## CA-41K

## Economic Counter

 with Dual Bright LED Display- $72 \times 72 \mathrm{~mm}$ dimension, providing single preset.
- Contact outputs available
- Up, Up/Down count mode switchable

- On-line change of set value possible


## Ordering Information

| Model No. | CA-41K-N | CA-41K-P |
| :---: | :---: | :---: |
| Input Type | Non-voltage (NPN) | Voltage (PNP) |
| Power Supply | AC $100 \mathrm{~V} \sim 240 \mathrm{~V} ; 50 / 60 \mathrm{~Hz}$ |  |

## Specification

- General Feature

| Model | CA-41K-N | CA-41K-P |
| :---: | :--- | :--- |
| Mounting | Flush mounting |  |
| Degree of Pollution | CAT II |  |
| Degree of Installation | CAT II |  |
| Digits \& Display | $-999 \sim 9999 ; 0.56 " H(14 m m)$ red LED Present Value, 0.3 "H $(7.6 \mathrm{~mm})$ green LED Set Value |  |
| Preset Range | $0 \sim 9999$ |  |
| Count Mode | Up with Gate input, Up/Down with quadrature inputs |  |
| Input Signals | Non-voltage: Via opening and closing contact | Voltage: Via signals HI and LO voltage |
| (A_In, B_In, Reset) | By EEPROM when power failure, keeping 10 years at least $\circ$ |  |
| Data Backup |  |  |

Rating

| Power Supply | AC 100V ~ $240 \mathrm{~V} ; 60 / 50 \mathrm{~Hz} \pm 10 \%$ |  |
| :---: | :---: | :---: |
| Power Consumption | 8VA Max. |  |
| Max. Counting Speed | $25 \mathrm{~Hz}, 300 \mathrm{~Hz}$, 3kHz (Selectable) |  |
|  | Non-voltage Inputs ON impedance <br>  <br>  <br> ON residual voltage <br> OFF impedance | $\begin{aligned} & 2 \mathrm{k} \Omega \text { max. (approx. } 2 \mathrm{~mA} \text { at } 0 \Omega \text { ) } \\ & 3 \mathrm{~V} \text { max. } \\ & 900 \mathrm{k} \Omega \text { min. } \end{aligned}$ |
| Inp | Voltage InputsHigh level <br> Low level <br> Input resistant | $\begin{aligned} & 6 \text { to } 25 \mathrm{VDC} \\ & 2 \text { to }-12 \mathrm{VDC} \\ & \text { Approx. } 8.2 \mathrm{k} \Omega \\ & \hline \end{aligned}$ |
| Controls Output | Contact: 5A, 240VAC, resistive load (p.f=1). |  |
| DC Output for Sensor | +12v, 100mA MAX. |  |
| Ambient Operating Temperature | $-10 \sim 55^{\circ} \mathrm{C}$ with no icing |  |
| Storage Temperature | $-25 \sim 65^{\circ} \mathrm{C}$ with no icing |  |
| Ambient Operating Humidity | 35\% ~ 85\% RH |  |

## Operation

- Panel explanation

- Key Operation

| Key name | Operation |
| :---: | :--- |
| Timer key | Determines the output time of <br> control output. Range: 0.1 ~ <br> 9.9 sec. |
| Number Keys <br> $(1-4)$ | Change the corresponding <br> digit of the set value. |
| Reset key | Resets present value and <br> outputs |

Connection Diagram


Setting SET VALUE


Set Value is set to compare with Present Value. When Present Value $\geq$ Set Value, OUT2 output ON. Output Time and Output Mode are settable.

Press increment key 1 to 4 directly that corresponds to the place of Set Value.

## - Count Speed

Select the S1 filtering the count input to protect against erroneous counts due to interference.
Hi: approx.3kHz
Mi: approx. 300 Hz
Lo: approx. 20 Hz


## Count Mode

Shift the position of Switch S2-4 to determine the count mode: Up with Gate input, or Up/Down with quadrature inputs(quadrature).

Up count mode(S2-4=OFF),
A_IN receives the count input, and B_IN as a Gate function which interrupts the count function without resetting the counter. Counting resumes once the signal is removed 。


Up/Down count mode(S2-4=ON),
A_IN,B_IN inputs accepted the quadrature signals 。

## Output mode

The position of Switch S2-2 and S2-3 determine the output mode of $\mathrm{N}, \mathrm{R}, \mathrm{C}$.

## Mode N:

Present value runs continuously.
Outputs are maintained until RESET.


## Mode R:

Present value runs continuously.
Outputs are maintained until time out.


## Mode C:

Present value reset to zero, as it reaches SET2, and Outputs are maintained until time out.

## Installation



Dimension (unit: mm)

Panel thickness is from 1 mm to 5 mm .


## Mounting

The illustration at right shows how to mount the counter to a panel with the mounting bracket.
Insert the counter through the panel, and then insert the bracket in the bottom of the counter. Tighten the screws unit the counter is fixed.

## ※Around the mounted counter please do keep at least 20mm

 space for ventilating.
## Caution

1. Make sure that the supply voltage is applied to the counter all at once.
2. The included fuse (the fuse writes:" F 1 ", $2 \mathrm{~A} / 250 \mathrm{~V}$ ) must be changed by technicians.
3. The counter, input signal lines, and the input sensors must be separated as far as possible from any sources of electrical noise, such as
 high-tension cable.
4. The circuit breaker or switch of the final equipment or the like shall disconnect both lines of the counter from its power source.
5. The counter is a built-in component during installation the relevant requirement shall be maintained.
6. For the permanent connection to the power supply, 18AWG wire with U-terminal shall be used.
