CI Series Multi-function Counter / Timer User Manual

Features:
1. Counting speed is up to 10KCPS;
2. Prescale coefficient 0.001--99.999 can be freely setting;
3. Universal input, NPN or PNP input can be selected by software;
4. With timing function, up to 9 timing mode;
5. Up to two counting / length counting alarm output, one batch counting alarm output;
6. Applicable to light industries, machinery, packing, food industries, etc. for quantity and length counting and control output, etc.

For your safty, please read following content carefully before you are using our Meter!

■ Safe Caution

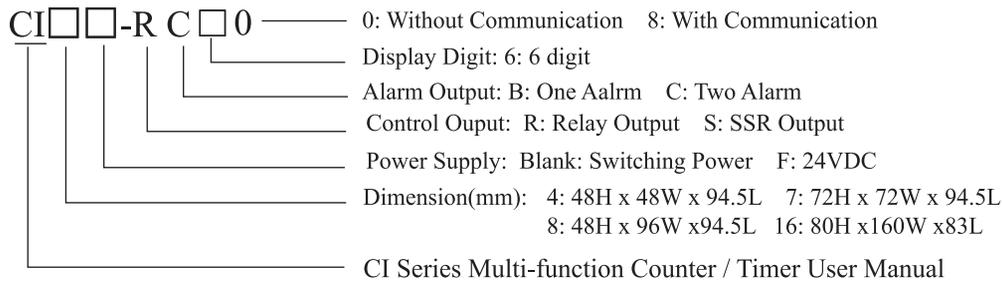| |
|---|
| ※   Please read the manual carefully before you use the temperature controller. |
| ※   Please comply with the below important points.
⚠   Warning   An accident may happen if the operation does not comply with the instruction.
⚠   Notice   An operation that does not comply with the instruction may lead to product damage. |
| ※   The instruction of the symbol in the manual is as below.
⚠   An accident danger may happen in a special condition. |

⚠ Warning

1. A safty protection equipment must be installed or please contact with us for the relative information if the product is used under the circumstance such as nuclear control, medical treatment equipment, automobile, train, airplane, aviation and equipment etc. Otherwise, it may cause serious loss, fire or person injury.
2. A panel must be installed, otherwise it may cause creepage (leakage).
3. Do not touch wire connectors when the power is on, otherwise you may get an electric shock.
4. Do not dismantle or modify the product. If you have to do so, please contact with us first. Otherwise it may cause electric shock and fire.
5. Please check the connection number while you connect the power supply wire or input signal, otherwise it may cause fire.

⚠ Caution

1. This product cannot be used outdoors. Otherwise the working life of the product will become shorter, or an electric shock accident may happen.
2. When you connect wire to the power input connectors or signal input connectors, the moment of the No.20 AWG (0.50 mm2) screw tweaked to the connector is 0.74n.m - 0.9n.m. Otherwise the connectors may be damaged or get fire.
3. Please comply with the rated specification. Otherwise it may cause electric shock or fire, and damage the product.
4. Do not use water or oil base cleaner to clean the product. Otherwise it may cause electric shock or fire and damage the product.
5. This product should be avoid working under the circumstance that is flammable, explosive, moist, under sunshine, heat radiation and vibration. Otherwise it may cause explosion.
6. In this unit it must not have dust or deposit, otherwise it may cause fire or mechanical malfunction.
7. Do not use gasoline, chemical solvent to clean the cover of the product because such solvent can damage it. Please use some soft cloth with water or alcohol to clean the plastic cover.

1. Model Illustration

CI□□-R C□0

- 0: Without Communication   8: With Communication
- Display Digit: 6: 6 digit
- Alarm Output: B: One Aalrm   C: Two Alarm
- Control Ouput: R: Relay Output   S: SSR Output
- Power Supply: Blank: Switching Power   F: 24VDC
- Dimension(mm): 4: 48H x 48W x 94.5L   7: 72H x 72W x 94.5L
  8: 48H x 96W x94.5L   16: 80H x160W x83L
- CI Series Multi-function Counter / Timer User Manual

24VDC Power Supply can be ordered

2. Model Type

No.	Model	Size (mm)	Output	Display Digit	Alarm Output	Batching Output	Communication
1	CI16-RC60	80H×160W	Relay Output	6	2	One Relay	NO
2	CI16-RC68	80H×160W	Relay Output	6	2	One Relay	RS485
3	CI8-RC60	48H×96W	Relay Output	6	2	One Relay	NO
4	CI8-RC68	48H×96W	Relay Output	6	2	One Relay	RS485
5	CI7-RC60	72H×72W	Relay Output	6	2	One Relay	NO
6	CI7-RC68	72H×72W	Relay Output	6	2	One Relay	RS485
7	CI4-RC60	48H×48W	Relay Output	6	2	NO	NO
8	CI4-RC68	48H×48W	Relay Output	6	2	NO	RS485

