

**NO:** TI-061  
**DATE:** January 2017

**PRODUCT:** H3JA Analog-Set Timers  
**TYPE:** Discontinuation Notice

H3JA Analog-Set Solid State Timers will be Discontinued;  
Replace with H3CR or H3BA-N Series



**H3JA**  
[36 x 36 x 81.2 mm]

**H3CR**  
[48 x 48 x 81.6 mm]

**H3BA-N**  
[48 x 48 x 94 mm]

**Discontinuation date: end of February, 2017**

## Cautions on Applying Replacements

- A larger panel cutout is required for replacements: H3JA measures 36 x 36 mm; H3CR and H3BA-N measure 48x 48 mm
- Please note that there are replacement models whose supply voltage is not applicable:  
H3CR-A8E: 12 VDC ⇒ not applicable  
H3BA-N8H: 12 VDC ⇒ not applicable,  
24 VAC ⇒ not applicable,  
100-120 VAC ⇒110 VAC,  
200-240 VAC ⇒220 VAC
- There are models which upper/lower limit of time range does not correspond. Please operate within the applicable time range of the desired setting time.
- Setting of operation mode (A mode: ON-delay) and setting of the time unit and time range are necessary for all replacement models
- Only time limit side with time limit + instantaneous type or one of time limit two output type is operable for replacement model of H3JA-8A (at 1C output).

See the detail of differences on the following pages.



Product discontinuation	Recommended replacement			
H3JA-8A 24VAC 30S	H3CR-A8E 24-48VAC/VDC	H3CR-A8 24-48VAC/12-48VDC		
H3JA-8A 24VAC 3H	H3CR-A8E 24-48VAC/VDC	H3CR-A8 24-48VAC/12-48VDC		
H3JA-8A 24VAC 3M	H3CR-A8E 24-48VAC/VDC	H3CR-A8 24-48VAC/12-48VDC		
H3JA-8A 24VAC 3S	H3CR-A8E 24-48VAC/VDC	H3CR-A8 24-48VAC/12-48VDC		
H3JA-8A 24VAC 5M	H3CR-A8E 24-48VAC/VDC	H3CR-A8 24-48VAC/12-48VDC	H3CR-A8-301 24-48VAC/12-48VDC	
H3JA-8A 24VAC 5S	H3CR-A8E 24-48VAC/VDC	H3CR-A8 24-48VAC/12-48VDC	H3CR-A8-301 24-48VAC/12-48VDC	
H3JA-8A 24VAC 60M	H3CR-A8E 24-48VAC/VDC	H3CR-A8 24-48VAC/12-48VDC	H3CR-A8-301 24-48VAC/12-48VDC	
H3JA-8A 24VAC 60S	H3CR-A8E 24-48VAC/VDC	H3CR-A8 24-48VAC/12-48VDC	H3CR-A8-301 24-48VAC/12-48VDC	
H3JA-8A 12VDC 10M		H3CR-A8 24-48VAC/12-48VDC	H3CR-A8-301 24-48VAC/12-48VDC	
H3JA-8A 12VDC 10S		H3CR-A8 24-48VAC/12-48VDC	H3CR-A8-301 24-48VAC/12-48VDC	
H3JA-8A 12VDC 1S		H3CR-A8 24-48VAC/12-48VDC		
H3JA-8A 12VDC 30M		H3CR-A8 24-48VAC/12-48VDC		
H3JA-8A 12VDC 30S		H3CR-A8 24-48VAC/12-48VDC		
H3JA-8A 12VDC 3H		H3CR-A8 24-48VAC/12-48VDC		
H3JA-8A 12VDC 3M		H3CR-A8 24-48VAC/12-48VDC		
H3JA-8A 12VDC 3S		H3CR-A8 24-48VAC/12-48VDC		
H3JA-8A 12VDC 5M		H3CR-A8 24-48VAC/12-48VDC	H3CR-A8-301 24-48VAC/12-48VDC	
H3JA-8A 12VDC 5S		H3CR-A8 24-48VAC/12-48VDC	H3CR-A8-301 24-48VAC/12-48VDC	
H3JA-8A 12VDC 60M		H3CR-A8 24-48VAC/12-48VDC	H3CR-A8-301 24-48VAC/12-48VDC	
H3JA-8A 12VDC 60S		H3CR-A8 24-48VAC/12-48VDC	H3CR-A8-301 24-48VAC/12-48VDC	
H3JA-8A 24VDC 10M	H3CR-A8E 24-48VAC/VDC	H3CR-A8 24-48VAC/12-48VDC	H3CR-A8-301 24-48VAC/12-48VDC	H3BA-N8H 24VDC
H3JA-8A 24VDC 10S	H3CR-A8E 24-48VAC/VDC	H3CR-A8 24-48VAC/12-48VDC	H3CR-A8-301 24-48VAC/12-48VDC	H3BA-N8H 24VDC
H3JA-8A 24VDC 1S	H3CR-A8E 24-48VAC/VDC	H3CR-A8 24-48VAC/12-48VDC		H3BA-N8H 24VDC
H3JA-8A 24VDC 30M	H3CR-A8E 24-48VAC/VDC	H3CR-A8 24-48VAC/12-48VDC		H3BA-N8H 24VDC
H3JA-8A 24VDC 30S	H3CR-A8E 24-48VAC/VDC	H3CR-A8 24-48VAC/12-48VDC		H3BA-N8H 24VDC
H3JA-8A 24VDC 3H	H3CR-A8E 24-48VAC/VDC	H3CR-A8 24-48VAC/12-48VDC		H3BA-N8H 24VDC
H3JA-8A 24VDC 3M	H3CR-A8E 24-48VAC/VDC	H3CR-A8 24-48VAC/12-48VDC		H3BA-N8H 24VDC
H3JA-8A 24VDC 3S	H3CR-A8E 24-48VAC/VDC	H3CR-A8 24-48VAC/12-48VDC		H3BA-N8H 24VDC
H3JA-8A 24VDC 5M	H3CR-A8E 24-48VAC/VDC	H3CR-A8 24-48VAC/12-48VDC	H3CR-A8-301 24-48VAC/12-48VDC	H3BA-N8H 24VDC
H3JA-8A 24VDC 5S	H3CR-A8E 24-48VAC/VDC	H3CR-A8 24-48VAC/12-48VDC	H3CR-A8-301 24-48VAC/12-48VDC	H3BA-N8H 24VDC
H3JA-8A 24VDC 60M	H3CR-A8E 24-48VAC/VDC	H3CR-A8 24-48VAC/12-48VDC	H3CR-A8-301 24-48VAC/12-48VDC	H3BA-N8H 24VDC

