

Specifications

Model		RJ1	RJ2	RJ22S	RJ22V
Number of Poles		1-pole	2-pole		
Contact Configuration		SPDT	DPDT	DPDT bifurcated contacts	DPDT (bifurcated), DPST-NO (bifurcated)
Contact Material		Silver-nickel alloy		AgNi (gold clad)	
Degree of Protection		IP40			Flux-tight structure
Contact Resistance (initial value) ¹		50 mΩ maximum			
Operating Time ²		15ms maximum (with diode: 20 ms maximum)			
Release Time ²		10 ms maximum (with diode: 20 ms maximum)			
Dielectric Strength	Between contact and coil	5000V AC, 1 minute			
	Between contacts of the same pole	1000V AC, 1 minute			
	Between contacts of different poles	—	3000V AC, 1 minute		
Vibration Resistance	Operating extremes	10 to 55 Hz, amplitude 0.75 mm			
	Damage limits	10 to 55 Hz, amplitude 0.75 mm			
Shock Resistance	Operating extremes	NO contact: 200 m/s ² , NC contact: 100 m/s ²			
	Damage limits	1000 m/s ²			
Electrical Life (rated load)		AC load: 200,000 operations minimum (operation frequency 1800 operations per hour) DC load: 100,000 operations minimum (operation frequency 1800 operations per hour)		AC load: 100,000 operations minimum (operation frequency 1,800 per hour) DC load: 200,000 operations minimum (operation frequency 1,800 per hour)	
Mechanical Life (no load)		AC coil: 30,000,000 operations minimum (operation frequency 18,000 operations per hour) DC coil: 50,000,000 operations minimum (operation frequency 18,000 operations per hour)		AC load: 10 million operations minimum (operating frequency 18,000 operations per hour) DC load: 20 million operations minimum (operating frequency 18,000 operations per hour)	
Operating Temperature ³		−40 to +70°C (no freezing)			
Operating Humidity		5 to 85% RH (no condensation)			
Weight (approx.)		19g (blade type), 17g (PCB form C type), 16g (PCB form A type)		19g	DPDT: 17g, DPST-NO: 16g



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 bounce time.

3. 100% rated voltage.

Coil Ratings

Rated Voltage			Coil Voltage Code	Rated Current (mA) ±15% (at 20°C)				Coil Resistance (ohms)±10% (at 20°C)	Operating Characteristics²			Power Consumption	
				Without LED¹		With LED¹			Pickup Voltage	Dropout Voltage	Maximum Allowable Voltage³		
				50Hz	60Hz	50Hz	60Hz						
AC	Blade & PCB Models	24V	A24	43.9	37.5	47.5	41.1	243	80% max	30% min	140%	0.9VA (60Hz)	
		120V	A120	8.8	7.5	8.7	7.4	6,400					
		240V	A240	4.3	3.7	4.3	3.7	25,570					
	Bifurcated Models	12V	A12	87.3	75.0	91.1	78.8	62.5				Approx. 1.1VA (50Hz) 0.9 to 1.2VA (60Hz)	
		24V	A24	43.9	37.5	47.5	41.1	243					
		120V	A120	8.8	7.5	8.7	7.4	6,400					
		240V	A240	4.3	3.7	4.3	3.7	25,570					
Rated Voltage			Coil Voltage Code	Rated Current (mA) ±15% (at 20°C)				Coil Resistance (ohms)±10% (at 20°C)	Operating Characteristics²			Power Consumption	
				Without LED¹		With LED¹			Pickup Voltage	Dropout Voltage	Maximum Allowable Voltage³		
DC	Blade Models	12V	D12	44.2		48.0		271				70% max	10% min
		24V	D24	22.1		25.7		1,080	160%				
		48V	D48	11.0		10.7		4,340					
		100-110V	D100	5.3 - 5.8		5.2 - 5.7		18,870					
	PCB Models	5V	D5	106		—		47.2	70% max	10% min	170%	0.53-0.64W	
		6V	D6	88.3		—		67.9					
		12V	D12	44.2		—		271					
		24V	D24	22.1		—		1,080					
		48V	D48	11.0		—		4,340					
		100-110V	D100	5.3 - 5.8		—		18,870			160%		
	Bifurcated Models	5V	D5	106		110		47.2	70% max	10% min	170%	Approx. 0.53 to 0.64W	
		12V	D12	44.2		48.0		271					
		24V	D24	22.1		25.7		1,080					
		48V	D48	11		10.7		4,340					
		100-110V	D100	5.3-5.8		5.2-5.7		18,870			160%		



1. LED Indicator is only available on Blade or Bifurcated relays.
2. Operating characteristics are at 20°C.
3. The maximum allowable voltage is the maximum value which can be applied to the relay coils.

Contact Ratings

Model		Contact	Allowable Contact Power		Rated Load			Allowable Switching Current	Allowable Switching Voltage	Minimum Applicable Load
			Resistive Load	Inductive Load	Voltage	Resistive Load	Inductive Load $\cos\phi=0.3$ L/R=7ms			
Blade Models	1 pole	NO	3000VA	1875VA	250V AC	12A	7.5A	16A	AC250V	DC5V
		NC	3000VA	1875VA	250V AC	12A	7.5A	6A	DC30V	100mA
	2 poles	NO	2000VA	1000VA	250V AC	8A	4A	4A	AC250V	DC5V
		NC	2000VA	1000VA	250V AC	8A	4A	4A	DC30V	10mA
PCB Models	2 poles (bifurcated contacts)	NO	250VA AC	100VA AC	250V AC	1A	0.4A	1A	250V AC	1V DC
		NC	30W DC	15W DC	30V DC	1A	0.5A		125V DC	100μA
	1 pole	Standard Type	3000VA	1875VA	250V AC	12A	7.5A	12A	AC250V	DC5V
			360W	180W	30V DC	12A	6A			
		NC	3000VA	1875VA	250V AC	12A	7.5A	6A	DC125V	100mA
			180W	90W	30V DC	6A	3A			
	High Capacity Type	NO	4000VA	2000VA	250V AC	16A	8A	16A	AC250V	DC5V
			480W	240W	30V DC	16A	8A			
		NC	4000VA	2000VA	250V AC	16A	8A	8A	DC125V	100mA
			240W	120W	30V DC	8A	4A			
	2 poles	NO	2000VA	1000VA	250V AC	8A	4A	8A	AC250V	DC5V
			240W	120W	30V DC	8A	4A			
		NC	2000VA	1000VA	250V AC	8A	4A	4A	DC125V	10mA
			120W	60W	30V DC	4A	2A			
	2 poles (bifurcated contacts)	NO	250VA AC	100VA AC	250V AC	1A	0.4A	1A	250V AC	1V DC
		NC	30W DC	15W DC	30V DC	1A	0.5A		125V DC	100μA