3. Technical Specification

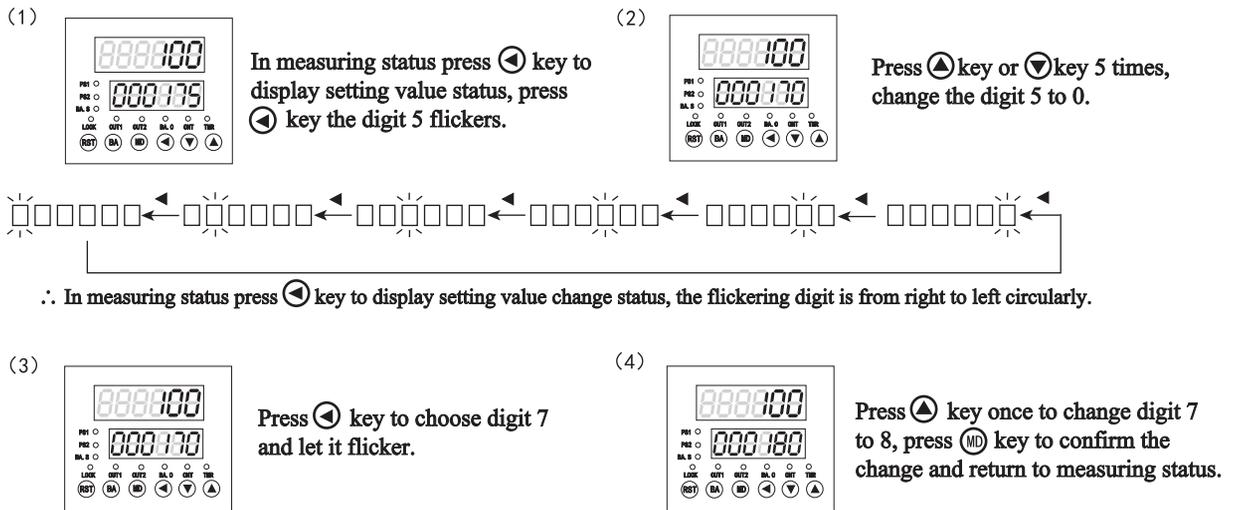|		
Series		CI
Display		Dual Line 6 digit
Power Supply		100~240V AC/DC
Fluctuation range of Allowed Voltage		90~110% of Rated Voltage (AC Power)
Input Frequency of INA, INB		1Hz、30Hz、1KHz、5KHz、10KHz can be choosed
Width of Input Pulse		INA,INHIBIT,RESET,BATCH RESET,can choose 1ms or 20ms
Input		Voltage Input: input impedance 5.4KΩ,"H": 5~30VDC "L":0~2VDC
		No-voltage Input: for Short-circuit impedance is 1KΩ, Residual Voltage: Max 2v dc, Open-circuit impedance Max 100KΩ
One-shot Output	Counter	10/50/100/200/500/1000/2000/5000ms
	Timer	10/50/100/200/500/1000/2000/5000ms
Control Output	Contact Capacity	NO:250VAC 3A Impedance NC：250VAC 2A Impedance
	SSR Capacity	Max: 30VDC ， Max: 100mA
Data Saving Time		Ten Years
Power of External Sensor		12VDC±10% Less than 100mA
Ambient Temperature		-10°C~50°C Unfreezing State
Storage Temperature		-25°C~65°C Unfreezing State
Ambient Humidity		35-85%RH
Time Accuracy		Active time function Voltage false Setting False Temperature False Power On ：±0.05%±0.05sec With Signal ：±0.05%±0.03sec
Dielectric Strength		Min: 100MΩ (at500VDC)
Dielectric		2000V AC 50/60Hz one minute
Interference (AC Power)		±2kV Square-wave generator interference (width of pulse: 1us)
Vibrate	Mechnical	Amplitude:0.75mm Frequency: 10-55Hz X,Y,Z each direction for one hour
	Fault	Amplitude:0.5mm Frequency: 10-55Hz X,Y,Z each direction for ten minutes
Impact	Mechnical	(about 30G) X,Y,Z each direction for three times
	Fault	(about 10G) X,Y,Z each direction for three times
Using Life	Mechnical	more than 10,000,000 times
	Electrical	more than 100,000 times (NO: 250V AC 3A Load NC: 250V AC 2A Load)