Product discontinuation	Recommended replacement			
H3JA-8A 24VDC 60S	H3CR-A8E 24-48VAC/VDC	H3CR-A8 24-48VAC/12-48VDC	H3CR-A8-301 24-48VAC/12-48VDC	H3BA-N8H 24VDC
H3JA-8C 100-120VAC 10M		H3CR-A8 100-240VAC/100-125VDC	H3CR-A8-301 100-240VAC/100-125VDC	H3BA-N8H 110VAC
H3JA-8C 100-120VAC 10S		H3CR-A8 100-240VAC/100-125VDC	H3CR-A8-301 100-240VAC/100-125VDC	H3BA-N8H 110VAC
H3JA-8C 100-120VAC 1S		H3CR-A8 100-240VAC/100-125VDC		H3BA-N8H 110VAC
H3JA-8C 100-120VAC 30M		H3CR-A8 100-240VAC/100-125VDC		H3BA-N8H 110VAC
H3JA-8C 100-120VAC 30S		H3CR-A8 100-240VAC/100-125VDC		H3BA-N8H 110VAC
H3JA-8C 100-120VAC 3H		H3CR-A8 100-240VAC/100-125VDC		H3BA-N8H 110VAC
H3JA-8C 100-120VAC 3M		H3CR-A8 100-240VAC/100-125VDC		H3BA-N8H 110VAC
H3JA-8C 100-120VAC 3S		H3CR-A8 100-240VAC/100-125VDC		H3BA-N8H 110VAC
H3JA-8C 100-120VAC 5M		H3CR-A8 100-240VAC/100-125VDC	H3CR-A8-301 100-240VAC/100-125VDC	H3BA-N8H 110VAC
H3JA-8C 100-120VAC 5S		H3CR-A8 100-240VAC/100-125VDC	H3CR-A8-301 100-240VAC/100-125VDC	H3BA-N8H 110VAC
H3JA-8C 100-120VAC 60M		H3CR-A8 100-240VAC/100-125VDC	H3CR-A8-301 100-240VAC/100-125VDC	H3BA-N8H 110VAC
H3JA-8C 100-120VAC 60S		H3CR-A8 100-240VAC/100-125VDC	H3CR-A8-301 100-240VAC/100-125VDC	H3BA-N8H 110VAC
H3JA-8C 200-240VAC 10M		H3CR-A8 100-240VAC/100-125VDC	H3CR-A8-301 100-240VAC/100-125VDC	H3BA-N8H 220VAC
H3JA-8C 200-240VAC 10S		H3CR-A8 100-240VAC/100-125VDC	H3CR-A8-301 100-240VAC/100-125VDC	H3BA-N8H 220VAC
H3JA-8C 200-240VAC 1S		H3CR-A8 100-240VAC/100-125VDC		H3BA-N8H 220VAC
H3JA-8C 200-240VAC 30M		H3CR-A8 100-240VAC/100-125VDC		H3BA-N8H 220VAC
H3JA-8C 200-240VAC 30S		H3CR-A8 100-240VAC/100-125VDC		H3BA-N8H 220VAC
H3JA-8C 200-240VAC 3H		H3CR-A8 100-240VAC/100-125VDC		H3BA-N8H 220VAC
H3JA-8C 200-240VAC 3M		H3CR-A8 100-240VAC/100-125VDC		H3BA-N8H 220VAC
H3JA-8C 200-240VAC 3S		H3CR-A8 100-240VAC/100-125VDC		H3BA-N8H 220VAC
H3JA-8C 200-240VAC 5M		H3CR-A8 100-240VAC/100-125VDC	H3CR-A8-301 100-240VAC/100-125VDC	H3BA-N8H 220VAC
H3JA-8C 200-240VAC 5S		H3CR-A8 100-240VAC/100-125VDC	H3CR-A8-301 100-240VAC/100-125VDC	H3BA-N8H 220VAC
H3JA-8C 200-240VAC 60M		H3CR-A8 100-240VAC/100-125VDC	H3CR-A8-301 100-240VAC/100-125VDC	H3BA-N8H 220VAC
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H3JA-8C 24VAC 10M		H3CR-A8 24-48VAC/12-48VDC	H3CR-A8-301 24-48VAC/12-48VDC	
H3JA-8C 24VAC 10S		H3CR-A8 24-48VAC/12-48VDC	H3CR-A8-301 24-48VAC/12-48VDC	
H3JA-8C 24VAC 1S		H3CR-A8 24-48VAC/12-48VDC		
H3JA-8C 24VAC 30M		H3CR-A8 24-48VAC/12-48VDC		

