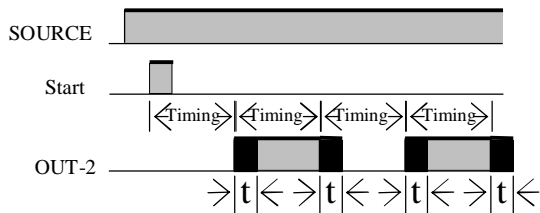
⊙ **Mode A-5: Signal ON delay 3 (Timer resets when power comes ON)**



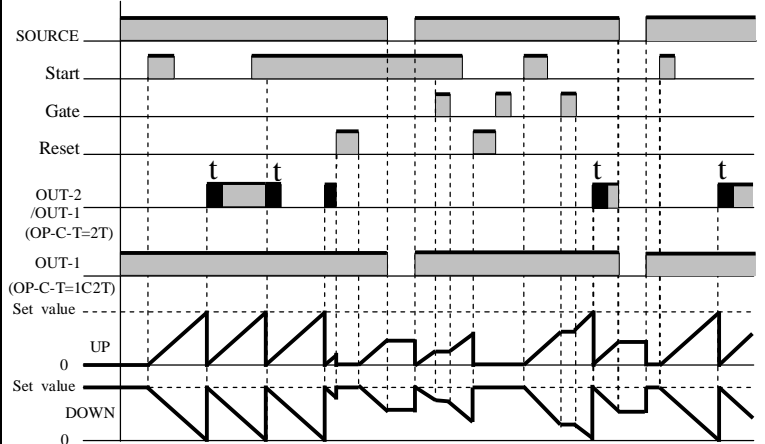
- START ON start the timing,Once reach setting value,OUT-2 enable self-holding or one-shot,Self-holding the present value will be hold until RESET ON or power supply recovered, One-shot the present value will be reset after one-shot expire.
- During the START ON, the timer starts when the power comes ON or when the RESET OFF.
- Start signal input is disabled during timing.
- Once START ON,OUT-2 is instantaneous when setting value is 0.



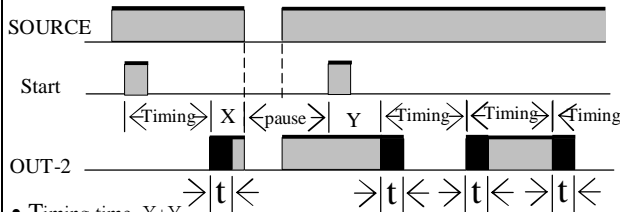
⊙ **Mode B: Repeat cycle 1 (Timer resets when power comes ON)**



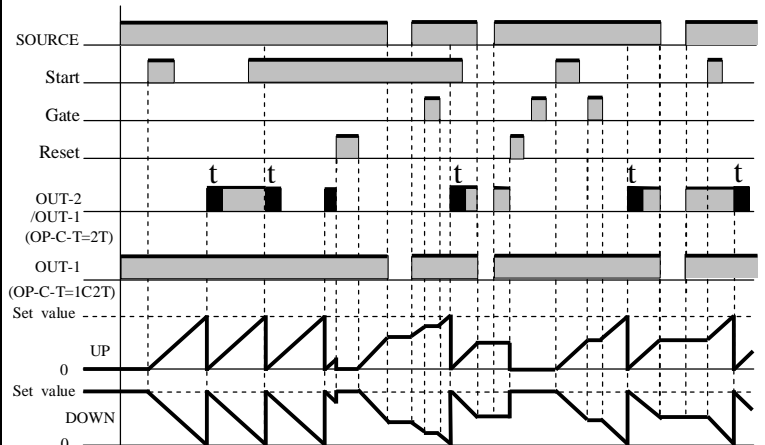
- START ON start the timing,Once reach setting value,the Present value reset and restart timing,OUT-2 enable one-shot or self-holding until next time reach again.Repeat timing and output until RESET ON or power supply recovered,and then Present value reset.
- During the START ON, the timer starts when the power comes ON or when the RESET OFF.
- Setting value must be at least 100 ms