4. Panel Indication

PS1: Lower line displays OUT1 setting value
PS2: Lower line displays OUT2 setting value
BA.S: Upper line displays batch counting value
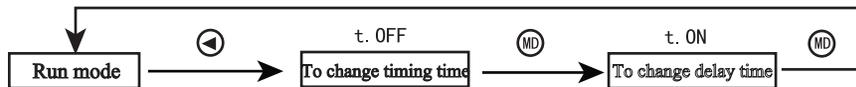   Lower line displays batch setting value
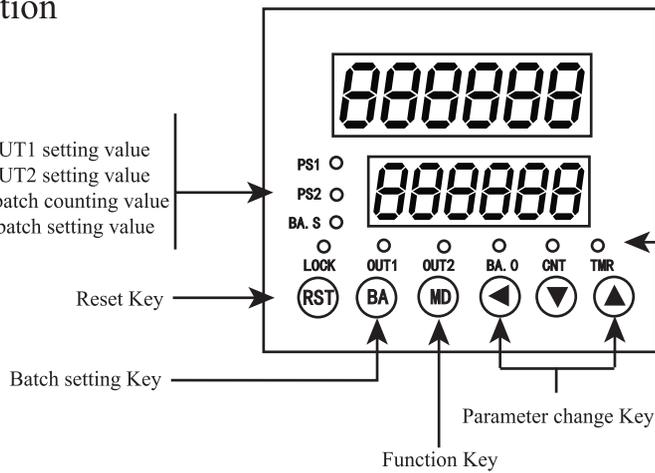
Lock: Button lock indication (CI16, CI8 do not with this lamp)
OUT1, OUT2: OUT1 or OUT2 output indication
BA.O: Batch output indication (CI3, CI4 do not with this lamp)
CNT: In the counting status
TMR: In the timing status

Reset Key

Batch setting Key

Parameter change Key

Function Key

5. Operation Instruction

1. How to change counter setting value (Example: change the setting calue from 175 to 180)

(1) In measuring status press ◄ key to display setting value status, press ◄ key the digit 5 flickers.

(2) Press ▲ key or ▼ key 5 times, change the digit 5 to 0.

∴ In measuring status press ◄ key to display setting value change status, the flickering digit is from right to left circularly.

(3) Press ◄ key to choose digit 7 and let it flicker.

(4) Press ▲ key once to change digit 7 to 8, press MD key to confirm the change and return to measuring status.

2. How to change timer setting value (Output mode is FLK)

Run mode → (◄) → To change timing time (t.OFF) → (MD) → To change delay time (t.ON) → (MD)

∴ In setting status, the menu will return to timing status automatically if no operation within 60 seconds.

How to change t.OFF time to 50sec from 30sec，change t.ON time to 20sec from 40sec (output mode: FLK timing range: 0.1s to 99999.9s).

(1) In timing status press ◄ key to display t.OFF setting status, press ◄ key the digit 3 flickers.

(2) Press ▲ key twice to change digit 3 to 5, press MD key to confirm the change and display t.ON setting status.

∴ In timing status press ◄ key to display setting value change status, the flickering digit is from right to left circularly.

(3) Press ◄ key to choose digit 4 and let it flicker.

(4) Press ▼ key twice to change digit 4 to 2, press MD key to confirm the change and return to timing status.

6. Batch Counting and Batch Preset

1. Batch Counting Action
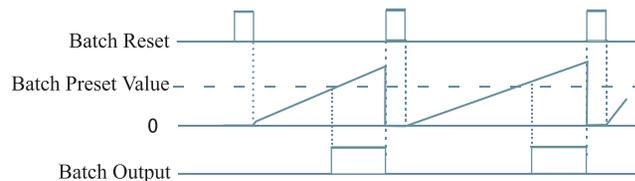
◆Batch counting

Batch counting value counts up, it will not be reset unless external BATCH reset signal is applied.
When batch counting value counts over 999999, it will be reset to 0 and counts again.
Batch couting value is not reset by front RST key or external reset signal.

(1) Batch counting in Counting mode.
   Batch alarm outputs when counting alarm output quantity is equal to the batch setting value.
   When batch control output is used, the time interval of counting up process is bigger than 10mS.

(2) Batch counting in Timing mode.
   Batch alarm outputs when timing alarm output quantity is equal to the batch setting value.
   In FLK output mode, the counting value of Batch counter is counting up, when Toff and Ton setting time passes.

◆Batch output action
If batch output is ON, it will keep ON status until batch reset signal is applied.
If batch output is ON, after power off and then power on again, batch output keeps ON status until external reset signal is applied.

2. How to change batch setting value
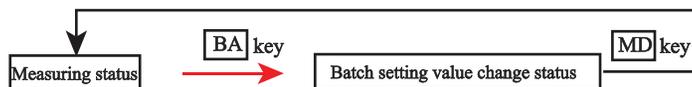
◆ In measuring status press BA key to display batch setting value change status. The method for changing batch setting value is the same as the one for changing counting setting value. Press ◄ key to select the digit to be changed to let it flicker, and then press ▲ ▼ key to change the value. Press MD key to confirm and menu returns to measuring status.
   After changing the value, the upper LED will display the current batch counting value.
◆ When batch setting value is bigger than batch counting value, if the setting value is changed (equal or smaller than the counting value, the batch output takes action.
◆ If batch setting value is 0, the batch output is in OFF state.
◆ When menu is batch setting value change status, if no button operation within 60 second, the menu will return to measuring status.

7. Application of Prescale Function

E.g.:Pulse number P is a number of pulse created by rotary encoder,L is the measured length,,
   Prescale value is equal to L divides P.

