PRODUCT NEWS

Product Discontinuation Notices

OMRON

Issue Date
November 1, 2023

Product Discontinuation	Recommended Replacement
Timers **H5CX-□-N series**	Timers **H5CC-□ series**
Accessories (Optional Front Panel) **Y92P-CXT series**	**No recommended replacement**
Accessories (Waterproof packing) **Y92S-29**	**Accessories (Waterproof packing)** **Y92S-P6**

[Final order entry date]

The end of March, 2025

[Date of The Last Shipping]

The end of June, 2025

[Caution on recommended replacement]

- The H5CX-□-N series has a choice of red, green or orange as the color of the present value display (H5CX-A11, H5CX-L8 and H5CX-B series display only red), whereas the H5CC series displays only white.
- The H5CX-□-N series has either 4-digit or 6-digit displays. Each digit of the 4-digit display can be set using the UP/DOWN keys, and the 6-digit display can be set using the UP keys.
As for the H5CC series, only 6-digit display is available and can be set using the UP/DOWN keys.
- The H5CX-□-N series has an optional front panel (Y92P-CXT series) as an accessory, but the H5CC series does not have it.
- The MODE key on the H5CX-□-N series is a dedicated key, and the mode can be switched over in the forward direction with each key operation. The mode for the H5CC series can be switched over in the forward direction by simultaneously pressing DW1+DW3 (MODE keys) and in the reverse direction by simultaneously pressing UP1+UP3 (MODE keys).
- The RST (reset) key on the H5CX-□-N series is a dedicated key, and the reset operation is performed upon pressing the key. The reset operation for the H5CC series is performed by simultaneously pressing UP6＋DW6 (RST keys). While pressing and holding the keys, the LED on each key starts blinking and then turns OFF, indicating that the reset operation is completed. If you release the keys while blinking, the reset operation will be interrupted.
- In the H5CX-□-N series, some settings can be configured using DIP switches, but in the H5CC series, DIP switches have been removed and all settings can be done through key operations.

[Difference from discontinued product]

Recommended replacement Model	Body Color	Dimen-sions	Wire connection	Mounting Dimensions	Charac-teristics	Operation ratings	Operation methods
H5CC-A□ series	**	*	**	**	**	**	*
H5CC-L□ series	**	**	**	**	**	**	*
H5CC-AWSD	**	**	**	**	**	**	*

** : Compatible
* : The change is a little/Almost compatible
-- : Not compatible
- : No corresponding specification

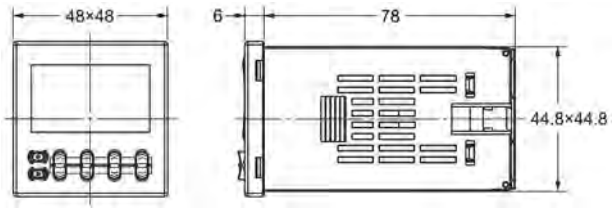
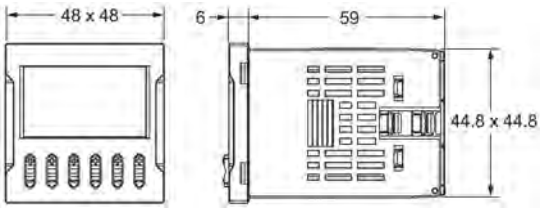
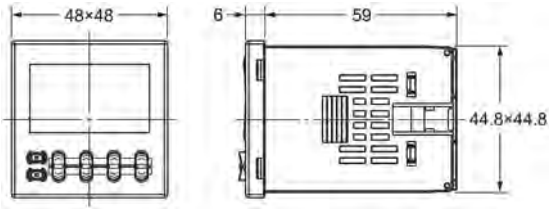
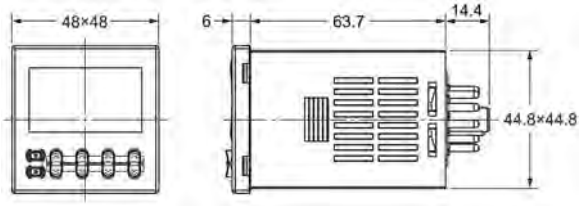
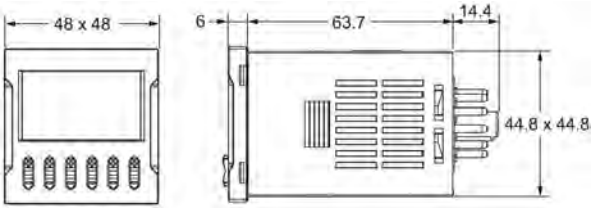
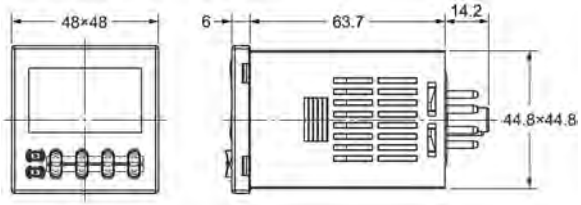
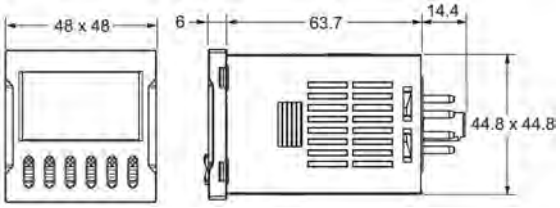
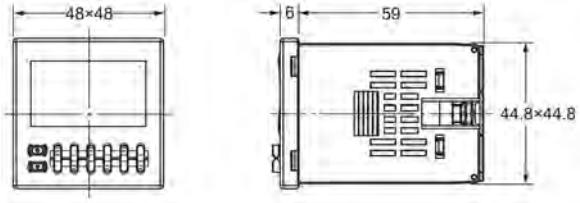
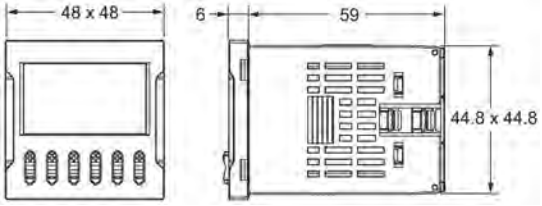
[Product Discontinuation and recommended replacement]

Product discontinuation	Recommended replacement
H5CX-A-N 100-240 VAC	H5CC-A 100-240 VAC
H5CX-AD-N 24 VAC / 12-24 VDC	H5CC-AD 24 VAC / 12-48 VDC
H5CX-A11-N 100-240 VAC	H5CC-A11 100-240 VAC
H5CX-A11D-N 24 VAC / 12-24 VDC	H5CC-A11D 24 VAC / 12-48 VDC
H5CX-A11S-N 100-240 VAC	H5CC-A11S 100-240 VAC
H5CX-A11SD-N 24 VAC / 12-24 VDC	H5CC-A11SD 24 VAC / 12-48 VDC
H5CX-AS-N 100-240 VAC	H5CC-AS 100-240 VAC
H5CX-ASD-N 24 VAC / 12-24 VDC	H5CC-ASD 24 VAC / 12-48 VDC
H5CX-BWSD-N 12-24 VDC	H5CC-AWSD 24 VAC / 12-48 VDC
H5CX-L8-N 100-240 VAC	H5CC-L8 100-240 VAC
H5CX-L8D-N 24 VAC / 12-24 VDC	H5CC-L8D 24 VAC / 12-48 VDC
H5CX-L8D-N-302 24 VAC / 12-24 VDC	H5CC-L8D 24 VAC / 12-48 VDC
H5CX-L8E-N 100-240 VAC	H5CC-L8E 100-240 VAC
H5CX-L8ED-N 24 VAC / 12–24 VDC	H5CC-L8ED 24 VAC / 12-48 VDC
H5CX-L8S-N 100–240 VAC	H5CC-L8S 100-240 VAC
H5CX-L8SD-N 24 VAC / 12–24 VDC	H5CC-L8SD 24 VAC / 12-48 VDC
Y92P-CXT4G	No recommended replacement
Y92P-CXT4S	No recommended replacement
Y92P-CXT4B	No recommended replacement
Y92S-29	Y92S-P6

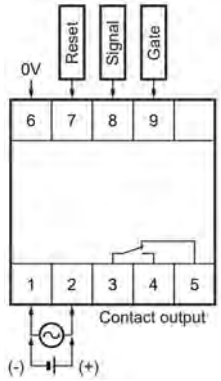
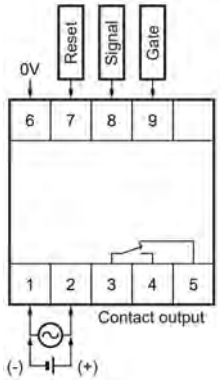
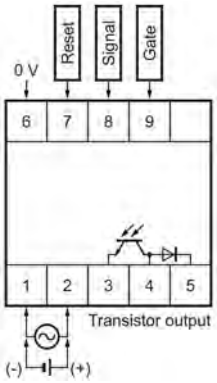
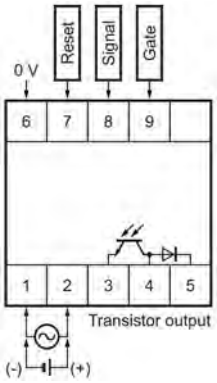
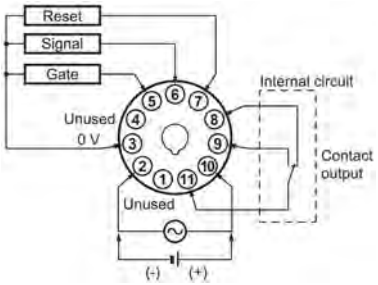
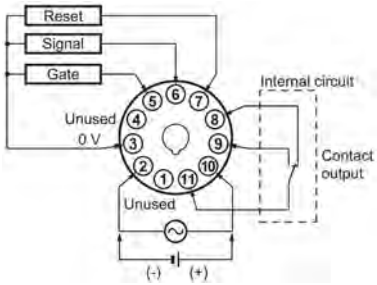
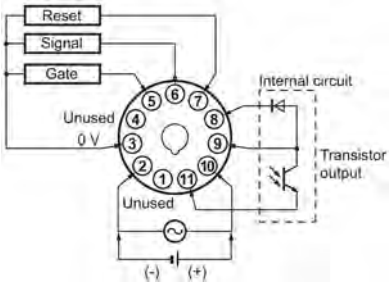
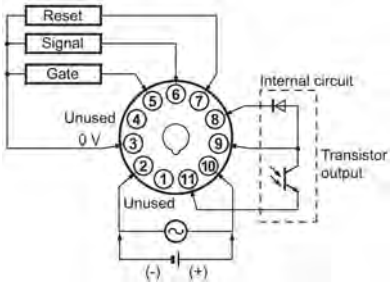
[Body color]

Product discontinuation H5CX-□-N series	Recommended replacement H5CC-□ series
H5CX-□-N series Black (N1.5)  **Accessories (Optional front panel)** **Y92P-CXT series** Y92P-CXT4G Light gray（5Y7/1） Y92P-CXT4B Black（N1.5） Y92P-CXT4S White（5Y9.2/0.5）  Light gray  Black  White	**H5CC-□ series** Black (N1.5)  No recommended replacement

[Dimensions]

Product discontinuation H5CX-□-N series	Recommended replacement H5CC-□ series
H5CX-A-N/-AS-N 	**H5CC-A/-AS/-AD/-ASD** 
H5CX-AD-N/-ASD-N 	
H5CX-A11□-N 	**H5CC-A11□** 
H5CX-L8□-N 	**H5CC-L8□** 
H5CX-BWSD-N 	**H5CC-AWSD** 

[Wire connection]

Product discontinuation H5CX-☐-N series	Recommended replacement H5CC-☐ series
H5CX-A-N/-AD-N 	**H5CC-A/-AD** 
H5CX-AS-N/-ASD-N 	**H5CC-AS/-ASD-N** 
H5CX-A11-N/-A11D-N 	**H5CC-A11/-A11D** 
H5CX-A11S-N/-A11SD-N 	**H5CC-A11S/-A11SD** 

[Wire connection]

Product discontinuation H5CX-□-N series	Recommended replacement H5CC-□ series
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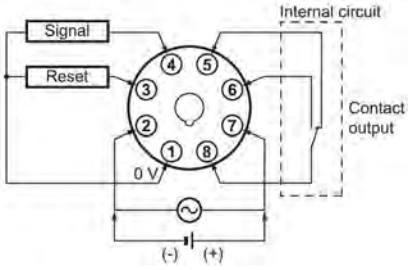
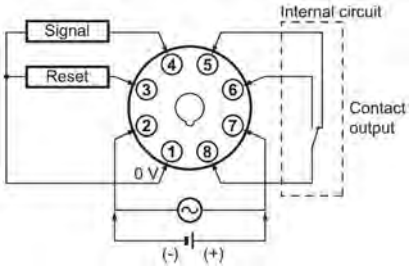
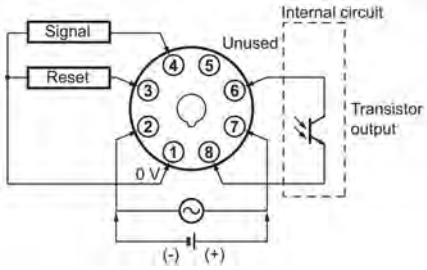
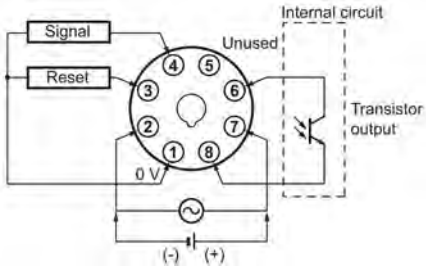
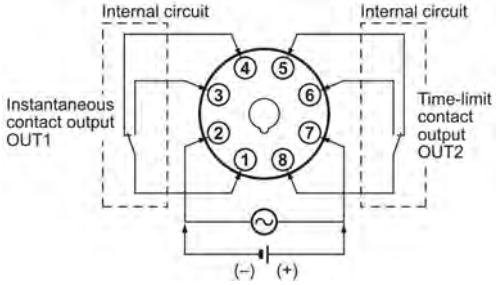
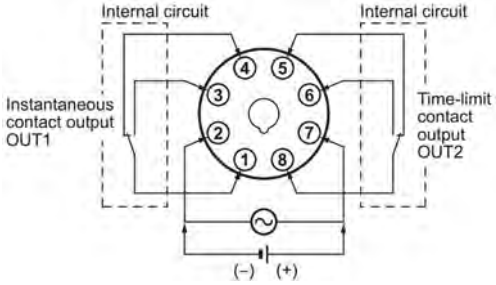
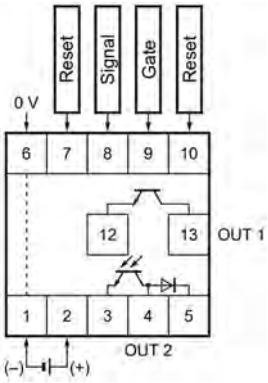
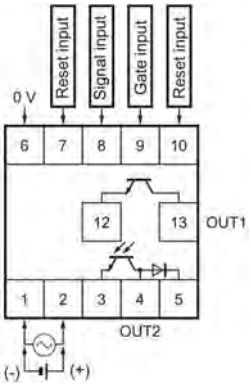
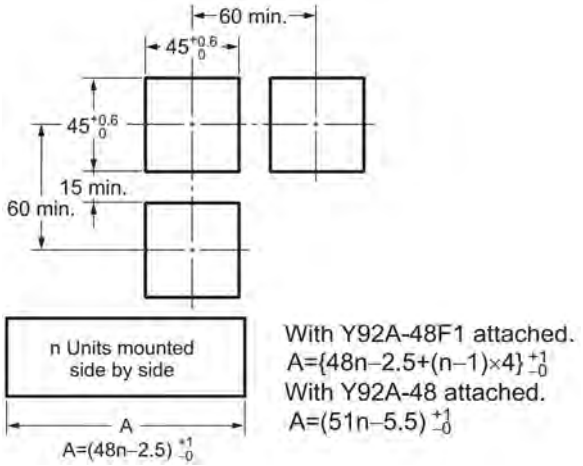
	
H5CX-L8S-N/-L8SD-N	**H5CC-L8S/-L8SD**
	
H5CX-L8E-N/-L8ED-N	**H5CC-L8E/-L8ED**
	
H5CX-BWSD-N	**H5CC-AWSD**
	

[Mounting dimensions]

Product discontinuation H5CX-☐-N series	Recommended replacement H5CC-☐ series
H5CX-☐-N series  With Y92A-48F1 attached. A={48n–2.5+(n–1)×4} +1 -0 With Y92A-48 attached. A=(51n–5.5) +1 -0	**H5CC-☐ series** Same as on the left

[Characteristics]

Item		Product discontinuation H5CX-A□-N/-L□-N series	Recommended replacement H5CC-A□/-L□ series
Classification		• H5CX-A□-N Standard Type • H5CX-L8□-N Economy Type	• H5CC-A□ Standard Type • H5CC-L8□ Economy Type
Ratings	**Power supply voltage**	100 to 240 VAC 50/60 Hz 12 to 24 VDC / 24 VAC 50/60 Hz	100 to 240 VAC 50/60 Hz 12 to 48 VDC / 24 VAC 50/60 Hz
	Allowable voltage fluctuation range	85% to 110% of rated supply voltage (90% to 110% at 12 to 24 VDC)	85% to 110% of rated supply voltage (90% to 110% at 12 to 48 VDC)
	Power consumption	Approx. 6.2 VA at 100 to 240 VAC, Approx. 5.1 VA/2.4 W at 24 VAC/12 to 24 VDC	Approx. 6.5 VA at 100 to 240 VAC Approx. 5.4 VA/3.2 W at 24 VAC/12 to 48 VDC
Mounting method		• H5CX-A□-N Flush mounting • H5CX-A11□-N/-L8□-N Flush mounting, surface mounting, DIN track mounting	• H5CC-A□ Flush mounting • H5CC-A11□/-L8□ Flush mounting, surface mounting, DIN track mounting
External connections		• H5CX-A□-N Standard Type • H5CX-A11□-N 11-pin socket • H5CX-L8□-N 8-pin socket	• H5CC-A□ Screw terminals • H5CC-A11□ 11-pin socket • H5CC-L8□ 8-pin socket
Degree of protection		IEC IP66, UL508 Type 4X (indoors) for panel surface only and when Y92S-29 Waterproof Packing is used	IEC IP66 for panel surface only and when Y92S-P6 Waterproof Packing is used
Digits		4 digits	6 digits
Time ranges		0.001 s to 9.999 s, 0.01 s to 99.99 s, 0.1 s to 999.9 s, 1 s to 9999 s, 1 s to 99 min 59 s, 0.1 m to 999.9 min, 1 min to 9999 min, 1 min to 99 h 59 min, 0.1 h to 999.9 h, 1 h to 9999 h	0.001 s to 999.999 s, 0.01 s to 9999.99 s, 0.1 s to 99999.9 s, 1 s to 999999 s, 1 s to 99 h 59 min 59 s, 0.1 m to 99999.9 min, 1 min to 999999 min, 1 min to 9999 h 59 min, 0.1 h to 99999.9 h, 1 h to 999999 h
Timer mode		Elapsed time (Up), remaining time (Down) (selectable)	Elapsed time (Up), remaining time (Down) (selectable)
Inputs	**Input signals**	• H5CX-A□-N Signal, Reset, Gate • H5CX-L8□-N Signal, Reset (no inputs on the H5CX-L8E□-N)	• H5CC-A□ Signal, Reset, Gate • H5CC-L8□ Signal, Reset (no inputs on the H5CC-L8E□)

[Characteristics]

