

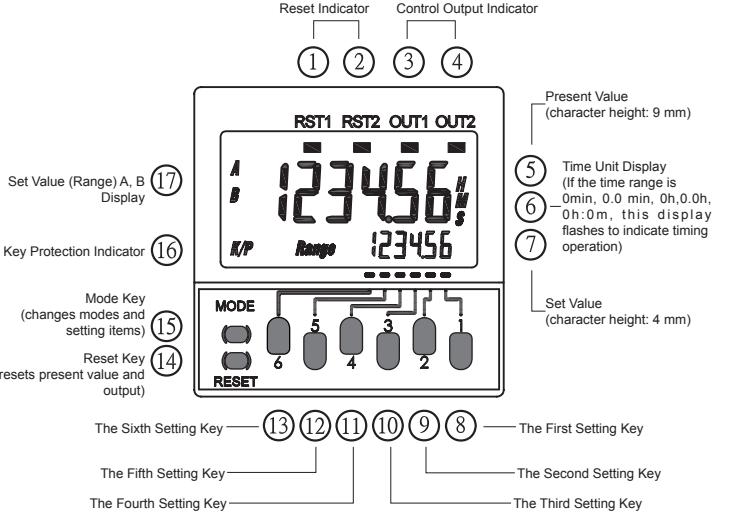
TC-Pro482

Timer/Counter/Tachometer operation manual

1 Safety Precautions

- Do not use the product where corrosive or volatile gases are present, there may occasionally be a risk of explosion.
- Usable life of output relay is determined by switch condition. According the actual usage, use product within its rated load and electrical life expectancy. If using product beyond its life expectancy, its contacts may become fused or there may be a risk of fire.
- This may occasionally cause electric shock, fire or malfunction. Never disassemble, repair or modify the product.
- This may occasionally cause electric shock, fire or malfunction. Do not allow metal fragments or lead wire scraps to fall inside this product.
- Make sure that the supply voltage and signal connection is correct before power is supplied, otherwise the product may be damaged.
- Do not touch the input terminals or repair the product while power is supplied. This may cause electric shock.

2 Nomenclature



3 Model Number Legend

TC-Pro482 □□□-D

1. Communication

S: Standard (no communication)

C: Communication

4. Installs the pattern

D: Track Mounting

None: Inserting Mounting

4 Electric Specifications

Parameter name	Timer	Counter/Tachometer
Rated supply voltage	100~240VAC(50/60HZ), 24VAC(50/60HZ), 24VDC(permissible ripple: 20%(p-p)max.)	
Operating voltage range	85% to 110% rated supply voltage(24VDC; 90% to 110%)	
Power consumption	Approx. 6.2VA at 264VAC, Approx. 5.1VA at 26.4VAC, Approx. 2.4W at 24VDC	
Input signals	Signal, reset, gate	CP1, CP2, Reset 1, Reset 2

* No-voltage input/voltage input (switchable)

◆ No-voltage input

ON impedance: 1kΩ max.(leakage current: 5~20 mA when 0Ω, ON residual voltage: 3V max.

OFF impedance: 100kΩ min.

◆ Voltage Input

High(logic) level: 4.5 to 30 VDC

Low(logic) level: 0 to 2 VDC

(Input resistance: approx. 4.7 kΩ)

Reset input Minimum input signal width: 1/20 ms(selectable, same for all input)

Sensor waiting time 250 ms max.(control output is turned OFF and no input is accepted during sensor waiting time)

