

## High-performance digital display timer T4GT T4DT T4FT

### Technical Manual

Version number: EN-V1-03



#### About us

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Thank you very much for choosing TMCON products,  
In order to better use this product, please read the following before using.

## ■ Safety precautions

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### Attention

Do not touch the terminals while power is on, otherwise minor injuries may occur due to electric shock.



Do not allow metal objects, conductors, debris (such as cuttings) from installation work, moisture, or other foreign matter to enter the digital controller, the setup tool ports, or between the pins on the connectors on the Setup Tool cable. Otherwise it may cause electric shock, short circuit or machine malfunction.



Do not use the product where subject to flammable or explosive gas. Otherwise, it may cause mild injury due to the explosion.



Never disassemble, modify, or repair the product or touch any of the internal parts. Otherwise, it may cause mild electric shock, fire, and equipment failure.



This equipment is an open processing controller. Do not use it in a control cabinet where fire may occur. When using more than 2 open-circuit switches, please turn off all switches before repair inspection, so that the product is in a power-off state.



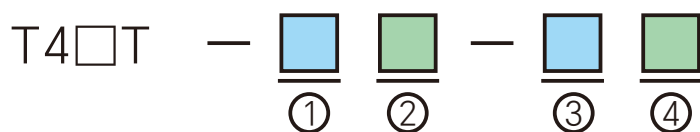
## ■ Main features

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### Display easy to read, powerful, stable performance, friendly docking industrial internet

- Adopting a color LCD display screen, the white font is easy to read from a long distance, and the side.
- Super-thin panel LCD screen with a new trend of industrial aesthetic shape design, more advanced sense.
- Waterproof keys with plastic handle, the surface of the keys is firm and wear-resistant, and the operation feels clear and smooth.
- The built-in waterproof sealing ring and the external installation of waterproof sealing ring can achieve good waterproof performance.
- Ultra-short fuselage with a depth of only 65mm behind the plat.
- Can set any time you want within the time range of 0.001 seconds to 9999 hours.
- Elapsed time (Up) or remaining time (Down) can selectable settings.
- Powerful with multiple output modes, it can meet most application scenarios.
- Supports RS485 communication interface, adopts the internationally recognized MODBUS-RTU communication protocol, and is friendly to the industrial internet.
- Can set the power-off memory function mode, power-off data automatically saved.
- Equipped with key lock function, with multiple key lock options available.
- High performance switching power supply design ensures stable operation of microcomputers.
- Strong anti-interference performance, accurate and reliable timing.

## ■ Technical reference

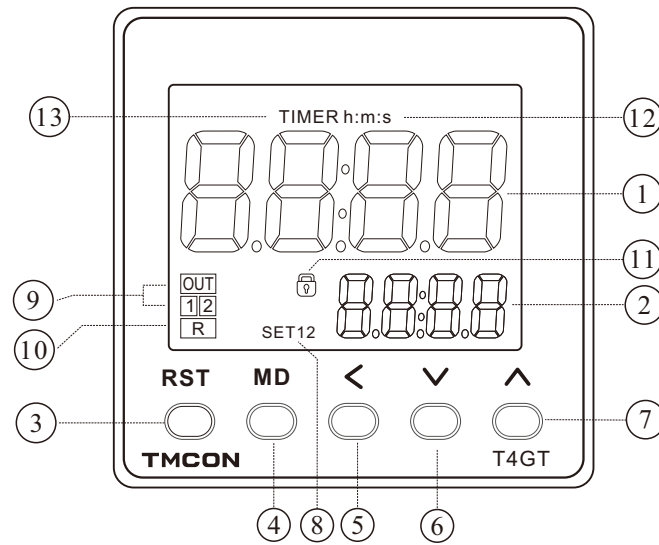


Models	①	②	③	④	Description
	Category	Communication function	Power supply	Control output	
T4GT					48×48mm High performance digital display timer
T4DT					72×72mm High performance digital display timer
T4FT					96×48mm High performance digital display timer
	A1				1-way relay control output
	A2				2-way relay control output
		N			No communication
		S			With RS485 communication port
			N or Not to write		Power Supply 100~240V AC
			D		Power Supply 12~24V AC/DC
				N or Not to write	Relay control output
				T	Transistor controlled output
				Q	SSR drive voltage output

