RH Series Power Relays

SPDT through 4PDT, 10A contacts
Midget power relays

The RH series are miniature power relays with a large capacity. The RH relays feature 10A contact capacity as large as the RR series and the same size as IDEC's miniature relays. The compact size saves space.

- Cadmium free contact relays available.
- Lloyd Register type approved.
- UL, CSA certified. EN compliant.

- See website for details on approvals and standards.

Termination	Style	SPDT		DPDT	
		Part No.	Coil Voltage Code *	Part No.	Coil Voltage Code *
Plug-in Terminal	Basic	**RH1B-U*** **RH1B-UW***	AC6, AC12, AC24, AC50, AC100, DC6, DC12, DC24, DC48	**RH2B-U*** **RH2B-UW***	AC6, AC12, AC24, AC50, AC100-110, AC200-220, DC6, DC12, DC24, DC48, DC100-110
			DC100, DC110		
			AC110, AC115, AC120		AC110-120
			AC200, AC220, AC230, AC240		AC220-240
	With Indicator	**RH1B-UL*** **RH1B-ULW***	AC6, AC12, AC24, AC50, AC100, DC6, DC12, DC24, DC48	**RH2B-UL*** **RH2B-ULW***	AC6, AC12, AC24, AC50, AC100-110, AC200-220, DC6, DC12, DC24, DC48, DC100-110
			DC100, DC110		
			AC110, AC115, AC120		AC110-120
			AC200, AC220, AC230, AC240		AC220-240
	Top Bracket Mounting	**RH1B-UT*** **RH1B-UTW***	AC6, AC12, AC24, AC50, AC100, DC6, DC12, DC24, DC48	**RH2B-UT*** **RH2B-UTW***	AC6, AC12, AC24, AC50, AC100-110, AC200-220, DC6, DC12, DC24, DC48, DC100-110
			DC100, DC110		
			AC110, AC115, AC120		AC110-120
			AC200, AC220, AC230, AC240		AC220-240
	With Diode (DC coil only)	**RH1B-UD*** **RH1B-UDW***	DC6, DC12, DC24, DC48	**RH2B-UD*** **RH2B-UDW***	DC6, DC12, DC24, DC48, DC100-110
			DC100		
	With Indicator and Diode (DC coil only)	**RH1B-ULD*** **RH1B-ULDW***	DC6, DC12, DC24, DC48	**RH2B-ULD*** **RH2B-ULDW***	DC6, DC12, DC24, DC48, DC100-110
			DC100, DC110		
PC Board Terminal	Basic	**RH1V2-U*** **RH1V2-UW***	AC6, AC12, AC24, AC50, AC100, DC6, DC12, DC24, DC48	**RH2V2-U*** **RH2V2-UW***	AC6, AC12, AC24, AC50, AC100-110, AC200-220, DC6, DC12, DC24, DC48, DC100-110
			DC100, DC110		
			AC110, AC115, AC120		AC110-120
			AC200, AC220, AC230, AC240		AC220-240
	With Diode (DC coil only)	**RH1V2-UD*** **RH1V2-UDW***	DC6, DC12, DC24, DC48	**RH2V2-UD*** **RH2V2-UDW***	DC6, DC12, DC24, DC48, DC100-110
			DC100		

- Part number ending with W is cadmium free.

Part No. Development

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

(Example) **RH2B-U** **AC100-110**

Part No. — Coil Voltage Code

Termination	Style	3PDT		4PDT	
		Part No.	Coil Voltage Code ∗	Part No.	Coil Voltage Code ∗
Plug-in Terminal	Basic	**RH3B-U∗** **RH3B-UW∗**	AC6, AC12, AC24, AC50, AC100, AC200, DC6, DC12, DC24, DC48, DC100	**RH4B-U∗** **RH4B-UW∗**	AC6, AC12, AC24, AC50, AC100, AC200, DC6, DC12, DC24, DC48, DC100
			AC110, AC115, AC120		AC110, AC115, AC120
			AC220, AC230, AC240, DC110		AC220, AC230, AC240, DC110
	With Indicator	**RH3B-UL∗** **RH3B-ULW∗**	AC6, AC12, AC24, AC50, AC100, AC200	**RH4B-UL∗** **RH4B-ULW∗**	AC6, AC12, AC24, AC50, AC100, AC200, DC6, DC12, DC24, DC48, DC100
			AC110, AC115, AC120, DC6, DC12, DC24, DC48, DC100		AC110, AC115, AC120
			AC220, AC230, AC240, DC110		AC220, AC230, AC240, DC110
	Top Bracket Mounting	**RH3B-UT∗** **RH3B-UTW∗**	AC6, AC12, AC24, AC50, AC100, AC110, AC115, AC120, AC200, AC220, AC230, AC240, DC6, DC12, DC24, DC48, DC100, DC110	**RH4B-UT∗** **RH4B-UTW∗**	AC6, AC12, AC24, AC50, AC100, AC200, DC6, DC12, DC24, DC48, DC100
					AC110, AC115, AC120
					AC220, AC230, AC240, DC110
	With Diode (DC coil only)	**RH3B-D∗**(Note) **RH3B-DW∗**(Note)	DC6, DC12, DC24, DC48, DC100, DC110	**RH4B-UD∗** **RH4B-UDW∗**	DC6, DC12, DC24, DC48, DC100, DC110
	With Indicator and Diode (DC coil only)	**RH3B-LD∗**(Note) **RH3B-LDW∗**(Note)	DC6, DC12, DC24, DC48, DC100, DC110	**RH4B-ULD∗** **RH4B-ULDW∗**	DC6, DC12, DC24, DC48, DC100, DC110
PC Board Terminal	Basic	**RH3V2-U∗** **RH3V2-UW∗**	AC6, AC12, AC24, AC50, AC100, AC200, DC6, DC12, DC24, DC48, DC100	**RH4V2-U∗** **RH4V2-UW∗**	AC6, AC12, AC24, AC50, AC100, AC200, DC6, DC12, DC24, DC48, DC100
			AC110, AC115, AC120		AC110, AC115, AC120
			AC220, AC230, AC240, DC110		AC220, AC230, AC240, DC110
	With Indicator	**RH3V2-UL∗** **RH3V2-ULW∗**	AC6, AC12, AC24, AC50, AC100, AC200	**RH4V2-UL∗** **RH4V2-ULW∗**	AC6, AC12, AC24, AC50, AC100, AC200, DC6, DC12, DC24, DC48, DC100
			AC110, AC115, AC120, DC6, DC12, DC24, DC48, DC100		AC110, AC115, AC120
			AC220, AC230, AC240, DC110		AC220, AC230, AC240, DC110
	With Diode (DC coil only)	**RH3V2-D∗**(Note) **RH3V2-DW∗**(Note)	DC6, DC12, DC24, DC48, DC100, DC110	**RH4V2-UD∗** **RH4V2-UDW∗**	DC6, DC12, DC24, DC48, DC100, DC110
	With Indicator and Diode (DC coil only)	**RH3V2-LD∗**(Note) **RH3V2-LDW∗**(Note)	DC6, DC12, DC24, DC48, DC100, DC110	**RH4V2-ULD∗** **RH4V2-ULDW∗**	DC6, DC12, DC24, DC48, DC100, DC110

