TMCON

High performance dual setting timer

T4GT-2P T4DT-2P

Technical Manual

Version number: EN-V1-03

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

About us

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■Safety precautions

⚠ 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 installationwork, 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 theinternal 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 switchesbefore repair inspection, so that the product is in a power-off state.

■Main features

- Using a high-quality color LCD display screen, the display is more soft and clear, the run value uses white light, which is convenient for remote reading.
- 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.
- The SET1/SET2 indicator light clearly indicates the dual time setting value.
- 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.
- The toff(OFF-ON cycle) or ton(ON-OFF cycle) operation mode can be selected and set.
- Can cycle indefinitely or set the number of cycles.
- 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

T4□T-2P — □ □ — □ □

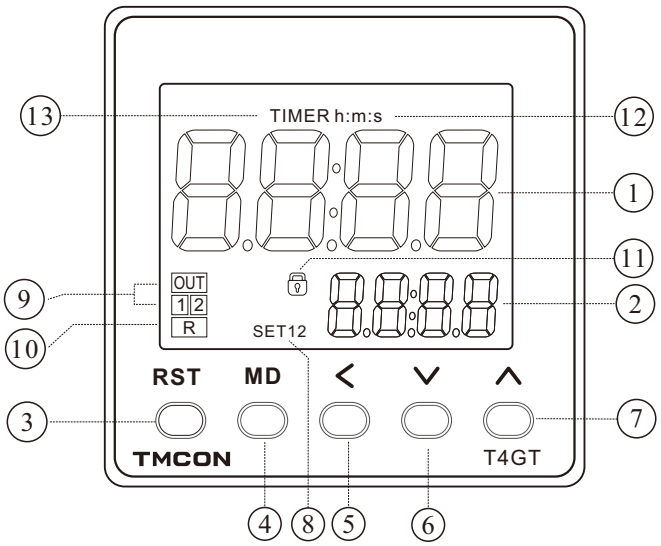
① ② ③ ④

Models	① Category	② Communication function	③ Power supply	④ Control output	Description
T4GT	2P				48×48mm High performance dual setting timer
T4DT	2P				72×72mm High performance dual setting timer
		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-2P□-□
Functional categories	Dual setting timer
External dimension (mm)	48(high)×48(wide)×65(deep)　72(high)×72(wide)×60(deep)
Hole size (mm)	45(high)×45(wide)　68(high)×68(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	Toff (OFF-ON cycle) or ton (ON-OFF cycle)
Reset mode	Power Reset (except power off data hold mode), external reset, panel button reset
Power outage memory	EEP-ROM Data held for more than 10 years
Auxiliary power output	12VDC ±10% 100mA Max
Control output	Relay output (standard configuration),Contact capacity: 3A/AC250V resistive load
	Customizable transistor output: NPN open collector output
	Customizable 2-way Solid-state relay 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)
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

