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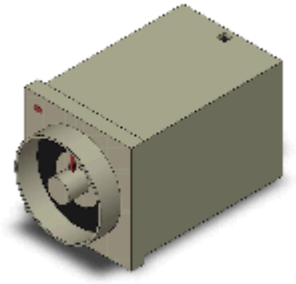
Solid-state Timer

H3CR-H8L AC200-240 M



Image

200/220/240 VAC 50/60 Hz, Output Time-limit: DPDT, Power OFF-delay, Time range: 0.05 to 0.6 min (4 range), 8-pin

Rated power supply voltage	200/220/240 VAC 50/60 Hz
Control output (Type)	Time-limit: DPDT
Operating resetting	Instantaneous operation/Time-limit reset
Connecting method	8-pin round socket

Ratings/Specifications

As of July 16, 2020

Rated power supply voltage	200/220/240 VAC 50/60 Hz
Allowable voltage variable range	85 to 110% of the power supply voltage
Power consumption	Approx. 0.35 VA (at 240 VAC) Approx. 0.3 W (at 240 VAC)
Operation start voltage	30% max. of rated supply voltage
Number of time ranges	4
Operation mode	Power OFF-delay
Control output (Type)	Time-limit: DPDT
Control output (Contact output)	Resistive load: 250 VAC 5 A (cosφ=1)/5 A at 30 VDC Minimum applicable load: 10 mA at 5 VDC (failure level: P Reference value)
Operating resetting	Instantaneous operation/Time-limit reset
Ambient temperature range	Operating: -10 to 55 ℃ (with no icing) Storage: -25 to 65 ℃ (with no icing)
Ambient humidity range	Operating: 35 to 85%
Accuracy of operating time	±0.2% FS max.
Setting error	±5% FS ±50 ms max.
Influence of voltage	±0.2% FS max.
Influence of temperature	±1% FS max.

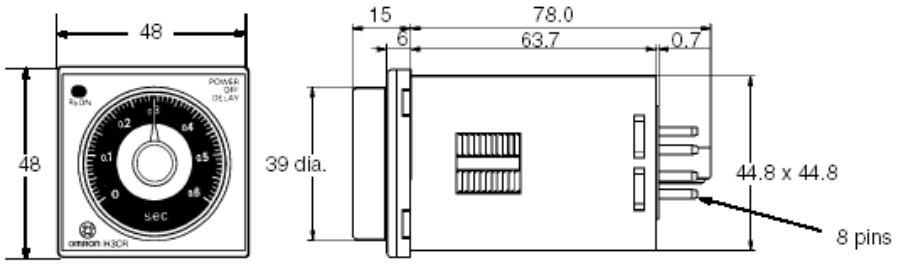
Insulation resistance	100 MΩ min. (at 500 VDC)
Dielectric strength	Between current carrying metal parts and non-current carrying metal parts: 2,000 VAC 50/60 Hz 1 min Between control output terminals and operating circuit: 2,000 VAC 50/60 Hz 1 min Between contacts of different polarity: 2,000 VAC 50/60 Hz 1 min Between non-continuous contacts: 1,000 VAC 50/60 Hz 1 min
Impulse withstand voltage	Between power terminals: 5 kV Between current carrying terminals and exposed non-current carrying metal parts: 5 kV
Noise immunity	±1.5 kV (between power terminals) and ±600 V (between input terminals), square-wave noise by noise simulator (pulse width: 100 ns/1 μs, 1-ns rise)
Static immunity	Mulfunction: 8 kV, Destruction: 15 kV
Vibration resistance	Destruction: 10 to 55 Hz, 0.75 mm single amplitude each in 3 directions for 2 h Malfunction: 10 to 55 Hz, 0.5 mm single amplitude each in 3 directions for 10 min
Shock resistance	Destruction: 980 m/s^2, 3 times each in 6 directions Malfunction: 98 m/s^2, 3 times each in 6 directions
Life expectancy (relay output)	Electrical: 100,000 operations min. (5 A at 250 VAC, resistive load at 1200 operations/h) Mechanical: 10 million operations min. (under no load at 1,200 operations/h)
Degree of protection	IP40 (panel surface)
Connecting method	8-pin round socket
Weight	Approx. 120 g