To use counter and rotary encoder to control length
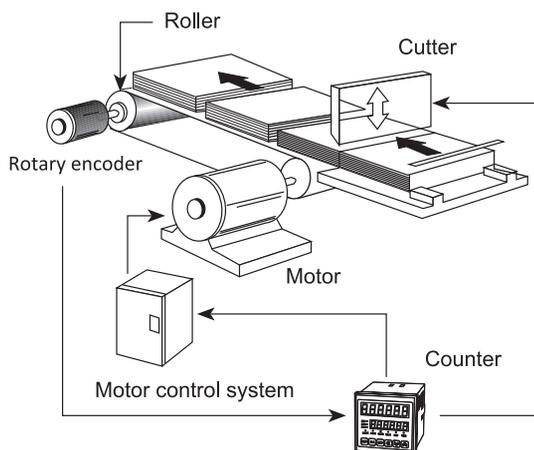
$$Prescale\ Value = \frac{\pi \times Diameter\ of\ the\ roller\ (D)}{Pulse\ numbers\ per\ 1\ revolution\ of\ the\ encoder}$$

$$= \frac{3.1416 \times 22}{1000}$$

$$= 0.069mm/pulse$$

Set 0.069 of prescale value at prescale value set mode.

The diameter of the roller connected to the rotary encoder is 22mm.
The pulse number per 1 revolution of the encoder is 1000.

8. Lock Key Setting

Lock Key be used for avoiding mis-operation
LoFF (LOCK OFF) : Cancel Lock Key Function.
LoC.1 (LOCK LEVEL1) : Lock RST Key
LoC.2 (LOCK LEVEL2) : Lock ◄ and ▲ and ▼ Key
LoC.3 (LOCK LEVEL3) : Lock RST and Lock ◄ and ▲ and ▼ Key

9.Setting of Counter Function Modes

Setting Mode	Select setting (▼ 、▲)
Input Type (In)	→ U→ d→Ud-A→Ud-b→Ud-C ⌐ If the output Mode is S, T and D, then input mode just can choose Ud-A, B, C
Max Counting Speed (CPS)	→ 1→30→1K→5K→10K ⌐ Counting Speed means the highest frequency of INA and INB allowed input, if the setting value is 5K, the error will be existed if the input signal over than 5K.
Output Mode (oUt)	※Up Or Down Input Mode → F→n→C→r→K→P→q→A ⌐ ※Up/Down - A、B、C Input Mode → F→ n→C→ r→K →P→q→A→S→t→d ⌐
OUT2 Output Time (oUt2)	→ 10→50→100→200→500→1000→2000→5000 ⌐ Units: ms
OUT1 Output Time (oUt1)	→ 10→50→100→200→500→1000→2000→5000→HoLd ⌐ Units: ms
Input Logic (SIG)	▲ or ▼ : Choose NPN or PNP input type
Min Reset Time (rSt)	1 ⇌ 20 Min Signal width of RESET (mm)
Decimal Point (dP)	→ - - - - - → - - - - → - - - → - - - - - ⌐ * * *
Prescale Value (SCL)	◄ Key: Shift the flickering digit ▼、▲ Key: Change the Prescale value Setting range of prescale value is 0.001--99.999 Prescale value: It is actual value of length and position
Memory Retention (dAtA)	CLrE ⇌ rEC CLrE: Power OFF Counting Value Reset rEC: Power OFF Counting Value Save
Baud Rate (bAUd)	4800 ⇌ 9600 Communication Baud is 4800 and 9600 can be choosed
Address (Add)	Communication Address: Can be setting freely between 1-247
Lock Key (LoCK)	→ L.oFF→LoC.1→LoC.2→LoC.3 ⌐
Counter/ Timer (C-t)	CoUn ⇌ tImE CoUn: Couner tImE: Timer

1. If you choose F or N output mode,, when the counting value reached setting value,the output will be kept, there is no "OUT2 output time" menu in function setting mode.

2. If the output Mode is S, T and D, then input mode just can choose Ud-A, B, C. If the input mode want to choose UP/DOWN, then output mode just can chosoe other modes except S,T,D.

3. If the output mode choose D, when counting frequency over than 1Kcps, please choose SSR output.

4. When the Max counting speed is 5Kcps or 10Kcps, if change output mode to D, counting speed will automatically choose 1Kcps.

5. In the mode of function setting,the external input signal can be accepted, after exit, display value and output will be reset automatically.