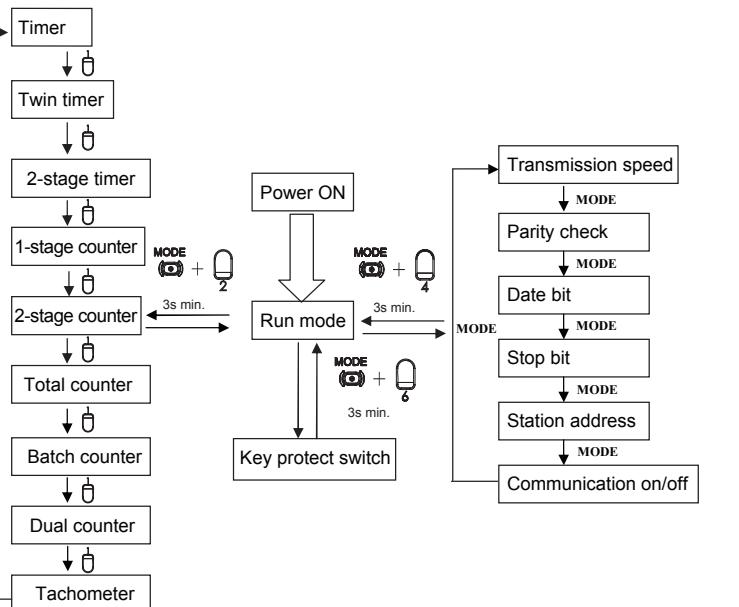
Output method Relay/transistor output

SPDT contact output: 5A at 250 VAC, resistive load($\cos\phi=1$) Minimum applied load: 10 mA at 5 VDC(failure level: P, reference value) Transistor output: NPN open collector, max. 100mA at 30 VDC Residual voltage: 1.5 VDC max.(approx. 1V) Output category according to EN60947-5-1 for timers with Contact outputs (AC-15; 250V 3A / AC-13; 250V 5A / DC-13; 30V 0.5A) Output category according to EN60947-5-2 for timers with Transistor outputs (DC-13; 30V 100 mA) NEMA B300 Pilot Duty, 1/4 HP 5-A resistive load at 120 VAC, 1/3 HP 5-A resistive load at 240 VAC

External power supply	12VDC(15%), 80mA
Memory backup	EEPROM(overwrites: 100,000 times min.)that can store data for 10 years min.
Ambient temperature	Operating: -10 to 55°C(with no icing or condensation) Storage: -25 to 65°C(with no icing or condensation)
Ambient humidity	25% to 85%