Item		Product discontinuation H5CX-A□-N/-L□-N series	Recommended replacement H5CC-A□/-L□ series
Inputs	**Input method**	• H5CX-A□-N No-voltage (NPN) input/voltage (PNP) input (switchable) [No-voltage Input] ON impedance: 1 kΩ max. (Leakage current: 12 mA when 0 Ω) ON residual voltage: 3 V max. OFF impedance: 100 kΩ min. [Voltage Input] High (logic) level: 4.5 to 30 VDC Low (logic) level: 0 to 2 VDC (Input resistance: approx. 4.7 kΩ) • H5CX-L8□-N [No-voltage Input] ON impedance: 1 kΩ max. (Leakage current: 12 mA when 0 Ω) ON residual voltage: 3 V max. OFF impedance: 100 kΩ min.	• H5CC-A□ No-voltage (NPN) input/voltage (PNP) input (switchable) [No-voltage input] ON impedance: 1 kΩ max. (Leakage current: approx. 12 mA when 0 Ω) ON residual voltage: 3 V max. OFF impedance: 100 kΩ min. [Voltage input] High (logic) level: 4.5 to 30 VDC Low (logic) level: 0 to 2 VDC (Input resistance: approx. 4.7 kΩ) • H5CC-L8□ [No-voltage input] ON impedance: 1 kΩ max. (Leakage current: 12 mA when 0 Ω) ON residual voltage: 3 V max. OFF impedance: 100 kΩ min.
	Minimum input signal width	1 or 20 ms (selectable)	1 or 20 ms (selectable)
Reset system		Power reset (depending on output mode), external reset, manual reset, automatic reset (depending on output mode)	Power reset (depending on output mode), external reset, manual reset, automatic reset (depending on output mode)
Power reset		Minimum power-opening time: 0.5 s (except for A-3, b-1, F, ton-1, and toff-1 mode)	Minimum power-opening time: 0.5 s (except for A-3, b-1, F, ton-1, and toff-1 mode)
Reset voltage		10% max. of rated supply voltage	10% max. of power supply voltage
Sensor waiting time		250 ms max. (Control output is turned OFF and no input is accepted during sensor waiting time.)	250 ms max. (Control output is turned OFF and no input is accepted during sensor waiting time.)
Output	**Output modes**	• Other than H5CX-L8E□-N A: Signal ON Delay I A-1: Signal ON Delay II A-2: Power ON Delay I A-3: Power ON Delay II b: Repeat Cycle 1 b-1: Repeat Cycle 2 d: Signal OFF Delay E: Interval F: Cumulative Z: ON/OFF-duty-adjustable flicker S: Stopwatch toff: Flicker OFF Start 1 ton: Flicker ON Start 1 toff-1: Flicker OFF Start 2 ton-1: Flicker ON Start 2	• Other than H5CC-L8E□ A: Signal ON delay I A-1: Signal ON delay II A-2: Power ON delay I A-3: Power ON delay II b: Flicker I b-1: Flicker II b-5: One-shot flicker C: Signal ON/OFF delay I d: Signal OFF delay I E: Interval F: Cumulative G: Signal ON/OFF delay II H: Signal OFF delay II Z: ON/OFF-duty-adjustable flicker S: Stopwatch toff: Flicker OFF start I ton: Flicker ON start I toff-1: Flicker OFF start II ton-1: Flicker ON start II
		• H5CX-L8E□-N A-2: Power ON Delay I b: Repeat Cycle 1 E: Interval Z: ON/OFF-duty-adjustable flicker toff: Flicker OFF Start 1 ton: Flicker ON Start 1	• H5CC-L8E□ A-2: Power ON delay I b: Flicker I E: Interval Z: ON/OFF-duty-adjustable flicker toff: Flicker OFF start I ton: Flicker ON start I

[Characteristics]

Item		Product discontinuation H5CX-A□-N/-L□-N series	Recommended replacement H5CC-A□/-L□ series
Output	One-shot time	0.01 to 99.99 s	0.01 to 99.99 s
	Control output	• Models with Contact Outputs 5 A at 250 VAC/30 VDC, resistive load (cos =1) Minimum applied load: 10 mA at 5 VDC (failure level: P, reference value) Contact materials : AgSnIn • Transistor output: NPN open collector, 100 mA at 30 VDC max., residual voltage: 1.5 VDC max. (Approx. 1 V), Leakage current: 0.1 mA max.	• Models with Contact Outputs 5 A at 250 VAC/30 VDC, resistive load (cos =1) Minimum applicable load: 10 mA at 5 VDC (failure level: P, reference value) Contact materials: AgSnIn • Transistor output: NPN open collector, 100 mA at 30 VDC max., residual voltage: 1.5 VDC max. (Approx. 1 V), Leakage current: 0.1 mA max.
Display method		• H5CX-A□-N 7-segment, negative transmissive LCD Present value: 12-mm-high characters, (switchable between red, green, and orange) Set value: 6-mm-high characters, green • Other than H5CX-A□-N 7-segment, negative transmissive LCD Present value: 12-mm-high characters, red Set value: 6-mm-high characters, green	7-segment, negative transmissive LCD Present value: 10-mm-high characters, white Set value: 6-mm-high characters, green
Memory backup		No-volatile memory (overwrites: 100,000 times min.) that can store data for 10 years min.	No-volatile memory (overwrites: 100,000 times min.) that can store data for 10 years min.
Operating temperature range		-10 to 55°C (-10 to 50°C if counters are mounted side by side) (with no icing or condensation)	-10 to 55°C (-10 to 50°C if timers are mounted side by side) (with no icing or condensation)
Storage temperature range		-25 to 70°C (with no icing or condensation)	-25 to 70°C (with no icing or condensation)
Operating humidity range		25% to 85%	25% to 85%
Case color		Black (N1.5) (Optional Front Panels are available to change the Front Panel color to light gray or white.)	Black (N1.5)
Attachments		• H5CX-A□-N Flush mounting adapter, waterproof packing, terminal cover, label for DIP switch settings • H5CX-A11□-N Label for DIP switch settings • H5CX-L8□-N N/A	• H5CC-A□ Flush mounting adapter, waterproof packing, terminal cover • H5CC-A11□ N/A • H5CC-L8□ N/A
Accuracy of operating time and setting error (including temperature and voltage influences)		Power-ON start: ±0.01%±0.05 s max. *1 Signal start: ±0.005%±0.03 s max. *1 Signal start for transistor output model: ±0.005%±3 ms max. *1 *2 If the set value is within the sensor waiting time at startup the control output of the H5CC will not turn ON until the sensor waiting time passes. *1. The values are based on the set value. *2. The value is applied for a minimum input signal width of 1 ms.	Power-ON start: ±0.01%±0.05 s max. *1 Signal start: ±0.005%±0.03 s max. *1 Signal start for transistor output model: ±0.005%±3 ms max. *1 *2 If the set value is within the sensor waiting time at startup the control output of the H5CC will not turn ON until the sensor waiting time passes. *1. The values are based on the set value. *2. The value is applied for a minimum input signal width of 1 ms.
Insulation resistance		100 MΩ min. (at 500 VDC) between current-carrying terminal and exposed non-current-carrying metal parts, and between non-continuous contacts	100 MΩ min. (at 500 VDC) between current-carrying terminal and exposed non-current-carrying metal parts, between non-continuous contacts

[Characteristics]

Item		Product discontinuation H5CX-A□-N/-L□-N series	Recommended replacement H5CC-A□/-L□ series
Dielectric strength		2,000 VAC, 50/60 Hz for 1 min between current-carrying metal parts and non-current-carrying metal parts 2,000 VAC, 50/60 Hz for 1 min between power supply and input circuits for the models other than H5CX-□D-N and H5CX-L8E□-N 1,000 VAC, 50/60 Hz for 1 min between control output and power supply/input circuits for the models other than H5CX-L8E□-N for H5CX-□SD-N 2,000 VAC, 50/60 Hz for 1 min between control output and power supply/input circuits (for models other than the H5CX-L8E□-N) for other models 1,000 VAC, 50/60 Hz for 1 min between non-continuous contacts	2,900 VAC, 50/60 Hz for 1 min between current-carrying terminal and operating section 2,000 VAC, 50/60 Hz for 1 min between power supply and input circuits for models other than the H5CC-L8E□ (1,500 VAC for 12 to 48 VDC/24 VAC) 1,500 VAC, 50/60 Hz for 1 min between control output and power supply/input circuits (for models other than the H5CC-L8E□ for H5CC-□SD 2,000 VAC, 50/60 Hz for 1 min between control output and power supply/input circuits (for models other than the H5CC-L8E□) for other models 1,000 VAC, 50/60 Hz for 1 min between non-continuous contacts
Impulse withstand voltage		5 kV (between power terminals) for 100 to 240 VAC, 1 kV for 24 VAC/12 to 24 VDC 5 kV (between current-carrying terminal and exposed non-current carrying metal parts) for 100 to 240 VAC 1.5 kV for 24 VAC/12 to 24 VDC	5 kV (between power terminals) for 100 to 240 VAC, 1.0 kV for 24 VAC/12 to 48 VDC 7.4 kV (between current-carrying terminal and operating section)
Static immunity		Malfunction: 8 kV Destruction: 15 kV	Malfunction: 8 kV Destruction: 15 kV
Vibration resistance	**Destruction**	10 to 55 Hz with 0.75-mm single amplitude each in three directions for 2 h each	10 to 55 Hz with 0.75-mm single amplitude each in three directions for 2 h each
	Malfunction	10 to 55 Hz with 0.35-mm single amplitude each in three directions for 10 min each	10 to 55 Hz with 0.35-mm single amplitude each in three directions for 10 min each
Shock resistance	**Destruction**	300 m/s^2 in three directions, three cycles	300 m/s^2 in three directions, three cycles
	Malfunction	100 m/s^2 in three directions, three cycles	100 m/s^2 in three directions, three cycles
Life expectancy	**Mechanical**	10,000,000 operations min. (under no load at 1,800 operations/h and ambient temperature of 23°C)	10,000,000 operations min. (under no load at 1,800 operations/h and ambient temperature of 23°C)
	Electrical	100,000 operations min. (5 A at 250 VAC, resistive load at 1,800 operations/h and ambient temperature of 23°C)	100,000 operations min. (5 A at 250 VAC, resistive load at 1,800 operations/h and ambient temperature of 23°C)
Weight		Approx. 115 g	Approx. 115 g

[Characteristics]

Item			Product discontinuation H5CX-BWSD-N	Recommended replacement H5CC-AWSD
Classification			Digital Timer with two-stage setting, and forecast output	Digital Timer with two-stage setting, and forecast output
Ratings	**Power supply voltage**		12 to 24 VDC	12 to 48 VDC / 24 VAC 50/60 Hz
	Allowable voltage fluctuation range		90% to 110% rated supply voltage	90% to 110% rated supply voltage
	Power consumption		Approx. 2.3 W	Approx. 5.4 VA/3.2 W
Mounting method			Flush mounting	Flush mounting
External connections			Screw terminals	Screw terminals
Degree of protection			IEC IP66, UL508 Type 4X (indoors) for panel front surface only and only when Y92S-29 Waterproof Packing is used	IEC IP66 for panel surface only and when Y92S-P6 Waterproof Packing is used
Digits			6 digits	6 digits
Time ranges			0.01 s to 9999.99 s, 1 s to 99 h 59 min 59 s, 0.1 min to 99999.9 min, 0.1 h to 99999.9 h	0.001 s to 999.999 s, 0.01 s to 9999.99 s, 0.1 s to 99999.9 s, 1 s to 999999 s, 1 s to 99 h 59 min 59 s, 0.1 min to 99999.9 min, 1 min to 999999 min, 1 min to 9999 h 59 min, 0.1 h to 99999.9h, 1 h to 999999 h
Timer mode			Elapsed time (Up)	Elapsed time (Up)
Inputs	**Input signals**		Signal, reset, gate	Signal, reset, gate
	Input method		No-voltage (NPN) input/voltage (PNP) input (switchable) [No-voltage Input] ON impedance : 1 kΩ max. (Leakage current: 12 mA when 0 Ω) ON residual voltage : 3 V max. OFF impedance : 100 kΩ min. [Voltage Input] High (logic) level : 4.5 to 30 VDC Low (logic) level : 0 to 2 VDC (Input resistance: approx. 4.7 kΩ)	No-voltage (NPN) input/voltage (PNP) input (switchable) [No-voltage input] ON impedance: 1 kΩ max. (Leakage current: 12 mA when 0 Ω) ON residual voltage: 3 V max. OFF impedance: 100 kΩ min. [Voltage input] High (logic) level: 4.5 to 30 VDC Low (logic) level: 0 to 2 VDC (Input resistance: approx. 4.7 kΩ)
	Signal, reset, gate		Minimum input signal width: 1 or 20 ms (selectable)	Minimum input signal width: 1 or 20 ms (selectable)
Reset system			Power resets (only for A mode), external and manual reset	Power resets (only for A mode), external and manual reset
Power reset			Minimum power-opening time: 0.5 s (except for F-1 mode)	Minimum power-opening time: 0.5 s (except for F-1 mode)
Reset voltage			10% max. of rated supply voltage	10% max. of power supply voltage
Sensor waiting time			250 ms max. (Control output is turned OFF and no input is accepted during sensor waiting time.)	250 ms max. (Control output is turned OFF and no input is accepted during sensor waiting time.)
Output		**Output modes**	A, F-1	A, F-1
		Output type	Transistor output: NPN open collector, 100 mA at 30 VDC max. residual voltage: 1.5 VDC max. (Approx. 1 V) Leakage current: 0.1 mA max.	Transistor output: NPN open collector, 100 mA at 30 VDC max. residual voltage: 1.5 VDC max. (Approx. 1 V) Leakage current: 0.1 mA max.
Display method			7-segment, negative transmissive LCD Present value: 10-mm-high characters, red Set value: 6-mm-high characters, green	7-segment, negative transmissive LCD Present value: 10-mm-high characters, white Set value: 6-mm-high characters, green

[Characteristics]

Item		Product discontinuation H5CX-BWSD-N	Recommended replacement H5CC-AWSD
Memory backup		No-volatile memory (overwrites: 100,000 times min.) that can store data for 10 years min.	No-volatile memory (overwrites: 100,000 times min.) that can store data for 10 years min.
Operating temperature range		-10 to 55°C (-10 to 50°C if counters are mounted side by side) (with no icing or condensation)	-10 to 55°C (-10 to 50°C if timers are mounted side by side) (with no icing or condensation)
Storage temperature range		-25 to 70°C (with no icing or condensation)	-25 to 70°C (with no icing or condensation)
Operating humidity range		25% to 85%	25% to 85%
Case color		Black (N1.5)	Black (N1.5)
Attachments		Waterproof packing, flush mounting adapter, terminal cover	Waterproof packing, flush mounting adapter, terminal cover
Accuracy of operating time and setting error (including temperature and voltage influences)		Power-ON start: ±0.01%±0.05 s max. *1 Signal start: ±0.005%±0.03 s max. *1 Signal start for transistor output model: ±0.005%±3 ms max. *1 *2 If the set value is within the sensor waiting time at startup the control output of the H5CC will not turn ON until the sensor waiting time passes. *1. The values are based on the set value. *2. The value is applied for a minimum input signal width of 1 ms.	Power-ON start: ±0.01%±0.05 s max. *1 Signal start: ±0.005%±0.03 s max. *1 Signal start for transistor output model: ±0.005%±3 ms max. *1 *2 If the set value is within the sensor waiting time at startup the control output of the H5CC will not turn ON until the sensor waiting time passes. *1. The values are based on the set value. *2. The value is applied for a minimum input signal width of 1 ms.
Insulation resistance		100 MΩ min. (at 500 VDC) between current-carrying terminal and exposed non-current-carrying metal parts	100 MΩ min. (at 500 VDC) between current-carrying terminal and exposed non-current-carrying metal parts
Dielectric strength		2,000 VAC, 50/60 Hz for 1 min between current-carrying metal parts and non-current-carrying metal parts 1,000 VAC, 50/60 Hz for 1 min between control output and power supply/input circuits	2,900 VAC, 50/60 Hz for 1 min between current-carrying terminal and operating section 1,500 VAC, 50/60 Hz for 1 min between control output and power supply/input circuits 1,500 VAC, 50/60 Hz for 1 min between power supply and input circuits
Impulse withstand voltage		1.0 kV (between power terminals) 1.5 kV (between current-carrying terminal and exposed non-current-carrying metal parts)	1.0 kV (between power terminals) 7.4 kV (between current-carrying terminal and operating section)
Static immunity		Malfunction: 8 kV Destruction: 15 kV	Malfunction: 8 kV Destruction: 15 kV
Vibration resistance	**Destruction**	10 to 55 Hz with 0.75-mm single amplitude in three directions for 2 h each	10 to 55 Hz with 0.75-mm single amplitude each in three directions for 2 h each
	Malfunction	10 to 55 Hz with 0.35-mm single amplitude in three directions for 10 min each	10 to 55 Hz with 0.35-mm single amplitude each in three directions for 10 min each
Shock resistance	**Destruction**	300 m/s^2 in three directions, three cycles	300 m/s^2 in three directions, three cycles
	Malfunction	100 m/s^2 in three directions, three cycles	100 m/s^2 in three directions, three cycles
Weight		Approx. 105 g	Approx. 115 g

[Operation ratings]

Product discontinuation
H5CX-A□-N/-L□-N series

Operating Procedures for Timer Function

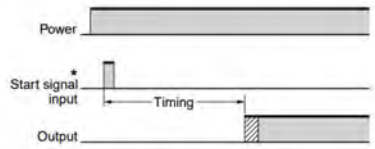
Models without Instantaneous Contact Outputs

The gate input is not included in the H5CX-L8□ models.

Either one-shot output or sustained output can be selected.

Mode A: Signal ON delay 1 (Timer resets when power comes ON.)

Basic operation

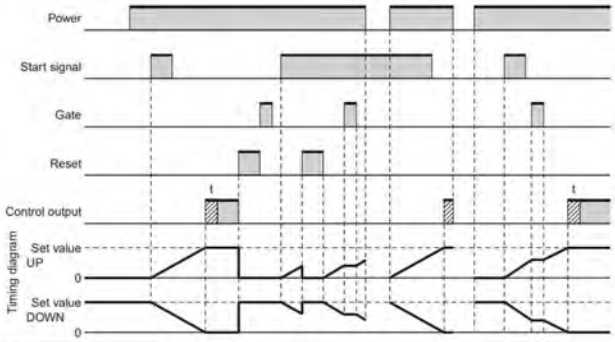


*Start signal input is disabled during timing.

Timing starts when the start signal goes ON.
While the start signal is ON, the timer starts when the power comes ON or when the reset input goes OFF.
The control output is controlled using a sustained or one-shot time period.

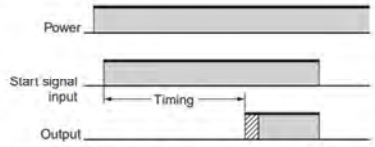
Note: Output is instantaneous when setting is 0.

Detailed operation



Mode A-1: Signal ON delay 2 (Timer resets when power comes ON.)

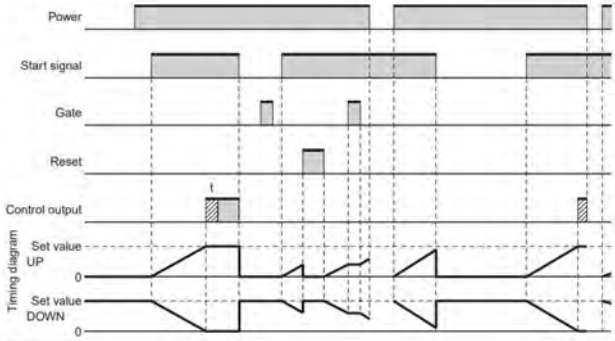
Basic operation



Timing starts when the start signal goes ON, and resets when the start signal goes OFF.
While the start signal is ON, the timer starts when the power comes ON or when the reset input goes OFF.
The control output is controlled using a sustained or one-shot time period.

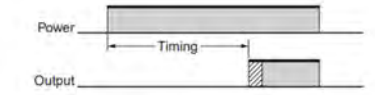
Note: Output is instantaneous when setting is 0.

Detailed operation



Mode A-2: Power ON delay 1 (Timer resets when power comes ON.)

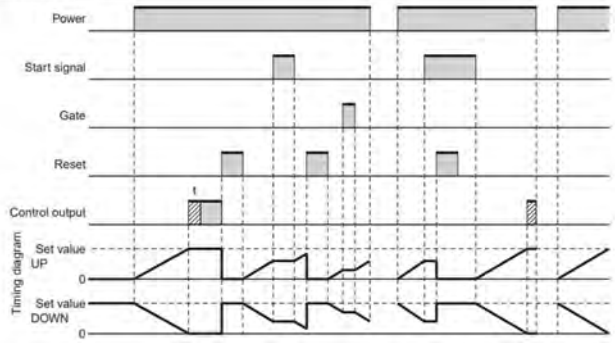
Basic operation



Timing starts when the reset input goes OFF.
The start signal disables the timing function (i.e., same function as the gate input).
The control output is controlled using a sustained or one-shot time period.