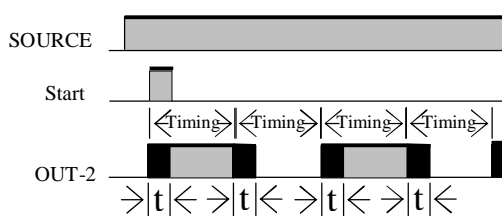
⊙ **Mode B-1: Repeat cycle 2 (Timer does not reset when power comes ON)**



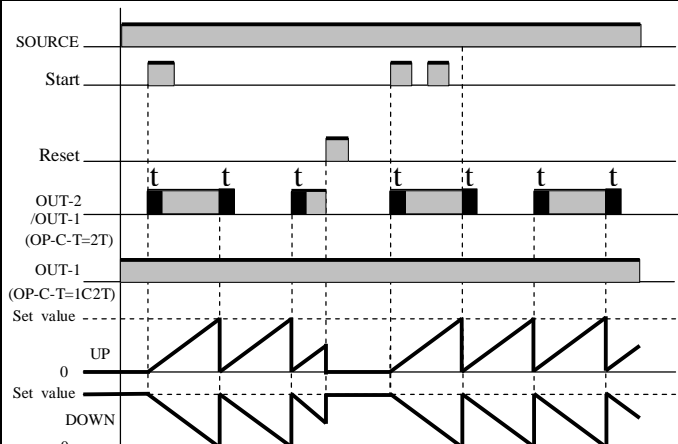
- Timing time= $X+Y$
- START ON start the timing,Once reach setting value,the Present value reset and restart timing,OUT-2 enable one-shot or self-holding until next time reach again.Repeat timing and output until RESET ON. During the START ON,if power off,the timing will be pause until power supply recovered.
- Setting value must be at least 100 ms



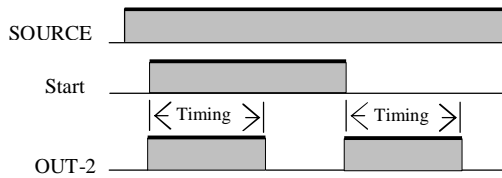
⊙ **Mode B-2: Repeat cycle ON START (Timer resets when power comes ON)**



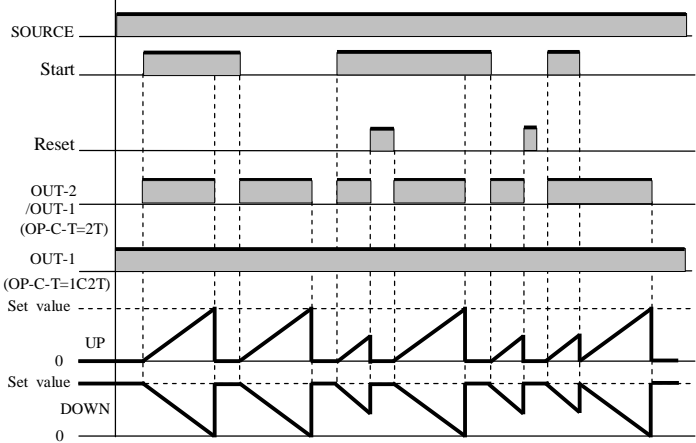
- START ON start the timing and enable OUT-2 one-shot or self-holding,Once reach setting value,both present value and OUT-2 reset .Repeat the timing and output until RESET ON.
- Setting value must be at least 100 ms



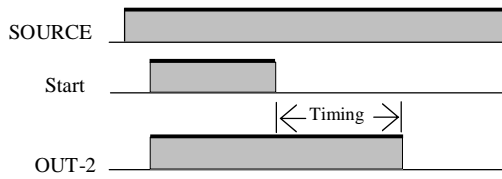
⊙ **Mode C: Signal ON/OFF START (Timer resets when power comes ON)**