Note: No standard approval.
• Part number ending with W is cadmium free.

Part No. Development

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

(Example) **RH4B-U** **AC100**

RH4B-U: Part No.
AC100: Coil Voltage Code

Relay coil tape color

The color of the tape wrapped around the coil is determined by the rated coil voltage.
(The voltage is indicated on the yellow tape.)

Coil Voltage	Tape Color
DC24V	Green
AC100-110V, AC110V	Clear
AC110-120V, AC120V	Blue
AC200-220V, AC220V	Black
AC220-240V, AC240V	Red
AC24V	White
Other voltages	Yellow

Coil Ratings

	Rated Voltage (V)				Rated Current (mA) ±15% at 20°C								Coil Resistance (Ω) ±10% at 20°C				Operation Characteristics (against rated values at 20°C)		
					50Hz				60Hz								Max. Continuous Applied Voltage	Min. Pickup Voltage	Dropout Voltage
	SPDT	DPDT	3PDT	4PDT	SPDT	DPDT	3PDT	4PDT	SPDT	DPDT	3PDT	4PDT	SPDT	DPDT	3PDT	4PDT			
AC (50/60Hz)	6	6	6	6	170	240	330	387	150	200	280	330	18.8	9.34	6.4	5.8	110%	80% maximum	30% minimum
	12	12	12	12	86	121	165	196	75	100	140	165	76.8	39.3	25.3	23.1			
	24	24	24	24	42	60.5	81	98	37	50	70	83	300	152	103	84.5			
	50	50	50	50	20.5	28.9	39.5	47	18	24	34	40	1,280	676	460	340			
	100	100-110	100	100	10.5	10.3-11.8	20	23.5	9	9.1-10.0	17	20	5,220	3,360	1,940	1,560			
	110	—	110	110	9.6	—	18.1	21.6	8.4	—	15.5	18.2	6,950	—	2,200	1,800			
	115	110-120	115	115	8.9	9.4-10.8	17.1	20.8	7.8	8.0-9.2	14.8	17.5	7,210	4,290	2,620	1,910			
	120	—	120	120	8.6	—	16.4	19.5	7.5	—	14.2	16.5	8,100	—	2,770	2,220			
	200	200-220	200	200	5.6	5.1-5.9	9.8	11.8	4.9	4.3-5.0	8.5	10	21,442	13,690	8,140	6,360			
	220	—	220	220	4.7	—	8.8	10.7	4.1	—	7.7	9.1	25,892	—	10,810	7,360			
	230	220-240	230	230	4.7	4.7-5.4	8.5	10.3	4.1	4.0-4.6	7.4	8.7	26,710	18,820	11,460	8,520			
	240	—	240	240	4.9	—	8.2	9.8	4.3	—	7.1	8.3	26,710	—	12,110	9,120			
DC	SPDT	DPDT	3PDT	4PDT	SPDT		DPDT		3PDT		4PDT		SPDT	DPDT	3PDT	4PDT	110%	80% maximum	10% minimum
	6	6	6	6	128		150		240		250		47	40	25	24			
	12	12	12	12	64		75		120		125		188	160	100	96			
	24	24	24	24	32		37.5		60		62		750	640	400	388			
	48	48	48	48	18		18.8		30		31		2,660	2,560	1,600	1,550			
	100	100-110	100	100	10		8.2-9.0		14.5		15		10,000	12,250	6,900	6,670			
	110	—	110	110	8		—		12.8		15		13,800	—	8,600	7,340			

Contact Ratings

Maximum Contact Capacity						
Contact	Continuous Current	Allowable Contact Power		Rated Load		
		Resistive Load	Inductive Load	Voltage (V)	Res. Load	Ind. Load
SPDT	10A	1540VA AC 300W DC	990VA AC 210W DC	110 AC	10A	7A
				220 AC	7A	4.5A
				30 DC	10A	7A
DPDT 3PDT 4PDT	10A	1650VA AC 300W DC	1100VA AC 225W DC	110 AC	10A	7.5A
				220 AC	7.5A	5A
				30 DC	10A	7.5A