<b>Product discontinuation</b>	<b>Recommended replacement</b>		
H3JA-8C 24VAC 30S	H3CR-A8 24-48VAC/12-48VDC		
H3JA-8C 24VAC 3H	H3CR-A8 24-48VAC/12-48VDC		
H3JA-8C 24VAC 3M	H3CR-A8 24-48VAC/12-48VDC		
H3JA-8C 24VAC 3S	H3CR-A8 24-48VAC/12-48VDC		
H3JA-8C 24VAC 5M	H3CR-A8 24-48VAC/12-48VDC	H3CR-A8-301 24-48VAC/12-48VDC	
H3JA-8C 24VAC 5S	H3CR-A8 24-48VAC/12-48VDC	H3CR-A8-301 24-48VAC/12-48VDC	
H3JA-8C 24VAC 60M	H3CR-A8 24-48VAC/12-48VDC	H3CR-A8-301 24-48VAC/12-48VDC	
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H3JA-8C 24VDC 10S	H3CR-A8 24-48VAC/12-48VDC	H3CR-A8-301 24-48VAC/12-48VDC	H3BA-N8H 24VDC
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H3JA-8C 24VDC 3S	H3CR-A8 24-48VAC/12-48VDC		H3BA-N8H 24VDC
H3JA-8C 24VDC 5M	H3CR-A8 24-48VAC/12-48VDC	H3CR-A8-301 24-48VAC/12-48VDC	H3BA-N8H 24VDC
H3JA-8C 24VDC 5S	H3CR-A8 24-48VAC/12-48VDC	H3CR-A8-301 24-48VAC/12-48VDC	H3BA-N8H 24VDC
H3JA-8C 24VDC 60M	H3CR-A8 24-48VAC/12-48VDC	H3CR-A8-301 24-48VAC/12-48VDC	H3BA-N8H 24VDC
H3JA-8C 24VDC 60S	H3CR-A8 24-48VAC/12-48VDC	H3CR-A8-301 24-48VAC/12-48VDC	H3BA-N8H 24VDC