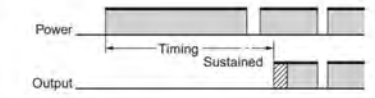
Note: Output is instantaneous when setting is 0.

Detailed operation



Mode A-3: Power ON delay 2 (Timer does not reset when power comes ON.)

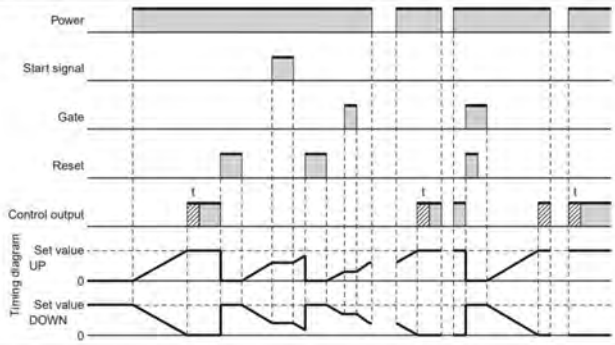
Basic operation



Timing starts when the reset input goes OFF.
The start signal disables the timing function (i.e., same function as the gate input).
The control output is controlled using a sustained or one-shot time period.

Note: Output is instantaneous when setting is 0.

Detailed operation

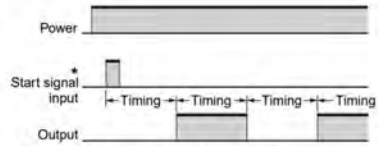


[Operation ratings]

Product discontinuation
H5CX-A□-N/-L□-N series

Mode b: Repeat cycle 1 (Timer resets when power comes ON.)

Basic operation



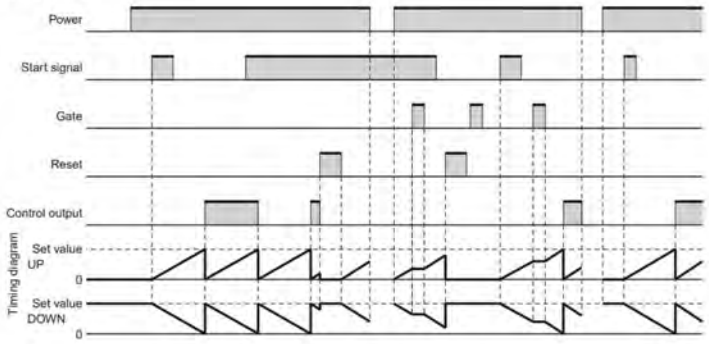
✱Start signal input is disabled during timing.

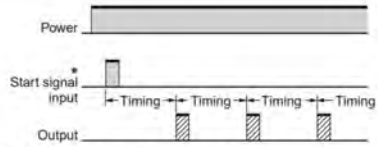
Timing starts when the start signal goes ON.
The status of the control output is reversed when time is up (OFF at start).
While the start signal is ON, the timer starts when the power comes ON or when the reset input goes OFF.

Note: Normal output operation will not be possible if the set time is too short.
Set the value to at least 100 ms (contact output type).

Detailed operation

Sustained Output



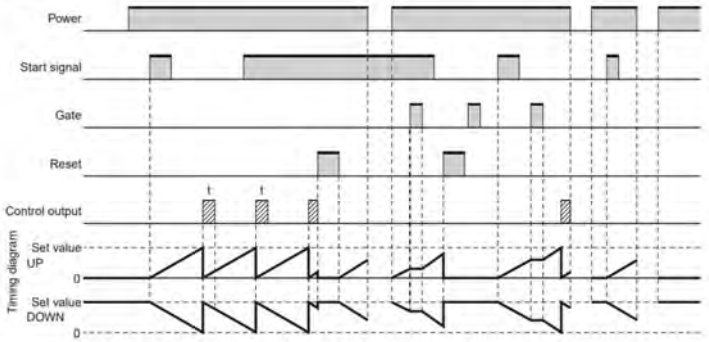


✱Start signal input is disabled during timing.

Timing starts when the start signal goes ON.
The control output is turned ON when time is up.
While the start signal is ON, the timer starts when the power comes ON or when the reset input goes OFF.

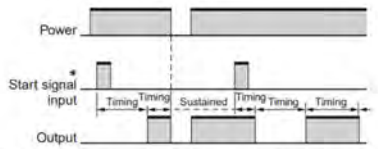
Note: Normal output operation will not be possible if the set time is too short.
Set the value to at least 100 ms (contact output type).

One-shot Output



Mode b-1: Repeat cycle 2 (Timer does not reset when power comes ON.)

Basic operation



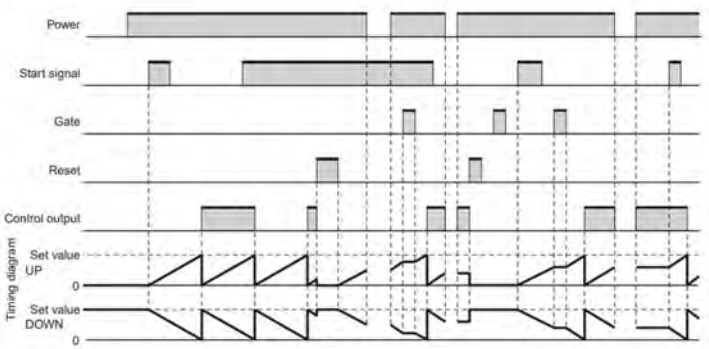
✱Start signal input is disabled during timing.

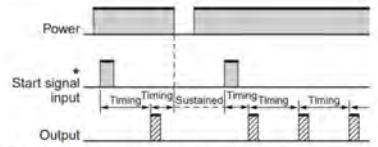
Timing starts when the start signal goes ON.
The status of the control output is reversed when time is up (OFF at start).
While the start signal is ON, the timer starts when the power comes ON or when the reset input goes OFF.

Note: Normal output operation will not be possible if the set time is too short.
Set the value to at least 100 ms (contact output type).

Detailed operation

Sustained Output



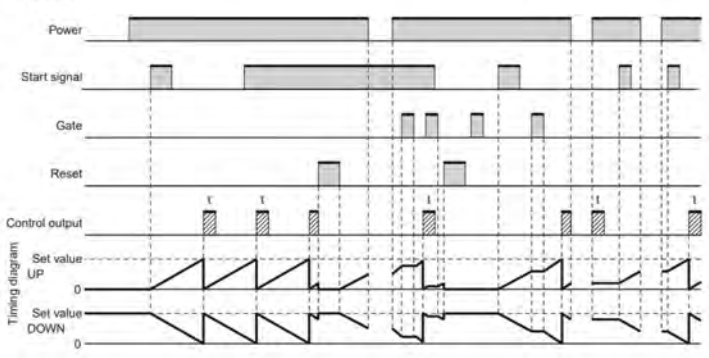


✱Start signal input is disabled during timing.

Timing starts when the start signal goes ON.
The control output is turned ON when time is up.
While the start signal is ON, the timer starts when the power comes ON or when the reset input goes OFF.

Note: Normal output operation will not be possible if the set time is too short.
Set the value to at least 100 ms (contact output type).

One-shot Output

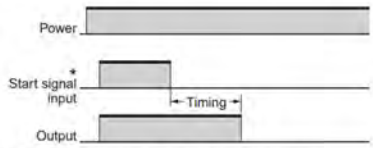


[Operation ratings]

Product discontinuation
H5CX-A□-N/-L□-N series

Mode d: Signal OFF delay (Timer resets when power comes ON.)

Basic operation

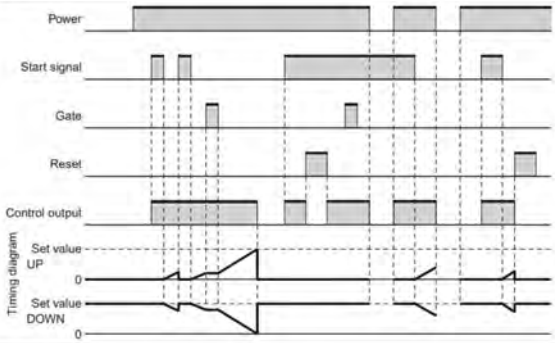


✱Start signal input is enabled during timing.

The control output is ON when the start signal is ON (except when the power is OFF or the reset is ON). The timer resets when the time is up.

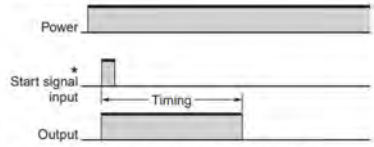
Note: Output functions only during start signal input when setting is 0.

Detailed operation



Mode E: Interval (Timer resets when power comes ON.)

Basic operation

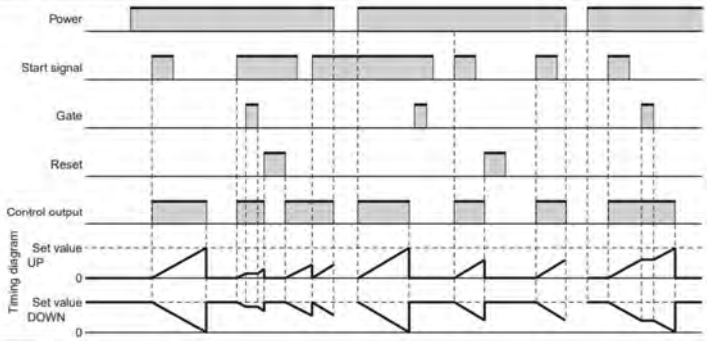


✱Start signal input is enabled during timing.

Timing starts when the start signal comes ON. The timer resets when the time is up. While the start signal is ON, the timer starts when the power comes ON or when the reset input goes OFF.

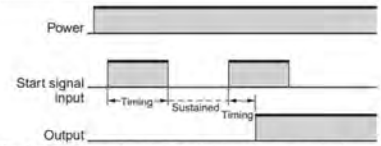
Note: Output is disabled when the setting is 0.

Detailed operation



Mode F: Cumulative (Timer does not reset when power comes ON.)

Basic operation

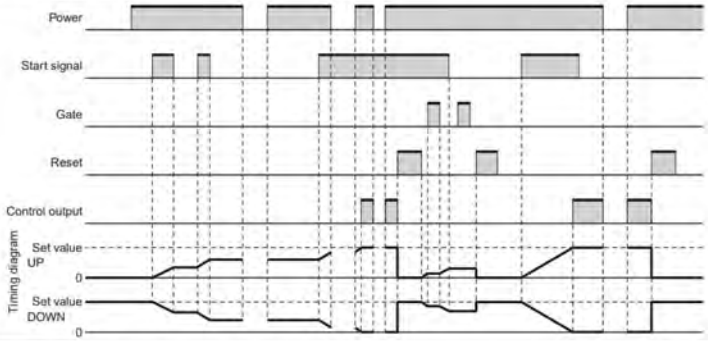


Start signal enables timing (timing is stopped when the start signal is OFF or when the power is OFF). A sustained control output is used.

Note: Output is instantaneous when setting is 0.

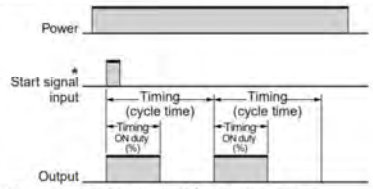
When the H5CX is used with power start, there will be a timer error (approximately 100 ms each time the H5CX is turned ON) due to the characteristics of the internal circuitry. Use the H5CX with signal start if timer accuracy is required.

Detailed operation



Mode Z: ON/OFF-duty-adjustable flicker (Timer resets when power comes ON.)

Basic operation

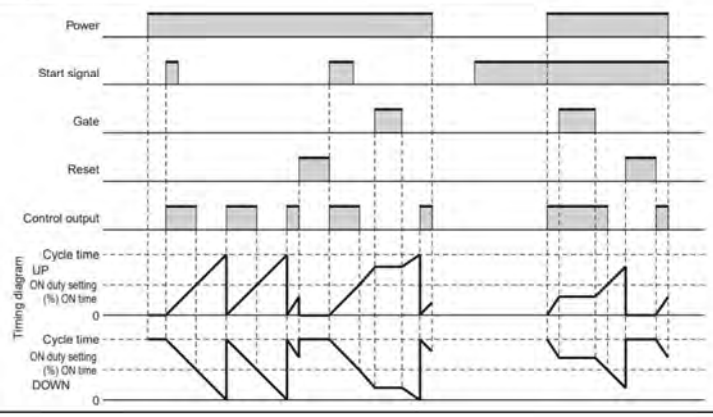


✱Start signal input is disabled during timing.

Timing starts when the start signal goes ON. The status of the control output is reversed when time is up (ON at start). While the start signal is ON, the timer starts when power comes ON or when the reset input goes OFF.

Note: Normal output operation will not be possible if the set time is too short. Set the value to at least 100 ms (contact output type).

Detailed operation

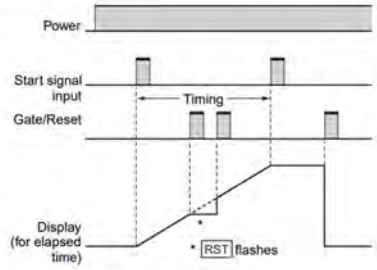


[Operation ratings]

Product discontinuation
H5CX-A□-N/-L□-N series

Mode S: Stopwatch (Timer resets when power comes ON.)

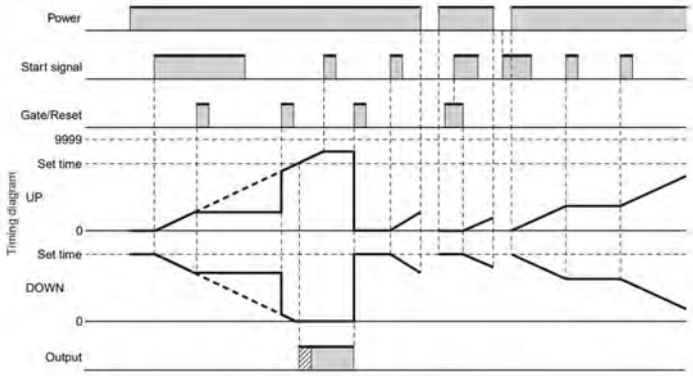
Basic operation



The signal starts and stops timing.
The display is held and timing is continued if the reset or gate input is received during timing operation.
The timer resets if the reset or gate input is received when the timing operation is stopped.

Note: Output is instantaneous when setting is 0.

Detailed operation

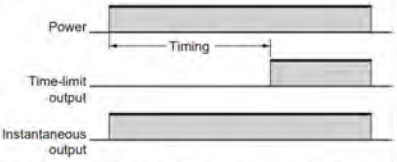


Models with Instantaneous Contact Outputs

Either one-shot output or sustained output can be selected.

Mode A-2: Power ON delay (Timer resets when power comes ON.)

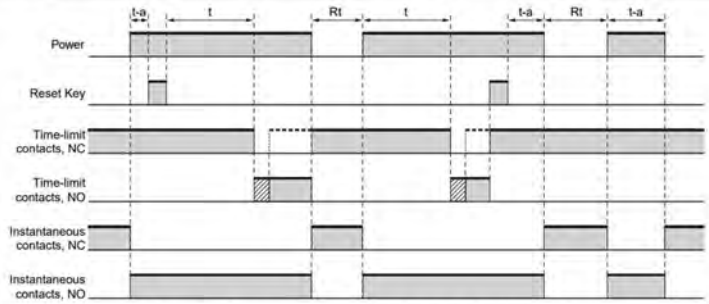
Basic operation



The Timer starts when the power comes ON or when the reset input goes OFF.

Note: Output is instantaneous when setting is 0.

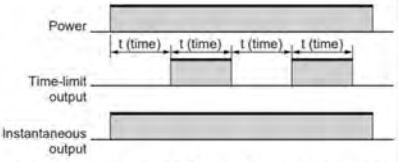
Detailed operation



t = Set time, Rt = Reset time (0.5 s min.), t – a < t (Indicates the time is less than the set time.)

Mode b: Repeat cycle 1 (Timer resets when power comes ON.)

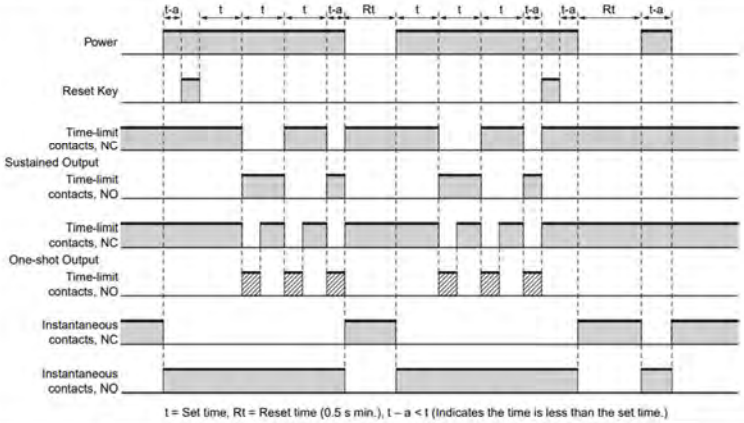
Basic operation



The Timer starts when the power comes ON or when the reset input goes OFF.

Note: Normal output operation will not be possible if the set time is too short.
Set the value to at least 100 ms.

Detailed operation



t = Set time, Rt = Reset time (0.5 s min.), t – a < t (Indicates the time is less than the set time.)

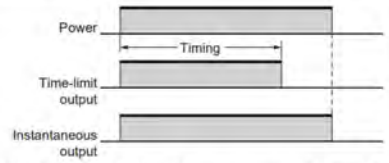
Note: H5CX-L8E□-N Precautions
Set the Timer's set value before using the Timer in a self-holding circuit.

[Operation ratings]

Product discontinuation
H5CX-A□-N/-L□-N series

Mode E: Interval (Timer resets when power comes ON.)

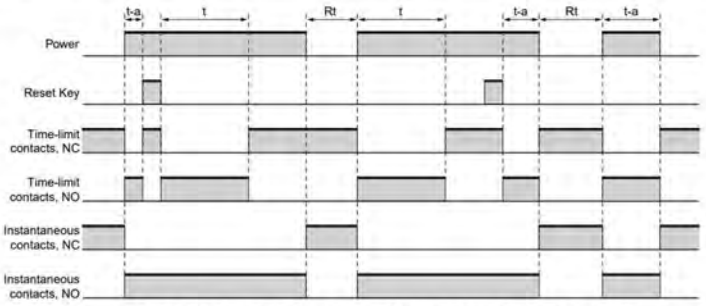
Basic operation



The Timer starts when the power comes ON or when the reset input goes OFF.

Note: Output is not instantaneous when setting is 0.

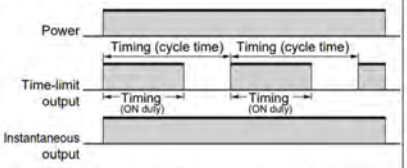
Detailed operation



t = Set time, Rt = Reset time (0.5 s min.), t – a < t (Indicates the time is less than the set time.)

Mode Z: ON/OFF-duty adjustable flicker (Timer resets when power comes ON.)

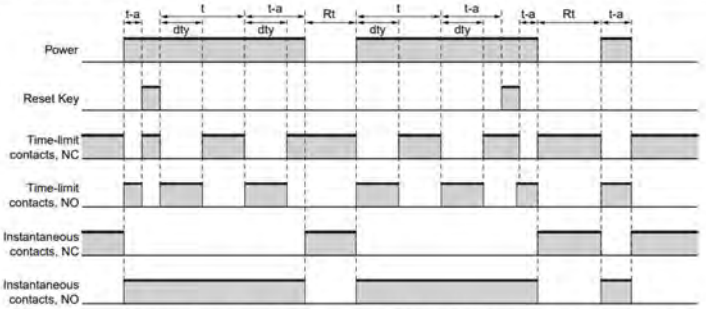
Basic operation



The Timer starts when the power comes ON or when the reset input goes OFF.

Note: Normal output operation will not be possible if the set time is too short.
Set the value to at least 100 ms.

Detailed operation



t = Set time, dty = ON duty time, Rt = Reset time (0.5 s min.), t – a < t (Indicates the time is less than the set time.)

Note: H5CX-L8E□-N Precautions
Set the Timer's set value before using the Timer in a self-holding circuit.