10. Time Function Setting

Setting Menu	Setting ▲ ▼
Time Range	SEC 9999.99 → SEC 99999.9 → SEC 999999 → m̄ S 99.59.99 → m̄ S 999.59.9 (down) → m̄ 99999.9 → m̄ 999999 → H m̄ S 99.59.59 → H m̄ 9999.59 (back to start)
Up/Down Mode (U-d)	U ⇄ d Up: from 0 increase to the setting value Down: from setting value decrease to 0
Output Mode (oUt)	ond → ond.1 → ond.2 → FLE → FLE.1 → FLE.2 → int → int.1 → oFd (loops back)
Output Time (oUt.t)	10 → 50 → 100 → 200 → 500 → 1000 → 2000 → 5000 → Hold (loops back) Unit: ms Output delay time choose
Input Logic (SiG)	▲ and ▼ : Input mode choose Voltage Input：PnP No voltage input：nPn
Signal Time Input (In-t)	1 ⇄ 20 (Unit:ms) INA、INHIBIT、RESET、BATCH RESET choose the Min width of signal
Baud Rate (bAud)	4800 ⇄ 9600 Communication Baud is 4800 and 9600 can be choosed
Address (Add)	Communication Address: Can be setting freely between 1-247
Lock key (LoCk)	L.oFF → LoC.1 → LoC.2 → LoC.3 (loops back)
Counter/Timer (C-t)	CoUn ⇄ tm̄E CoUn：Counter tm̄E：Timer

※When it is in the function setting mode, input signal and output are still going on, but they will be reset when the counter exits the setting mode.
※In case of output mode is FLK, INT, INT1, OFD, there is no output time setting in the function setting mode.
※When in the function setting mode, if no key is touched for 60 sec., the timer will return to RUN mode.

11.Timing Range

11.Timing Range	Function Setting	
	Display	Range Display
0.01s～9999.99s	SEC	9999.99
0.1s～99999.9s	SEC	99999.9
1s～999999s	SEC	999999
0.01s～99m59.99s	m̄S	99.59.99
0.1s～999m59.9s	m̄S	999.59.9
0.1m～99999.9m	m̄	99999.9
1m～999999m	m̄	999999
1s～99h59m59s	H m̄S	99.59.59
1m～9999h59m	H m̄	9999.59

12. Input Operation Mode For Counter

※ Ⓐ : Over Min. signal width, Ⓑ : Over 1/2 of Min. signal width.

Input Type	Illustration	Note
U (Add)	INA, INB, Counting Value (0 1 2 3 4 5), No Counting	INA: Counting Input INB: Control Input INB=L; INA pulse input add count INB=H; INA forbid to count
	INA, INB, Counting Value (0 1 2 3 4 5)	INA: Control Input INB: Counting Input INA=H; INB pulse input add count INA=L; INB forbid to count
D (Minus)	INA, INB, Counting Value (n, n−1, n−2, n−3, n−4, n−5), No Counting	INA: Counting Input INB: Control Input INB=L; INA pulse input minus count INB=H; INA forbid to count
	INA, INB, Counting Value (n, n−1, n−2, n−3, n−4, n−5), No Counting	INA: Control Input INB: Counting Input INA=H; INB pulse input minus count INA=L; INB forbid to count
Ud-a (Add/ Minus-A) Order Input	INA, INB, Counting Value (0 1 2 3 2 1 2 3)	INA: Counting Input INB: Control Input INB=L; INA pulse input add count INB=H; INA input pulse minus count
Ud-b (Add/Minus-B) Sole Input	INA, INB, Counting Value (0 1 2 3 2 1 1 2 3)	INA input pulse, add count INB input pulse, minus count
Ud-c Phase Difference Input	INA, INB, Counting Value (0 1 2 3 2 1 2 3)	INA before, INB add count INA delay, INB minus count Phase difference input (for rotary encoder)

When using rotary encoder's A, B ohase output, please connect meter's INA, INB input terminal, and turn the input mode to Ud-C.

Symbol / Input Type	Voltage Input (PNP)	Terminal Input (NPN)
H	5−30VDC	Short Circuit
L	0−2VDC	Open Circuit

13. Output Operation Mode For Counter

One-shot Output (OUT1 output)
Hold Output
One-shot Output（OUT2 Output）
Hold Output
Simultaneous Output

	Input Mode			Operation after reached the setting
	Up	Down	Up/DownA, B, C	
F				Display will continue to increase or decrease, output will be kept to the reset input
N				Display and output will be kept to the reset input
C				Display value will return to the start status automatically, output delay will return to the initial status after reached the setting time. (Output activity is repeat single output)
R				Display value and output will automatically return to the initial status after keep to the delay setting time. (Output activity is repeat single output)
K				Display value will continus to increase or decrease until reset input, output delay will return to the initial status after reached the setting time. (Output activity is repeat single output)
P				Display value kept to the delay time, will display the next cycle. (In the delay time, the next cycle counting and timing from initical status) (Output activity is repeat single output)
Q				Display value will continus to increase or decrease within output delay time, display value and output will return to the initial status after output delay reached the setting time. (Output activity is repeat single output)
A				Display value and OUT1 output will be kept to the reset input, OUT2 output will return to the initial statusafter reaching the setting time. (Output activity is repeat single output)

Each cell of the Input Mode columns contains waveform diagrams labeled Reset, 999999, Display SV2/SV1, 0, OUT1 Output, OUT2 Output.