## Detail of Differences

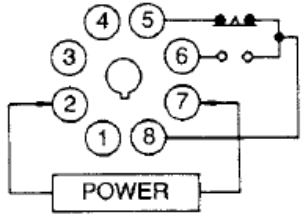
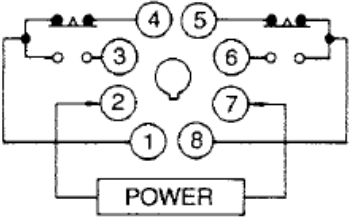
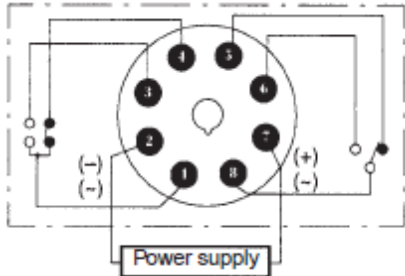
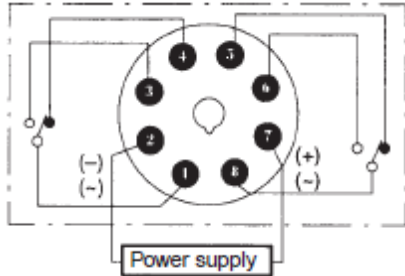
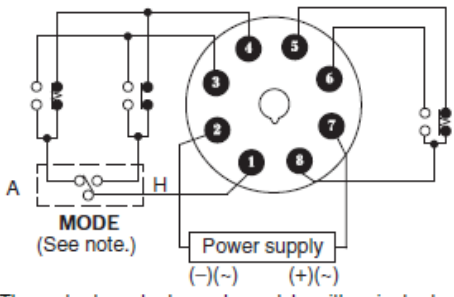
### Reference Documentation

<b>Description</b>	<b>Media</b>	<b>Publication number</b>
H3JA Timer Datasheet	PDF	<a href="#">L110-E1-01A</a>
H3CR Timer Datasheet	PDF	<a href="#">L084-E1-07_rev2_2</a>
H3BA-N Timer Datasheet	PDF	<a href="#">L093-E1-03_rev1_4</a>

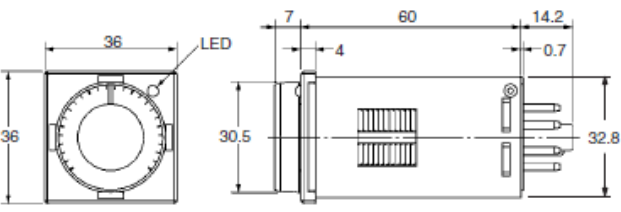
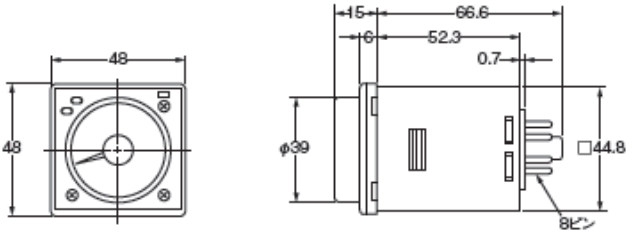
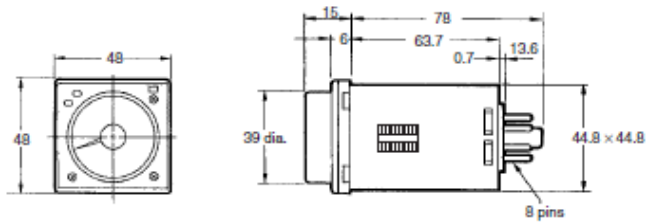
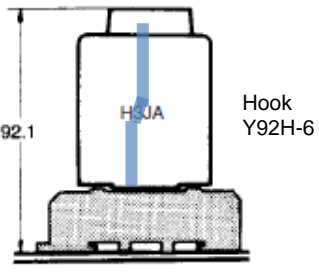
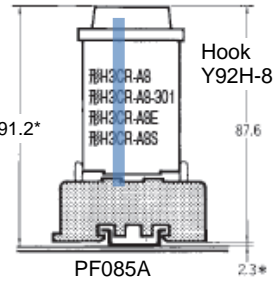
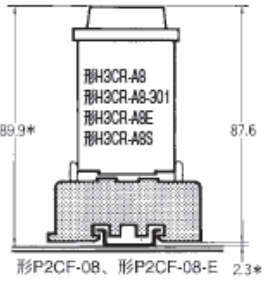
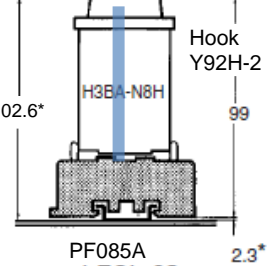
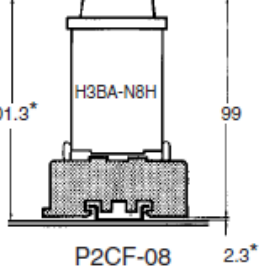
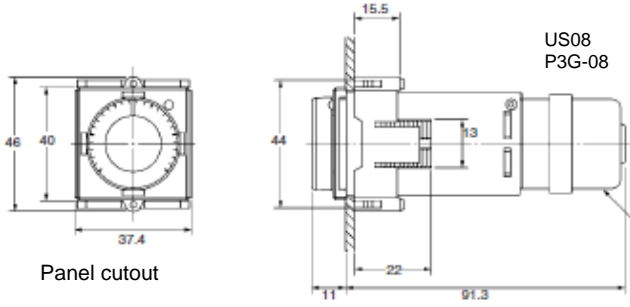
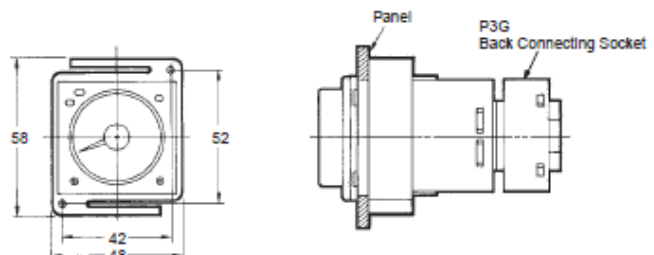
### Body Color

