

Thrumb Switch Setting Digital Timer

User Manual

HK Series

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Ordering Code

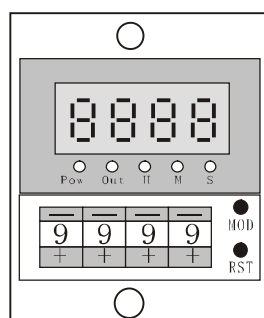
HK	HK Series digital timer relay	
Dimension (mm)	2	87H X 58W X 80L
	4	48H X 48W X 80L
Function	A	With one relay alarm function (with no menu setting and no power fail memory)
	B	With two relay alarm function (2 time limits or 1 time limit+ 1 instantaneous output)
	C	With one relay alarm function (With menu setting and data memory function)

Example: HK2-C, means that HK series timer relay, size 87H*58W. With one relay alarm.

Technical Data

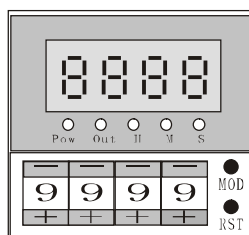
Supply voltage	220V AC $\pm$ 10V, 50/ 60Hz
Energy consumption	<3W
Repeat error	$\pm$ 0.2%
Reset time	<100mS
Contact load	250V AC/ 3A (Resistance load)
Timing range	0.01s ~ 99.99s; 0.1s ~ 999.9s; 0.01m ~ 99.99m; 0.1m ~ 999.9m
	0.01h ~ 99.99h; 0.1h ~ 999.9h; 1s ~ 99m 59s, 1m ~ 99h 59m
Delay time range	0.1s ~ 999.9s; 0.1m ~ 999.9m; 0.1h ~ 999.9h
Anti-interference	$\pm$ 2000V/ 1m
Operation environment	0°C ~ 50°C (with no condensation); 35 ~ 85%RH
Operation life	Mechanical life: above 5 million times; electrical life: 100 thousand times for rated load

Panel Illustration



HK2

HK4



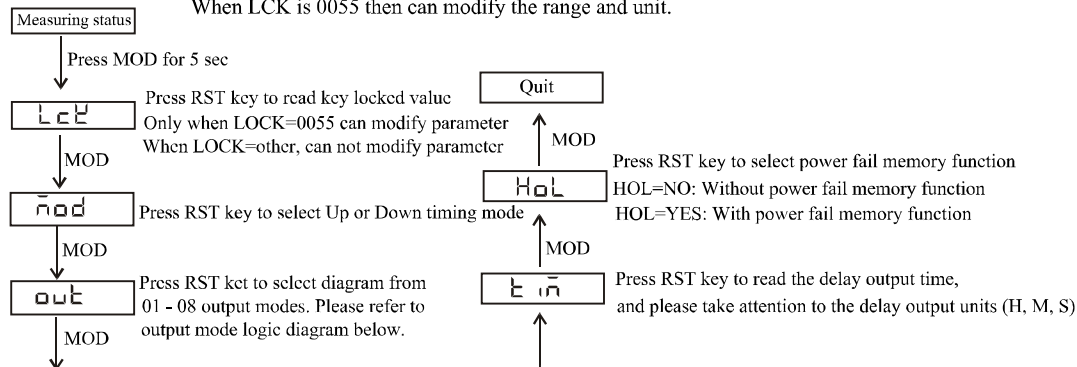
MOD	Set/ Confirm
RST	Reset
Upper line display	Measuring value display
Lower line display	Set value or parameter display
H	Hours indicator lamp
MOD	Minutes indicator lamp
S	Seconds indicator lamp
OUT	Alarm output indicator lamp

Operation Process

A. MOD: Set/ confirm RST: Reset key

B. Parameter setting process (Note: This process is applied to model HK□ C, for HK□ A & HK□ B, only have LCK setting function)

C. When in measuring mode, press MOD and RST key at the same time to change the timing units and range.
When LCK is 0055 then can modify the range and unit.



Output Mode Logic Relation Chart

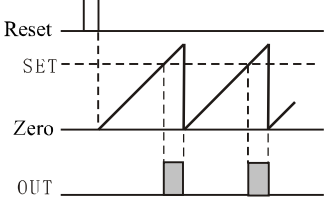
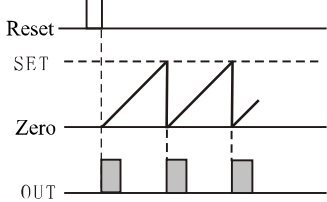
		Delay output	Maintain output
Output mode	01	02	
Figure			
Operation after reached the setting	Output and display value will be kept to the reset input. (START be used as pause function)	Display value and output reset automatically after reaches the output delay time. (START for pause)	
Output mode	03	04	
Figure			
Operation after reached the setting	Timer value reset after reaches setting value, relay will reset after reaches delay output time till to next reset input. (START for trigger)	Output keep till to output delay, display value will reset automatically after output delay. (START for pause)	
Output mode	05	06	
Figure			
Operation after reached the setting	Output and display value keep going after trigger signal input, and reset after reaches setting value. (START for pause)	Display value keep going, output kept till to reset input. (START for pause)	

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Output mode	07	08
Figure		
Operation after reached the setting	Timer value reaches setting value, after reached timer relay delay output and reset with display value. (START for pause)	Timer value reset automatically when reaches setting value, the relay become work till to next reset input. (START for pause)

Note: Reset pulse is RESET (#1, #4 terminal), trigger pulse is START (#1, #3 terminal).