Note: Inductive load for the rated load — cos ø = 0.3, L/R = 7 ms

Approval Ratings

UL Ratings (silver cadmium oxide)

Voltage	Resistive			General use			Horse Power Rating		
	RH1 RH2	RH3	RH4	RH1 RH2	RH3	RH4	RH1 RH2	RH3	RH4
240V AC	10A	7.5A	7.5A	7A	6.5A	5A	1/3 HP	1/3 HP	—
120V AC	—	10A	10A	—	7.5A	7.5A	1/6 HP	1/6 HP	—
30V DC	10A	10A	—	7A	—	—	—	—	—
28V DC	—	—	10A	—	—	—	—	—	—

UL Ratings (cadmium free)

Voltage	Resistive			General use			Horse Power Rating		
	RH1 RH2	RH3	RH4	RH1 RH2	RH3	RH4	RH1 RH2	RH3	RH4
240V AC	10A	10A	10A	10A	10A	10A	1/3 HP	1/3 HP	—
120V AC	—	—	—	—	—	—	1/6 HP	1/6 HP	—
30V DC	10A	10A	10A	7A	—	—	—	—	—

CSA Ratings (Silver cadmium oxide/cadmium free)

Voltage	Resistive				General use				Horse Power Rating
	RH1	RH2	RH3	RH4	RH1	RH2	RH3	RH4	RH 1, 2, 3
240V AC	10A	10A	10A	10A	7A	7A	7A	5A	1/3 HP
120V AC	10A	10A	10A	10A	7.5A	7.5A	—	7.5A	1/6 HP
30V DC	10A	10A	10A	10A	7A	7.5A	—	—	—

TÜV Ratings (silver cadmium oxide/cadmium free)

Voltage	RH1	RH2	RH3	RH4
240V AC	10A	10A	7.5A	7.5A
30V DC	10A	10A	10A	10A

AC: cos ø = 1.0, DC: L/R = 0 ms

Specifications

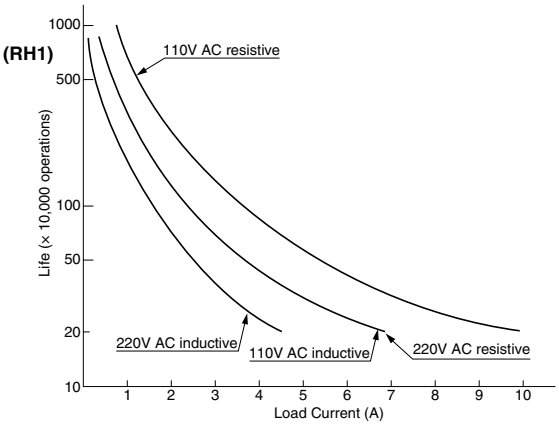
Contact Material		Silver cadmium oxide/cadmium free (Ag-alloy)
Contact Resistance ∗1		50 mΩ maximum
Minimum Applicable Load		24V DC, 30 mA; 5V DC, 100 mA (reference value)
Operate Time ∗2	SPDT/DPDT	20 ms maximum
	3PDT/4PDT	25 ms maximum
Release Time ∗2	SPDT/DPDT	20 ms maximum
	3PDT/4PDT	25 ms maximum
Power Consumption (approx.)	SPDT	AC: 1.1 VA (50 Hz), 1 VA (60 Hz), DC: 0.8W
	DPDT	AC: 1.4 VA (50 Hz), 1.2 VA (60 Hz), DC: 0.9W
	3PDT	AC: 2 VA (50 Hz), 1.7 VA (60 Hz), DC: 1.5W
	4PDT	AC: 2.5 VA (50 Hz), 2 VA (60 Hz), DC: 1.5W
Insulation Resistance		100 MΩ minimum (500V DC megger)
Dielectric Strength	SPDT	Between live and dead parts: 2000V AC, 1 minute ∗3 Between contact and coil: 2000V AC, 1 minute Between contacts of the same pole: 1000V AC, 1 minute
	DPDT/3PDT/4PDT	Between live and dead parts: 2000V AC, 1 minute Between contact and coil: 2000V AC, 1 minute Between contacts of different poles: 2000V AC, 1 minute Between contacts of the same pole: 1000V AC, 1 minute
Operating Frequency		Electrical: 1,800 operations/h maximum Mechanical: 18,000 operations/h maximum
Vibration Resistance		Damage limits: 10 to 55 Hz, amplitude 0.5 mm Operating extremes: 10 to 55 Hz, amplitude 0.5 mm
Shock Resistance		Damage limits: 1,000 m/s² Operating extremes: 200 m/s² (SPDT, DPDT) 100 m/s² (3PDT, 4PDT)
Mechanical Life		50,000,000 operations minimum
Electrical Life	DPDT	Silver cadmium oxide contact: 500,000 operations minimum (110V AC, 10A) Cadmium free (Ag-alloy) contact: 300,000 operations minimum
	SPDT/3PDT/4PDT	200,000 operations minimum (110V AC, 10A)
Operating Temperature ∗4	SPDT	–25 to +50°C (no freezing)
	DPDT/3PDT/4PDT	–25 to +40°C (no freezing)
Operating Humidity		45 to 85% RH (no condensation)
Storage Temperature		–55 to +70°C (no freezing)
Storage Humidity		45 to 85% RH (no condensation)
Weight (approx.)		SPDT: 24g, DPDT: 37g, 3PDT: 50g, 4PDT: 74g

Note: Above values are initial values.
∗1: Measured using 5V DC, 1A voltage drop method
∗2: Measured at the rated voltage (at 20°C), excluding contact bouncing
Release time of relays with diode: 40 ms maximum
∗3: Relays with indicator or diode: 1000V AC, 1 minute
∗4: For use under different temperature conditions, refer to Continuous Load Current vs. Operating Temperature Curve. The operating temperature range of relays with indicator or diode is –25 to +40°C.