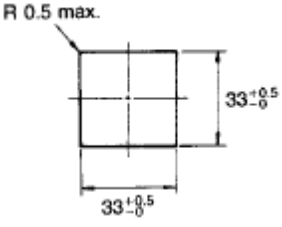
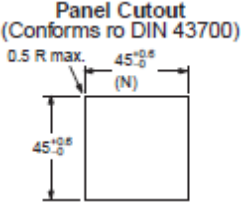
<b>Product discontinuation Model H3JA</b>	<b>Recommended replacement Model H3CR/H3BA</b>
<b>Light gray (Munsell 5Y7/1)</b>	<b>Light gray (Munsell 5Y7/1)</b>

# Wiring Diagram

Product discontinuation Model H3JA	Recommended replacement Model H3CR/H3BA
<p><b>H3JA-8A</b></p>  <p><b>H3JA-8C</b></p> 	<p><b>H3CR-A8E</b></p>  <p><b>H3CR-A8</b></p>  <p><b>H3BA-N8H</b></p>  <p><b>Note:</b> The output contact can be set to either instantaneous or time-limit contact using the output type selector located at the upper right corner of the front panel.</p>

# Mounting dimensions

Product discontinuation Model H3JA	Recommended replacement Model H3CR/H3BA
	<p><b>H3CR</b></p>  <p><b>H3BA</b></p> 
<p><b>Dimensions with socket PF085A</b></p> 	<p><b>Dimensions with socket PF085A</b></p>  <p><b>P2CF-08(-E)</b></p>  <p><b>Hook Y92H-8</b></p> <p><b>H3BA</b></p>  <p><b>Hook Y92H-2</b></p> 
<p><b>Dimensions with adapter Y92F-31</b></p> 	<p><b>Dimensions with adapter Y92F-30</b></p> 