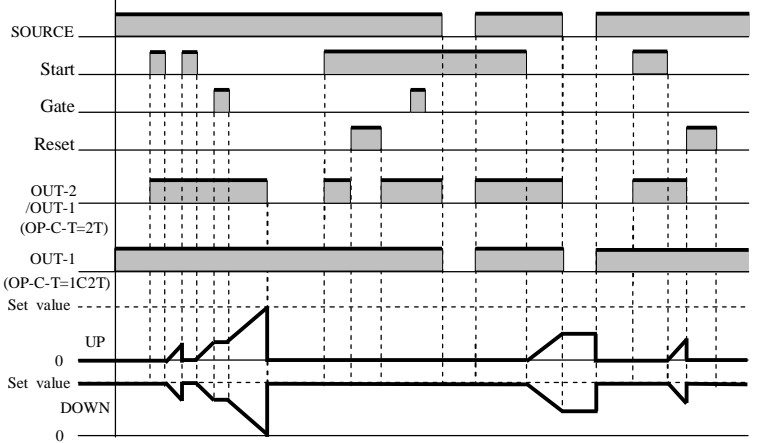
- START ON or START OFF start the timing and enable OUT-2 self-holding until reach setting value
- During START ON, Present value will be reset and pause OUT-2 period of the RESET ON
- START ON or START OFF must greater than TIME-T



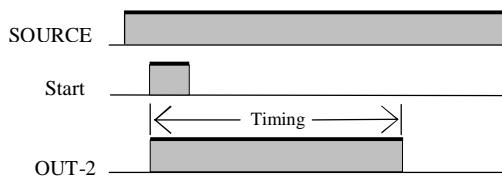
⊙ **Mode D: Signal OFF DELAY (Timer resets when power comes ON)**



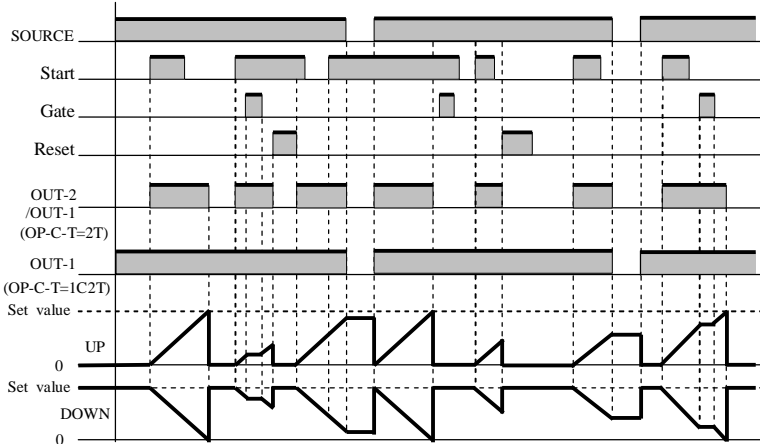
- START OFF start the timing, Once reach setting value or RESET ON or START ON or power supply recovered, the present value will be reset.
- The OUT-2 is ON during START ON (except when the power is OFF or RESET ON)
- When setting value is 0, the OUT-2 only ON during the START ON



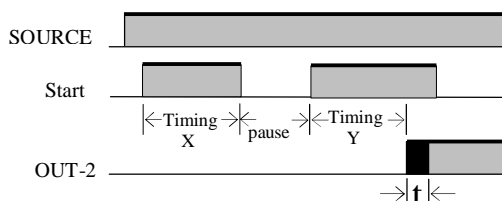
⊙ **Mode E: Interval (Timer resets when power comes ON)**



- START ON start the timing, Once reach setting value or RESET ON or power supply recovered, the present value will be reset.
- START ON start the timing, the OUT-2 is ON until reach setting value or RESET ON or power supply recovered.
- OUT-2 is disabled when the setting value is 0.



⊙ **Mode F: Cumulative (Timer does not reset when power comes ON)**



- Setting value = Timing X + Timing Y
- 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.
- During power off, the present value is hold, and OUT-2 pause.
- Once START ON, OUT-2 is instantaneous when setting value is 0.
- When the power start, there will be a timer error (exceeding 100 ms each time). Use the signal start if timer accuracy is required.