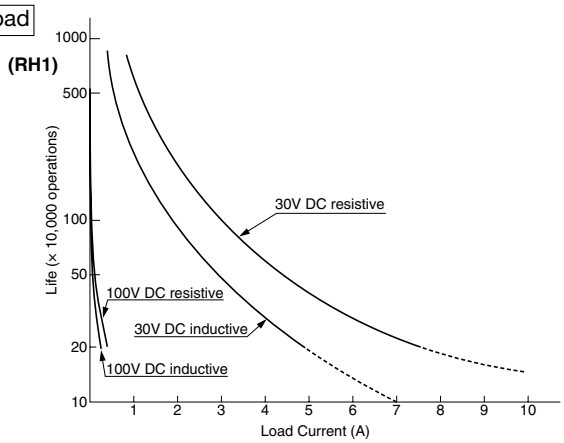
Characteristics (Reference Data)

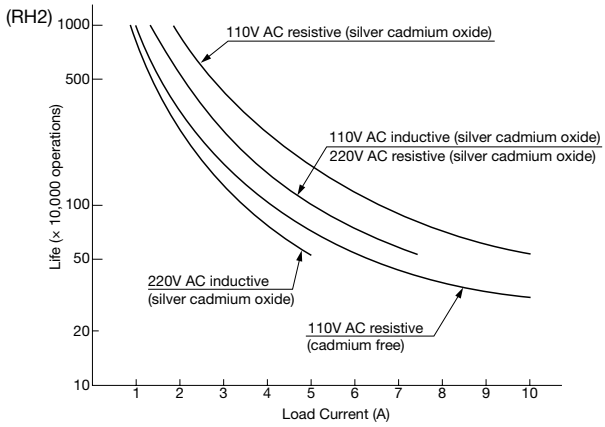
Electrical Life Curve

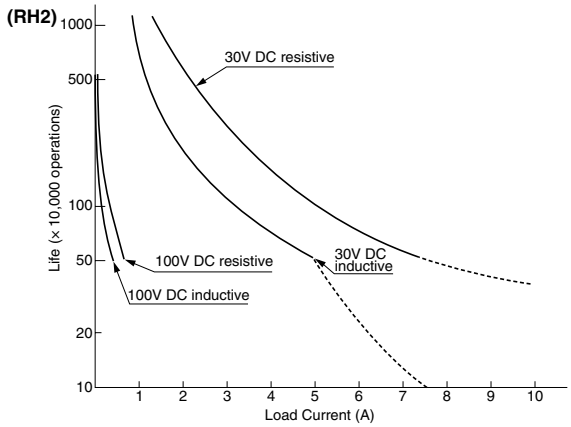
AC Load

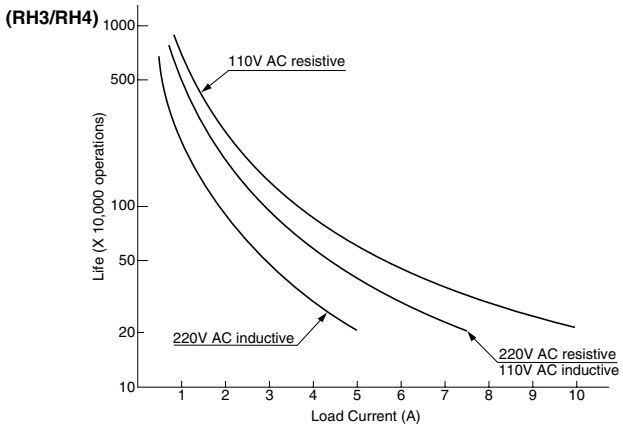


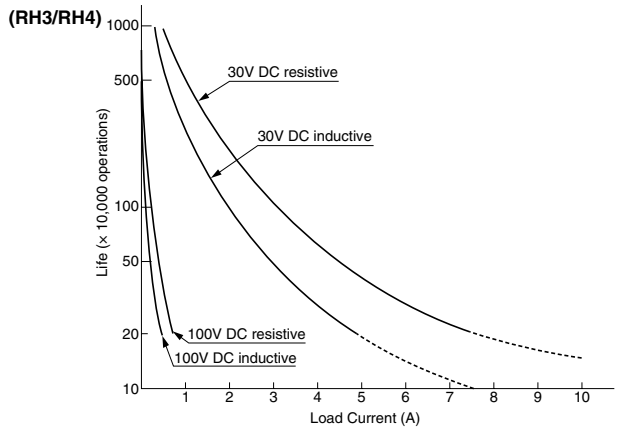
DC Load



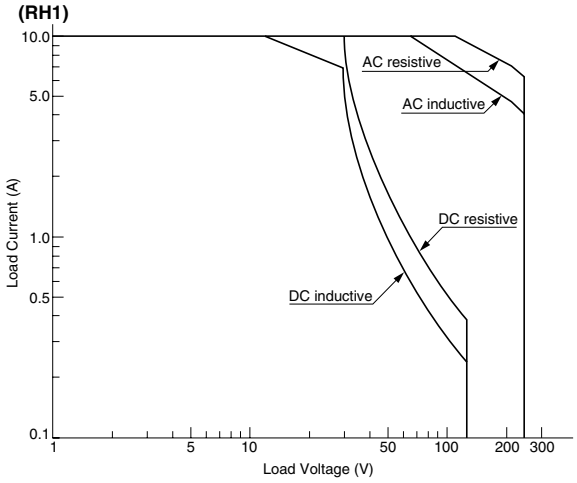


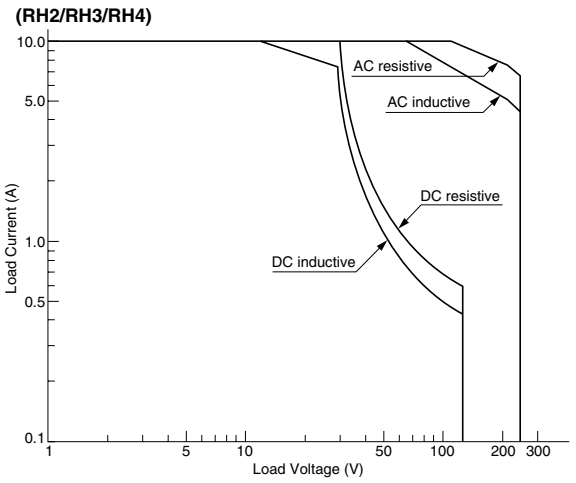