# ■ Technical reference

Models	T4□T-A1□-□	T4□T-A2□-□
Functional categories	1-way relay output (standard order)	2-way relay output
External dimension (mm)	48(high)×48(wide)×65(depth) 72(high)×72(wide)×60(depth) 96(high)×48(wide)×60(depth)	
Hole size (mm)	45(high)×45(wide) 68(high)×68(wide) 92(high)×45(wide)	
Power supply	AC100~240V 50/60Hz or AC/DC12~24V (The model suffix has "-D" is 12~24V, and the model suffix does not have "-D" is 100~240V)	
Permissible voltage range	85~110%	
Power consumption	About 5VA (AC240V), about 3.2 VA (DC24V)	
Display mode	Color LCD display (run value white light, set value green light, indicator light orange light)	
Time Frame	9.999s (0.001s~), 99.99s (0.01s~), 999.9s (0.1s~), 9999s (1s~), 99m59s (1s~), 999.9m (0.1m~), 9999m (1m~), 99h59m (1m~), 999.9h (0.1h~), 9999h (1h~)	
Timing mode	Elapsed time (Up) or remaining time (Down) can selectable settings	
Input signal	Signal, Gate, Reset	
Input method	No-voltage (NPN) input/voltage (PNP) input (switchable) No-voltage inputs: ON impedance: 1KΩ max (Leakage current: 12mA at 0Ω) ON residual voltage: 3V max OFF impedance: 100KΩ min Voltage input: High (logic) level: 4.5 to 30VDC	
Minimum input signal width	1ms/20ms (optional setting)	
Output mode	A, A-1, A-2, A-3, b, b-1, d, E, F, Z, b	
Output time	HOLD (output remains until manual reset or signal reset)/0.01s~99.99s (output automatic reset time)	
Reset mode	Power reset (except for power outage memory in A-3, b-1, and F modes), external reset, and panel button reset Bit, automatic reset (according to output mode)	
Power outage memory	EEP-ROM Data held for more than 10 years	
Auxiliary power output	12VDC ±10% 100mA Max	
Control output	1-way relay output (standard configuration), Contact capacity: 3A/AC250V resistive load	2-way relay output (standard), contact capacity: 3A/AC250V resistive load
	Customizable 1-way transistor output: NPN open collector output	Customizable 2-way transistor output: NPN open collector output
	Customizable 1-way SSR drive voltage (DC12V 100mA) output	Customizable 1-way SSR drive voltage (DC12V 100mA) output
Communication function	RS485 communication interface, Modbus-RTU communication protocol (models with S at the end of the model have this function)	
Communication protocol	Modbus RTU communication protocol	
Accuracy error	Less than ± 0.01% ± 0.05S	
Insulation withstand voltage	AC2000V 50/60Hz 1min	
Usage environment	Temperature -10~+55°C (not freezing or exposed), humidity: 25~85% RH	