Product discontinuation Model H3JA	Recommended replacement Model H3CR/H3BA
	

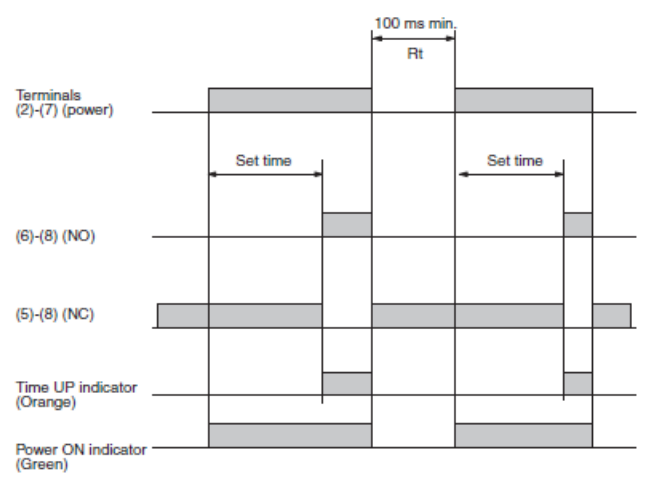
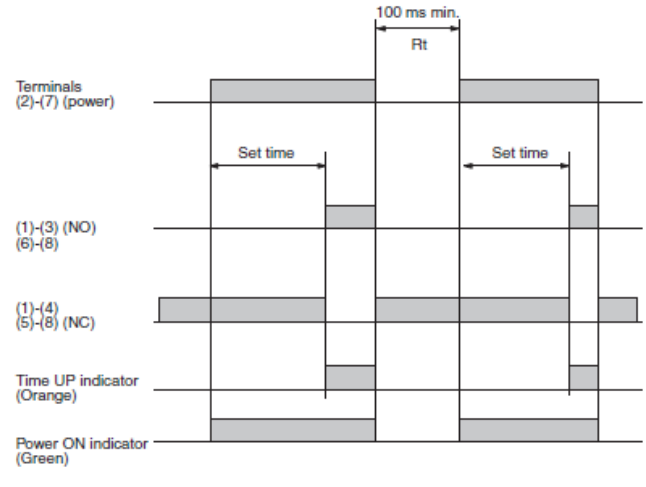
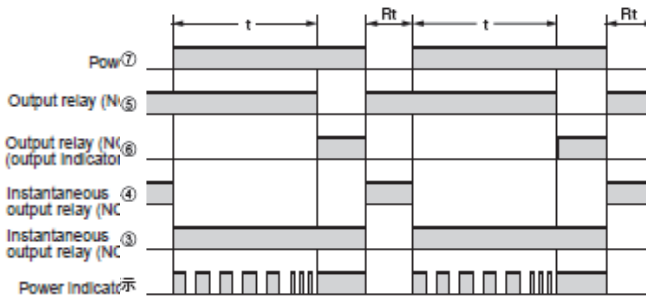
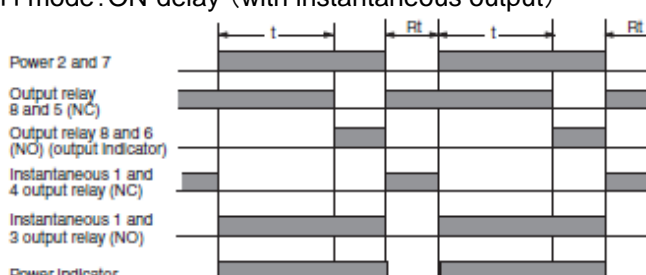
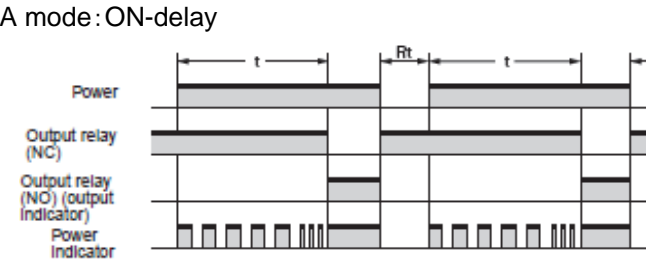
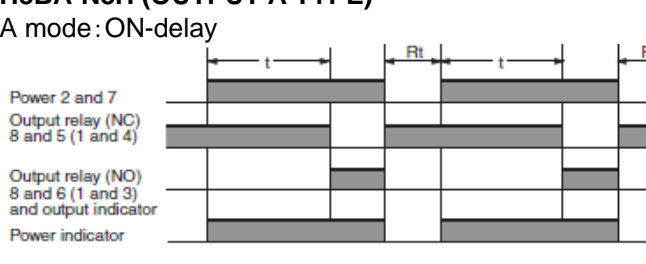
## Characteristics

