



H5KLR

MULTI-FUNCTION DIGITAL COUNTER

User's Manual

RESTRICTIONS ON USE

When using this product in applications that require particular safety or when using this product in important facilities, please pay attention to the safety of the overall system and equipment. Install fail-safe mechanisms, perform redundancy checks and periodic inspections and adopt other appropriate safety measures when it is necessary. This product is rated at Class II □.

SAFETY PRECAUTION

This manual uses the following symbols to ensure safe operation of this timer.

- WARNING** Warnings are indicated when mishandling this product might result in death or serious injury to user.
- CAUTION** Cautions are indicated when mishandling this product might result in minor injury to the user, or only physical damage to the timer.

WARNING

- Note this incorrect wiring of this product can damage it and lead to other hazards. Make sure the product has been correctly wired before turning the power ON.
- Before wiring, or removing / mounting the product, be sure to turn the power OFF. Failure to do so might cause electric shock.
- Do not touch electrically charged parts such as the power terminals. Doing so might cause electric shock.
- Do not disassemble the product. Doing so might cause electric shock or faulty operation.

CAUTION

- Use the product within the operating ranges recommended in the specification (temperature, humidity, voltage, shock, mounting direction, atmosphere and etc.). Failure to do so might cause fire or faulty operation.
- Firmly tighten the wires to the socket. Insufficient tightening of the wires to the socket might cause fire.

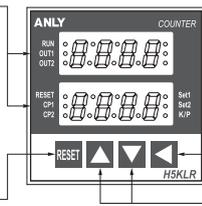
SPECIFICATIONS

Operating voltage	AC/DC : 12~48V / AC/DC : 100~240V
Allowable operating voltage range	85 ~ 110% of rated operating voltage
Rated frequency	50 / 60Hz
Contact rating	250VAC 5A (Resistive load)
Count speed	MAX 30 cps or 1,000 cps
Power consumption	Approx. 2.5VA
Life	Mechanical : 5,000,000 times / Electrical : 100,000 times
Ambient temperature	-10 ~ +50°C
Ambient humidity	MAX 85% RH
Weight	Approx. 120g

NAMES AND FUNCTIONS OF FACEPLATE

LEDs

- RUN: Counting indicator
- OUT1: Control output 1 indicator
- OUT2: Control output 2 indicator
- RESET: Reset indicator
- CP1: Signal input 1 indicator
- CP2: Signal input 2 indicator
- Set1: 1st set value indicator
- Set2: 2nd set value indicator
- K/P: Key protection indicator



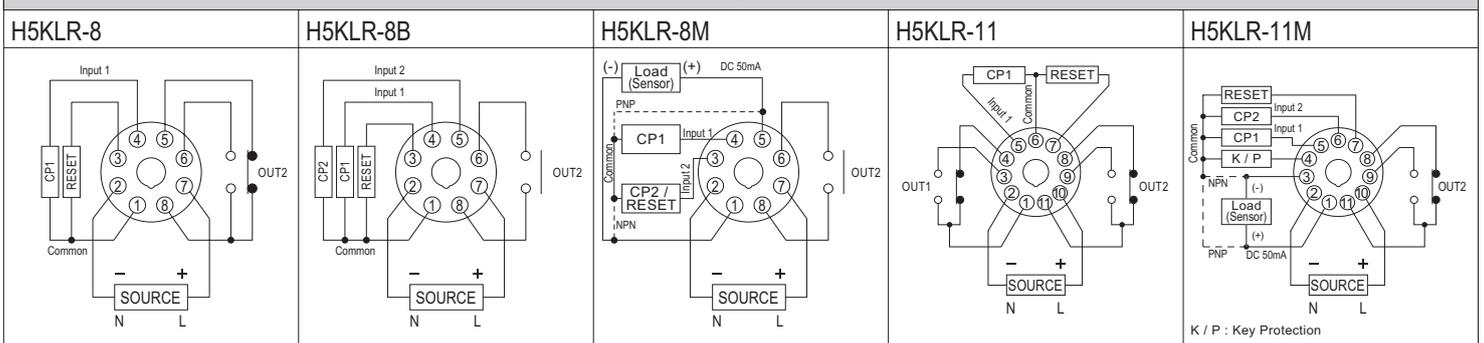
- Upper display**
Display PV values (current count values, etc.) or setup items.
- Lower display**
Display SV values (set count values, etc.) and other parameter values.