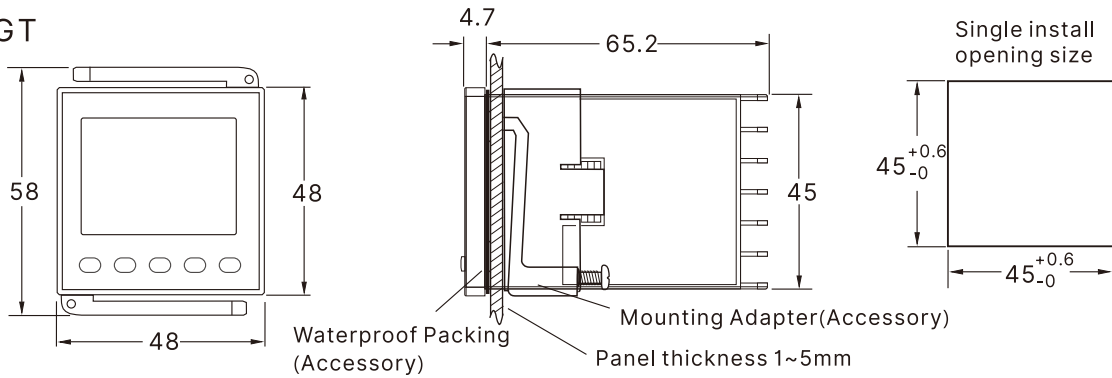
## ■ Panel description



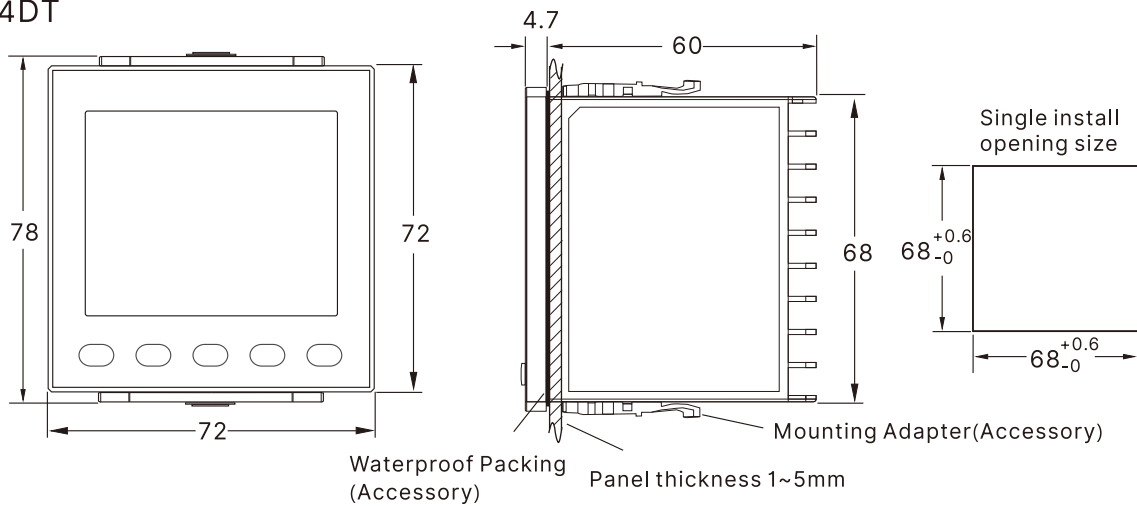
- ① Present Value Display
- ② Set value
- ③ Reset key
- ④ Mode key
- ⑤ Data shift key
- ⑥ Data decrease key
- ⑦ Data increase key
- ⑧ settings 1, 2 indicator
- ⑨ Control Output Indicator
- ⑩ Reset indicator
- ⑪ Key protect indicator
- ⑫ Time unit Indicator
- ⑬ Timer Character/Run Indicator. Character flickers to indicate that the timing is in progress