As of July 16, 2020

Dimensions

As of July 16, 2020

Outline drawing



As of July 16, 2020

Internal connection

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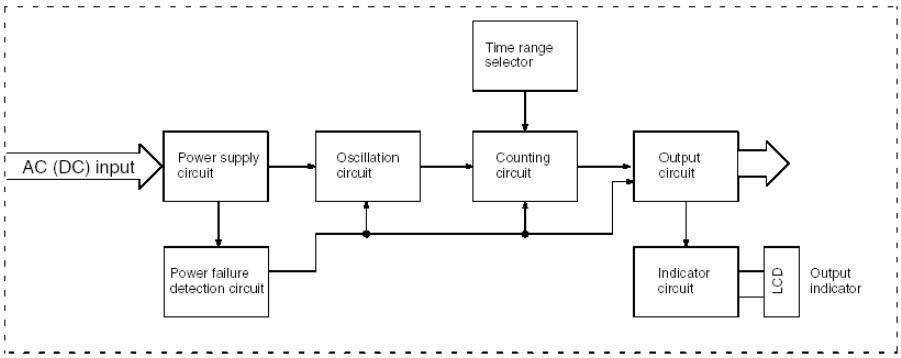
Internal connection



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Terminal arrangement

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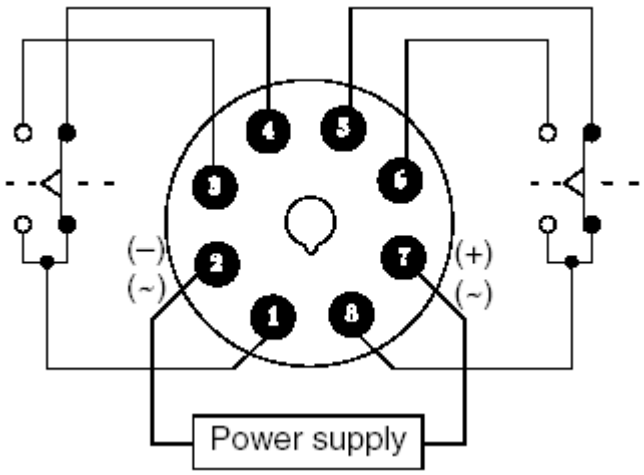
Terminal arrangement



As of July 16, 2020

Time ranges

As of July 16, 2020

Time ranges

Time unit		S-series	M-series
		s (sec)	min
Setting	0.6	0.05 to 0.6	
	1.2	0.1 to 1.2	
	6	0.5 to 6	
	12	1 to 12	
Min. power ON time		0.1 s min.	2 s min.

Note: If the above minimum power ON time is not secured, the H3CR may not operate. Be sure to secure the above minimum power ON time.

As of July 16, 2020

Operating chart

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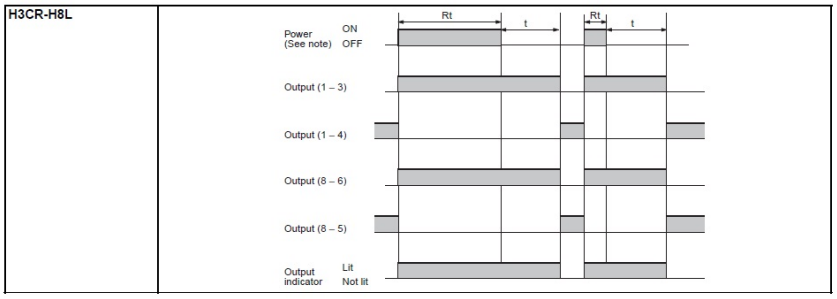
Operating chart

Power OFF-delay

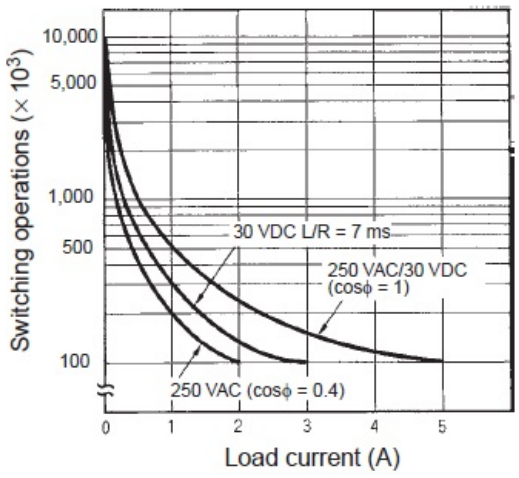


As of July 16, 2020

Electrical life curve

As of July 16, 2020

Electrical life curve



Reference: A maximum current of 0.15 A can be switched at 125 VDC (cosϕ = 1) and a maximum current of 0.1A can be switched at 125V DC and L/R = 7ms. In both cases, a life of 100,000 operations can be expected.

The minimum applicable load is 10 mA at 5 VDC for H3CR-H8L/-HRL and 100 mA at 5 VDC for H3CR-H8RL (failure level: P).

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