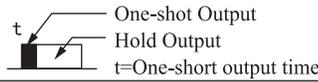|	Up/DownA, B, C	Operation
S	RESET / 999999 / SV2 / SV1 / 0 / -999999 / OUT1 / OUT2 (OUT)	OUT1 and OUT2 meet following conditions,will keep ON status: Display Value≥Setting Value 1 Display Value≥Setting Value 2
T	RESET / 999999 / SV2 / SV1 / 0 / -999999 / OUT1 / OUT2 (OUT)	OUT1 keeps OFF status when display value is smaller than the preset 1 value, but if preset vlaue is "0", OUT1 keeps ON status. When display value is smaller than the preset value "2", OUT2 keeps ON stataus
D	RESET / 999999 / SV2 / SV1 / 0 / -999999 / OUT1 / OUT2 (OUT)	When display value = setting value OUT1 and OUT2 keeps ON status When the speed of counter meter setting to 1kcps, should use SSR output

14. Operation Mode Change

Measuring mode (counting or timing status)

MD Press for 3 seconds

Counting Mode:

- Input Mode (IN)
- MAX counting speed (CPS)
- Output Mode (OUT)
- Output Time (OUT2)
- Output Time (OUT1)
- Input Logic (SIG)
- Min Reset Time (RST)
- Decimal Point (dP)
- Prescale Value (SCL)
- Counting Value Save (DATA)

MD Press for 3 seconds

Timing Mode:

- Time Range
- Up/Down Mode (U-D)
- Output Mode (OUT)
- Output Time (OUT-T)
- Input Logic (SIG)
- Input Signal Time (In-T)

- Baud Rate (BAUD)
- Address (ADD)
- Lock key (LOCK)
- Counter / Timer (C-T)

※ Under the mode of Counting can directly change to Timing mode;

※.In the mode of function setting, counter will return to the measuring status automatically after without any operation for 60 seconds.
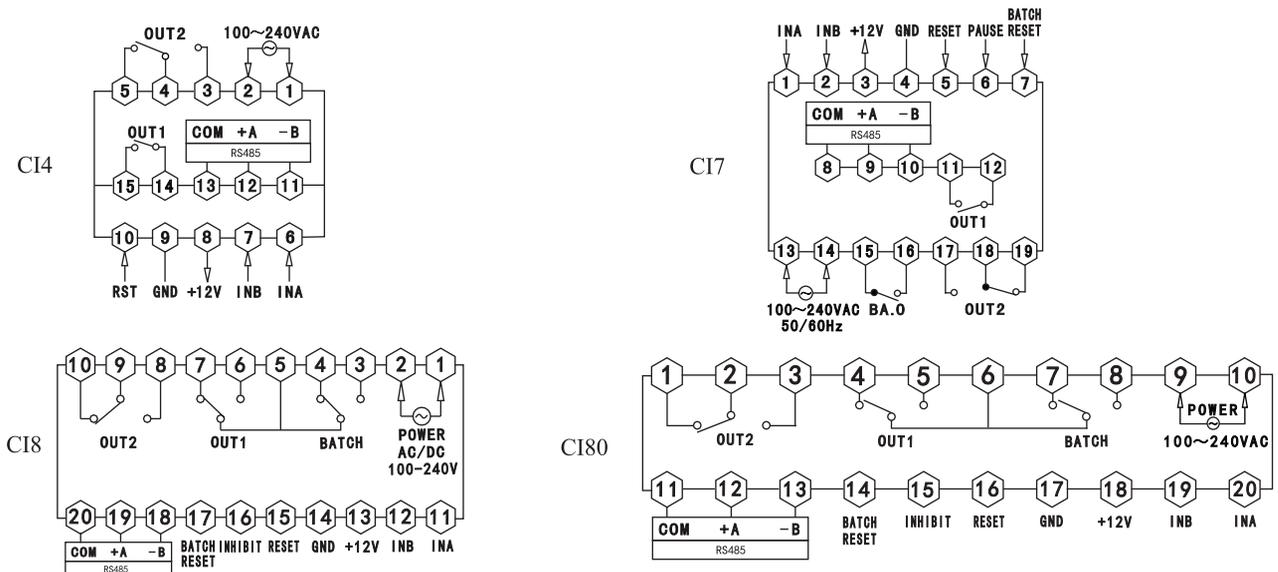
Timer Output Operation Mode