Item	Product discontinuation Model H3JA	Recommended replacement Model H3CR/H3BA
<b>Rated supply voltage</b>	24 VAC 100 to 120 VAC 200 to 240 VAC 12 VDC 24 VDC	<u><b>H3CR-A8/A8-301</b></u> 100 to 240 VAC /100 to 125 VDC 24 to 48 VAC /12 to 48 VDC <u><b>H3CR-A8E</b></u> 100 to 240 VAC /100 to 125 VDC 24 to 48 VAC/VDC <u><b>H3BA-N8H</b></u> 110 VAC 220 VAC 24 VDC
<b>Operating voltage range</b>	85% to 110% of rated supply voltage (90% to 110% at 12 VDC)	85% to 110% of rated supply voltage (90% to 110% at 12 VDC for <b>H3CR</b> )
<b>Po Wer consumption</b>	<u><b>H3JA-8A</b></u> 24 VAC: 1.0 VA (0.9 W) 100 to 120 VAC: 2.6 VA (1.1 W) 200 to 240 VAC: 5.0 VA (1.5 W) 12 VDC: 0.5 W 24 VDC: 0.8 W  <u><b>H3JA-8C</b></u> 24 VAC: 1.2 VA (1.0 W) 100 to 120 VAC: 2.4 VA (0.9 W) 200 to 240 VAC: 4.1 VA (1.1 W) 24 VDC: 0.8 W	<u><b>H3CR-A8/A8-301</b></u> 100 to 240 VAC /100 to 125 VDC: ( When at 240 VAC, 60 Hz) Relay ON: 2.0 VA (1.6 W) Relay OFF:1.3 VA (1.1 W) 24 to 48 VAC /12 to 48 VDC: ( When at 24 VDC) Relay ON: 0.8 W Relay OFF:0.2 W  <u><b>H3CR-A8E</b></u> 100 to 240 VAC /100 to 125 VDC: ( When at 240 VAC, 60 Hz) Relay ON/OFF: 2.0 VA (1.6 W) 24 to 48 VAC/VDC: ( When at 24 VDC) Relay ON/OFF: 0.9 W  <u><b>H3BA-N8H</b></u> 110 VAC: 3.6 VA (1.6 W) 220 VAC: 7.8 VA (1.9 W) 24 VDC: 0.9 W
<b>Control outputs</b>	<u><b>H3JA-8A</b></u> 7 A at 250 VAC (resistive load) <u><b>H3JA-8C</b></u> 5 A at 250 VAC (resistive load)	5 A at 250 VAC/30 VDC (resistive load)

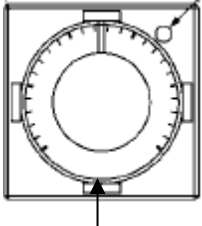
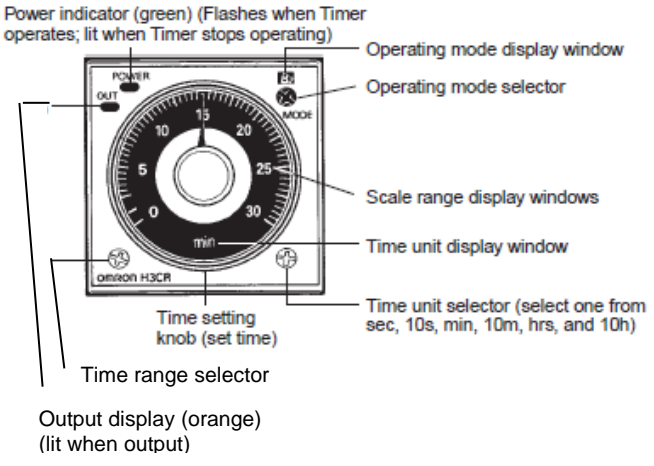


Item	Product discontinuation Model H3JA	Recommended replacement Model H3CR/H3BA
Accuracy of operating time	±2% FS max.	<b>H3CR</b> ±0.2% FS max. (±0.2%±10 ms max. in a range of 1.2s, 3s) <b>H3BA</b> ±0.3% FS max. (±0.3%±10 ms max. in a range of 1.2s, 3s)
Setting error	±7% FS max. ±50 ms	±5% FS max. ±50 ms
Influence of voltage	±2% FS max.	<b>H3CR</b> ±0.2% FS max. (±0.2%±10 ms max. in a range of 1.2s, 3s) <b>H3BA</b> ±0.5% FS max. (±0.5%±10 ms max. in a range of 1.2s, 3s)
Influence of temperature	±5% FS max.	<b>H3CR</b> ±1% FS max. (±1%±10 ms max. in a range of 1.2s, 3s) <b>H3BA</b> ±2% FS max. (±2%±10 ms max. in a range of 1.2s, 3s)
Mechanical life expectancy	10,000,000 operations min.	<b>H3CR</b> 20,000,000 operations min. <b>H3BA</b> 10,000,000 operations min.
Electrical life expectancy	<b>H3JA-8A</b> 60,000 operations min. (7 A at 250 VAC, resistive load) <b>H3JA-8C</b> 100,000 operations min. (5 A at 250 VAC, resistive load)	100,000 operations min. (5 A at 250 VAC, resistive load)
Approved standards	UL508, CSA C22.2 No.14 ,EN61812-1	UL508, CSA C22.2 No.14, LR, CCC EN61812-1