Dimension Size

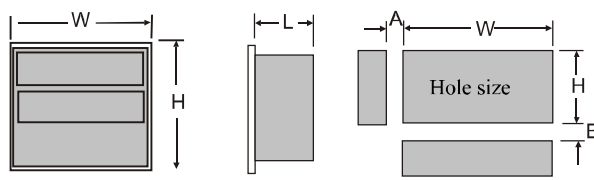
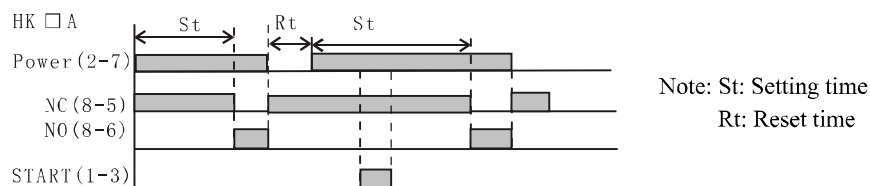
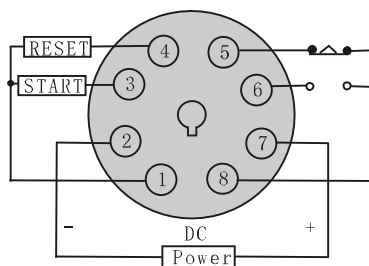
			
Model	Panel size H X W (mm)	Shell size H X W X L (mm)	Hole size A X B (mm)
HK2-	87 X 58	45 X 45 X 70	90 X 110
HK4-	48 X 48	45 X 45 X 70	46 X 46

Figure 1: Output timing logic diagram for HK □ A and HK □ B.

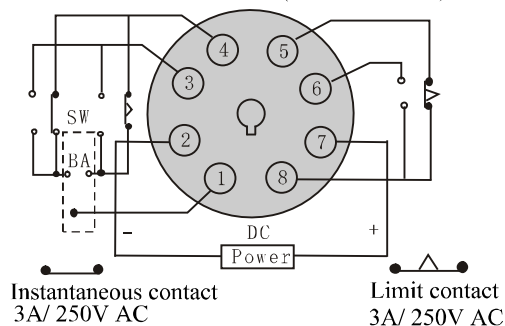


Terminal Connection

HK □ A, HK □ C
POWER: 100~240VAC 50/60HZ
Contact: 250VA/3A

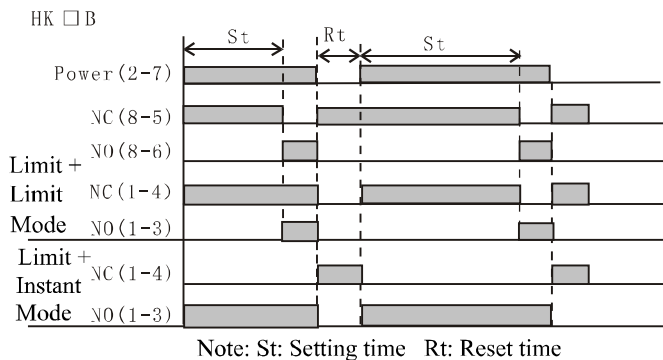


HK □ B
POWER: 100~240VAC 50/60HZ
Contact: 250VAC/ 3A (Resistance load)



Note: Please set the switch (SW) on the circuit board inside the meter.

Note: Please refer to the connection diagram on the product if any changes.



Caution

Installation conditions:

Atmospheric pressure: 86 ~ 106KPa

Operation Temperature: 0 ~ 50℃

Operation Humidity: 35% ~ 85% (with no condensation)

Installation warning:

1. Rapid changes in ambient temperature may cause condensation.
2. This product should be avoid working under the circumstance that is corrosive, flammable, explosive, moist, under sunshine, heat radiation and vibration. Otherwise it may cuase explosion.
3. In this unit it must not have dust or deposit, otherwise it may cause fire or mechanical malfunction.
4. Do not use gasoline, chemical solvent to clean the cover of the product because such solvent can damage it. Please use some soft colth with water or alcohol to clean the plastic cover.
5. Do not touch wire connectors when the power is on, otherwise you may get an electric shock.

Installation

1. Please make the holes on the shell according to meter hole dimensions . When there are more than one meter, the distance of two holes between the left meter and the right meter should large than 25mm and the distance of two holes between the upper meter and the lower meter should large than 30mm.
2. Insert the meter into the panel.
3. Insert the mounting bracket into mounting slot.
4. Push tight the mounting brackets so that the meter can combine with the shell firmly.

Maintenance

If there are any malfunction to the meter due to quality issues , the meter is guaranteed for a year.

But if the damage is cuased by improper use, customer need to pay approriate repairs charge.

YOTO company provide long-term maintenance for our meters.

Storage

Long time for storage, the instrument should be in proper packing and stored in indry and ventilated place .

Don' t place in an area surrounded by organic solvents or corrosive gases.