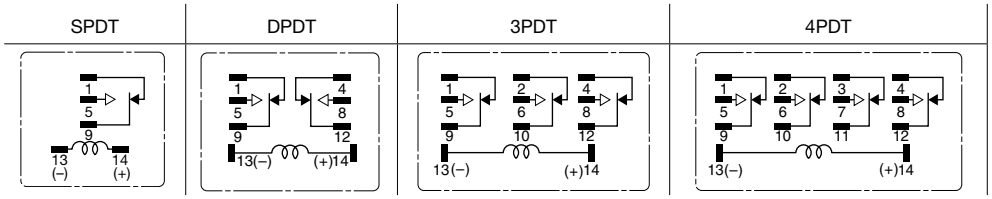
Maximum Switching Capacity



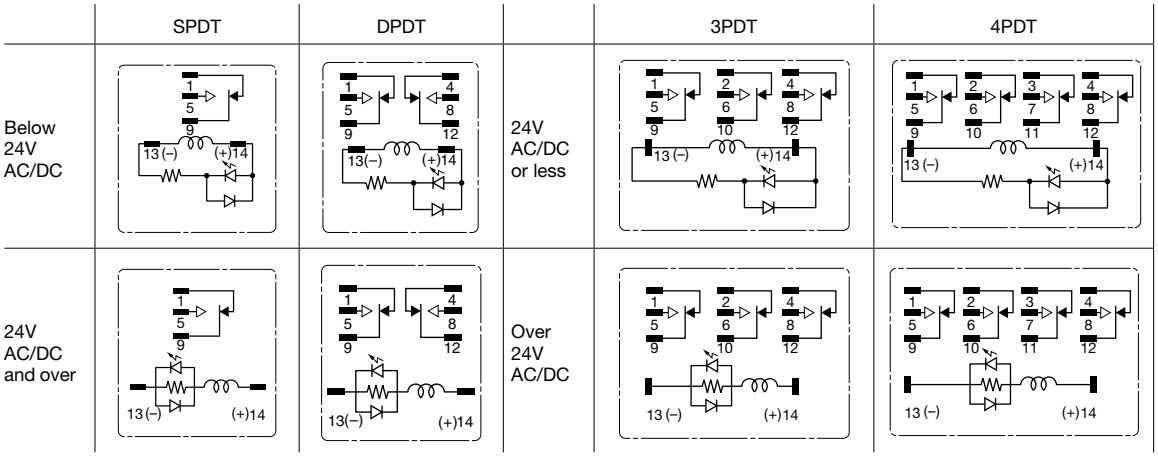


Internal Connection (Bottom View)

Basic

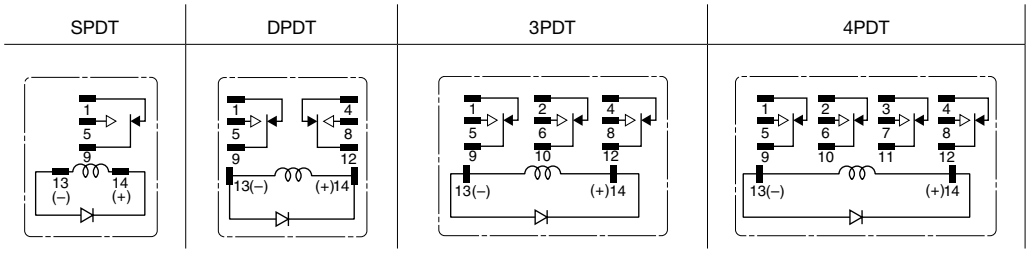


With Indicator (-L)



When the coil is energized, the indicator goes on.

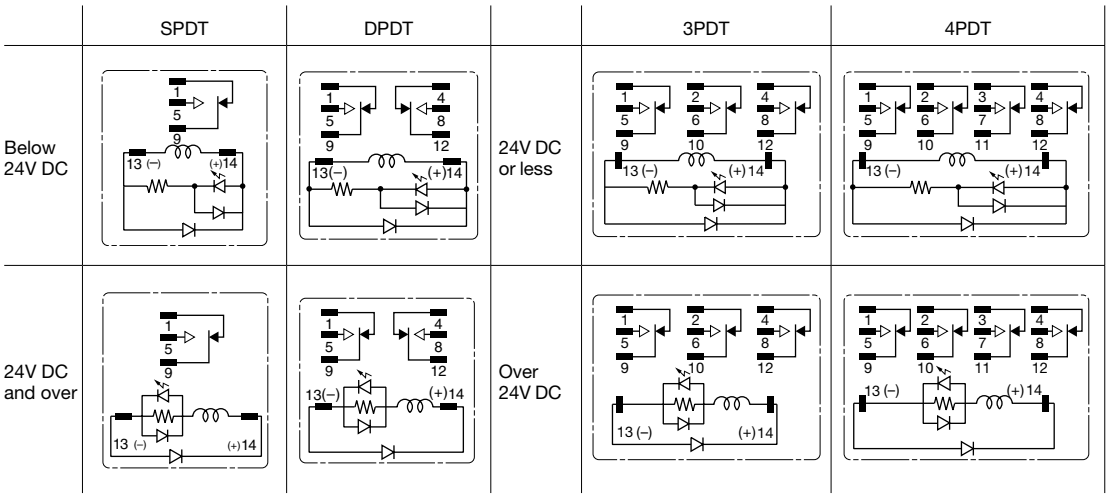
With Diode (-D)