5 Function parameter setting

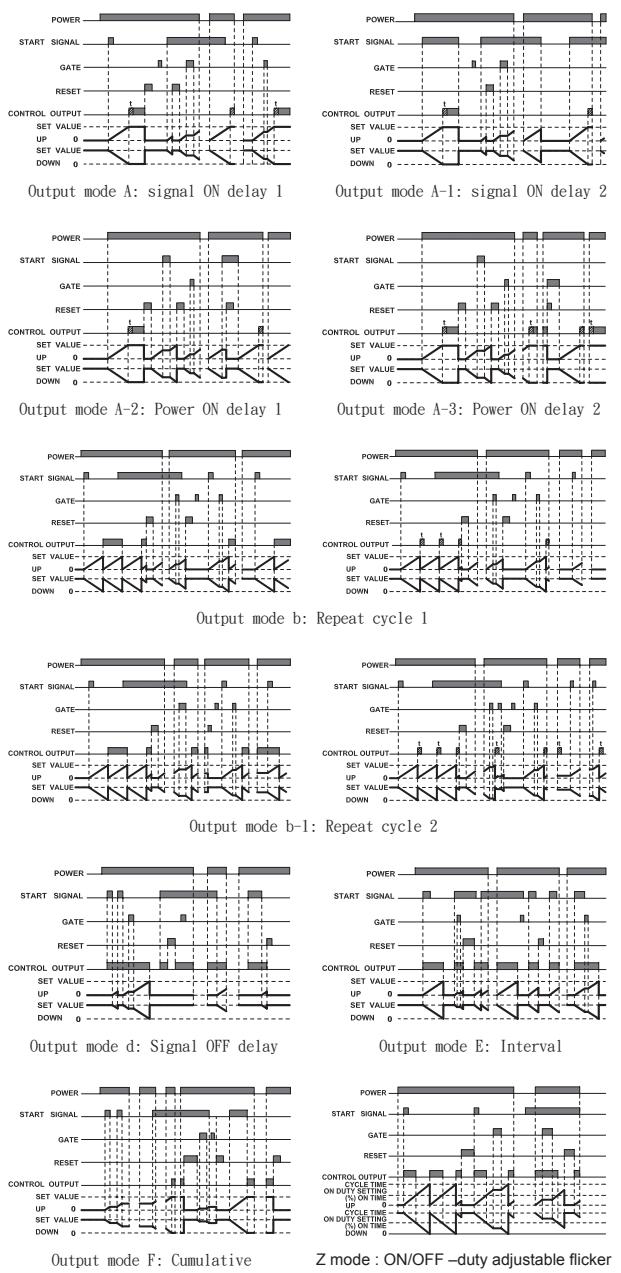
Mode setting



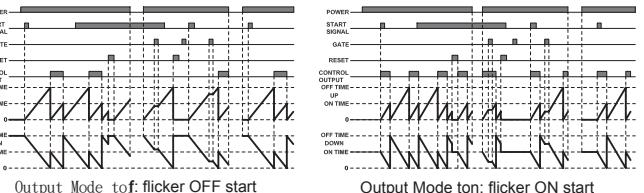
Parameter name	Parameter	Setting range (use key to select)	Default value
Tachometer output mode		hilo/area/hihi/lolo	hilo
Counting speed		30Hz/10KHz	30Hz
Decimal point position		----/---.---.---.---	----
Prescale value		000.001~999.999	001.000
Average processing		off/2/4/8	off
Auto-zero time		00.01~99.99	99.99
Startup time		00.01~99.99	00.00
NPN/PNP Input time		NPN/PNP	NPN
Key protect level		kp-1/kp-2/kp-3/kp-4/kp-5	kp-1

