

RH2L Series Latch Relays

Midget Power Latch Relays DPDT — 10A contact capacity

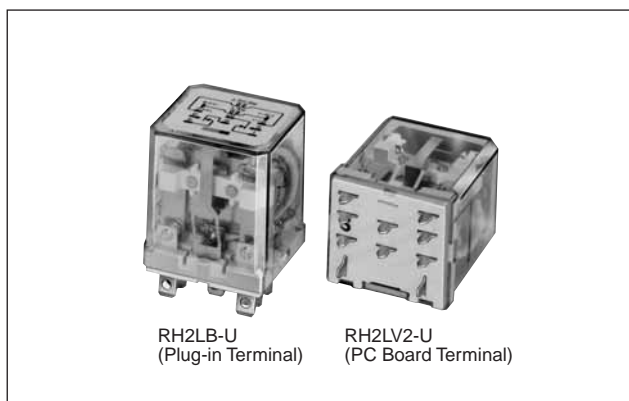
The RH2L series latch relays have a self-holding function by residual magnetism generated by a special magnetic material. The large 10A contact capacity equivalent to the RH and RR series is provided in a miniature relay package as small as the IDEC's RH3 type.

- With a mechanical operation indicator to show the set/reset status.
- Power saving operation by pulse inputs eliminates the need of continuous control voltage.
- Available with plug-in or PC board mount terminals.
- All basic types are recognized by UL and certified by CSA.



Types

Terminal Style	Type No.	Coil Voltage Code *
Plug-in Terminal	RH2LB-U*	AC6, AC12, AC24, AC50, AC100, AC120
PC Board Terminal	RH2LV2-U*	DC6, DC12, DC24



Ordering Information

When ordering, specify the Type No. and coil voltage code.

(Example) **RH2LB-U** **AC120**
 Type No. Coil Voltage Code

Coil Ratings

Rated Voltage (V)	Set Coil			Reset Coil			Operation Characteristics (against rated values at 20°C)	
	Rated Current (mA) ±15% at 20°C		Coil Resistance (Ω) ±10% at 20°C	Rated Current (mA) ±15% at 20°C		Coil Resistance (Ω) ±10% at 20°C	Maximum Continuous Applied Voltage	Set and Reset Voltage
	50Hz	60Hz		50Hz	60Hz			
AC (50/60Hz)	6	227	220	—	68.7	68	110%	80% maximum
	12	103	100	—	34.2	34		
	24	51.2	50	—	17.1	17		
	50	24.7	24	—	10.4	10.3		
	100	12.3	12	—	4.6	4.6		
DC	6	333		18	150		110%	80% maximum
	12	167		72	75			
	24	83		288	37.5			

Contact Ratings

Switching Voltage	Continuous Current	Maximum Contact Capacity				
		Allowable Contact Power		Rated Load		
		Resistive Load	Inductive Load	Voltage	Res. Load	Ind. Load
250V AC 125V DC	10A	1650 VA AC 300W DC	1100VA AC 225W DC	110V AC	10A	7.5A
				220V AC	7.5A	5A
				30V DC	10A	7.5A

Note: Inductive load for rated load — $\cos \phi = 0.3$, $L/R = 7$ ms

• UL Ratings

Voltage	Resistive	General Use	Motor Load
240V AC	7.5A	6.5A	1/3 HP
120V AC	10A	7.5A	1/6 HP
30V DC	10A	—	—

• CSA Ratings

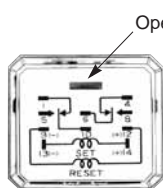
Voltage	Resistive	General Use	Motor Load
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120V AC	10A	7.5A	1/6 HP
30V DC	10A	7.5A	—

Specifications

Contact Material	Silver cadmium oxide
Contact Resistance	50 mΩ maximum (initial value)
Set Time	30 ms maximum (AC) 20 ms maximum (DC) (at the rated voltage)
Reset Time	30 ms maximum (AC) 20 ms maximum (DC) (at the rated voltage)
Power Consumption (approx.)	Set coil: 1.2 VA (AC), 2W (DC) Reset coil: 0.5 VA (AC), 0.9W (DC)
Insulation Resistance	100 MΩ minimum (500V DC megger)
Dielectric Strength	Between live and dead parts: 2,000V AC, 1 minute Between contact and coil: 2,000V AC, 1 minute Between contacts of different poles: 1,500V AC, 1 minute Between contacts of the same pole: 1,000V AC, 1 minute
Operating Frequency	Electrical: 1800 operations/h maximum Mechanical: 18,000 operations/h maximum
Vibration Resistance	0 to 60 m/s ² (maximum frequency: 55 Hz), Frequency: 5 to 55 Hz, Amplitude: 0.5 mm
Shock Resistance	100 m/s ² minimum
Mechanical Life	10,000,000 operations minimum
Electrical Life	200,000 operations minimum
Operating Temperature	-5 to +40°C (no freezing)
Weight (approx.)	50g

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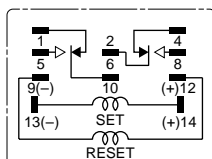
Operation Indicator



Operation Indicator

The red flag appears when the contacts are set.

Internal Connection (Bottom View)



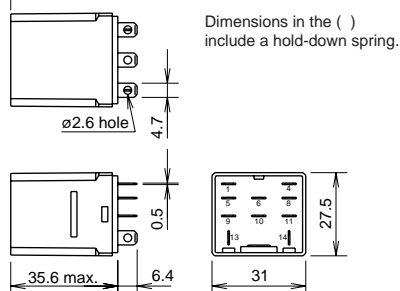
Instructions

1. Do not use the RH2L relays in environments where magnetic particles and dust are present in large quantities or external magnetic field is strong, or in the vicinity of large-current circuits.
2. Do not use the RH2L relays in circuits whose power source contains heavy surges.
3. When two or more RH2L relays are mounted in a row, separate the relays by 6 mm or more.
4. Do not energize the set and reset coils at the same time.
5. Because of the polarity of the coil, connect the DC input voltage to correct terminals of the DC coil type.

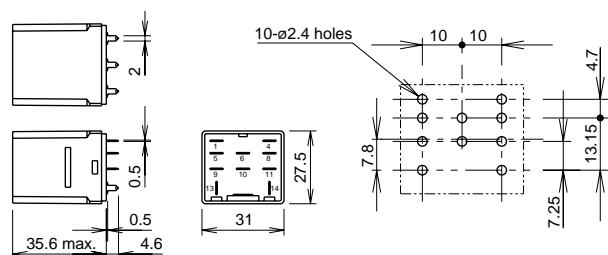
Dimensions

• RH2LB (Plug-in Terminal)

Total length from panel surface including relay socket
SH3B-05A: 61.5 (63.5) max., SH3B-51: 39.6 (41.6) max.



• RH2LV2 (PC Board Terminal)



All dimensions in mm.

• Applicable Socket and Hold-down Spring

Socket		Hold-down Spring
Mounting Style	Type No.	
DIN Rail Mount Socket	SH3B-05A	SH3B-05F1
	SH3B-05C	SFA-101 SFA-202
Panel Mount Socket	SH3B-51	SY4S-51F1
PC Board Mount Socket	SH3B-62	SFA-301
		SFA-302

For details about sockets and hold-down springs, see page 386.