## ■ Dimensions (mm) and installation instructions

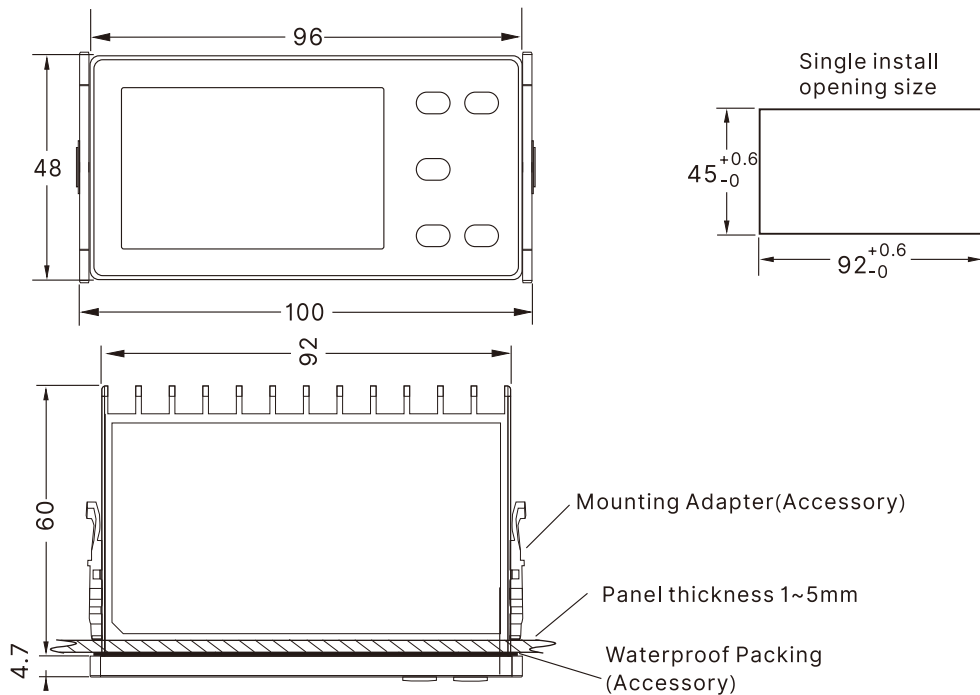
● T4GT



● T4DT

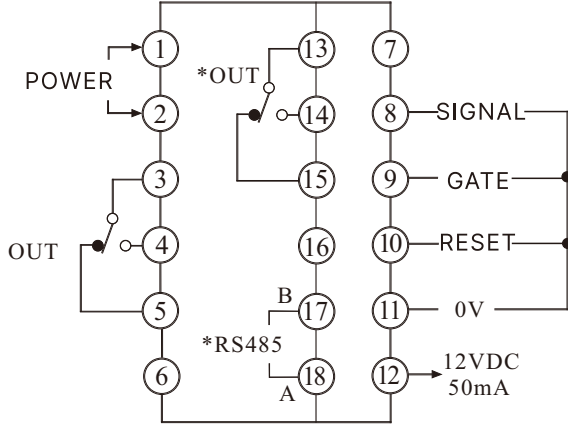


● T4FT

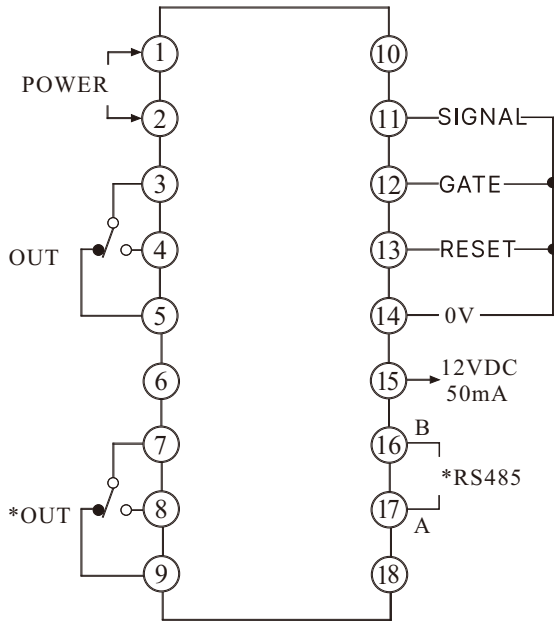


# ■ Wiring diagram

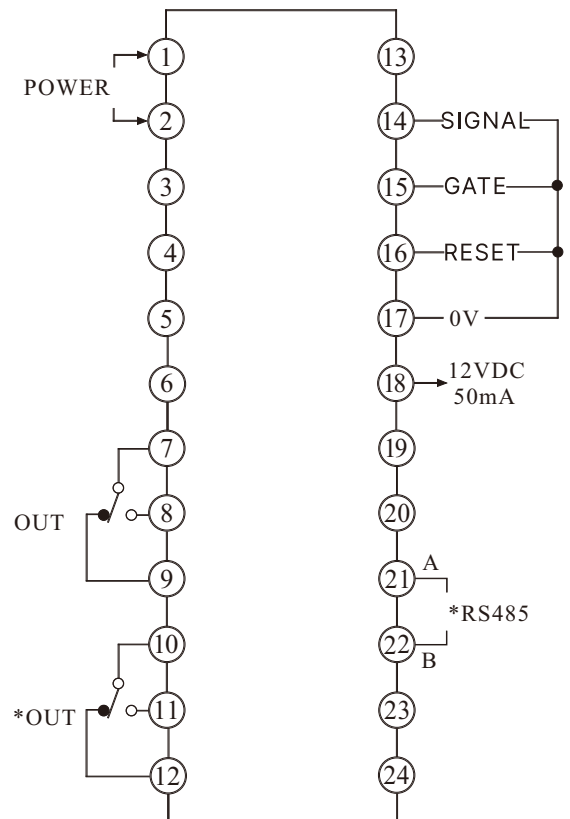
## ● T4GT



## ● T4DT

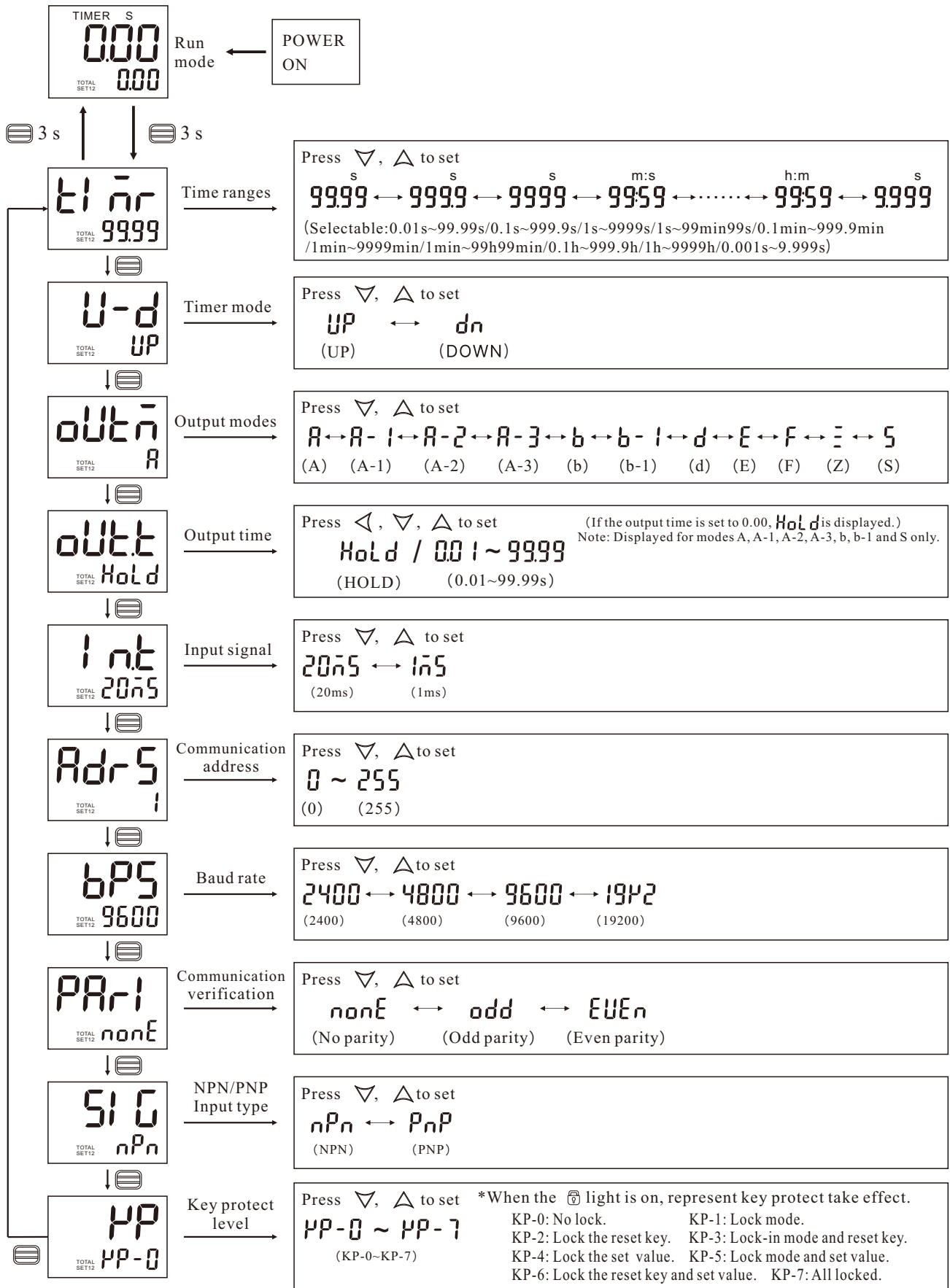


## ● T4FT



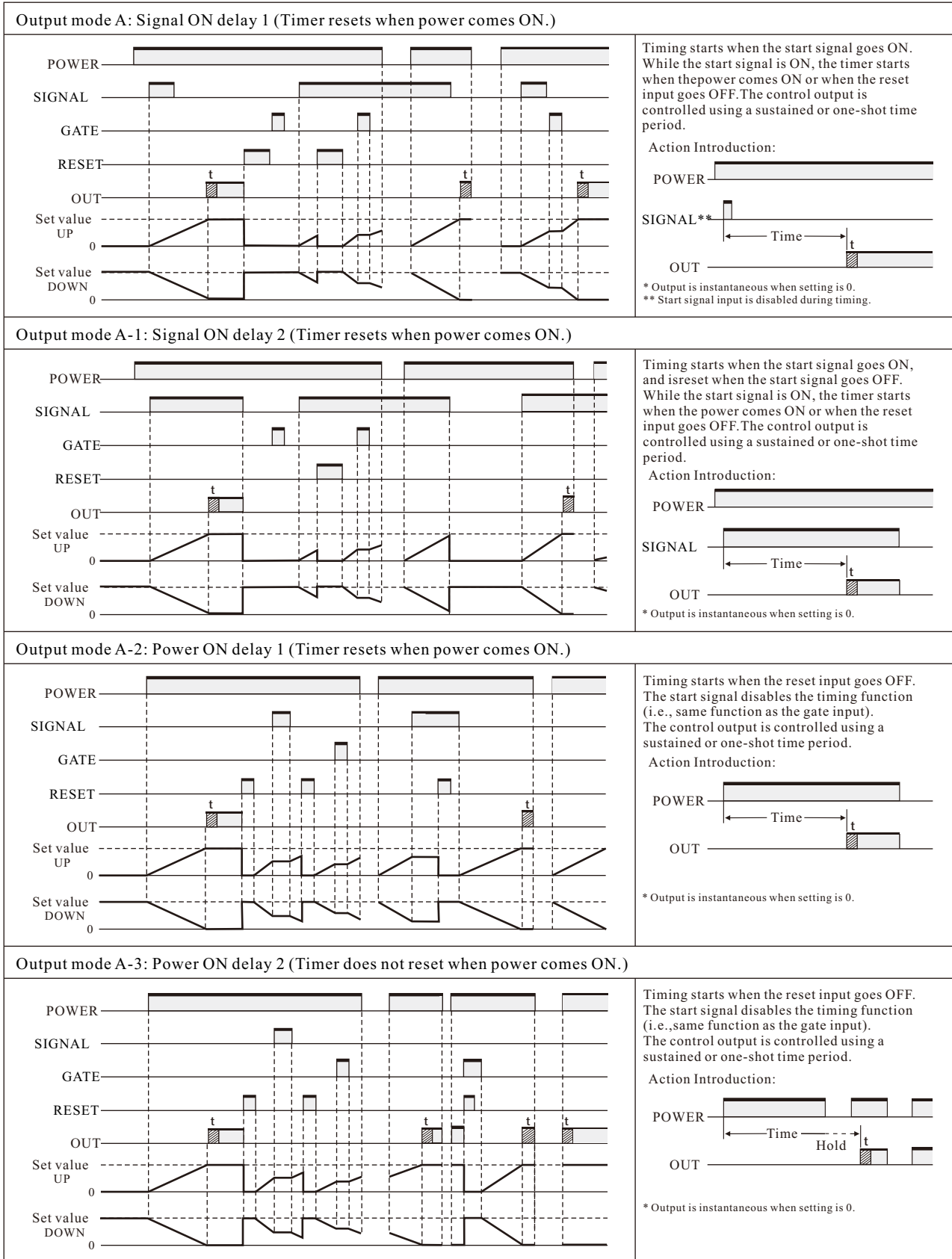


# Input Modes and Present Value

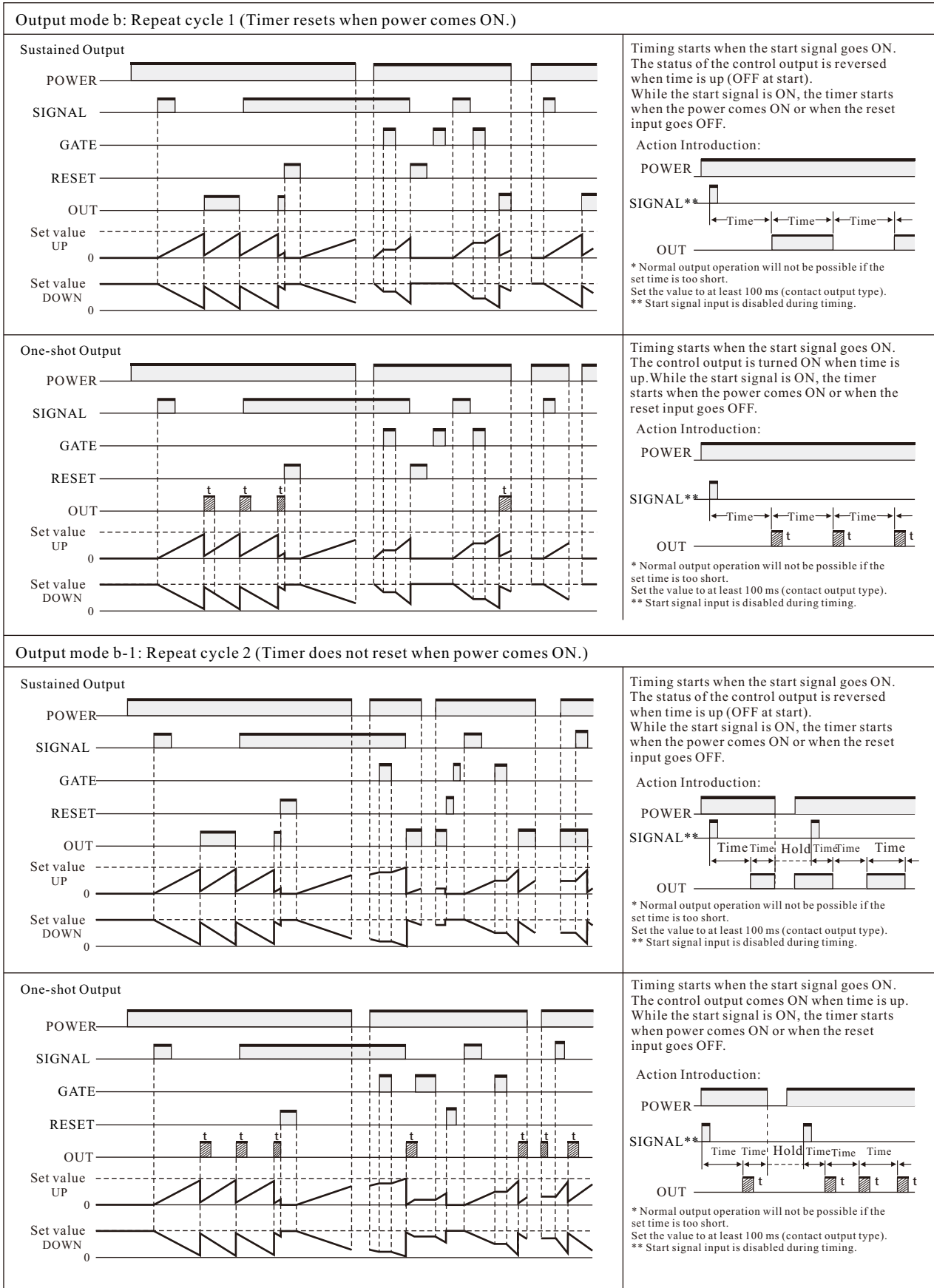