[Operation ratings]

Product discontinuation
H5CX-A□-N/-L□-N series

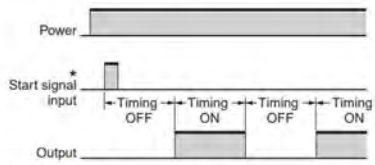
Operating Procedures for Twin Timer Function

Models without Instantaneous Contact Outputs

The gate input is not included in the H5CX-L8□ models.

Mode toff: Flicker OFF start 1 (Timer resets when power comes ON.)

Basic operation

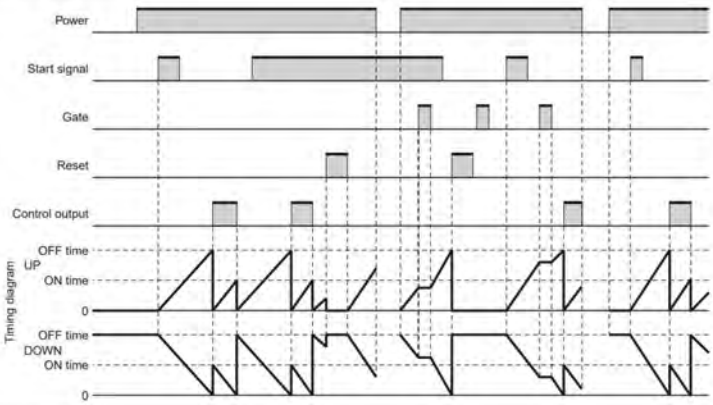


✱Start signal input is disabled during timing.

Timing starts when the start signal goes ON.
The status of the control output is reversed when time is up (OFF at start).
While the start signal is ON, the timer starts when the power comes ON or when the reset input goes OFF.

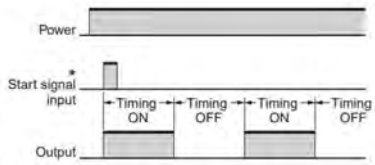
Note: Normal output operation will not be possible if the set time is too short.
Set the value to at least 100 ms (contact output type).

Detailed operation



Mode ton: Flicker OFF start 1 (Timer resets when power comes ON.)

Basic operation

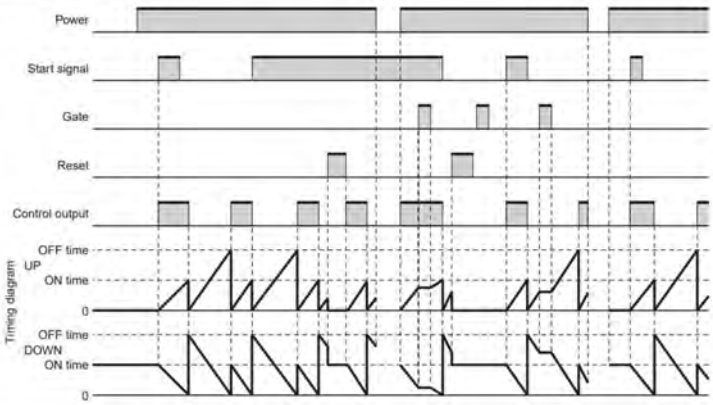


✱Start signal input is disabled during timing.

Timing starts when the start signal goes ON.
The status of the control output is reversed when time is up (ON at start).
While the start signal is ON, the timer starts when the power comes ON or when the reset input goes OFF.

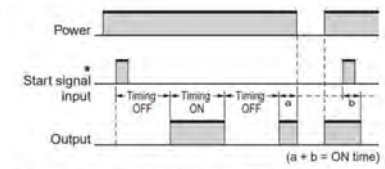
Note: Normal output operation will not be possible if the set time is too short.
Set the value to at least 100 ms (contact output type).

Detailed operation



Mode toff-1: Flicker OFF start 2 (Timer does not reset when power comes ON.)

Basic operation

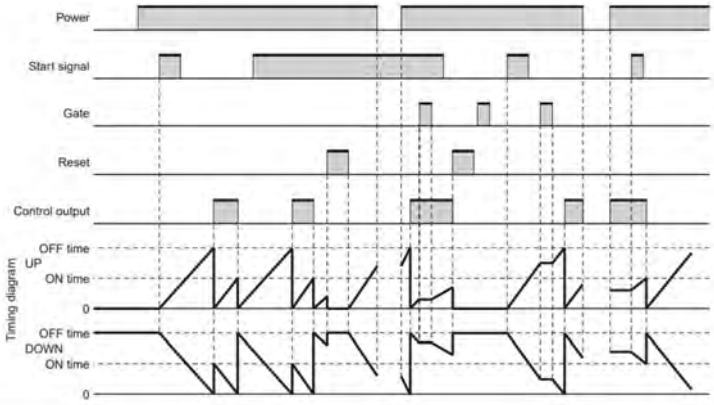


✱Start signal input is disabled during timing.

Timing starts when the start signal goes ON.
The status of the control output is reversed when time is up (OFF at start).
While the start signal is ON, the timer starts when the power comes ON or when the reset input goes OFF.

Note: Normal output operation will not be possible if the set time is too short.
Set the value to at least 100 ms (contact output type).

Detailed operation

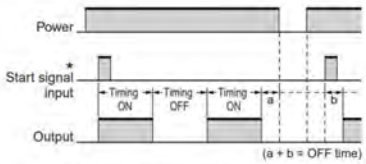


[Operation ratings]

Product discontinuation
H5CX-A□-N/-L□-N series

Mode ton-1: Flicker ON start 2 (Timer does not reset when power comes ON.)

Basic operation

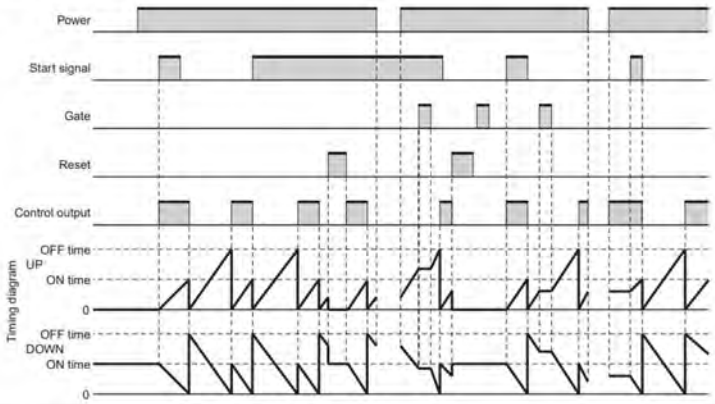


✱Start signal input is disabled during timing.

Timing starts when the start signal goes ON.
The status of the control output is reversed when time is up (ON at start).
While the start signal is ON, the timer starts when the power comes ON or when the reset input goes OFF.

Note: Normal output operation will not be possible if the set time is too short.
Set the value to at least 100 ms (contact output type).

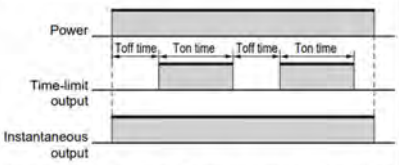
Detailed operation



Models with Instantaneous Contact Outputs

Mode toff: Flicker OFF start 1 (Timer resets when power comes ON.)

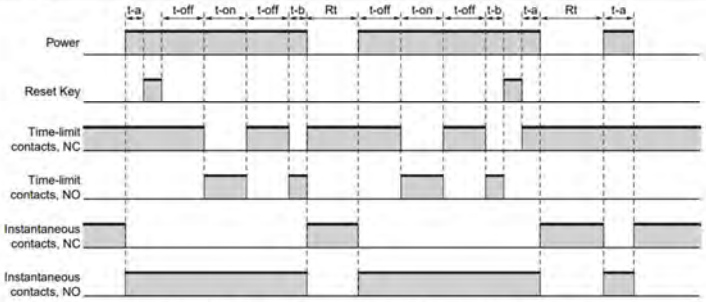
Basic operation



The Timer starts when the power comes ON or when the reset input goes OFF.

Note: Normal output operation will not be possible if the set time is too short.
Set the ON time and OFF time to at least 100 ms.

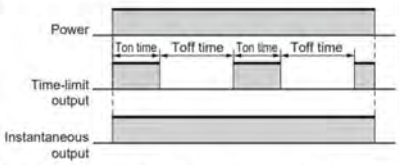
Detailed operation



t-on = ON time, t-off = OFF time, Rt = Reset time (0.1 s min.), t – a < t-off and t – b < t-on
(Indicates the time is less than the set time.)

Mode ton: Flicker ON start 1 (Timer resets when power comes ON.)

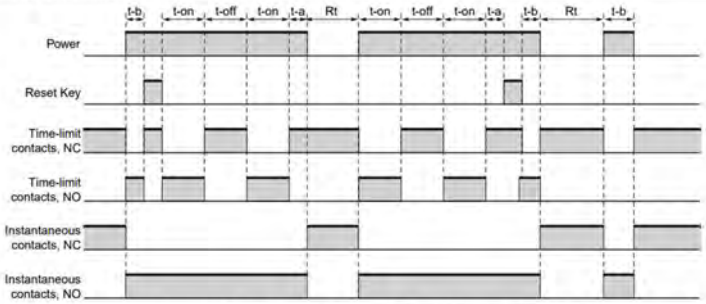
Basic operation



The Timer starts when the power comes ON or when the reset input goes OFF.

Note: Normal output operation will not be possible if the set time is too short.
Set the ON time and OFF time to at least 100 ms.

Detailed operation



t-on = ON time, t-off = OFF time, Rt = Reset time (0.1 s min.), t – a < t-off and t – b < t-on
(Indicates the time is less than the set time.)

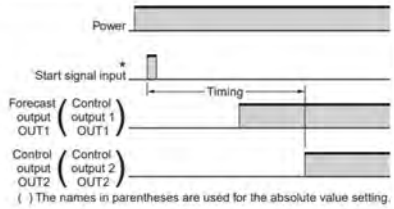
Note: H5CX-L8E□-N Precautions
Set the Timer's set value before using the Timer in a self-holding circuit.

[Operation ratings]

Product discontinuation
H5CX-BWSD-N

Mode A: Signal ON delay (Timer resets when power comes ON.)

Basic operation



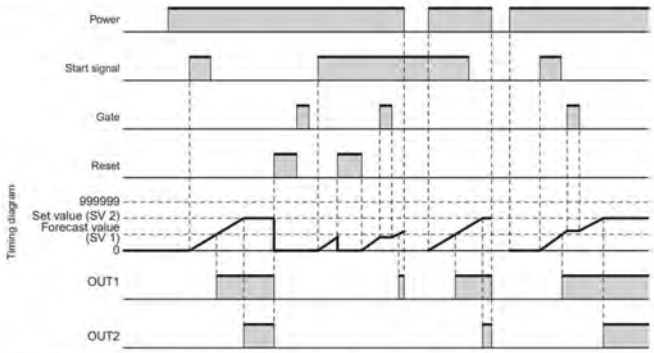
( ) The names in parentheses are used for the absolute value setting.

✱Start signal input is disabled during timing.

- Timing starts when the start signal goes ON.
- While the start signal is ON, the timer starts when the power comes ON or when the reset input goes OFF.
- A sustained control output is used.
- Timing stops when the time is up.

Note: Output is instantaneous when the set value is 0.

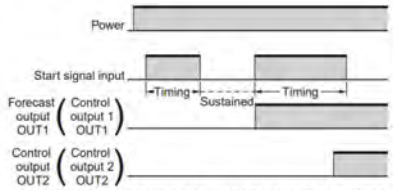
Detailed operation



The names in parentheses are used for the absolute value setting.

Mode F-1: Cumulative (Timer does not reset when power comes ON.)

Basic operation



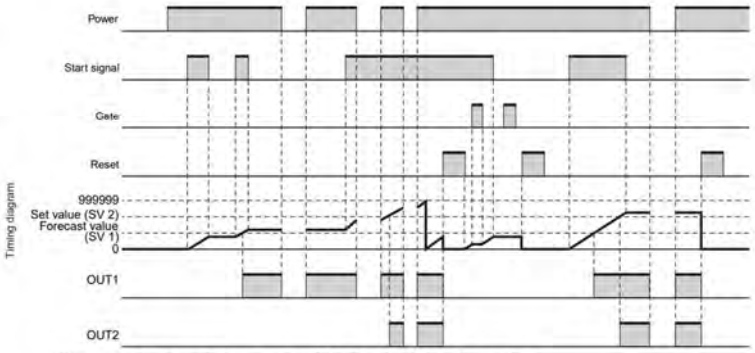
( ) The names in parentheses are used for the absolute value setting.

- Start signal enables timing (timing is stopped when the start signal is OFF or when the power is OFF).
- A sustained control output is used.
- Timing continues even after the time is up.

Note: Output is instantaneous when the set value is 0.

When the H5CX is used with power start, there will be a timer error (approximately 100 ms each time the H5CX is turned ON) due to the characteristics of the internal circuitry. Use the H5CX with signal start if timer accuracy is required.

Detailed operation



The names in parentheses are used for the absolute value setting.

Note: 1. The forecast value = set value - forecast set value
2. The forecast set value is used to set the deviation for the set value.

[Operation ratings]

Recommended replacement
H5CC-A□/-L□ series

Operating Procedures for Timer Function

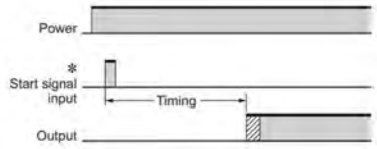
Models Other than the H5CC-L8E□

The gate input is not included in the H5CC-L8□ models.

Either one-shot output or sustained output can be selected.

Mode A: Signal ON delay I (Timer resets when power comes ON.)

Basic operation

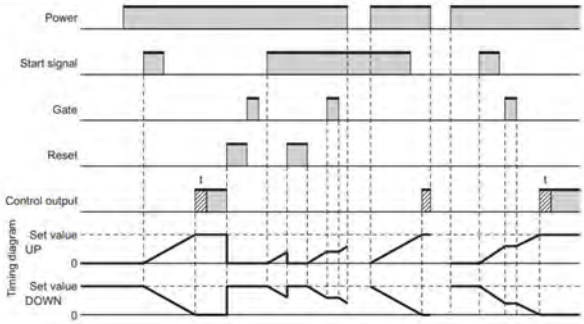


*Start signal input is disabled during timing.

Timing starts when the start signal goes ON.
While the start signal is ON, the timer starts when the power comes ON or when the reset input goes OFF.
The control output is controlled using a sustained or one-shot time period.

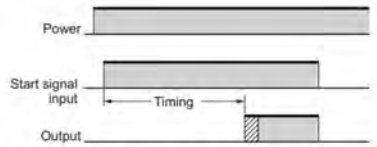
Note: Output is instantaneous when setting is 0.

Detailed operation



Mode A-1: Signal ON delay II (Timer resets when power comes ON.)

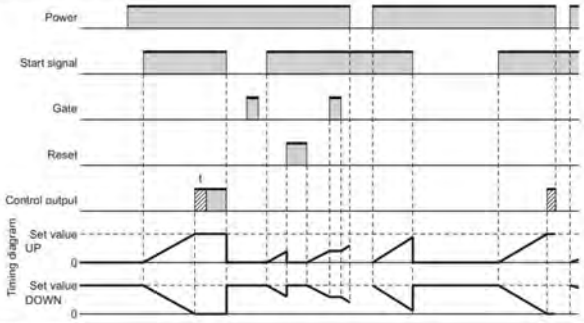
Basic operation



Timing starts when the start signal goes ON, and resets when the start signal goes OFF.
While the start signal is ON, the timer starts when the power comes ON or when the reset input goes OFF.
The control output is controlled using a sustained or one-shot time period.

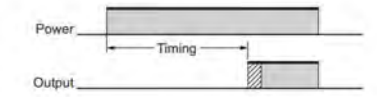
Note: Output is instantaneous when setting is 0.

Detailed operation



Mode A-2: Power ON delay I (Timer resets when power comes ON.)

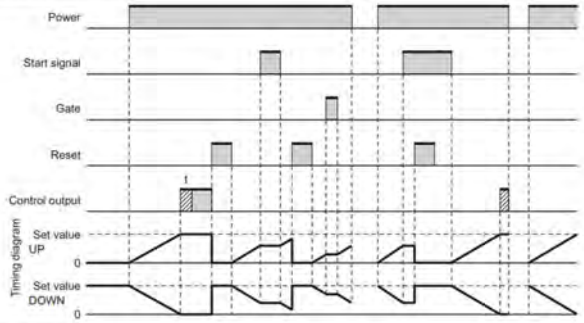
Basic operation



Timing starts when the reset input goes OFF.
The start signal disables the timing function (i.e., same function as the gate input).
The control output is controlled using a sustained or one-shot time period.

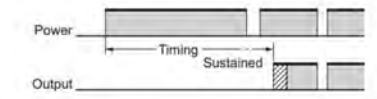
Note: Output is instantaneous when setting is 0.

Detailed operation



Mode A-3: Power ON delay II (Timer does not reset when power comes ON.)

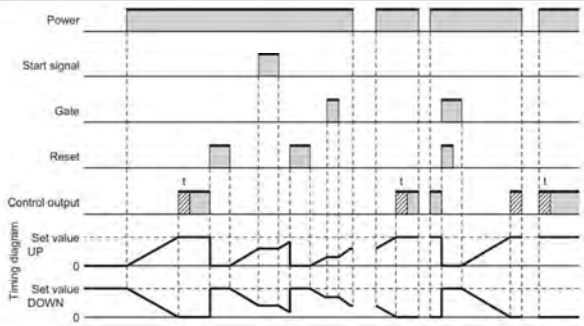
Basic operation



Timing starts when the reset input goes OFF.
The start signal disables the timing function (i.e., same function as the gate input).
The control output is controlled using a sustained or one-shot time period.

Note: Output is instantaneous when setting is 0.

Detailed operation

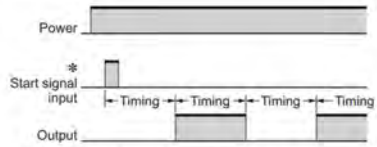


[Operation ratings]

Recommended replacement
H5CC-A□/-L□ series

Mode b: Flicker I (Timer resets when power comes ON.)

Basic operation



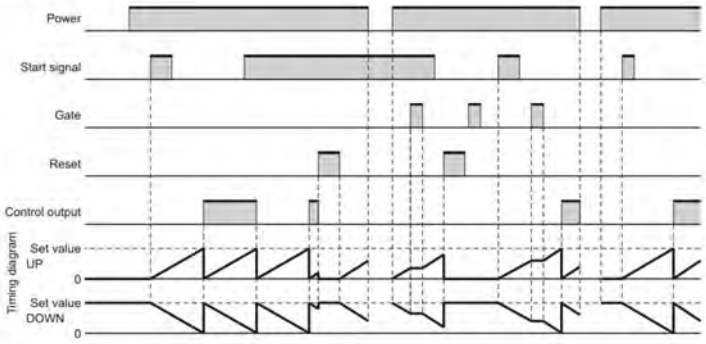
✻Start signal input is disabled during timing.

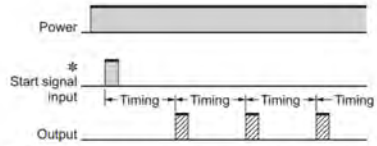
Timing starts when the start signal goes ON.
The status of the control output is reversed when time is up (OFF at start).
While the start signal is ON, the timer starts when the power comes ON or when the reset input goes OFF.

Note: Normal output operation will not be possible if the set time is too short.
Set the value to at least 100 ms (contact output type).

Detailed operation

Sustained Output



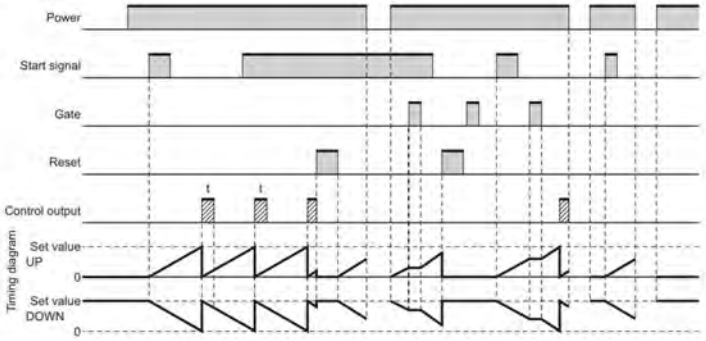


✻Start signal input is disabled during timing.

Timing starts when the start signal goes ON.
The control output is turned ON when time is up.
While the start signal is ON, the timer starts when the power comes ON or when the reset input goes OFF.