One-shot Output
Hold Output
t=One-short output time

Hold Output

Output Mode	Time and Sepuence	Activation
ond (OND)	SIGNAL ON DELAY (POWER OFF RESET) Power INA INHIBIT RESET OUT-2 (Output) up — UP (Setting Time) — 0 Display Down — Down (Setting Time) — 0	1. Timer starts when INA signal turns ON; when INA signal turns OFF, time reset. 2. Timer starts when power turns ON and when reset turns OFF during INA signal ON. 3. Control output operate decide by hold or One-short time. Power INA OUT2 (Output) — T:preset time
ond.1 (OND. 1)	SIGNAL ON DELAY 1 (POWER OFF RESET) Power INA INHIBIT RESET OUT-2 (Output) up — UP (Setting Time) — 0 Display Down — Down (Setting Time) — 0	1. Timer starts when INA signal turns ON; when INA signal turns OFF, timing keeps on. 2. counting starts when power turns ON , Reset signal OFF and INAsignal ON 3. Control output operate decide by hold or One-short time. Power INA OUT2 (Output) — T:preset time
ond.2 (OND. 2)	POWER ON DELAY (POWER OFF COUNTING KEEP) Power INA INHIBIT RESET OUT-2 (Output) up — UP (Setting Time) — 0 Display Down — Down (Setting Time) — 0	1. Timing starts when power on and the data will be keeped when power off. 2. counting starts when reset signal OFF ,Pause signal OFF and power ON 3. Control output operate decide by hold or One-short time. HOLD Power OUT2 (Output) — T:preset time
FLK (FLK)	FLCKER (Power OFF Reset) Power INA Toff Ton Tb Ton Toff Tor Toff Ton Toff INHIBIT RESET OUT-2 (Output) up — UP (Setting Time) — 0 Display Down — Down (Setting Time) — 0	1. Timing starts when INA signal turns on, if INA signal is applied repeatedly, only initial signal is recognized. 2. When power ON , reset signal is OFF and INA signal ON, it starts to timing. 3. Control output operation is decided by hold output, when the time comes to Toff setting time or Ton setting time, output is ON or OFF. (No One-shot output) 4. Each Ton time and Toff time should be setted sepertately. 5. When using terminal output, the setting time must over than 100ms. Power INA OUT2 (Output) — Toff Ton Toff
FLK.1 (FLK. 1)	FLCKER1 (Power OFF Reset): Hold output Power INA INHIBIT RESET OUT-2 (Output) up — UP (Setting Time) — 0 Display Down — Down (Setting Time) — 0	1. Timing starts when INA signal turns on, if INA signal is accepted, only initial signal is recognized. 2. When power ON , reset signal is OFF and INA signal ON, it starts to timing. 3. Control output operate decide by hold output, when using terminal output, the setting time must over than 100ms. Power INA OUT2 (Output) — T T T T: Setting Time
	FLCKER1 (Power OFF Reset): One-shot output Power INA INHIBIT RESET OUT-2 (Output) up — UP (Setting Time) — 0 Display Down — Down (Setting Time) — 0	1. Timing starts when INA signal turns on, if INA signal is accepted, only initial signal is recognized. 2. When power ON , reset signal is OFF and INA signal ON, it starts to timing. 3. Control output operate decide by one-shot output, when using terminal output, the setting time must over than 100ms. Power INA OUT2 (Output) — T T T

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Mode	Diagram	Description
FL2.2 (FLK)	**FLCKER2 (POWER OFF HOLD): HOLD OUTPUT** — Power, INA, INHIBIT, RESET, OUT-2 (Output), UP (Setting Time) 0, Display up Down, Down (Setting Time) 0	1. Timing starts when INA signal turns on, if INA signal is accepted, only initial signal is recognized. 2. Control output operate is decided by Hold output which will be keeped to the next setting value. 3. When power ON , reset signal is OFF and INA signal ON, it starts to timing. 3. when using terminal output, the setting time must over than 100ms. Power, INA, OUT2 (Output), HOLD, T: Time setting
	FLCKER2 (POWER OFF HOLD): One-shot OUTPUT — Power, INA, INHIBIT, RESET, OUT-2 (Output), UP (Setting Time) 0, Display up Down, Down (Setting Time) 0	1. Timing starts when INA signal turns on, if INA signal is accepted, only initial signal is recognized. 2. Control output operate is decided by One-shot output which will be keeped to the setting value. 3. When power ON , reset signal is OFF and INA signal ON, it starts to timing. 3. when using terminal output, the setting time must over than 100ms. Power, INA, OUT2 (Output), HOLD, T: Time setting
int (INT)	**INTERVAL (POWER/SIGNAL RESET)** — Power, INA, INHIBIT, RESET, OUT-2 (Output), UP (Setting Time) 0, Display up Down, Down (Setting Time) 0	1. Timing starts when INA signal turns to ON. 2. Timing reset when INA signal turns to OFF. 3. When power ON, reset signal OFF and INA signal ON, it starts to timing. 4. Display value and Control output will reset automatically after reach the setting time. 5. In the process of timing, control output is ON. Power, INA, OUT2 (Output), T: Time setting
int.1 (INT. 1)	**INTERVAL (POWER OFF RESET)** — Power, INA, INHIBIT, RESET, OUT-2 (Output), UP (Setting Time) 0, Display up Down, Down (Setting Time) 0	1. When INA signal turns to ON, control output will turns to ON and starts to counting. 2. If INA signal is repeatedly showed, only initial signal is recognized. 3. When power ON, reset signal OFF and INA signal ON, it starts to timing. 4. Display value and Control output will reset automatically after reach the setting time. 5. In the process of timing, the INA signal keeps ON. Power, INA, OUT2 (Output), T: Time setting
oFd (OFD)	**INTERVAL 1 (POWER OFF RESET)** — Power, INA, INHIBIT, RESET, OUT-2 (Output), UP (Setting Time) 0, Display up Down, Down (Setting Time) 0	1. When power ON and reset signal OFF, in the time of INA signal ON, control output will keep ON status. 2. Display value and Control output will reset automatically after timing reach the setting time. Power, INA, OUT2 (Output), T: Time setting