6 Sequence Charts

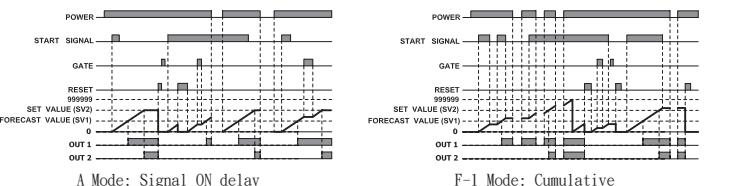
★ Timer Operation



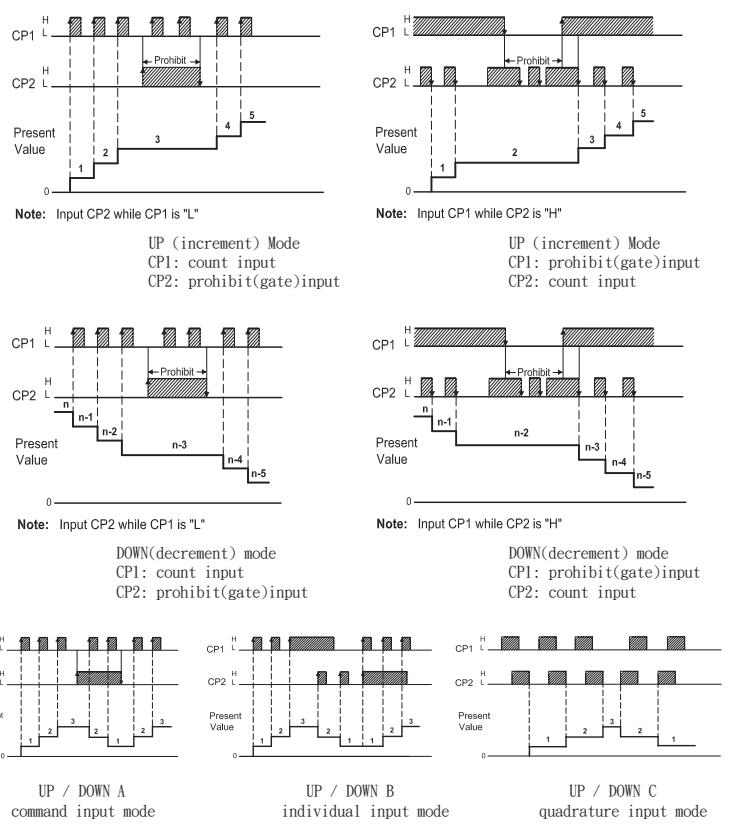
★ Twin Timer Operation



★ 2-Stage Timer Operation

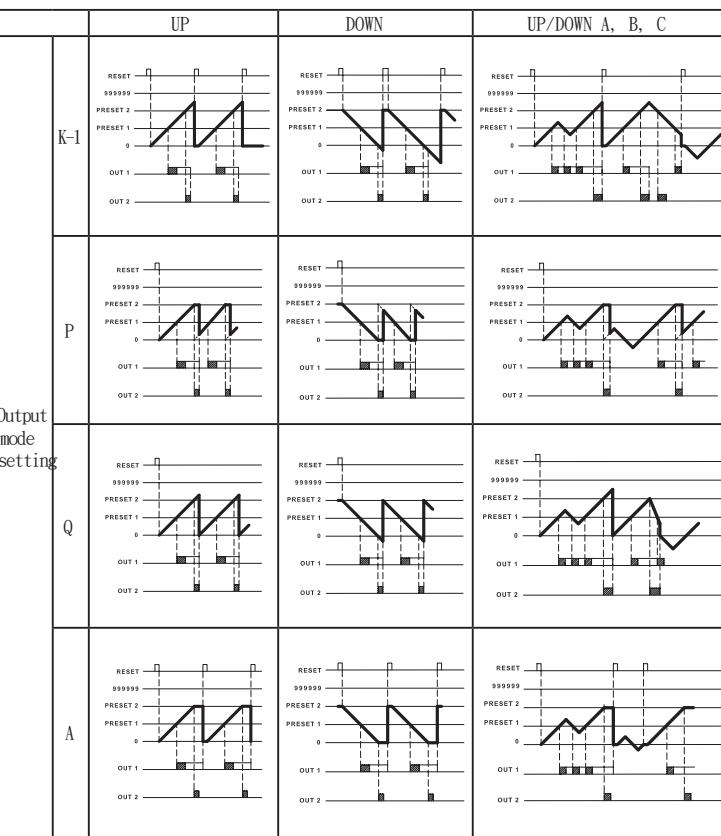
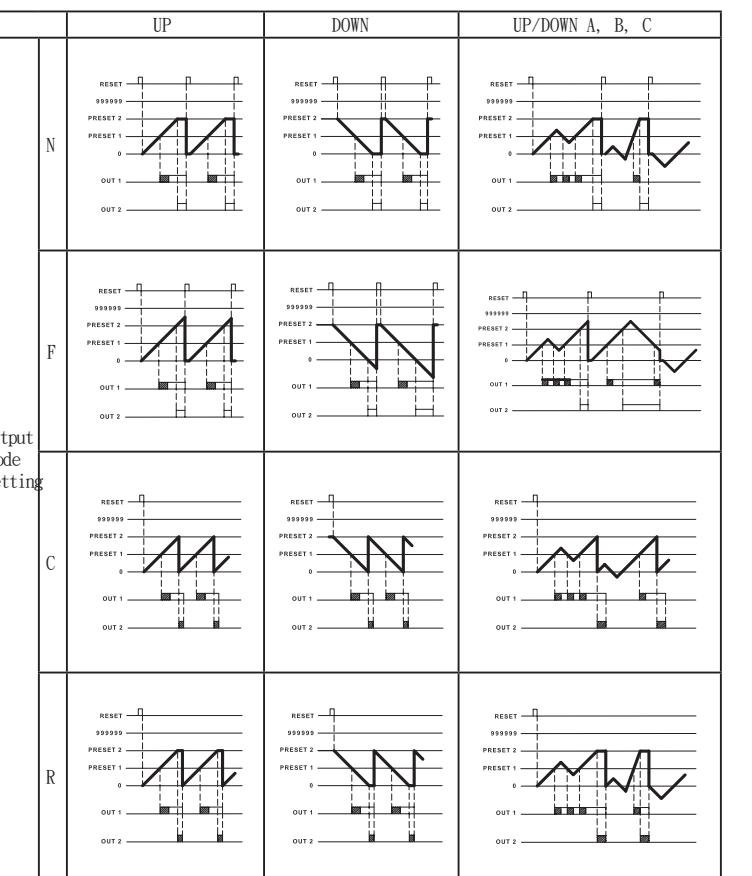