- ◀ key :** Performing arithmetic shift operations and switches the display. Hold down for at least 3 seconds to enter setting modes.
- ▶ key :** Used for incrementing or decrementing numeric values. And show the first set value or second set value.

SETTING PROCEDURE

COUNTER VALUES RESET	SWITCH TO THE MODE SETTING STATUS	ON / OFF KEY PROTECT	SWITCH TO THE NEXT MODE	SAVE AND BACK TO THE OPERATION STATUS
<p>POWER ON or RESET</p>	<p>(1) Stop ▶ + 3 Sec</p> <p>(2) Counting RESET → ▶ → ▶ + 3 Sec</p>	<p>▶ + ▶ + 3 Sec</p>	<p>▶</p>	<p>RESET</p>
<p>1.INPUT MODE</p> <p>1-1 UP 1-5 UP/DOWN C 1-2 DOWN 1-3 UP/DOWN A 1-4 UP/DOWN B</p> <p>※ UP/DOWN MODE not available on H5KLR-8/-11 type</p>	<p>2.OUTPUT MODE</p> <p>2-1 Mode N 2-5 Mode K 2-2 Mode F 2-6 Mode P 2-3 Mode C 2-7 Mode Q 2-4 Mode R 2-8 Mode A</p> <p>See reverse page for more details</p>	<p>3.OUTPUT 2 TIME</p> <p>3-1 0.01S 3-5 0.5S 3-9 10S 3-2 0.05S 3-6 1S 3-A 20S 3-3 0.1S 3-7 2S 3-4 0.2S 3-B 5S</p> <p>※ Not available for Mode N and Mode F</p>	<p>4.OUTPUT 1 TIME</p> <p>4-1 Hold 4-5 0.2S 4-9 5S 4-2 0.01S 4-6 0.5S 4-A 10S 4-3 0.05S 4-7 1S 4-b 20S 4-4 0.1S 4-8 2S</p> <p>※ Available on H5KLR-11 type only</p>	
<p>5.COUNT SPEED</p> <p>5-1 30 cps 5-2 1k cps</p>	<p>6.MINIMUM RESET TIME</p> <p>6-1 20mS 6-2 1mS</p>	<p>7.DECIMAL POINT</p> <p>7-1 9999 7-2 999.9 7-3 99.99</p>	<p>8.PRESCALE VALUE</p> <p>8-1 0.01~9.99</p>	
<p>9.KEY PROTECTION LEVEL</p> <p>9-1 Lock function key ▶ + 3Sec 9-2 Lock reset key RESET 9-3 Lock preset value key ▶▶▶ 9-4 Lock all key</p>	<p>10.POWER OFF MODE</p> <p>9-1 Power off reset 9-2 Power off memory</p>	<p>11.NPN/PNP INPUT MODE</p> <p>b-1 nPn b-2 PnP</p>		

CONNECTION



H5KLR : b-1 NPN, Common = 0V
H5KLR : b-2 PNP, Common = +V

TIMING CHART

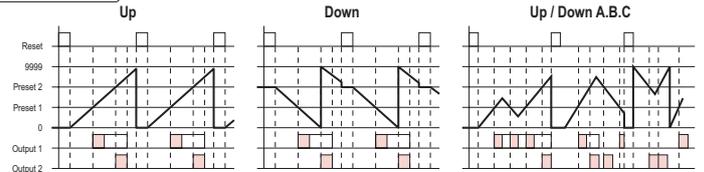
Output : One-shot output from Output 1 One-shot output from Output 2
 Self-holding output Self-holding output

Output mode N



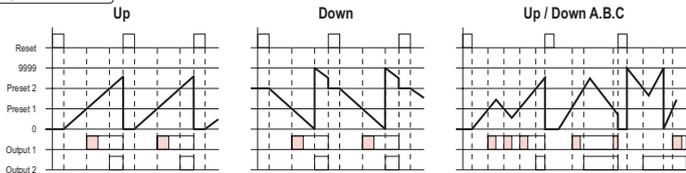
Output and present value display are maintained until reset.

