## ANLY COUNTER

## H5KLR mULTI-FUNCTION DIGITAL COUNTER



## CHARACTERISTICS :

- Proximity and photoelectric switch compatible
- Protection against power surge and high frequency interference
- High-speed response allows 1,000 counts per second
- Online change of set value possible
- Four levels of key protection provided
- Count Up, Count Down or Count Up/Down mode user selectable
- Memory function available
- UL, C-UL recognized and CE certified


## SPECIFICATION :

| Operating voltage | AC/DC(V): 12~48 or 100~240 |
| :--- | :--- |
| Allowable operating <br> voltage range | $85 \sim 110 \%$ of rated operating voltage |
| Rated frequency | $50 / 60 \mathrm{~Hz}$ |
| Contact rating | 250 VAC 5 A (resistive load) |
| Count speed | MAX 30 cps or $1,000 \mathrm{cps}$ |
| Reset time | MAX 0.1 s |
| Power consumption | Approx. 2.5 VA |
| Life | Mechanical: $5,000,000$ times <br> Electrical: 100,000 times |
| Ambient temperature | $-10 \sim+50{ }^{\circ} \mathrm{C}$ |
| Ambient humidity | MAX $85 \% \mathrm{RH}$ |
| Weight | Approx. 120 g |

## TYPE SELECTION :

| Type | H5KLR-8 | H5KLR-8B | H5KLR-8M | H5KLR-11 | H5KLR-11M |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Count speed | Max 30 cps or 1,000 cps(user program selectable) |  |  |  |  |
| Output contact | 1C | 1a | 1 a | 2C | 1C |
| Memory | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ |
| External Reset | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ |
| Count Up | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ |
| Count Down | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ |
| Count Up/Down |  | $\bigcirc$ | $\bigcirc$ |  | $\bigcirc$ |

## CONNECTION :



Note: H5KLR-8 $\square$ : When using Proximity(Type NPN) or photoelectric switch, connect ( + ) to external 12VDC, ( - ) to pin (1) and (OUT) to pin (4). (OUT2) to pin (5) for H5KLR-8B only. Connect (+) to pin (5) and (OUT) to pin (4), (OUT2) to pin (3) for H5KLR-8M only.
H5KLR-11 : When using Proximity(Type NPN) or photoelectric switch, connect (+) to external 12VDC, (-) to pin (6) and (OUT) to pin (5)
H5KLR-11M: When using Proximity(Type NPN) or photoelectric switch, connect $(+)$ to pin (1), ( - ) to pin (3), (OUT) to pin (5) and (OUT2) to pin (6)

## TIMING CHART :

## Input Modes and Count Value

Please note: 1. "A" indicates minimum signal width; " $B$ " indicates $1 / 2$ of minimum signal width. Signals may not be counted if the minimums for $A$ and $B$ are not met. 2. H and L

| Signal | No-voltage input | Voltage input |
| :---: | :---: | :---: |
| H | Short circuit | $4.5 \sim 30$ VDC |
| L | Open circuit | $0 \sim 2$ VDC |

Up (increment) mode - Count at rising edge


Up (increment) mode - Count at falling edge


Up/Down A Command input mode


Down (decrement) mode - Count at rising edge


0
Down (decrement) mode - Count at falling edge



Up/Down B Individual input mode


## Up/Down C Phase difference input mode (See note 1.)



Input / Output Mode Setting



One-shot output from Output 2 $\square$ - Self-holding output Output mode $\mathbf{N}$ Outpu


Output mode F :




Output mode C: Present value is placed in resets start status as soon as count up is reached. The count up is not displayed. Outputs are 1 -shot and operate repeatedly. Output 1 is self-holding, and goes off after expiration of the 1 -shot period for Output 2 . One -shot time periods for Output 1 and 2 are independent.


Output mode $\mathbf{R}$ : Present value is placed in reset star status as soon as count up is reached. Outputs are 1 -shot and operate repeatedly. Output 1 is self-holding, and goes off after expiration of the 1 -shot period for Output 2 . One -shot time periods for Output 1 and 2 are independent.




Output mode K: Present value runs continuously. Output 1 is self-holding, and goes off after expiration of the 1 -shot period for Output 2. One-shot time periods for Output 1 and 2 are independent.




Output mode P : Present value display does not change during 1-shot time period, but reset start status is returned to a s soon as count is reached. Outputs are 1 -shot and operate repeatedly. Output 1 is self-holding, and goes off after expiration of the 1 -shot period for Output 2 . One -shot time periods for Output 1 and 2 are independent.



Up / Down A.B.C


## Output mode Q

: Present value runs continuously through 1 -shot time period and returns to reset start status immediately afterward. Outputs are 1 -shot and operate repeatedly. Output 1 is self-holding, and goes off after expiration of the 1 -shot period for Output 2 . One -shot time periods for Output 1 and 2 are independent.

Down



Output mode A: Present value and output 1 maintain status until reset. Output 1 and 2 operate independently.




## DIMENSIONS : (mm)

N type(Surface Mounting): Using P2CF-08, PF085A Socket or PF113A Socket(for H5KLR-11/11M use only)


Y type(Flush Mounting): Using Y50 Frame \& US-08 Socket, P3G-08 Socket or P3G-11 Socket(for H5KLR-11/11M use only)


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