15.Connection Drawing

CI4
OUT2 100~240VAC
5 4 3 2 1
OUT1 COM +A −B RS485
15 14 13 12 11
10 9 8 7 6
RST GND +12V INB INA

CI7
INA INB +12V GND RESET BATCH PAUSE RESET
1 2 3 4 5 6 7
COM +A −B RS485
8 9 10 11 12
OUT1
13 14 15 16 17 18 19
100~240VAC BA.O OUT2
50/60Hz

CI8
10 9 8 7 6 5 4 3 2 1
OUT2 OUT1 BATCH POWER AC/DC 100~240V
20 19 18 17 16 15 14 13 12 11
COM +A −B BATCH INHIBIT RESET GND +12V INB INA RS485 RESET

CI80
1 2 3 4 5 6 7 8 9 10
OUT2 OUT1 BATCH POWER 100~240VAC
11 12 13 14 15 16 17 18 19 20
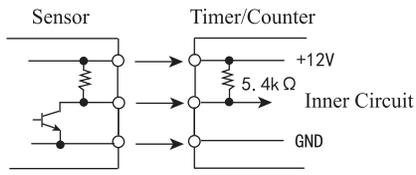COM +A −B RS485 BATCH RESET INHIBIT RESET GND +12V INB INA

Note: If there is any change, please subject to the drawing on the meter!
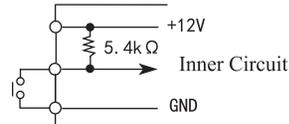
16. Input Connection

1. Input logic: without voltage input (NPN)

(1). SSR input
Standard sensor: NPN output

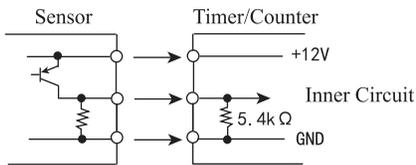(2) Terminal Connection
Timer/Counter

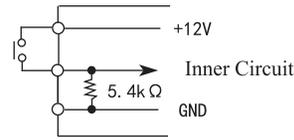
counting speed: 1 or 30cps setting (counter)

2. Input logic : voltage input (PNP)

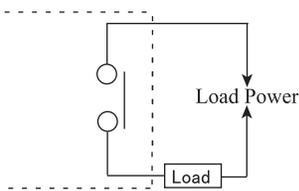(1). SSR input
Standard sensor: NPN output
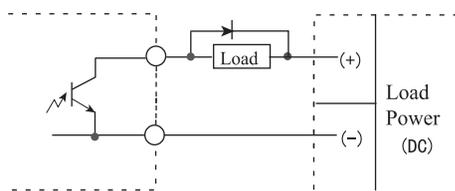

(2) Terminal Connection
Timer/Counter

counting speed: 1 or 30cps setting (counter)

17. Output Connection
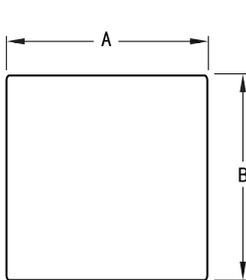
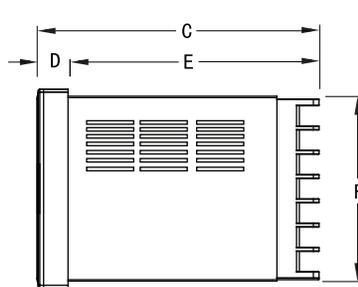Relay Output
Timer/Counter

SSR Output
Timer/Counter

SSR Output:
1. Please use adaptable load and power, SSR output can not over then ON/OFF, capacity (30VDC, less than100mA)
2. Making sure that the power connected in the right way,
3. When using Inductive load(Relay, etc), Filter circuit(Diode, etc) must connect to the load ends
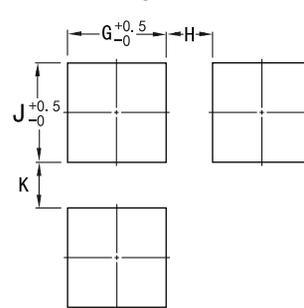
18. Dimension

Panel Size | Side Face Size | Mounting Size

Model	A	B	C	D	E	F	G	H(Min)	J	K(Min)
CI4:(48*48)	48	48	97.5	3	94.5	45	45.5	25	45.5	25
CI7:(72*72)	72	72	97.5	3	94.5	67	67.5	25	67.5	25
CI8:(48*96)	96	48	97.5	3	94.5	44.5	90	25	45	25
CI16:(160*80)	160	80	96	13	83	155	76	30	155.5	30