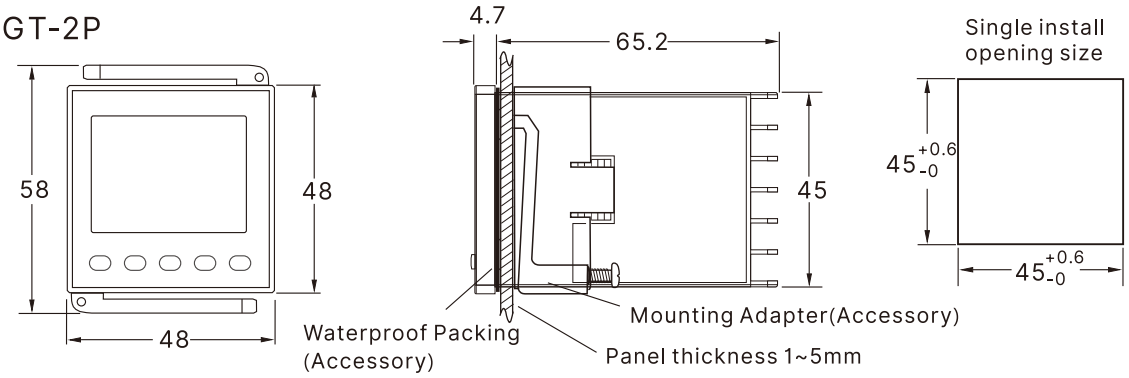
■Panel description



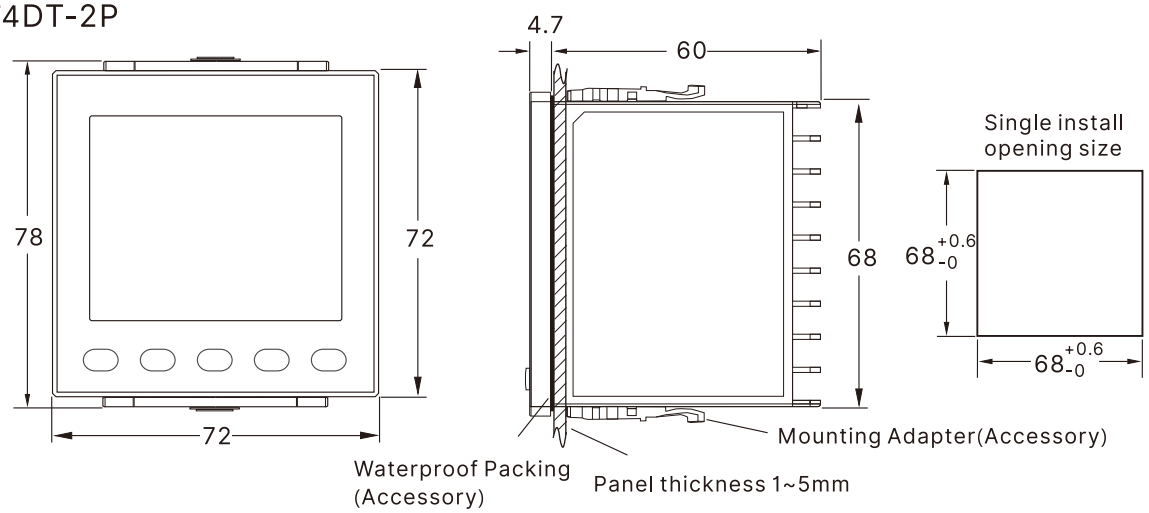
① Present Value Display
② Set value
③ Reset key
④ Mode key
⑤ Data shift key
⑥ Data decrease key
⑦ Data increase key
⑧ settings 1, 2 indicator
⑨ Control Output Indicator
⑩ Reset indicator
⑪ Key protect indicator
⑫ Time unit Indicator
⑬ Timer Character/Run Indicator. Character flickers to indicate that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

