

NEW / Preliminary Datasheet  
RCN Power Relay



RCN

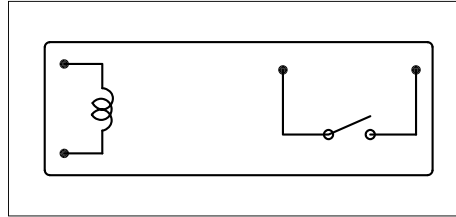
1 Form A, 5 A



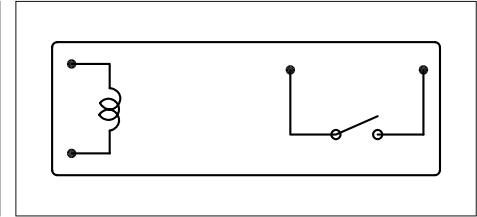
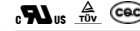
RCN

1 Form A, 8 A

- 1 Form A
- Rated current: 5 to 10 A
- Slim type with 7mm width
- Dielectric strength between coil & contact: 4000 V AC
- Product compliance for IEC60335-1 available
- Meets IEC 60079-15 Anti-explosion Standard



Technical parameters



Technical parameters

Coil data

Coil input voltage	3/5/6/9/12/18/24 V DC
Coil power	200 mW
Response voltage	< 75% (Room temp.)
Drop out voltage	> 5% (Room temp.)
Operation time / Release time	Less than 10 ms / Less than 10 ms

Contact data

Contact numbers	1 form A
Contact material	AgSnO <sub>2</sub> , AgNi
Min. switching voltage	5 V DC
Max. switching voltage	30 V DC, 277 V AC
Max. switching power	1385 VA / 150 W
Contact ratings	5 A 277 V AC / 30 V DC, TV-3, C300, FLA 2A/LRA 12 A, 1/6HP 240 V AC
Min. switching current	100 mA 5 V DC
Contact resistance	Max. 100 mΩ (1 A/6 V DC)
Mechanical service life	1×10 <sup>7</sup> times
Electrical Service life	1×10 <sup>5</sup> times

General data

Rated withstand impulse voltage	Coil / Contact	4000 V AC/1 min
	Between contacts	750 V AC/1 min
Surge voltage		10 kV AC (1.2/50 μs)
Insulation Resistance		1000 mΩ (500 V DC)
Vibration		Malfunction 10~55 Hz (Amplitude 1.5 mm) Endurance 10~55 Hz (Amplitude 1.5 mm)
Shock		Malfunction 98 m/s <sup>2</sup> , Endurance 980 m/s <sup>2</sup>
Ambient temperature (Operation)		-40~85 °C (No condensation)
Operating humidity		20~85%
Dimension LxWxH (mm)		20.4×7.0×15.3
Enclosure type		Flux-proof, sealed
Mounting		PCB
Weight (g)		3.6
Compliance certification number		CQC/TUV/UL

Coil input voltage	3/5/6/9/12/18/24 V DC
Coil power	200 mW
Response voltage	< 75%
Drop out voltage	> 5%
Operation time / Release time	Less than 10 ms / Less than 10 ms

Contact numbers	1 form A
Contact material	AgSnO <sub>2</sub> , AgNi
Min. switching voltage	5 V DC
Max. switching voltage	30 V DC, 277 V AC
Max. switching power	2216 VA / 240 W
Contact ratings	8 A 277 V AC / 30 V DC

Min. switching current	100 mA 5 V DC
Contact resistance	Max. 100 mΩ (1 A/6 V DC)
Mechanical service life	1×10 <sup>7</sup> times
Electrical Service life	5×10 <sup>4</sup> times

Rated withstand impulse voltage	Coil / Contact	4000 V AC / 1 min
	Between contacts	750 V AC / 1 min
Surge voltage		10 kV AC (1.2/50 μs)
Insulation Resistance		1000 mΩ (500 V DC)
Vibration		Malfunction 10~55 Hz (Amplitude 1.5 mm) Endurance 10~55 Hz (Amplitude 1.5 mm)
Shock		Malfunction 98 m/s <sup>2</sup> , Endurance 980 m/s <sup>2</sup>
Ambient temperature (Operation)		-40~85 °C (No condensation)
Operating humidity		20~85%
Dimension LxWxH (mm)		20.4×7.0×15.3
Enclosure type		Flux-proof, sealed
Mounting		PCB
Weight (g)		3.6
Compliance certification number		CQC/TUV/UL

Type designation

Model designation	Number of poles	Coil voltage	Coil power	Contact configuration	Contact rating	Contact material	Insulation class	Enclosure type	Special request
RCN	-1	12	L	M	1	3	F	H	-XXX
RCN	1: 1 pole	03: 3 V 05: 5 V 06: 6 V 09: 9 V 12: 12 V 18: 18 V 24: 24 V	L: 200 mW	M: 1 Form A	Blank: 5A 1: 10A 2: 8A	Blank: AgSnO <sub>2</sub> 3: AgNi+AgSnO <sub>2</sub>	F: class F	Blank: Flux-proof H: Sealed	

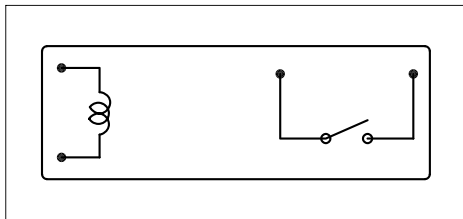
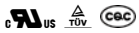