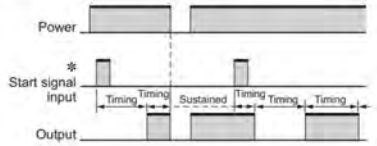
Note: Normal output operation will not be possible if the set time is too short.
Set the value to at least 100 ms (contact output type).

One-shot Output



Mode b-1: Flicker II (Timer does not reset when power comes ON.)

Basic operation



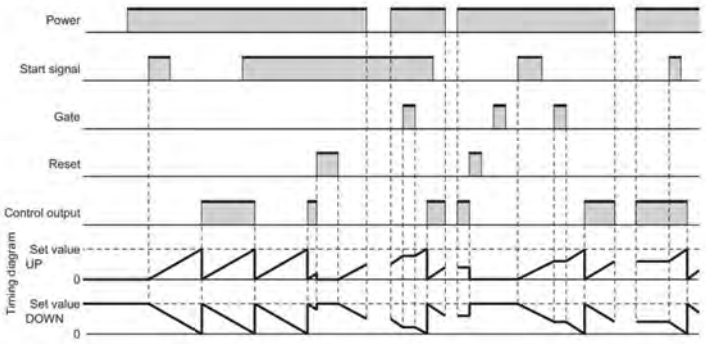
✻Start signal input is disabled during timing.

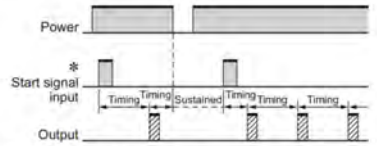
Timing starts when the start signal goes ON.
The status of the control output is reversed when time is up (OFF at start).
While the start signal is ON, the timer starts when the power comes ON or when the reset input goes OFF.

Note: Normal output operation will not be possible if the set time is too short.
Set the value to at least 100 ms (contact output type).

Detailed operation

Sustained Output



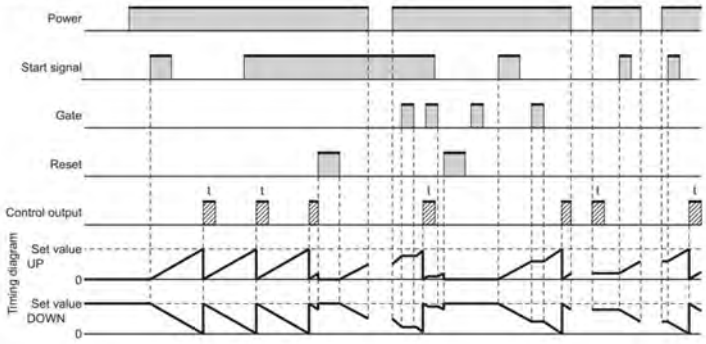


✻Start signal input is disabled during timing.

Timing starts when the start signal goes ON.
The control output is turned ON when time is up.
While the start signal is ON, the timer starts when the power comes ON or when the reset input goes OFF.

Note: Normal output operation will not be possible if the set time is too short.
Set the value to at least 100 ms (contact output type).

One-shot Output

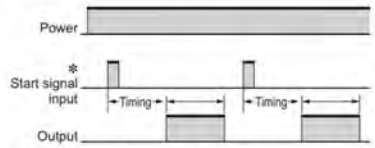


[Operation ratings]

Recommended replacement
H5CC-A□/-L□ series

Mode b-5: One-shot flicker (Timer resets when power comes ON.)

Basic operation

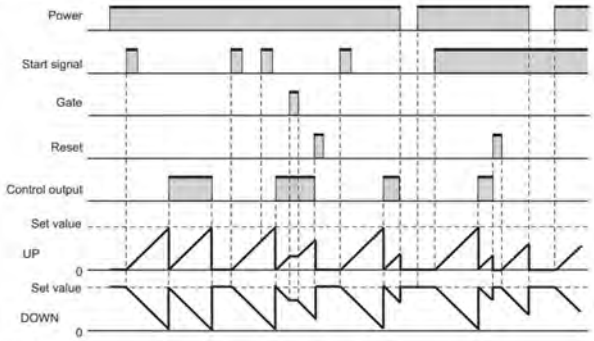


✻Start signal input is disabled during timing.

Timing starts when the start signal goes ON.
The control output is turned ON when time is up. It resets in one cycle.
While the start signal is ON, the timer starts when the power comes ON or when the reset input goes OFF.

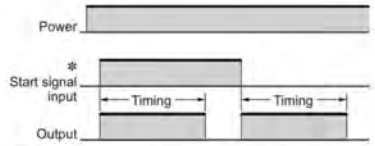
Note: Normal output operation will not be possible if the set time is too short. Set the value to at least 100 ms (contact output type).

Detailed operation



Mode C: Signal ON/OFF delay I (Timer resets when power comes ON.)

Basic operation

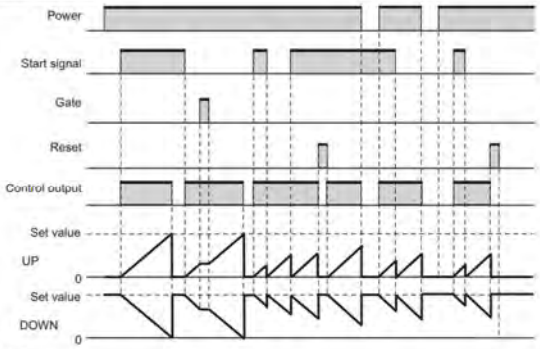


✻Start signal input is enabled during timing.

While the start signal is ON, the timer starts when the power comes ON or when the reset input goes OFF.
The timer resets when the time is up.

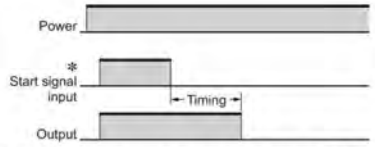
Note: Output is disabled when the setting is 0.

Detailed operation



Mode d: Signal OFF delay I (Timer resets when power comes ON.)

Basic operation

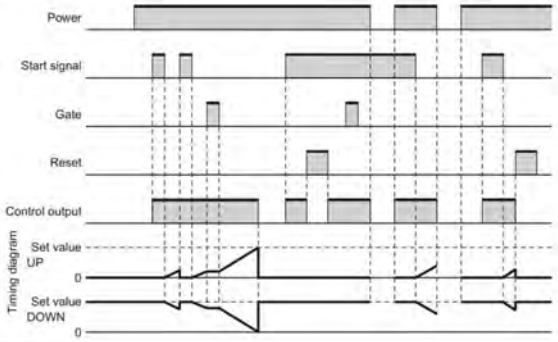


✻Start signal input is enabled during timing.

The control output is ON when the start signal is ON (except when the power is OFF or the reset is ON).
The timer resets when the time is up.

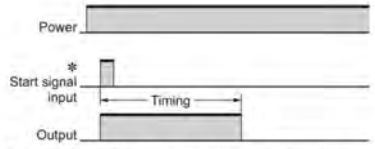
Note: Output functions only during start signal input when setting is 0.

Detailed operation



Mode E: Interval (Timer resets when power comes ON.)

Basic operation

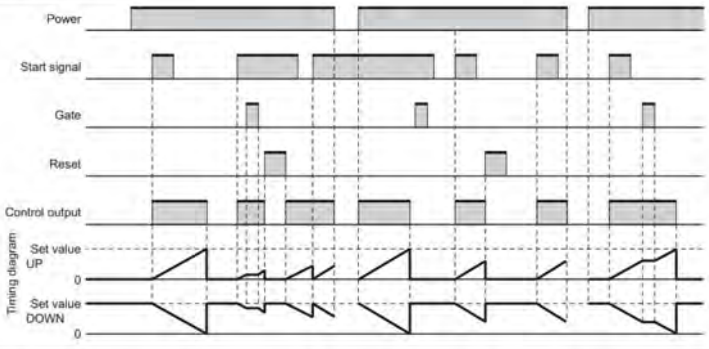


✻Start signal input is enabled during timing.

Timing starts when the start signal comes ON.
The timer resets when the time is up.
While the start signal is ON, the timer starts when the power comes ON or when the reset input goes OFF.

Note: Output is disabled when the setting is 0.

Detailed operation

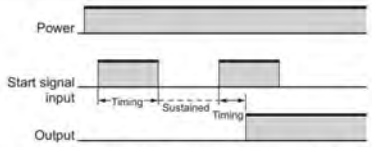


[Operation ratings]

Recommended replacement
H5CC-A□/-L□ series

Mode F: Cumulative (Timer does not reset when power comes ON.)

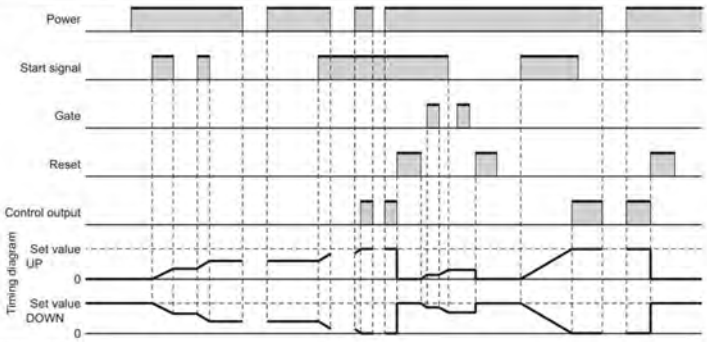
Basic operation



Start signal enables timing (timing is stopped when the start signal is OFF or when the power is OFF).
A sustained control output is used.

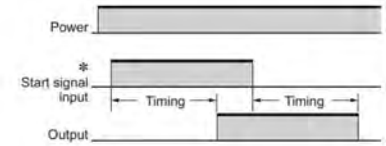
Note: Output is instantaneous when setting is 0.
When the H5CC is used with power-ON start, there will be a timer error (approximately 100 ms each time the H5CC is turned ON) due to the characteristics of the internal circuit. Use the H5CC with signal start if timer accuracy is required.

Detailed operation



Mode G: Signal ON/OFF delay II (Timer resets when power comes ON.)

Basic operation

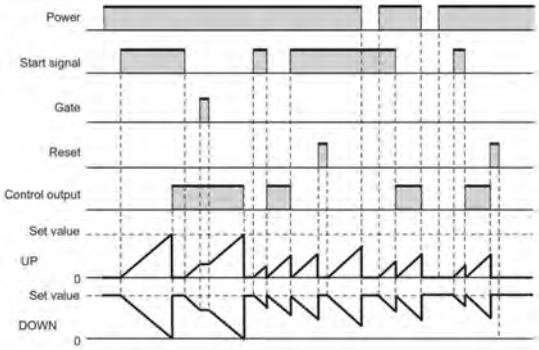


* Start signal input is enabled during timing.

While the start signal is ON, the timer starts when the power comes ON or when the reset input goes OFF.
The timer resets when the time is up.

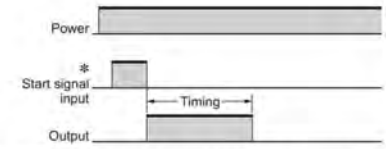
Note: Output functions only during start signal input when setting is 0.

Detailed operation



Mode H: Signal OFF delay II (Timer resets when power comes ON.)

Basic operation

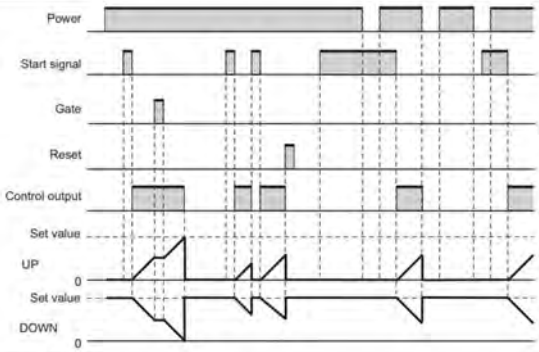


* Start signal input is enabled during timing.

The control output is OFF when the start signal is ON.
The timer resets when the time is up.

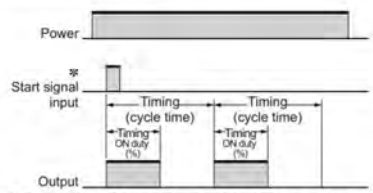
Note: Output is disabled when the setting is 0.

Detailed operation



Mode Z: ON/OFF-duty-adjustable flicker (Timer resets when power comes ON.)

Basic operation

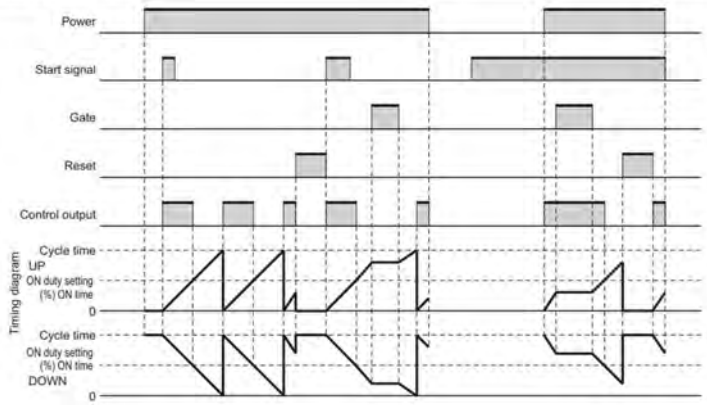


* Start signal input is disabled during timing.

Timing starts when the start signal goes ON.
The status of the control output is reversed when time is up (ON at start).
While the start signal is ON, the timer starts when the power comes ON or when the reset input goes OFF.

Note: Normal output operation will not be possible if the set time is too short.
Set the value to at least 100 ms (contact output type).

Detailed operation

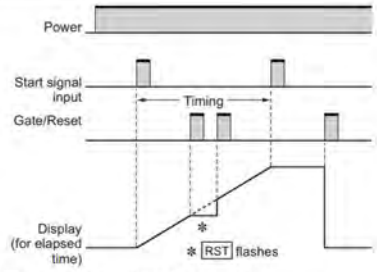


[Operation ratings]

Recommended replacement
H5CC-A□/-L□ series

Mode S: Stopwatch (Timer resets when power comes ON.)

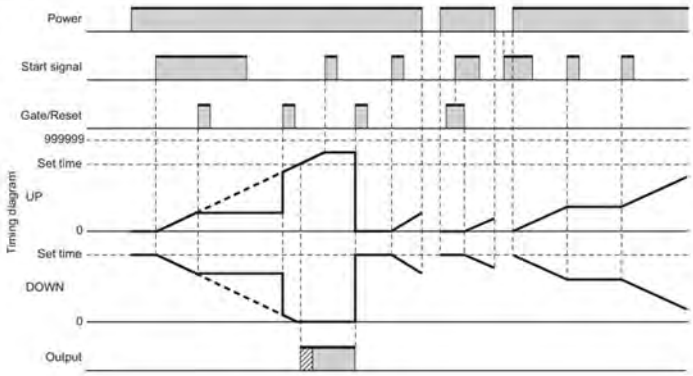
Basic operation



The signal starts and stops timing.
The display is held and timing is continued if the reset or gate input is received during timing operation.
The timer resets if the reset or gate input is received when the timing operation is stopped.

Note: Output is instantaneous when setting is 0.

Detailed operation

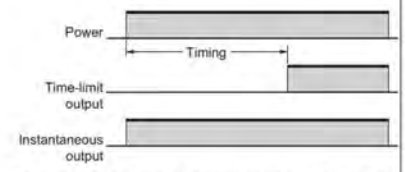


H5CC-L8E□

Either one-shot output or sustained output can be selected.

Mode A-2: Power ON delay (Timer resets when power comes ON.)

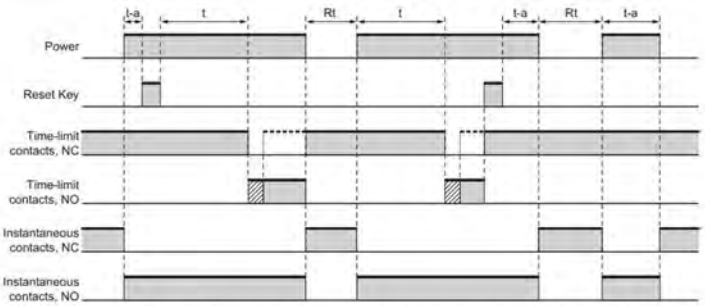
Basic operation



The Timer starts when the power comes ON or when the reset input goes OFF.

Note: Output is instantaneous when setting is 0.

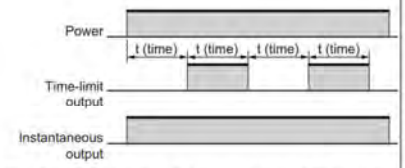
Detailed operation



t = Set time, Rt = Reset time (0.5 s min.), t – a < t (Indicates the time is less than the set time.)

Mode b: Flicker I (Timer resets when power comes ON.)

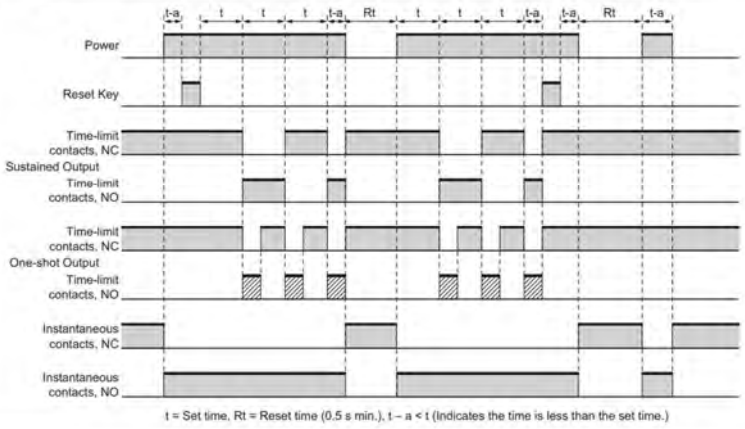
Basic operation



The Timer starts when the power comes ON or when the reset input goes OFF.

Note: Normal output operation will not be possible if the set time is too short.
Set the value to at least 100 ms.

Detailed operation



t = Set time, Rt = Reset time (0.5 s min.), t – a < t (Indicates the time is less than the set time.)

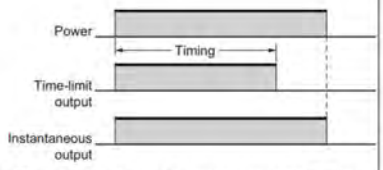
Note: H5CC-L8E□ Precautions
Set the Timer's set value before using the Timer in a self-holding circuit.

[Operation ratings]

Recommended replacement
H5CC-A□/-L□ series

Mode E: Interval (Timer resets when power comes ON.)

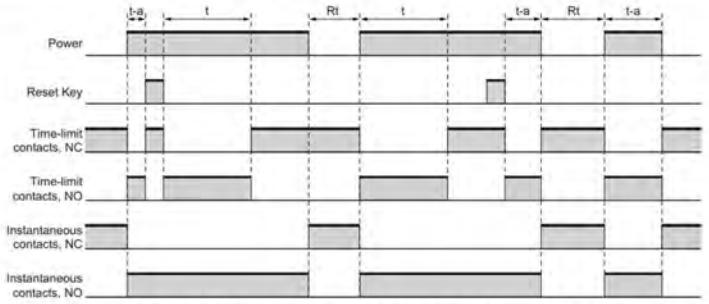
Basic operation



The Timer starts when the power comes ON or when the reset input goes OFF.

Note: Output is not instantaneous when setting is 0.

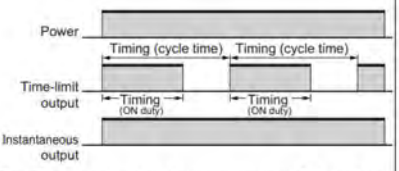
Detailed operation



t = Set time, Rt = Reset time (0.5 s min.), t – a < t (Indicates the time is less than the set time.)

Mode Z: ON/OFF-duty-adjustable flicker (Timer resets when power comes ON.)

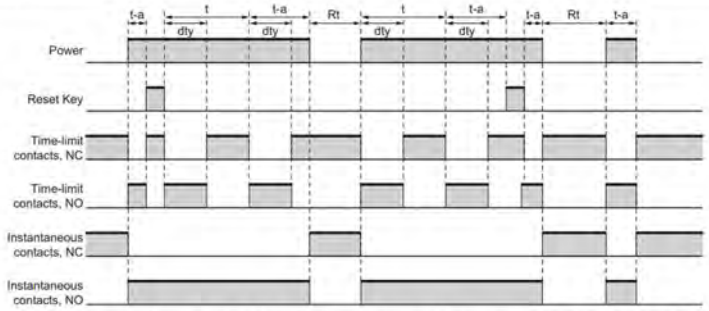
Basic operation



The Timer starts when the power comes ON or when the reset input goes OFF.