This type contains a diode to absorb the counter emf generated when the coil is deenergized. The release time is slightly longer. Available for DC coil only.

• Diode Characteristics
Reverse withstand voltage: 1,000V
Forward current: 1A

With Indicator and Diode (-LD)

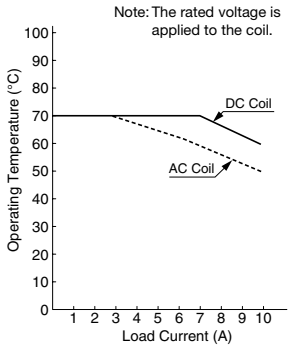


This type contains an operation indicator and a sure absorber, and has the same height as the basic type.

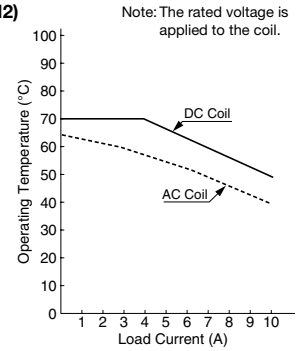
Characteristics (Reference Data)

Continuous Load Current vs. Operating Temperature Curve (Basic and Top Bracket Mounting)

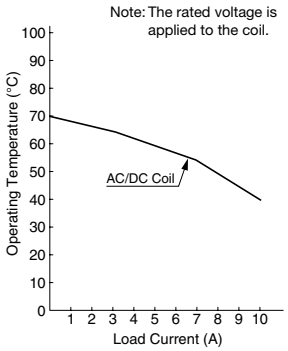
(RH1)



(RH2)



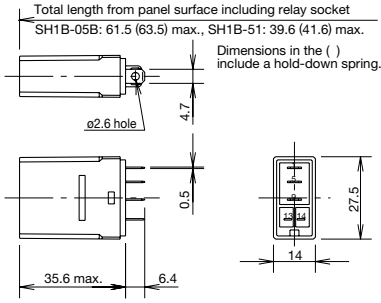
(RH3/RH4)



Dimensions

SPDT Plug-in Terminal
RH1B-U/RH1B-UL/RH1B-UD/ULD

(Photo: RH1B-U)



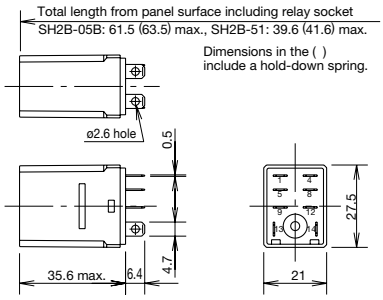
Applicable Socket and Hold-down Spring

Socket		Hold-down Spring
Mounting Style	Part No.	
DIN Rail Mount Socket	**SH1B-05**∗	SFA-101 SFA-202
Panel Mount Socket	**SH1B-51**	SY4S-51F1 SFA-301 SFA-302
PC Board Mount Socket	**SH1B-62**	

DPDT Plug-in Terminal
RH2B-U/RH2B-UL/RH2B-UD/RH2B-ULD

Note: For SH2B-5D, use SFA-502 hold-down spring.

(Photo: RH2B-U)



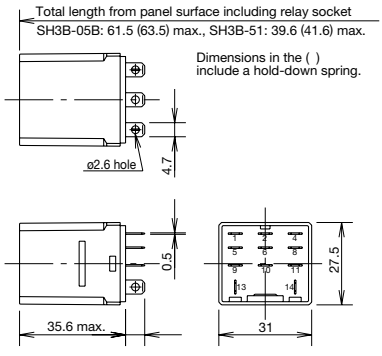
Applicable Socket and Hold-down Spring

Socket		Hold-down Spring
Mounting Style	Part No.	
DIN Rail Mount Socket	**SH2B-05**∗ (Note)	SFA-202 SFA-101
Panel Mount Socket	**SH2B-51**	SY4S-51F1 SFA-302(Note) SFA-301(Note) (SY4S-02F1)
PC Board Mount Socket	**SH2B-62**	

Note: Not applicable with SH2B-62.
• (SY4S-02F1) is for the relay with check button.

3PDT Plug-in Terminal
RH3B-U/RH3B-UL/RH3B-D/RH3B-LD

(Photo: RH3B-U)

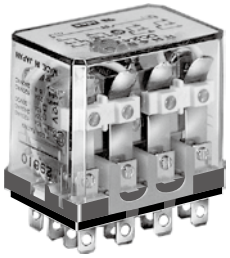


Applicable Socket and Hold-down Spring

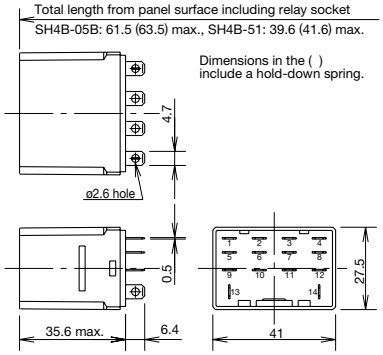
Socket		Hold-down Spring
Mounting Style	Part No.	
DIN Rail Mount Socket	**SH3B-05**∗	SFA-101 SFA-202
Panel Mount Socket	**SH3B-51**	SY4S-51F1 SFA-301 SFA-302 (SH3B-05F1)
PC Board Mount Socket	**SH3B-62**	

• (SH3B-05F1) is for the relay with check button.