■Dimensions (mm) and installation instructions

● T4GT-2P

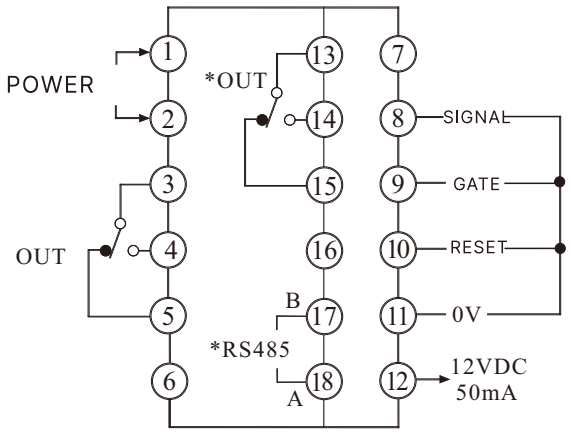


● T4DT-2P



■Wiring diagram

● T4GT-2P



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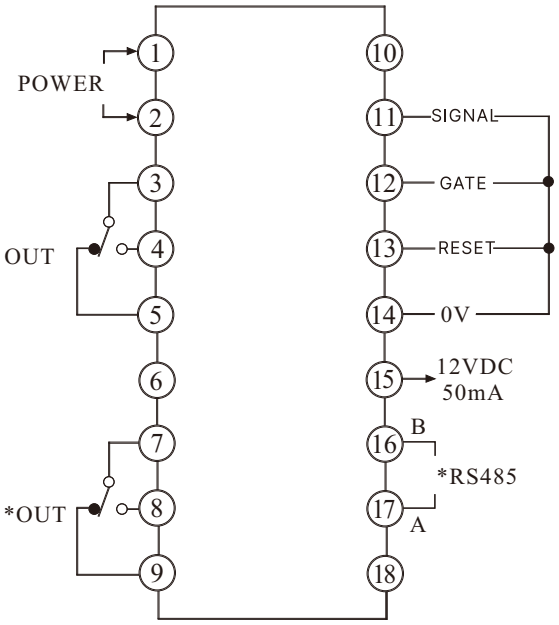
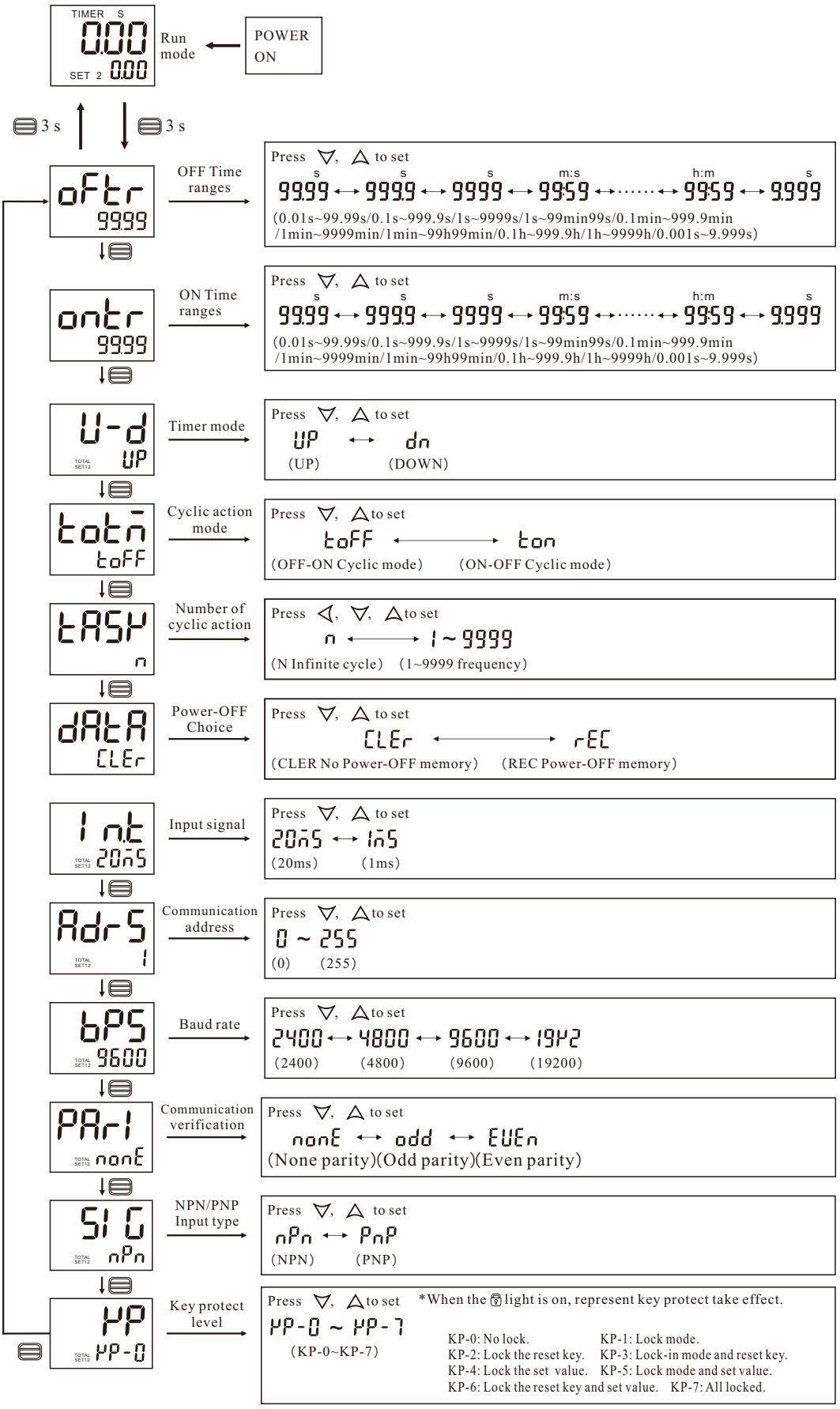