Note: Normal output operation will not be possible if the set time is too short.
Set the value to at least 100 ms.

Detailed operation



t = Set time, dty = ON duty time, Rt = Reset time (0.5 s min.), t – a < t (Indicates the time is less than the set time.)

Note: H5CC-L8E□ Precautions
Set the Timer's set value before using the Timer in a self-holding circuit.

[Operation ratings]

Recommended replacement
H5CC-A□/-L□ series

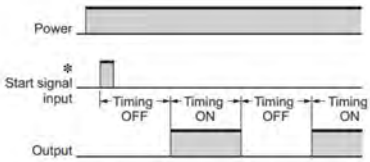
Operating Procedures for Twin Timer Function

Models Other than the H5CC-L8E□

The gate input is not included in the H5CC-L8□ models.

Mode toff: Flicker OFF start I (Timer resets when power comes ON.)

Basic operation

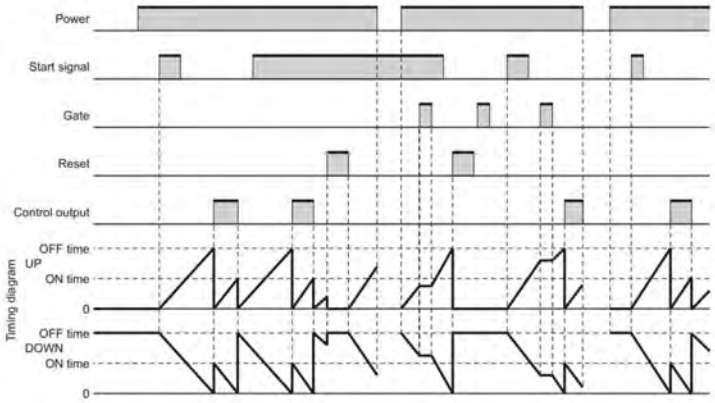


✻Start signal input is disabled during timing.

Timing starts when the start signal goes ON.
The status of the control output is reversed when time is up (OFF at start).
While the start signal is ON, the Timer starts when the power comes ON or when the reset input goes OFF.

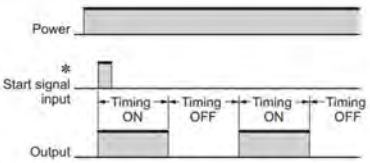
Note: Normal output operation will not be possible if the set time is too short.
Set the ON time and OFF time to at least 100 ms (contact output type).

Detailed operation



Mode ton: Flicker ON start I (Timer resets when power comes ON.)

Basic operation

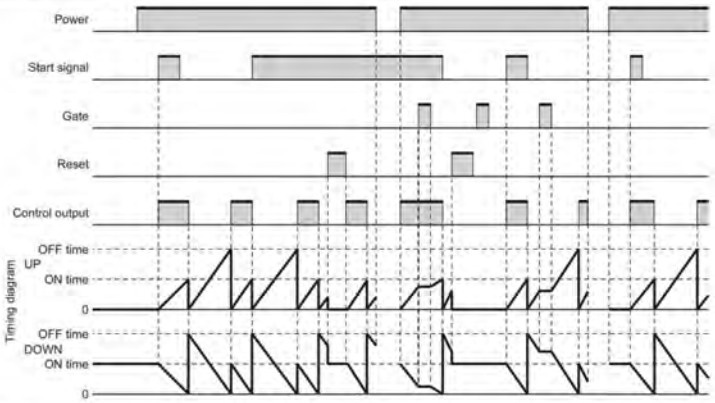


✻Start signal input is disabled during timing.

Timing starts when the start signal goes ON.
The status of the control output is reversed when time is up (ON at start).
While the start signal is ON, the Timer starts when the power comes ON or when the reset input goes OFF.

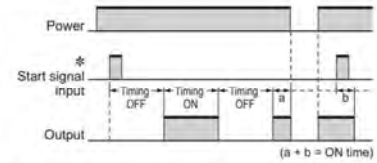
Note: Normal output operation will not be possible if the set time is too short.
Set the ON time and OFF time to at least 100 ms (contact output type).

Detailed operation



Mode toff-1: Flicker OFF start II (Timer does not reset when power comes ON.)

Basic operation

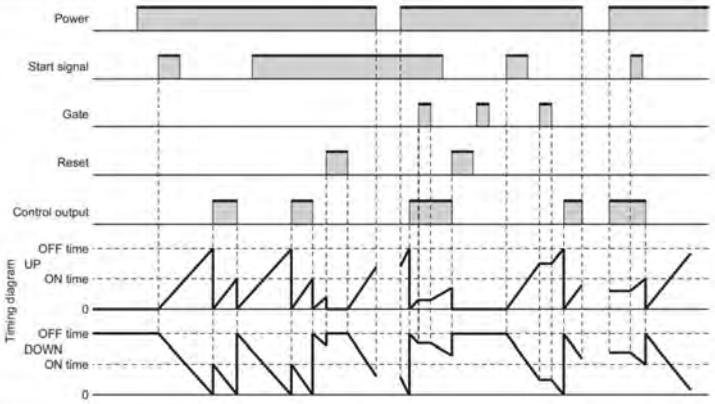


✻Start signal input is disabled during timing.

Timing starts when the start signal goes ON.
The status of the control output is reversed when time is up (OFF at start).
While the start signal is ON, the Timer starts when the power comes ON or when the reset input goes OFF.

Note: Normal output operation will not be possible if the set time is too short.
Set the ON time and OFF time to at least 100 ms (contact output type).

Detailed operation

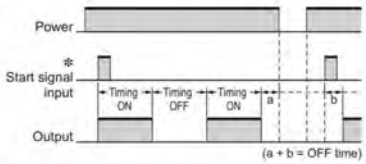


[Operation ratings]

Recommended replacement
H5CC-A□/-L□ series

Mode ton-1: Flicker ON start II (Timer does not reset when power comes ON.)

Basic operation

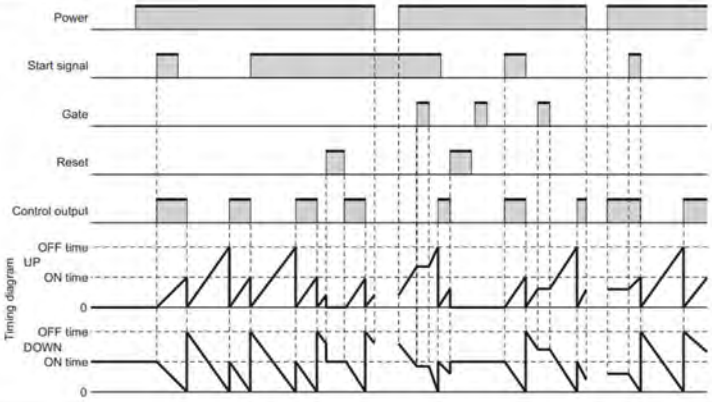


✻Start signal input is disabled during timing.

Timing starts when the start signal goes ON.
The status of the control output is reversed when time is up (ON at start).
While the start signal is ON, the Timer starts when the power comes ON or when the reset input goes OFF.

Note: Normal output operation will not be possible if the set time is too short.
Set the ON time and OFF time to at least 100 ms (contact output type).

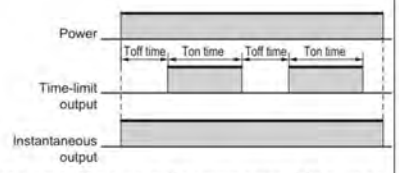
Detailed operation



H5CC-L8E□

Mode toff: Flicker OFF start I (Timer resets when power comes ON.)

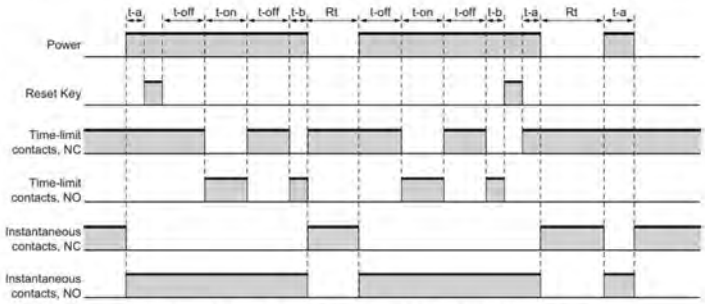
Basic operation



The Timer starts when the power comes ON or when the reset input goes OFF.

Note: Normal output operation will not be possible if the set time is too short.
Set the ON time and OFF time to at least 100 ms.

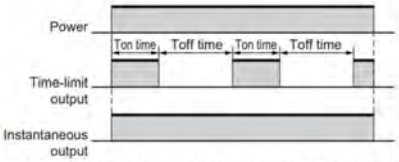
Detailed operation



t-on = ON time, t-off = OFF time, Rt = Reset time (0.1 s min.), t – a < t-off and t – b < t-on
(Indicates the time is less than the set time.)

Mode ton: Flicker ON start I (Timer resets when power comes ON.)

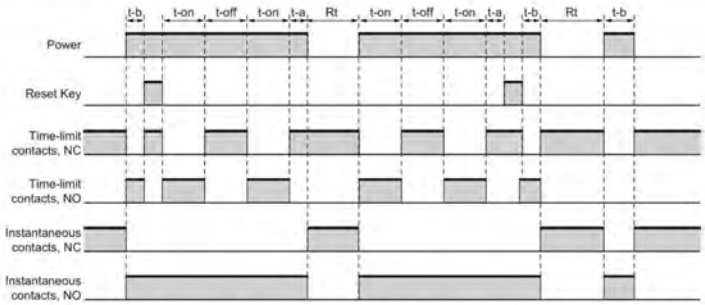
Basic operation



The Timer starts when the power comes ON or when the reset input goes OFF.

Note: Normal output operation will not be possible if the set time is too short.
Set the ON time and OFF time to at least 100 ms.

Detailed operation



t-on = ON time, t-off = OFF time, Rt = Reset time (0.1 s min.), t – a < t-off and t – b < t-on
(Indicates the time is less than the set time.)

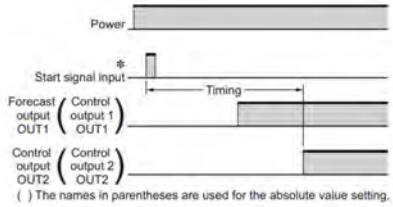
✻H5CC-L8E□ Precautions
Set the Timer's set value before using the Timer in a self-holding circuit.

[Operation ratings]

Recommended replacement
H5CC-AWSD series

Mode A: Signal ON delay (Timer resets when power comes ON.)

Basic operation

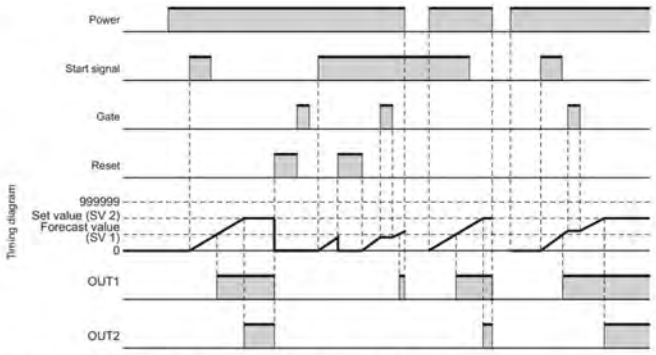


✻ Start signal input is disabled during timing.

- Timing starts when the start signal goes ON.
- While the start signal is ON, the Timer starts when the power comes ON or when the reset input goes OFF.
- A sustained control output is used.
- Timing stops when the time is up.

Note: Output is instantaneous when the set value is 0.

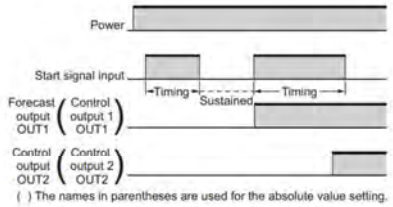
Detailed operation



The names in parentheses are used for the absolute value setting.

Mode F-1: Cumulative (Timer does not reset when power comes ON.)

Basic operation

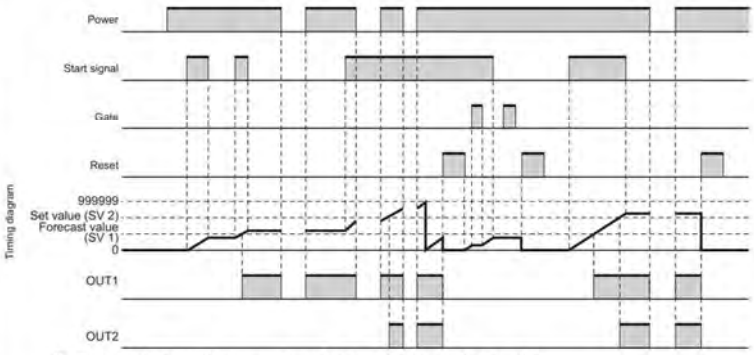


- Start signal enables timing (timing is stopped when the start signal is OFF or when the power is OFF).
- A sustained control output is used.
- Timing continues even after the time is up.

Note: Output is instantaneous when the set value is 0.

When the H5CC is used with power-ON start, there will be a timer error (approximately 100 ms each time the H5CC is turned ON) due to the characteristics of the internal circuit. Use the H5CC with signal start if timer accuracy is required.

Detailed operation



The names in parentheses are used for the absolute value setting.

Note: The forecast value = set value - forecast set value
✻ The forecast set value is used to set the deviation for the set value.

[Operation methods]

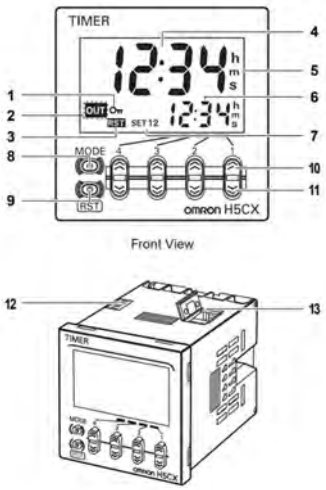
Product discontinuation
H5CX-☐-N series

H5CX-A☐-N/-L☐-N

Display Section

1. **Key Protect Indicator** (orange)
2. **Control Output Indicator** (orange)
3. **Reset Indicator** (orange)
4. **Present Value Display** (Main display)
   (Character height: 12 mm, red *)
   * Characters on models with screw terminals (H5CX-A☐) can be switched between red, green, and orange.
5. **Time Unit Indicators**
   (Color is same as present value display.)
   (If the time range is 0 min, 0 h, 0.0 h, or 0 h 0 min, these indicators flash to indicate timing operation.)
6. **Set Value Display** (Sub-display)
   (Character height: 6 mm, green)
7. **Set Value 1, 2 Indicator** (green)

Character Size for Present Value Display	Character Size for Set Value Display
12mm	6mm



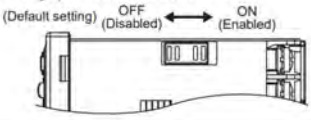
Front View

Operation Key

8. **Mode Key**
   (Changes modes and setting items)
9. **Reset Key**
   (Resets present value and output)
10. **Up Keys 1 to 4**
11. **Down Keys 1 to 4**

Switches

12. **Key-protect Switch**



13. **DIP Switch**

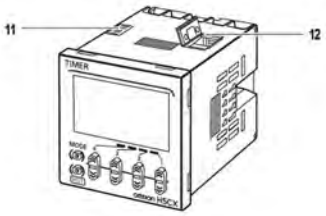
Note: There is no DIP switch on the H5CX-L8☐.

H5CX-BWSD-N

Display Section

1. **Key Protection Indicator** (orange)
   Lit when the reset input or Reset Key is ON.
2. **Control Output Indicator** (orange)
   Forecast value setting
   Forecast output ON: OUT 1 is lit.
   Control output ON: OUT 2 is lit.
   Absolute value setting
   Control output 1 ON: OUT 1 is lit.
   Control output 2 ON: OUT 2 is lit.
3. **Reset Indicator** (orange)
   Lit when the reset input or Reset Key is ON.
4. **Present Value Display** (red)
   Character height: 10 mm
   If the time range is 0.0 min or 0.0 h, the decimal point flashes to indicate timing operation.
5. **Time Unit Indicators** (green)
6. **Set Value** (green)
   Character height: 6 mm
7. **Set Value 1, 2 Indicator** (green)

Character Size for Present Value Display	Character Size for Set Value Display
10mm	6mm

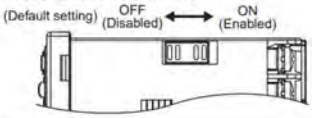


Operation Key

8. **Mode Key**
   (Changes modes and setting items)
9. **Reset Key**
   Resets present value and output.
10. **Up Keys 1 to 6**

Switches

11. **Key-protect Switch**



12. **DIP Switch**

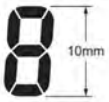
[Operation methods]

Recommended replacement
H5CC-☐ series

Display Section

1. **Key Protection Indicator** (yellow)
   Lit when the key protect switch is ON.
2. **Control Output Indicator** (yellow)
   Forecast value setting (for the H5CC-AWSD)
   Forecast output ON: OUT 1 is lit.
   Control output ON: OUT 2 is lit.
   Absolute value setting (for the H5CC-AWSD)
   Control output 1 ON: OUT 1 is lit.
   Control output 2 ON: OUT 2 is lit.
3. **Reset Indicator** (yellow)
   Lit when the reset input or Reset Key is ON.
4. **Present Value Display** (Main display)
   (Character height: 10 mm, white)
5. **Time Unit Indicators** (green)
   (If the time range is 0 min, 0 h, 0.0 h, or 0 h 0 min, these indicators flash to indicate timing operation.)
6. **Set Value Display** (Sub-display)
   (Character height: 6 mm, green)
7. **Set Value 1, 2 Indicator** (green)

Character Size for Main Display



Character Size for Sub-display

Operation Keys

8. **Up Keys (UP1 to UP6)**
   (UP1, 2, 3, 4, 5, 6 from right to left)
9. **Down Keys (DW1 to DW6)**
   (DW1, 2, 3, 4, 5, 6 from right to left)

10. Reset Operation (UP6+DW6) ✻

1. Press RST keys (UP6+DW6) simultaneously for at least one second.
2. LED on each key starts blinking.
   Do not release the keys until the LED starts blinking. Otherwise the setting value may change. If not blink, that is because the keys are not pressed simultaneously. In this case, release the keys after pressing for at least 1 second, and restart from 1.
3. Press and hold until the LED turns off.
   If you release the keys while blinking, the reset operation will be interrupted.

11. Mode Operation (UP1+UP3 or DW1+DW3)

<Change of setting item>
1. Press MODE keys (UP1+UP3 or DW1+DW3) simultaneously to switch setting items.

<Move to Function Setting Mode>
1. Press MODE key (UP1+UP3 or DW1+DW3) for at least 2 seconds simultaneously.
2. LEDs on UP1 (DW1) and UP3 (DW3) key start blinking.
   Do not release the keys until the LEDs start blinking. Otherwise the setting value may change. If not blink, that is because the keys are not pressed simultaneously. In this case, release the keys after pressing for at least one second, and restart from 1.
3. Press and hold until the LED turns off. If you release the keys during blinking, the mode will not be moved to Function Setting Mode.

DW1+DW3

12. Status indicator

<When Run mode is not selected.>
· When the indicator display mode is ON
The ratio of the measurement value to the set value is displayed from 0 to 100%.
· When the indicator display mode is all off or all lit
All off or all lit display.

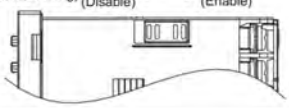
Note. When you press the Up Key or the Down Key, the status indicator display goes off, and the pressed key lights up or blinks.

<When Function Setting Mode is not selected>
· The keys that can be set light up for notification.