4PDT Plug-in Terminal
RH4B-U/RH4B-UL/RH4B-UD/RH4B-ULD



(Photo: RH4B-U)

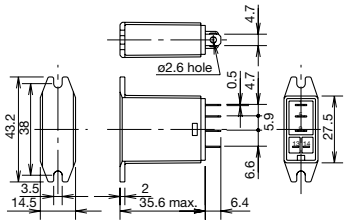


Applicable Socket and Hold-down Spring

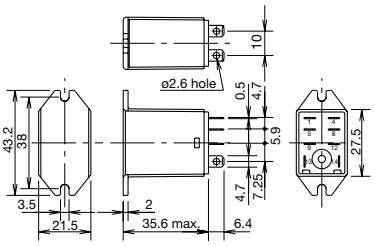
Socket		Hold-down Spring
Mounting Style	Part No.	
DIN Rail Mount Socket	**SH4B-05**∗	SFA-101 SFA-202
Panel Mount Socket	**SH4B-51**	SY4S-51F1 (Note) SFA-301 SFA-302 (SH4B-02F1)
PC Board Mount Socket	**SH4B-62**	

Note: Use two SY4S-51F1 hold-down springs for the SH4B-51 socket.
• (SH4B-02F1) is for the relay with check button.

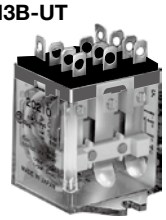
SPDT Plug-in Terminal (Top Bracket Mounting)
RH1B-UT

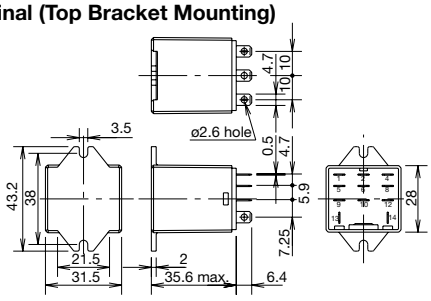


DPDT Plug-in Terminal (Top Bracket Mounting)
RH2B-UT

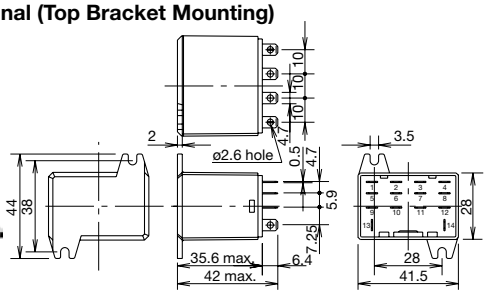


3PDT Plug-in Terminal (Top Bracket Mounting)
RH3B-UT



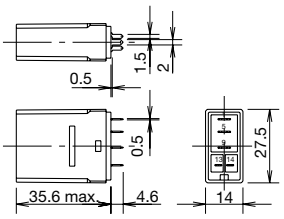


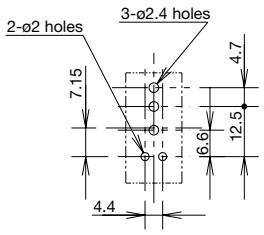
4PDT Plug-in Terminal (Top Bracket Mounting)
RH4B-UT



SPDT PC Board Terminal
RH1V2-U/RH1V2-UD

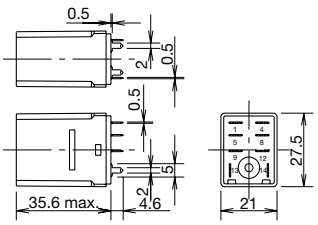
(Photo: RH1V2-U)

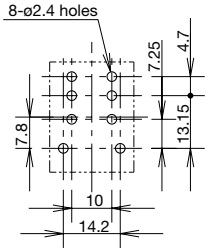




DPDT PC Board Terminal
RH2V2-U/RH2V2-UD

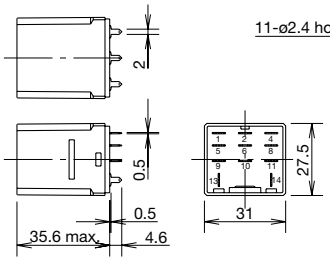
(Photo: RH2V2-U)

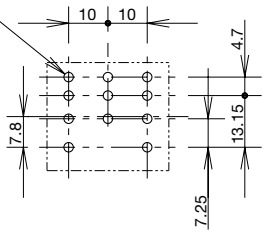




3PDT PC Board Terminal
RH3V2-U/RH3V2-UL/
RH3V2-D/RH3V2-LD

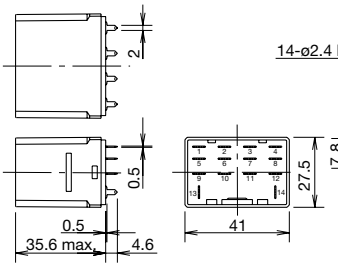
(Photo: RH3V2-U)

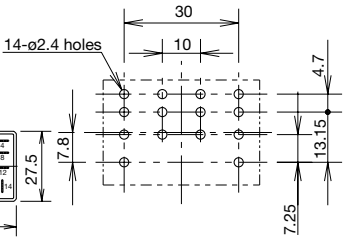




4PDT PC Board Terminal
RH4V2-U/RH4V2-UL/
RH4V2-UD/RH4V2-ULD

(Photo: RH4V2-U)





All dimensions in mm.