■Input Modes and Present Value

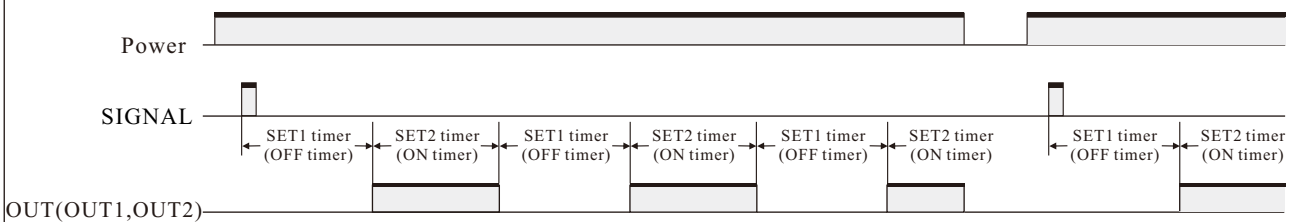


■T4□T-2P Output mode action diagram

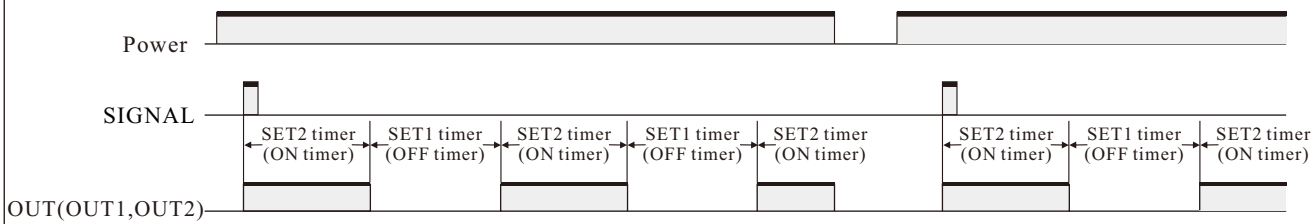
Principle diagram of cyclic action

* Input control signal start timing,Short circuit 6 and 8 terminals if no control signal is needed.

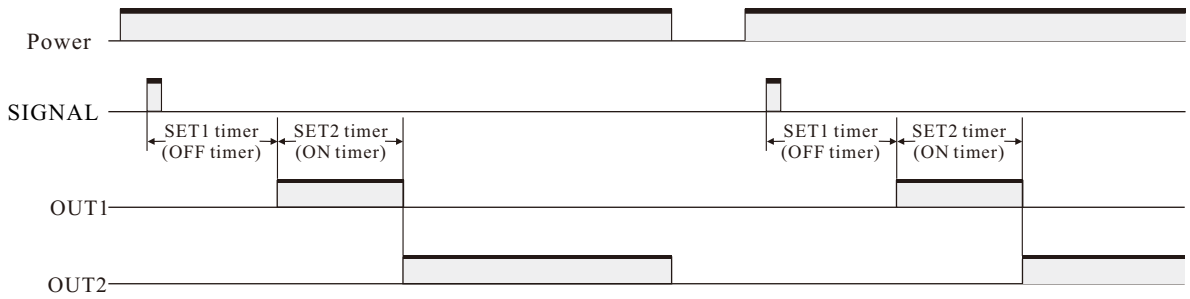
toto = toFF, tASY = n (Implement OFF-ON infinite cyclic action)