Output mode K



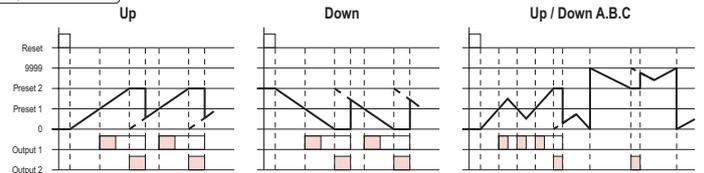
Present value runs continuously. Output 1 is self-holding, and goes off after expiration of the 1-shot period for Output 2. One-shot time periods for Output 1 and 2 are independent.

Output mode F



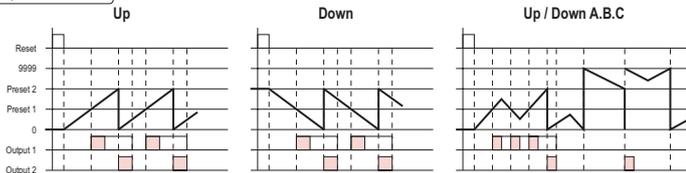
Present value display runs continuously. Outputs are maintained until reset.

Output mode P



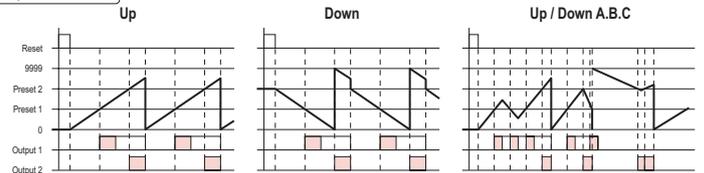
Present value display does not change during 1-shot time period, but reset start status is returned to as soon as count is reached. Outputs are 1-shot and operate repeatedly. Output 1 is self-holding, and goes off after expiration of the 1-shot period for Output 2. One-shot time periods for Output 1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

Output mode C



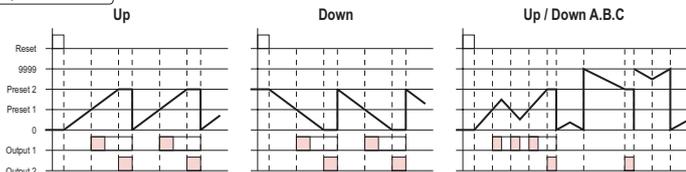
Present value is placed in reset start status as soon as count up is reached. The count up is not displayed. Outputs are 1-shot and operate repeatedly. Output 1 is self-holding, and goes off after expiration of the 1-shot period for Output 2. One-shot time periods for Output 1 and 2 are independent.

Output mode Q



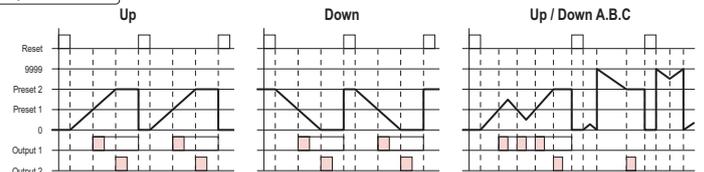
Present value runs continuously through 1-shot time period and returns to reset start status immediately afterward. Outputs are 1-shot and operate repeatedly. Output 1 is self-holding, and goes off after expiration of the 1-shot period for Output 2. One-shot time periods for Output 1 and 2 are independent.

Output mode R



Present value is placed in reset start 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.

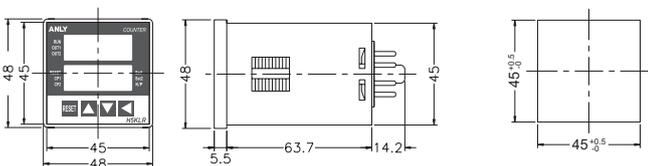
Output mode A



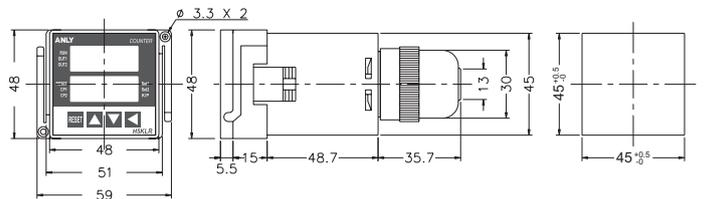
Present value and output 1 maintain status until reset. Output 1 and 2 operate independently.

DIMENSION(mm)

H5KLR



H5KLR + Y-50 + US-08



NOTE