Ordering Terms and Conditions

Thank you for using IDEC Products.

By purchasing products listed in our catalogs, datasheets, and the like (hereinafter referred to as "Catalogs") you agree to be bound by these terms and conditions. Please read and agree to the terms and conditions before placing your order.

1. Notes on contents of Catalogs

(1) Rated values, performance values, and specification values of IDEC products listed in this Catalog are values acquired under respective conditions in independent testing, and do not guarantee values gained in combined conditions.
Also, durability varies depending on the usage environment and usage conditions.

(2) Reference data and reference values listed in Catalogs are for reference purposes only, and do not guarantee that the product will always operate appropriately in that range.

(3) The specifications / appearance and accessories of IDEC products listed in Catalogs are subject to change or termination of sales without notice, for improvement or other reasons.

(4) The content of Catalogs is subject to change without notice.

2. Note on applications

(1) If using IDEC products in combination with other products, confirm the applicable laws / regulations and standards.
Also, confirm that IDEC products are compatible with your systems, machines, devices, and the like by using under the actual conditions. IDEC shall bear no liability whatsoever regarding the compatibility with IDEC products.

(2) The usage examples and application examples listed in Catalogs are for reference purposes only. Therefore, when introducing a product, confirm the performance and safety of the instruments, devices, and the like before use. Furthermore, regarding these examples, IDEC does not grant license to use IDEC products to you, and IDEC offers no warranties regarding the ownership of intellectual property rights or non-infringement upon the intellectual property rights of third parties.

(3) When using IDEC products, be cautious when implementing the following.

i. Use of IDEC products with sufficient allowance for rating and performance

ii. Safety design, including redundant design and malfunction prevention design that prevents other danger and damage even in the event that an IDEC product fails

iii. Wiring and installation that ensures the IDEC product used in your system, machine, device, or the like can perform and function according to its specifications

(4) Continuing to use an IDEC product even after the performance has deteriorated can result in abnormal heat, smoke, fires, and the like due to insulation deterioration or the like. Perform periodic maintenance for IDEC products and the systems, machines, devices, and the like in which they are used.

(5) IDEC products are developed and manufactured as general-purpose products for general industrial products. They are not intended for use in the following applications, and in the event that you use an IDEC product for these applications, unless otherwise agreed upon between you and IDEC, IDEC shall provide no guarantees whatsoever regarding IDEC products.

i. Use in applications that require a high degree of safety, including nuclear power control equipment, transportation equipment (railroads / airplanes / ships / vehicles / vehicle instruments, etc.), equipment for use in outer space, elevating equipment, medical instruments, safety devices, or any other equipment, instruments, or the like that could endanger life or human health

ii. Use in applications that require a high degree of reliability, such as provision systems for gas / waterworks / electricity, etc., systems that operate continuously for 24 hours, and settlement systems

iii. Use in applications where the product may be handled or used deviating from the specifications or conditions / environment listed in the Catalogs, such as equipment used outdoors or applications in environments subject to chemical pollution or electromagnetic interference
If you would like to use IDEC products in the above applications, be sure to consult with an IDEC sales representative.

3. Inspections

We ask that you implement inspections for IDEC products you purchase without delay, as well as thoroughly keep in mind management/maintenance regarding handling of the product before and during the inspection.

4. Warranty

(1) Warranty period

The warranty period for IDEC products shall be one (1) year after purchase or delivery to the specified location. However, this shall not apply in cases where there is a different specification in the Catalogs or there is another agreement in place between you and IDEC.

(2) Warranty scope

Should a failure occur in an IDEC product during the above warranty period for reasons attributable to IDEC, then IDEC shall replace or repair that product, free of charge, at the purchase location / delivery location of the product, or an IDEC service base. However, failures caused by the following reasons shall be deemed outside the scope of this warranty.

i. The product was handled or used deviating from the conditions / environment listed in the Catalogs

ii. The failure was caused by reasons other than an IDEC product

iii. Modification or repair was performed by a party other than IDEC

iv. The failure was caused by a software program of a party other than IDEC

v. The product was used outside of its original purpose

vi. Replacement of maintenance parts, installation of accessories, or the like was not performed properly in accordance with the user's manual and Catalogs

vii. The failure could not have been predicted with the scientific and technical standards at the time when the product was shipped from IDEC

viii. The failure was due to other causes not attributable to IDEC (including cases of force majeure such as natural disasters and other disasters)

Furthermore, the warranty described here refers to a warranty on the IDEC product as a unit, and damages induced by the failure of an IDEC product are excluded from this warranty.

5. Limitation of liability

The warranty listed in this Agreement is the full and complete warranty for IDEC products, and IDEC shall bear no liability whatsoever regarding special damages, indirect damages, incidental damages, or passive damages that occurred due to an IDEC product.

6. Service scope

The prices of IDEC products do not include the cost of services, such as dispatching technicians. Therefore, separate fees are required in the following cases.

(1) Instructions for installation / adjustment and accompaniment at test operation (including creating application software and testing operation, etc.)

(2) Maintenance inspections, adjustments, and repairs

(3) Technical instructions and technical training

(4) Product tests or inspections specified by you

The above content assumes transactions and usage within your region. Please consult with an IDEC sales representative regarding transactions and usage outside of your region. Also, IDEC provides no guarantees whatsoever regarding IDEC products sold outside your region.

IDEC CORPORATION

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