# Operation ratings

Product discontinuation Model H3JA	Recommended replacement Model H3CR
<p><b>Timing chart</b></p> <p><b>H3JA-8A</b></p>  <p>100 ms min. Rt</p> <p>Terminals (2)-(7) (power)</p> <p>Set time</p> <p>(6)-(8) (NO)</p> <p>(5)-(8) (NC)</p> <p>Time UP indicator (Orange)</p> <p>Power ON indicator (Green)</p> <p><b>H3JA-8C</b></p>  <p>100 ms min. Rt</p> <p>Terminals (2)-(7) (power)</p> <p>Set time</p> <p>(1)-(3) (NO) (6)-(8)</p> <p>(1)-(4) (5)-(8) (NC)</p> <p>Time UP indicator (Orange)</p> <p>Power ON indicator (Green)</p>	<p><b>Timing chart</b></p> <p><b>H3CR-A8E</b></p> <p>A mode : ON-delay</p>  <p>Power ⑦</p> <p>Output relay (N) ⑤</p> <p>Output relay (N) ⑥ (output indicator)</p> <p>Instantaneous output relay (NC) ④</p> <p>Instantaneous output relay (NC) ③</p> <p>Power Indicator ⑩</p> <p><b>H3BA-N8H (OUTPUT H TYPE)</b></p> <p>H mode : ON-delay (with instantaneous output)</p>  <p>Power 2 and 7</p> <p>Output relay 8 and 5 (NC)</p> <p>Output relay 8 and 6 (NO) (output indicator)</p> <p>Instantaneous 1 and 4 output relay (NC)</p> <p>Instantaneous 1 and 3 output relay (NO)</p> <p>Power Indicator</p> <p><b>H3CR-A8/A8-301</b></p> <p>A mode : ON-delay</p>  <p>Power</p> <p>Output relay (NC)</p> <p>Output relay (NO) (output indicator)</p> <p>Power Indicator</p> <p><b>H8BA-N8H (OUTPUT A TYPE)</b></p> <p>A mode : ON-delay</p>  <p>Power 2 and 7</p> <p>Output relay (NC) 8 and 5 (1 and 4)</p> <p>Output relay (NO) 8 and 6 (1 and 3) and output indicator</p> <p>Power indicator</p>

## Operation methods

<b>Product discontinuation</b> <b>Model H3JA</b>	<b>Recommended replacement</b> <b>Model H3CR/H3BA</b>																												
<p><b>Time setting</b> Set time with setting knob.</p>  <p>Setting knob</p>	<ul style="list-style-type: none"> <li>• <b>Operating mode setting</b> Set A mode (ON-delay) with operating selector.</li> <li>• <b>Time unit setting</b> Set time unit with time unit selector.</li> <li>• <b>Time range setting</b> Set time range with time range selector.</li> <li>• <b>Time setting</b> Set time with time setting knob.</li> </ul>  <p>Power indicator (green) (Flashes when Timer operates; lit when Timer stops operating)</p> <p>Operating mode display window</p> <p>Operating mode selector</p> <p>Scale range display windows</p> <p>Time unit display window</p> <p>Time unit selector (select one from sec, 10s, min, 10m, hrs, and 10h)</p> <p>Time setting knob (set time)</p> <p>Time range selector</p> <p>Output display (orange) (lit when output)</p> <p>Scale range display windows changes as below by turning the Time range selector clockwise.*</p> <table border="1" data-bbox="808 1150 1421 1297"> <tbody> <tr> <td>0</td> <td>0.2</td> <td>0.4</td> <td>0.6</td> <td>0.8</td> <td>1.0</td> <td>1.2</td> </tr> <tr> <td>0</td> <td>0.5</td> <td>1</td> <td>1.5</td> <td>2</td> <td>2.5</td> <td>3</td> </tr> <tr> <td>0</td> <td>2</td> <td>4</td> <td>6</td> <td>8</td> <td>10</td> <td>12</td> </tr> <tr> <td>0</td> <td>5</td> <td>10</td> <td>15</td> <td>20</td> <td>25</td> <td>30</td> </tr> </tbody> </table> <p>* On the H3CR-A□-301 type, the time is twice as long.</p>	0	0.2	0.4	0.6	0.8	1.0	1.2	0	0.5	1	1.5	2	2.5	3	0	2	4	6	8	10	12	0	5	10	15	20	25	30
0	0.2	0.4	0.6	0.8	1.0	1.2																							
0	0.5	1	1.5	2	2.5	3																							
0	2	4	6	8	10	12																							
0	5	10	15	20	25	30																							

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