Switches

13. Key-protect Switch

(Default setting) OFF (Disable) ⟷ ON (Enable)

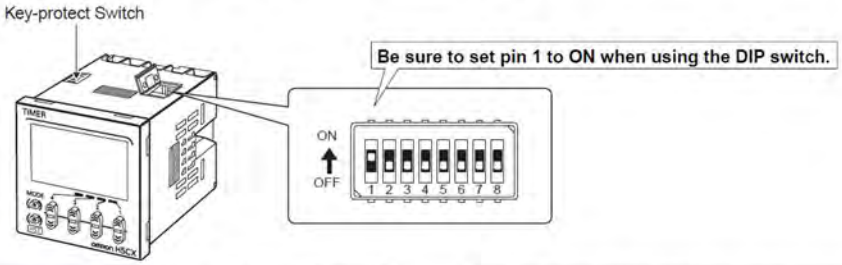


[Operation methods]

Product discontinuation
H5CX-□-N series

Operating Procedures for Timer Function

Step1 Settings for basic functions can be performed with just the DIP switch.
Note: There is no DIP switch on the H5CX-L8□. Go to **Step2**.



	Item	OFF	ON
1	DIP switch settings	Disabled	Enabled
2	Time range	Refer to the table on the right.	
3			
4			
5	Output modes	Refer to the table on the right.	
6			
7	Timer mode	UP	DOWN
8	Input signal width	20 ms	1 ms

Note: All the pins are factory-set to OFF.

- Be sure to turn ON pin 1 of the DIP switch.
- Changes to DIP switch settings are enabled when the power is turned ON.
  (Set the DIP switch while the power is OFF.)

Pin 2	Pin 3	Pin 4	Time range
ON	ON	ON	0.001 s to 9.999 s
OFF	OFF	OFF	0.01 s to 99.99 s
ON	OFF	OFF	0.1 s to 999.9 s
OFF	ON	OFF	1 s to 9999 s
ON	ON	OFF	0 min 01 s to 99 min 59 s
OFF	OFF	ON	0.1 min to 999.9 min
ON	OFF	ON	0 h 01 min to 99 h 59 min
OFF	ON	ON	0.1 h to 999.9 h

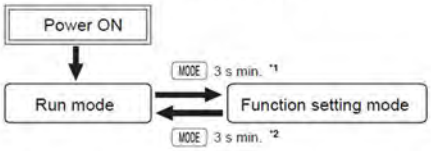
Pin 5	Pin 6	Output mode
OFF	OFF	Mode A: Signal ON delay 1 (Timer resets when power comes ON.)
ON	OFF	Mode A-2: Power ON delay 1 (Timer resets when power comes ON.)
OFF	ON	Mode E: Interval (Timer resets when power comes ON.)
ON	ON	Mode F: Cumulative (Timer does not reset when power comes ON.)

[Operation methods]

Product discontinuation
H5CX-☐-N series

Step2 Settings that cannot be performed with the DIP switch are performed with the operation keys.

• Change to Function Setting Mode.



*1. If the mode is switched to the function setting mode during operation, operation will continue.
*2. Changes made to settings in function setting mode are enabled for the first time when the mode is changed to run mode. Also, when settings are changed, the timer is reset (time initialized and output turned OFF).

The characters displayed in reverse video are the default settings.
When performing settings with operation keys only, set pin1 of the DIP switch to OFF (factory setting).
If pin 1 of the DIP switch is set to ON, the setting items indicated in ▭ will not be displayed.

Function setting mode

Time range (tLmr)
- Set the time range using the ▲ ▼ keys.

-.--s ↔ --.-s ↔ ----s ↔ ..... ↔ ----h ↔ -.---s

➡ For details, refer to the **Time Range List**.

Timer mode (tLmm)
- Set the timer mode using the ▲ ▼ keys.

UP (UP) ↔ down (DOWN)

Output modes (oUtm)
- Set the output mode using the ▲ ▼ keys.

A (A) ↔ A-1 (A-1) ↔ A-2 (A-2) ↔ A-3 (A-3) ↔ b (b) ↔ b-1 (b-1) ↔ d (d) ↔ E (E) ↔ F (F) ↔ z (Z) ↔ S (S)

Note: Only modes A-2 b, E, and Z can be selected for models with instantaneous contact outputs.

Output time (otLm)
- Set each digit for the output time using the corresponding ▲ ▼ keys.

Hold (Output hold) / 0.01~99.99 (0.01s) (99.99s)

(If the output time is set to 0.00, Hold is displayed.)

Note: Displayed for modes A, A-1, A-2, A-3, b, b-1 and S only.

Input signal (iFLt)
- Set the input signal width using the ▲ ▼ keys.

20mS (20ms) ↔ 1mS (1ms)

Note: Not displayed for models with instantaneous contact outputs.

NPN/PNP input (inod)
- Set the NPN/PNP mode using the ▲ ▼ keys.

nPn (NPN input) PnP (PNP input)

Note: Only displayed for the H5CX-A☐ and H5CX-A11☐.

Display color (CoLr)
- Set the display color using the ▲ ▼ keys.

rEd (Red) ↔ Grn (Green) ↔ orG (Orange) ↔ r-G (Red-green) ↔ G-r (Green-red) ↔ r-o (Red-orange) ↔ o-r (Orange-red) ↔ G-o (Green-orange) ↔ o-G (Orange-green)

Note: Displayed only for models with terminal screws (H5CX-A☐).

Instantaneous/time-limit (otmd)
- Set the function (instantaneous or time-limit operation) for the instantaneous output (output 1) using the ▲ ▼ Keys.

1t 1t (Instantaneous) ↔ 2t (Time-limit)

Note: Displayed only for models with instantaneous contact outputs.

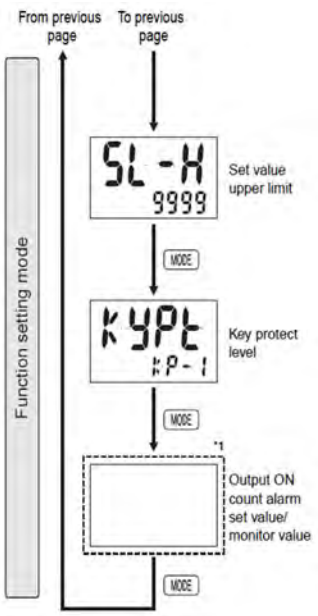
Time Range List

Display	Set Value
-.--s	0.01 s to 99.99 s (default setting)
--.-s	0.1 s to 999.9 s
----s	1 s to 9999 s
--:--m	0 min 01 s to 99 min 59 s
---.-m	0.1 min to 999.9 min
----m	1 min to 9999 min
--:--h	0 h 01 min to 99 h 59 min
---.-h	0.1 h to 999.9 h
----h	1 h to 9999 h
-.---s	0.001 s to 9.999 s

From next page To next page

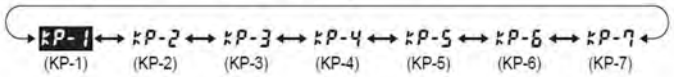
[Operation methods]

Product discontinuation
H5CX-□-N series

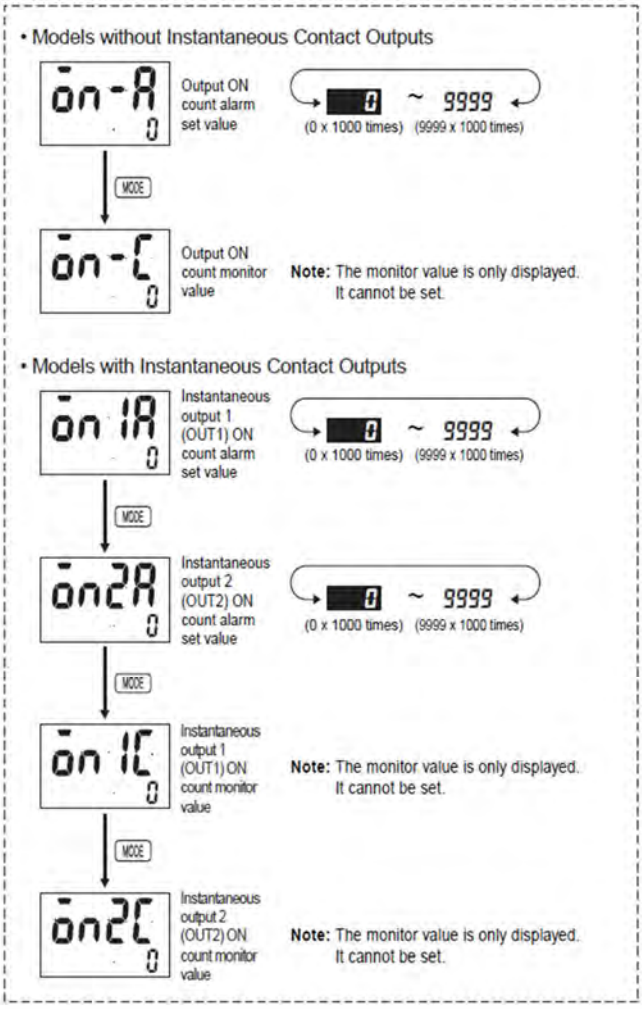


▪ Set the digits for the set value limit using the corresponding ⋀ ⋁ keys.

▪ Set the key protect level using the ⋀ ⋁ keys.



*1. Set each digit for the output time using the corresponding ⋀ ⋁ keys.

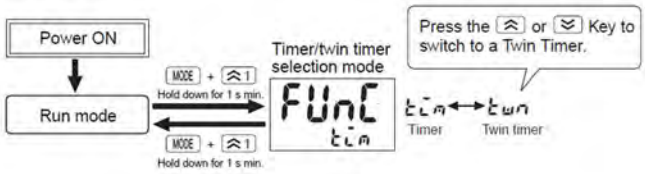


[Operation methods]

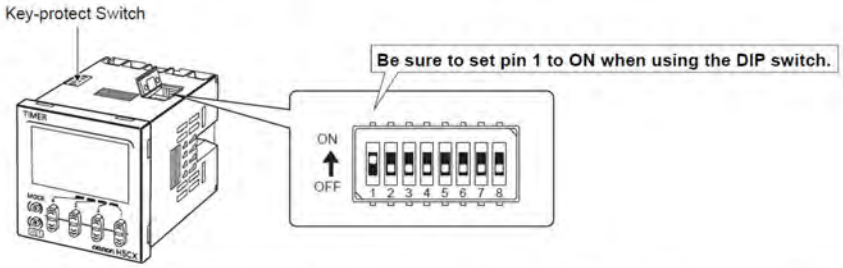
Product discontinuation
H5CX-☐-N series

Operating Procedures for Twin Timer Function

Step1 Switching to a Twin Timer



Step2 Settings for basic functions can be performed with just the DIP switch.
Note: There is no DIP switch on the H5CX-L8☐. Go to **Step3**.



	Item	OFF	ON
1	DIP switch settings	Disabled	Enabled
2	OFF time range	Refer to the table on the right.	
3			
4	ON time range	Refer to the table on the right.	
5			
6	Output mode	Flicker OFF start	Flicker ON start
7	Timer mode	UP	DOWN
8	Input signal width	20 ms	1 ms

Note: All the pins are factory-set to OFF.

Pin 2	Pin 3	OFF time range
OFF	OFF	0.01 s to 99.99 s
ON	OFF	0.1 s to 999.9 s
OFF	ON	1 s to 9999 s
ON	ON	0 min 01 s to 99 min 59 s

Pin 4	Pin 5	ON time range
OFF	OFF	0.01 s to 99.99 s
ON	OFF	0.1 s to 999.9 s
OFF	ON	1 s to 9999 s
ON	ON	0 min 01 s to 99 min 59 s

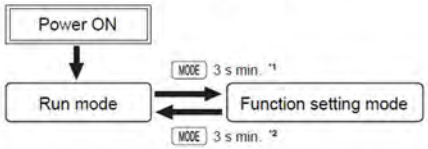
- Be sure to turn ON pin 1 on the DIP switch.
- Changes to DIP switch settings are enabled when the power is turned ON.
  (Perform DIP switch settings while the power is OFF.)

[Operation methods]

Product discontinuation
H5CX-□-N series

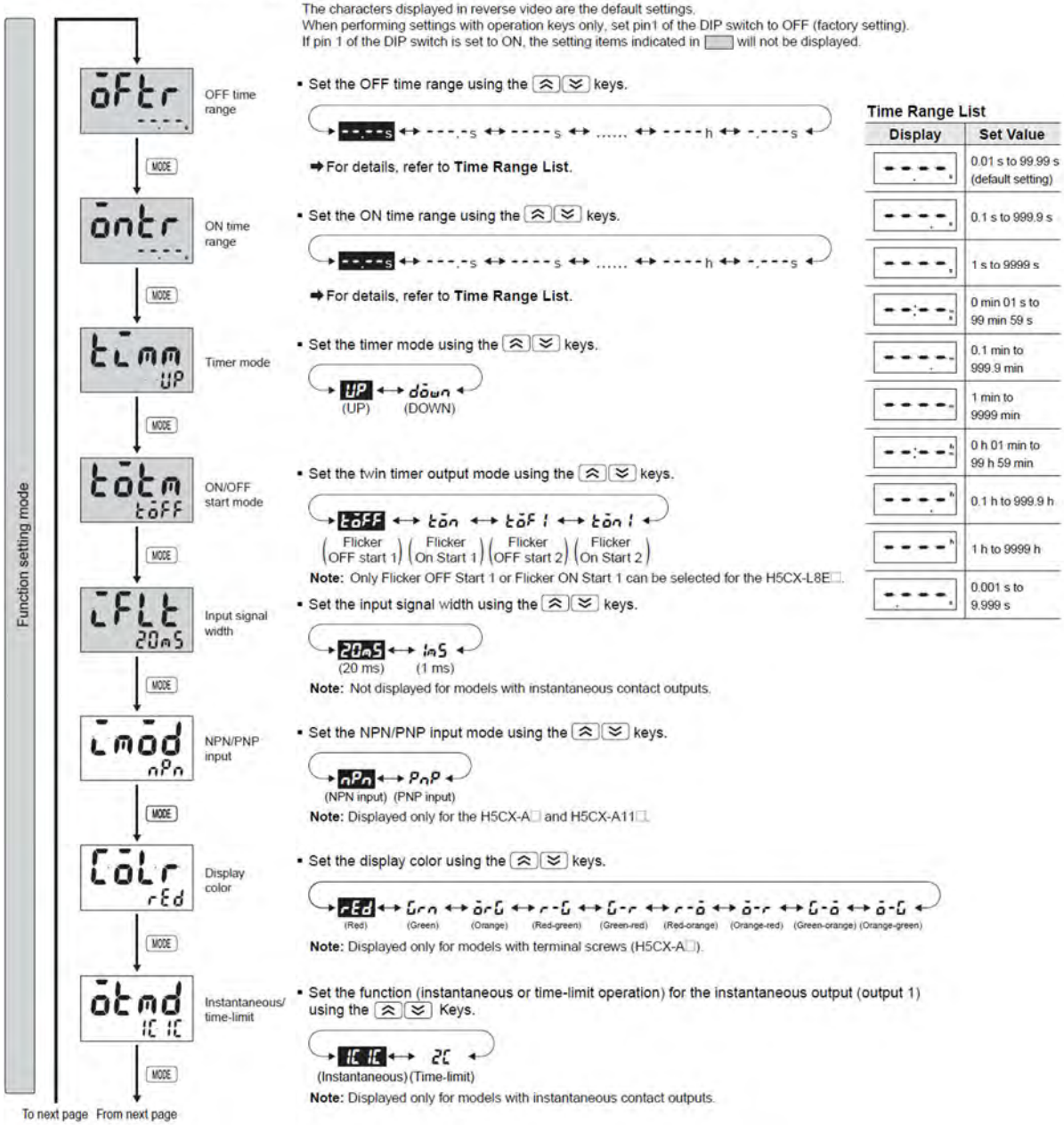
Step3 Settings that cannot be performed with the DIP switch are performed with the operation keys.

• Change to Function Setting Mode.



*1. If the mode is switched to the function setting mode during operation, operation will continue.
*2. Changes made to settings in function setting mode are enabled for the first time when the mode is changed to run mode. Also, when settings are changed, the timer is reset (time initialized and output turned OFF).

The characters displayed in reverse video are the default settings.
When performing settings with operation keys only, set pin1 of the DIP switch to OFF (factory setting).
If pin 1 of the DIP switch is set to ON, the setting items indicated in ▭ will not be displayed.

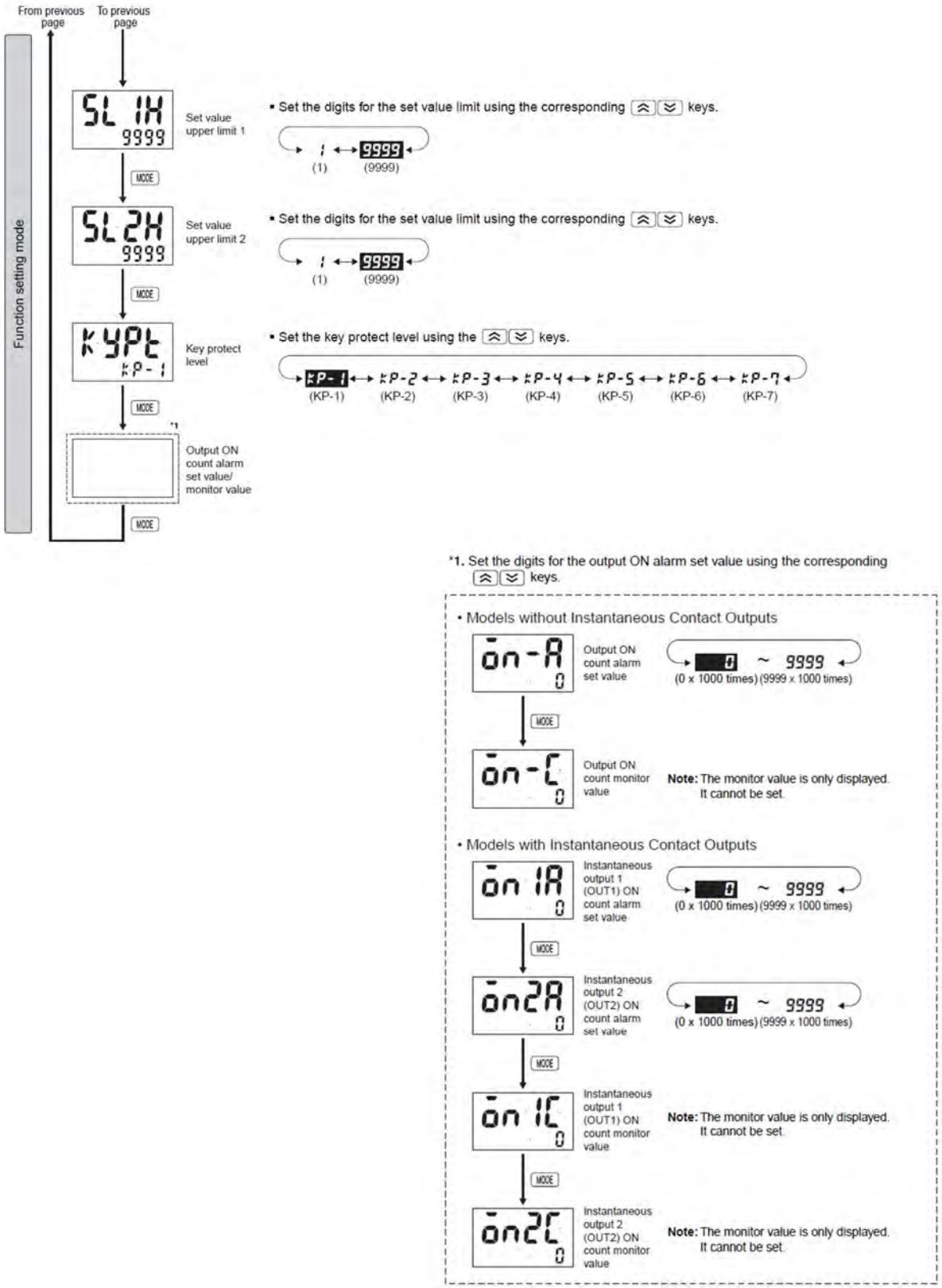


Time Range List

Display	Set Value
- - - -	0.01 s to 99.99 s (default setting)
- - - -	0.1 s to 999.9 s
- - - -	1 s to 9999 s
- -:- -	0 min 01 s to 99 min 59 s
- - - -	0.1 min to 999.9 min
- - - -	1 min to 9999 min
- -:- -	0 h 01 min to 99 h 59 min
- - - -	0.1 h to 999.9 h
- - - -	1 h to 9999 h
- - - -	0.001 s to 9.999 s

[Operation methods]

Product discontinuation
H5CX-☐-N series



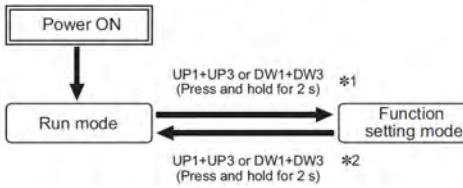
[Operation methods]

Recommended replacement
H5CC-☐ series

Settings for Timer Operation

Step1

Change to Function Setting Mode.