# T4□T Output mode action diagram

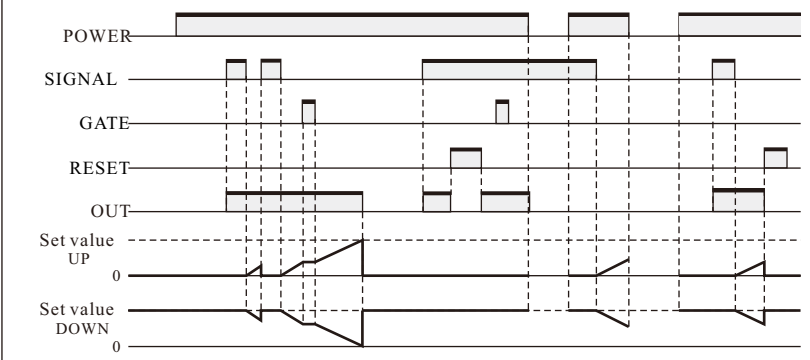
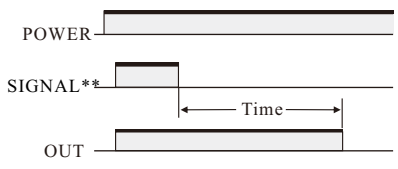
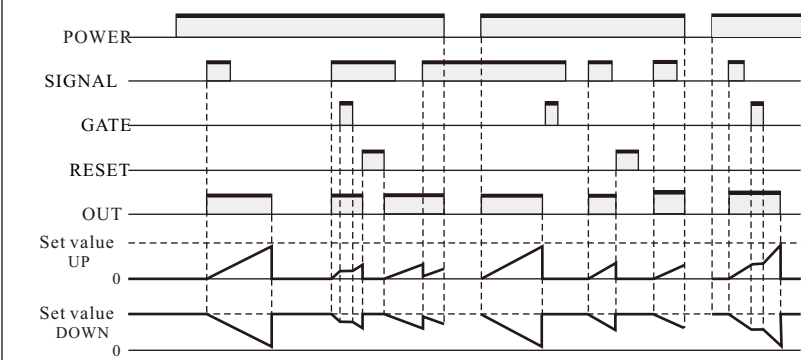
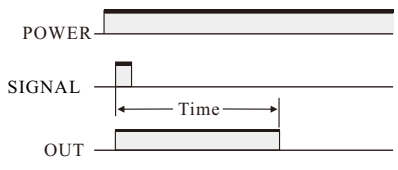
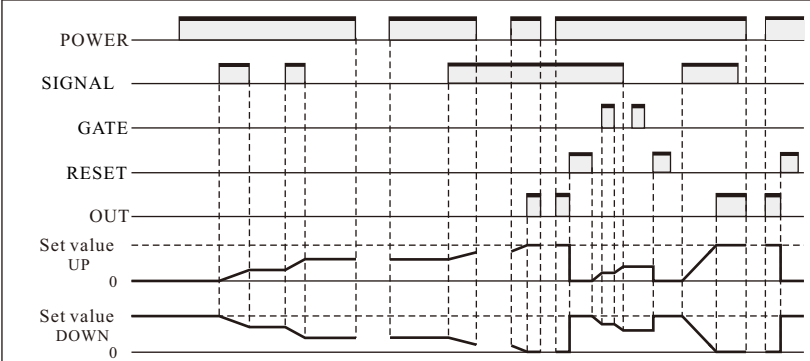
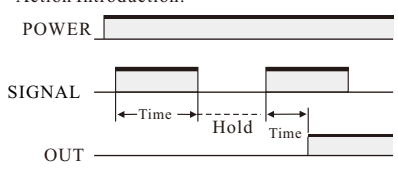
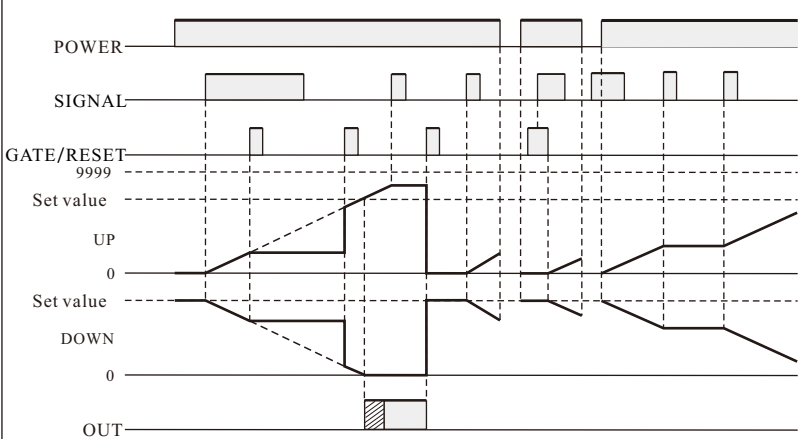
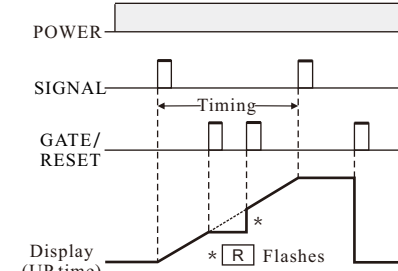
Output mode of action Figure



# T4□T Output mode action diagram



# T4□T Output mode action diagram

<p><b>Output mode d: Signal OFF delay (Timer resets when power comes ON.)