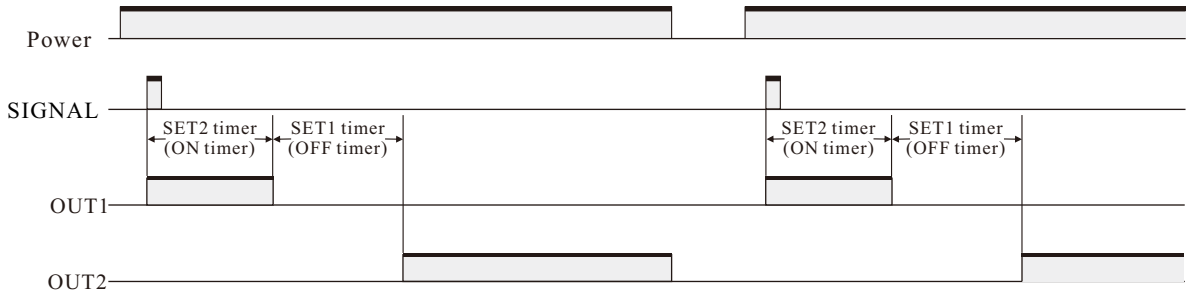
toto = ton, tASY = n (Implement ON-OFF infinite cyclic action)



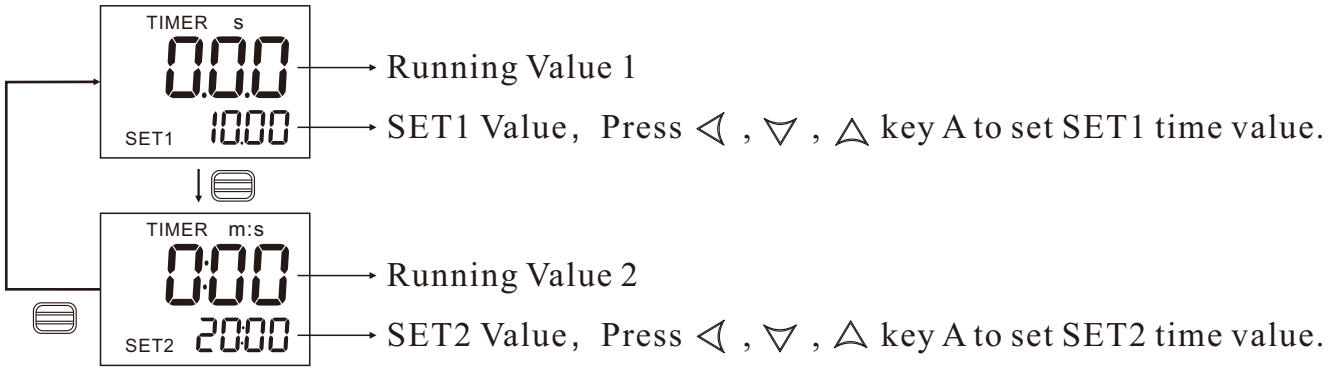
toto = toFF, tASY = 1 (Implement OFF-ON one cyclic action)



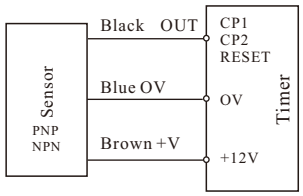
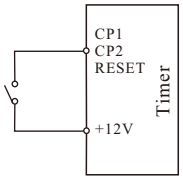
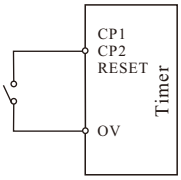
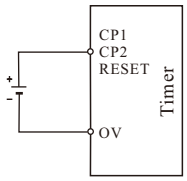
toto = ton, tASY = 1 (Implement ON-OFF one cyclic action)



■Time Setting Method



■ Signal input connection diagram

•Sensor input:  NPN sensor needs set SIG=NPN. PNP sensor needs set SIG=PNP.	•Contact Input: When SIG=PNP:  When SIG=NPN:  	•DC voltage pulse signal input: Needs set SIG=PNP:  "H"level (input ON) DC4.5~30V "L"level (input ON)DC0～2V