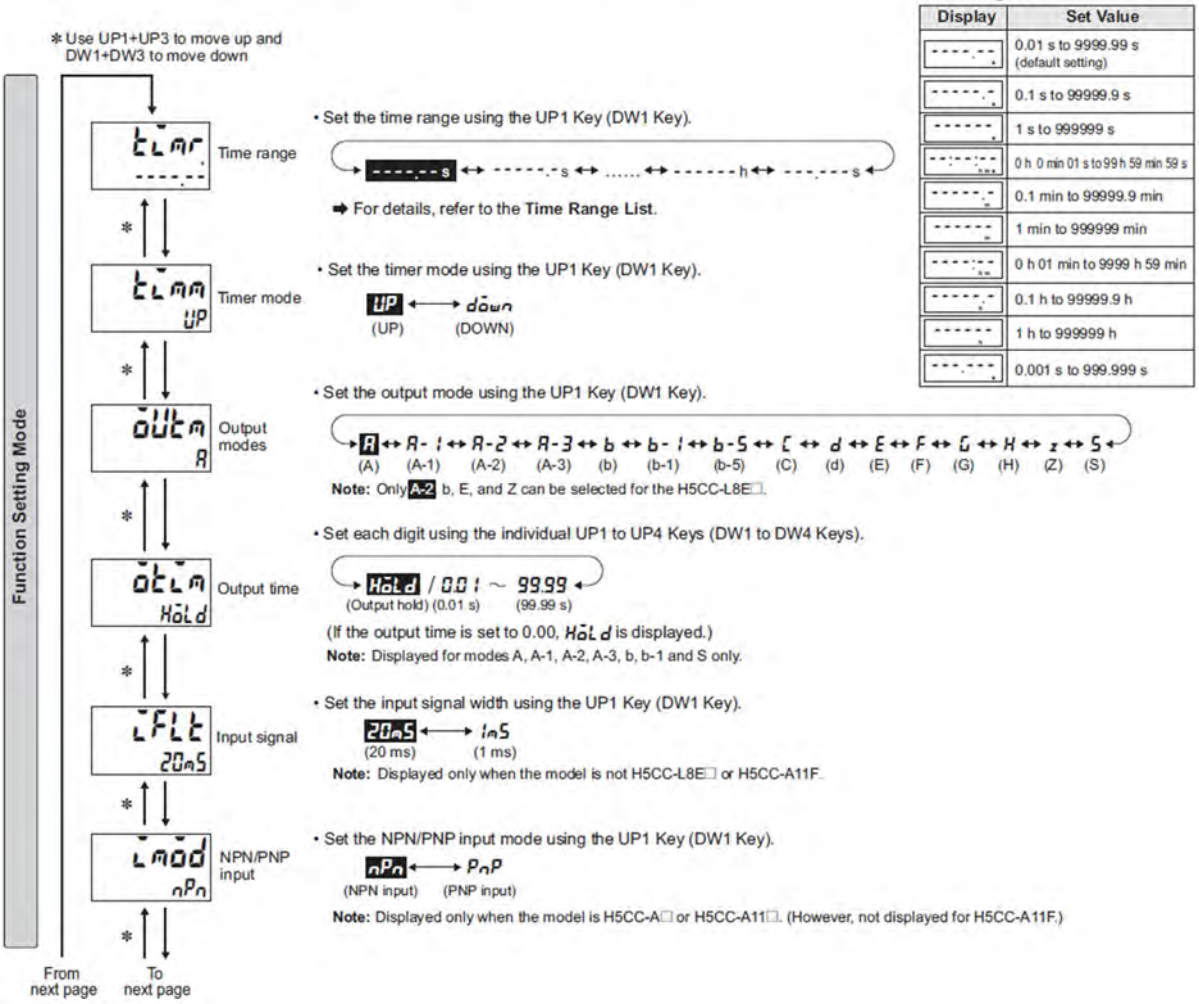


※1. If the mode is switched to the function setting mode during operation, operation will continue.
※2. Changes made to settings in function setting mode are enabled for the first time when the mode is changed to run mode. Also, when settings are changed, the timer is reset (time initialized and output turned OFF).

The characters displayed in reverse video are the default settings. In the function setting mode, the status indicators of the keys that can be set light up.
(Example) In the case of the Output time
A value from 0.01 to 99.99 s can be set, and therefore the status indicators of the UP1 to UP4 Keys (DW1 to DW4 Keys) light up.

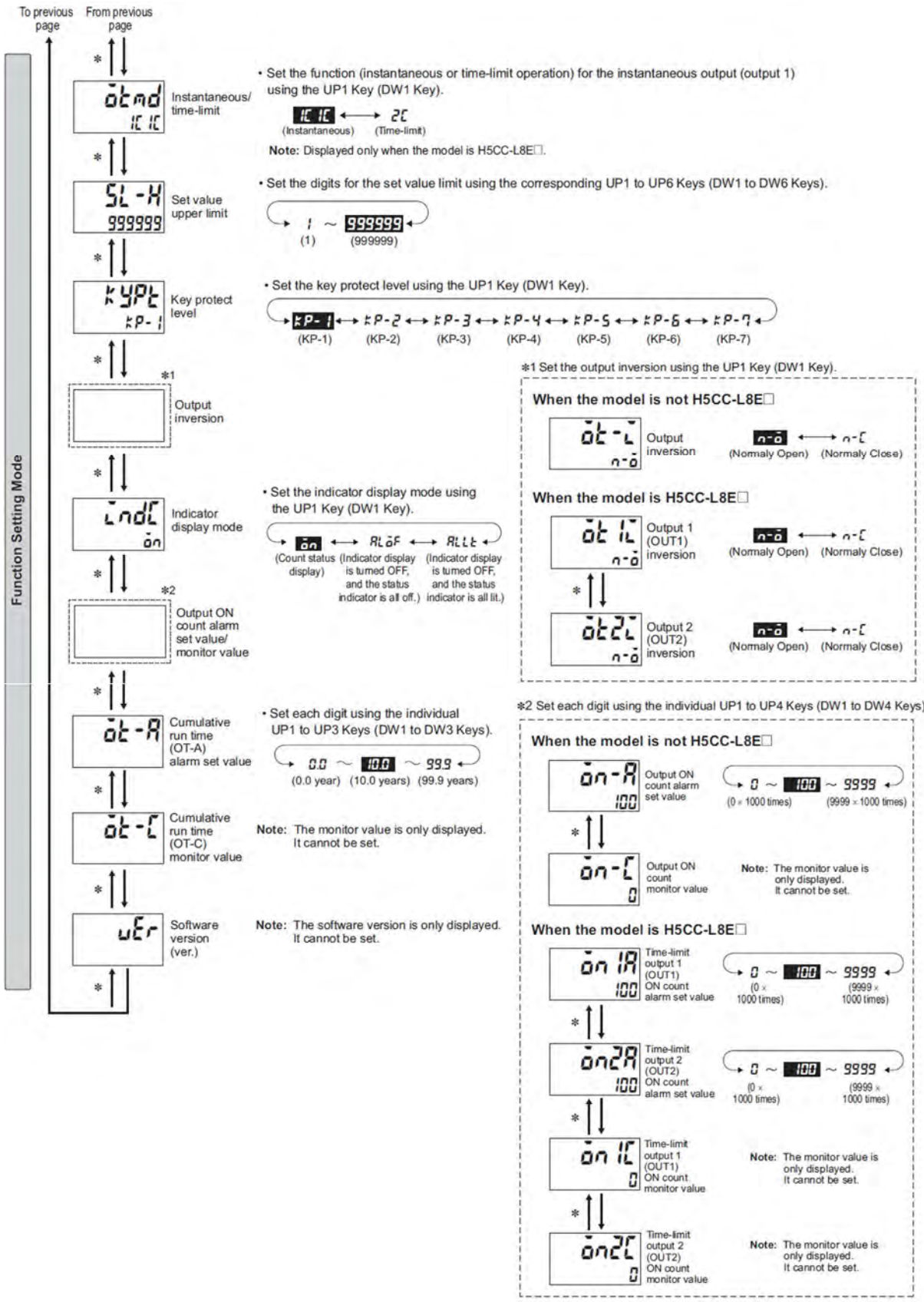
Time Range List

Display	Set Value
------.--	0.01 s to 9999.99 s (default setting)
------.-	0.1 s to 99999.9 s
------	1 s to 999999 s
--:--:--	0 h 0 min 01 s to 99 h 59 min 59 s
------.-	0.1 min to 99999.9 min
------	1 min to 999999 min
--:--:--	0 h 01 min to 9999 h 59 min
------.-	0.1 h to 99999.9 h
------	1 h to 999999 h
---.---	0.001 s to 999.999 s



[Operation methods]

Recommended replacement
H5CC-☐ series

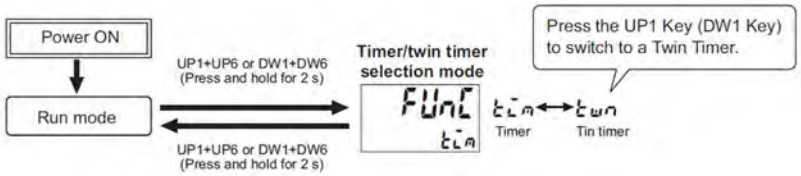


[Operation methods]

Recommended replacement
H5CC-☐ series

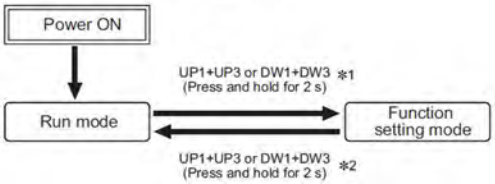
Settings for Twin Timer Operation

Step1 Switching to a Twin Timer



Step2

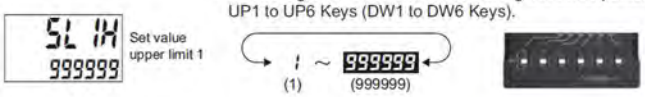
Change to Function Setting Mode.



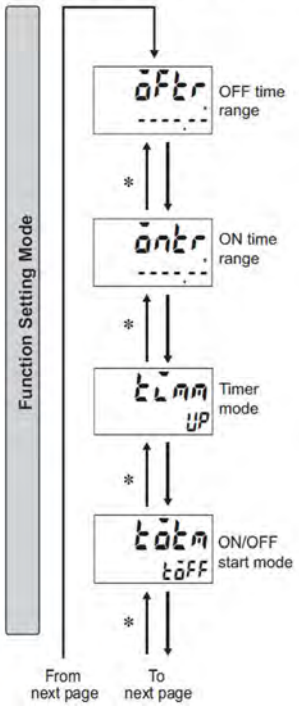
✻1. If the mode is switched to the function setting mode during operation, operation will continue.
✻2. Changes made to settings in function setting mode are enabled for the first time when the mode is changed to run mode. Also, when settings are changed, the timer is reset (time initialized and output turned OFF).

The characters displayed in reverse video are the default settings. In the function setting mode, the status indicators of the keys that can be set light up.

(Example) In the case of the set value upper limit 1
A value from 1 to 999999 can be set, and therefore the status indicators of the UP1 to UP6 Keys (DW1 to DW6 Keys) light up.



✻ Use UP1+UP3 to move up and DW1+DW3 to move down



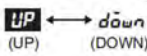
• Set the OFF time range using the UP1 Key (DW1 Key).

➡For details, refer to **Time Range List**.

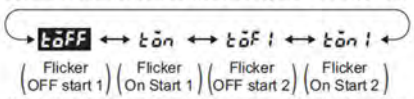
• Set the ON time range using the UP1 Key (DW1 Key).

➡For details, refer to **Time Range List**.

• Set the timer mode using the UP1 Key (DW1 Key).



• Set the twin timer output mode using the UP1 Key (DW1 Key).



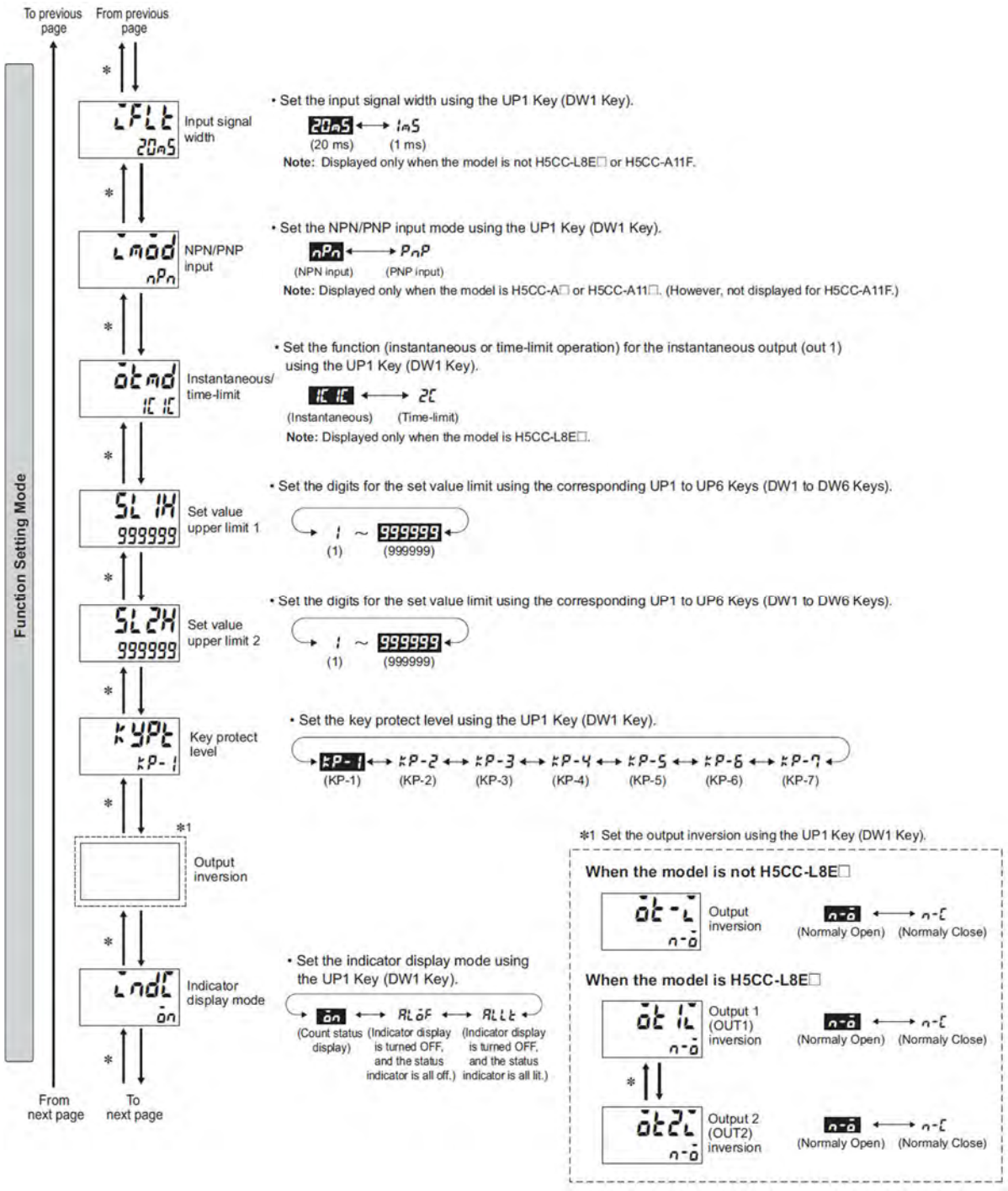
Note: Only Flicker OFF Start 1 or Flicker ON Start 1 can be selected for the H5CC-L8E☐.

Time Range List

Display	Set Value
----.--s	0.01 s to 9999.99 s (default setting)
------.-s	0.1 s to 99999.9 s
------s	1 s to 999999 s
--:--:--h:m:s	0 h 0 min 01 s to 99 h 59 min 59 s
------.-m	0.1 min to 99999.9 min
------m	1 min to 999999 min
---:--h:m	0 h 01 min to 9999 h 59 min
------.-h	0.1 h to 99999.9 h
------h	1 h to 999999 h
---.---s	0.001 s to 999.999 s

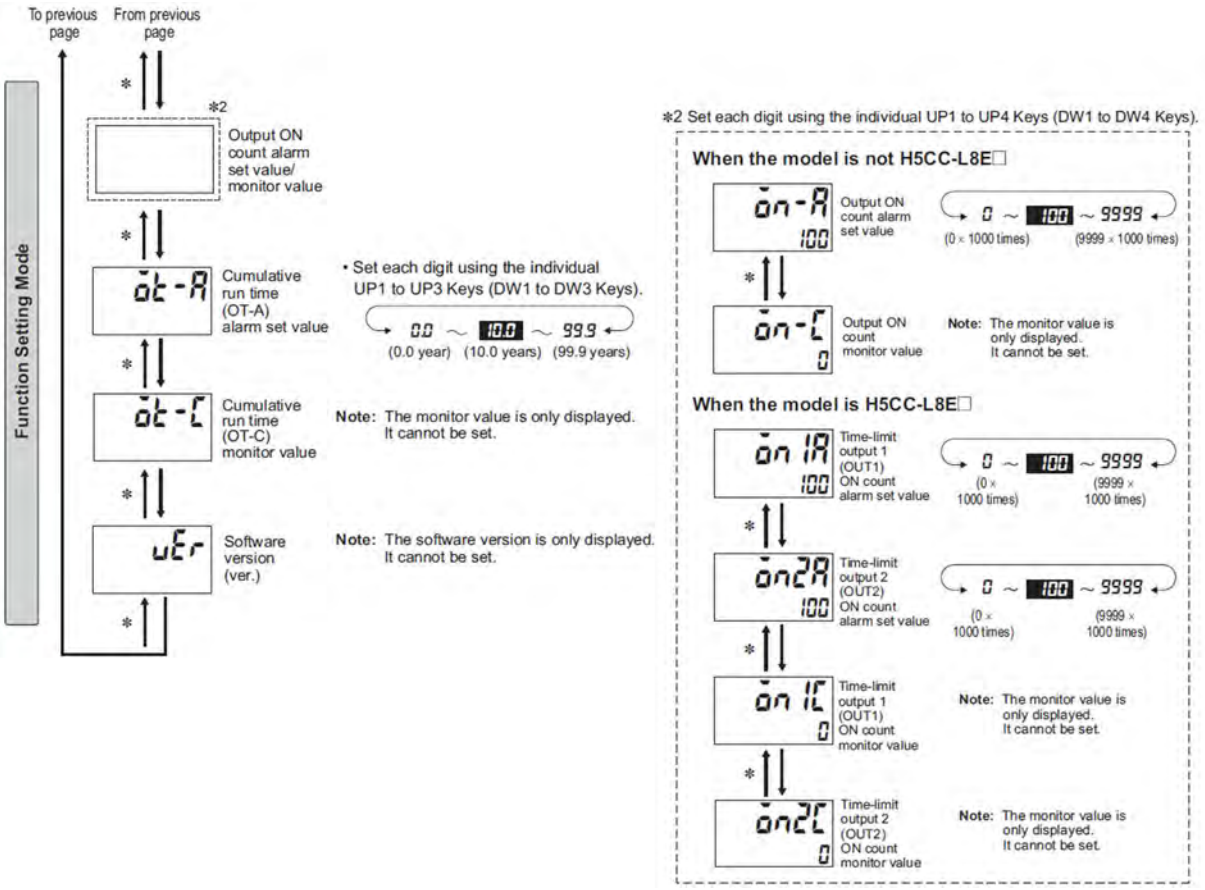
[Operation methods]

Recommended replacement
H5CC-☐ series



[Operation methods]

Recommended replacement
H5CC-☐ series



Specifications and prices in this product news are as of the issue date and are subject to change without notice.
Only main changes in specifications are described in this document. Please be sure to read the relevant catalogs, datasheets, product specifications, instructions, and manuals for precautions and necessary information when using products.