★ Counter Input Modes and Present Value

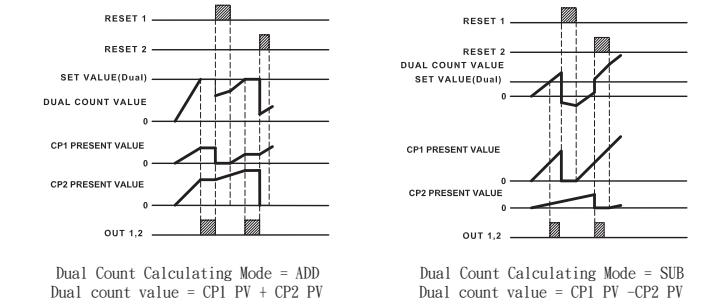


★ Counter Output Mode Setting

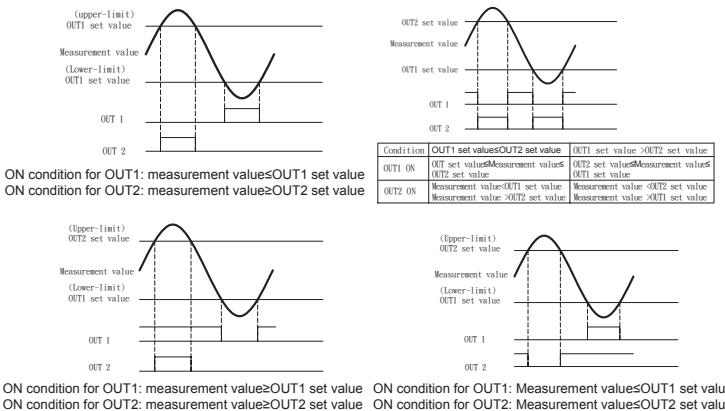
Operation for 1-stage models is the same as that for OUT2. When using a 2-stage model as a 1-stage counter, or dual counter, total and preset counter, OUT1 and OUT2 turn ON and OFF.



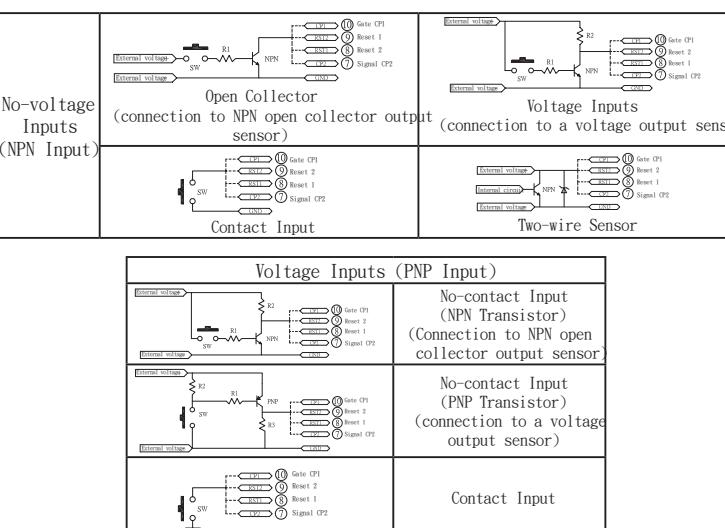
★ Dual Counter Operation



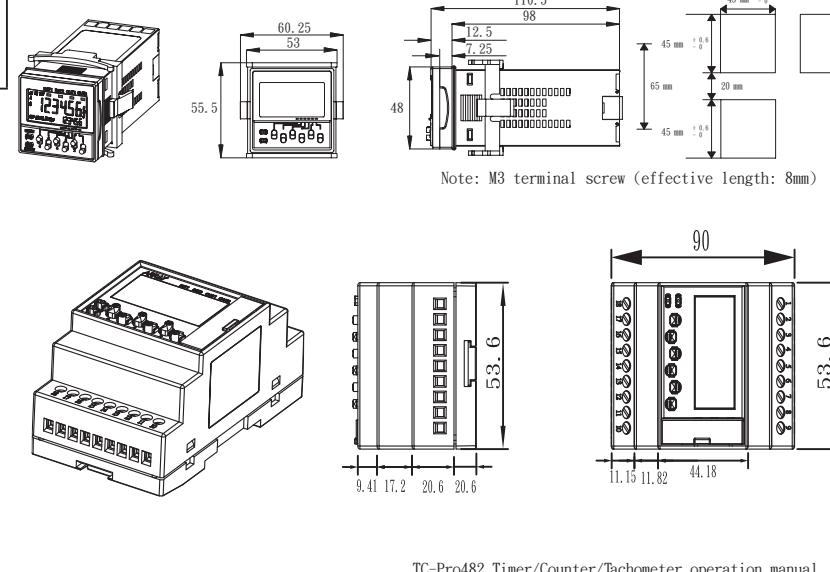
★ Tachometer Output Mode Settings



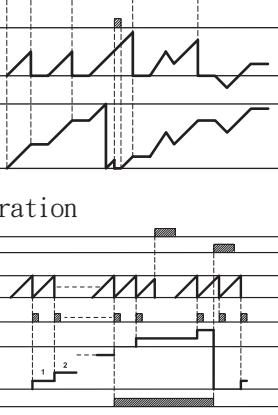
7 Input Connections



8 Dimensions and Panel Cutouts



★ Total and Preset Counter Operation



★ Batch Counter Operation