### RCN

1 Form A, 10 A

Coil rating					
Rated voltage (VDC)	Rated current (mA)	Coil resistance ( $\Omega \pm 10\%$ )	Operating power (mW)	Operating voltage (VDC)	Release voltage (VDC)
3	66.67	45	200	$\leq 2.25$	$\geq 0.15$
5	40.00	125	200	$\leq 3.75$	$\geq 0.25$
6	33.33	180	200	$\leq 4.50$	$\geq 0.30$
9	22.22	405	200	$\leq 6.75$	$\geq 0.45$
12	16.67	720	200	$\leq 9.00$	$\geq 0.60$
18	11.11	1620	200	$\leq 13.50$	$\geq 0.90$
24	8.33	2880	200	$\leq 18.00$	$\geq 1.20$

MAX. allowable coil voltage: 130% of rated coil voltage (Room temperature)



#### Technical parameters

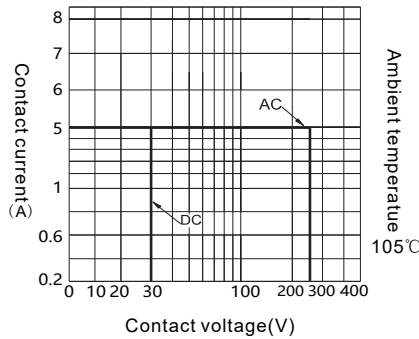
3/5/6/9/12/18/24 V DC  
 200 mW  
 < 75%  
 > 5%  
 Less than 10 ms / Less than 10 ms

1 form A  
 AgSnO<sub>2</sub>, AgNi  
 5 V DC  
 30 V DC, 277 V AC  
 2770 VA / 300 W  
 10 A 277 V AC / 30 V DC

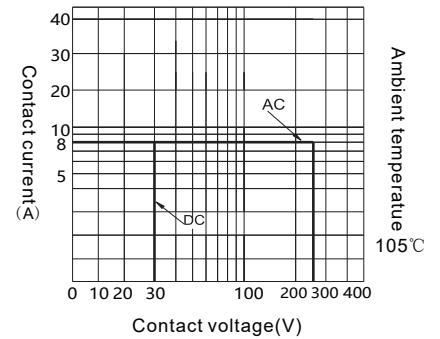
100 mA 5 V DC  
 Max. 100 m $\Omega$  (1 A/6 V DC)  
 1 $\times 10^7$  times  
 3 $\times 10^4$  times

4000 V AC / 1 min  
 750 V AC / 1 min  
 10 kV AC (1.2/50  $\mu$ s)  
 1000 m $\Omega$  (500 V DC)  
 Malfunction 10~55 Hz (Amplitude 1.5 mm)  
 Endurance 10~55 Hz (Amplitude 1.5 mm)  
 Malfunction 98 m/s<sup>2</sup>, Endurance 980 m/s<sup>2</sup>  
 -40~85 °C (No condensation)  
 20~85%  
 20.4 $\times$ 7.0 $\times$ 15.3  
 Flux-proof, sealed  
 PCB  
 3.6  
 CQC/TUV/UL

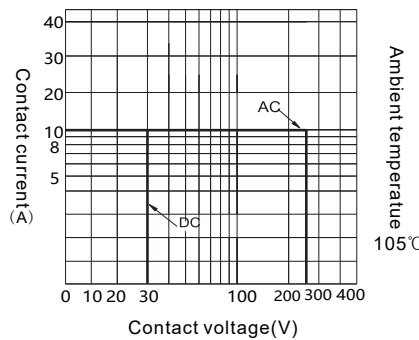
MAX.contact capacity (5A)



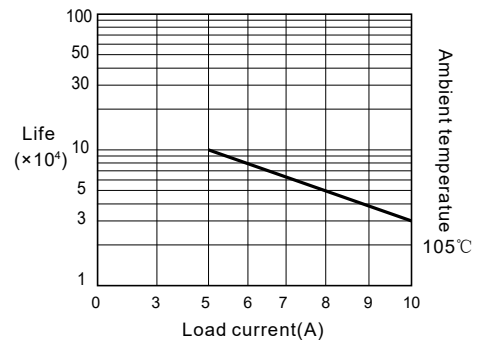
MAX.contact capacity (8A)



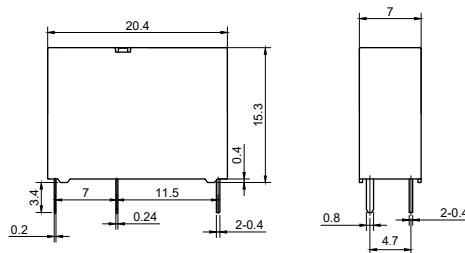
MAX.contact capacity (10A)



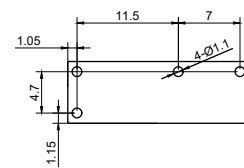
Life curve



Outline dimensions



PCB board layout (Bottom view)



#### Tolerance

Outline dimension	Tolerance
<1mm	$\pm 0.1$ mm
1~3mm	$\pm 0.2$ mm
>3mm	$\pm 0.3$ mm

PCB board layout	Tolerance
Pitch-row	$\pm 0.1$ mm
Aperture	+0.1mm