</b></p> 		<p>The control output is ON when the start signal is ON (except when the power is OFF or the reset is ON). The timer is reset when the time is up.</p> <p>Action Introduction:</p>  <p>* Output functions only during start signal input when setting is 0. ** Start signal input is enabled during timing.</p>
<p><b>Output mode E: Interval (Timer resets when power comes ON.)</b></p> 		<p>Timing starts when the start signal comes ON. The control output is reset when time is up. While the start signal is ON, the timer starts when power comes ON or when the reset input goes OFF.</p> <p>Action Introduction:</p>  <p>* Output is disabled when the setting is 0. ** Start signal input is enabled during timing.</p>
<p><b>Output mode F: Cumulative (Timer does not reset when power comes ON.)</b></p> 		<p>Start signal enables timing (timing is stopped when the start signal is OFF or when the power is OFF). A sustained control output is used.</p> <p>Action Introduction:</p>  <p>* Output is instantaneous when setting is 0.</p>
<p><b>Output mode S: Stopwatch (Timer resets when power comes ON.)</b></p> 		 <p>The signal starts and stops timing. The display is held and timing is continued if the reset or gate input is received during timing operation. The timer resets if the reset or gate input is received when the timing operation is stopped.</p> <p>Note: output is instantaneous when set is 0.</p>

# ■T4□T Output mode action diagram

