

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.

Switches & Pilot Lights

Signaling Lights

Relays & Sockets

Timers

Contactors

Terminal Blocks

Circuit Breakers

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Coil Ratings

Rated Voltage	Coil Voltage Code	Rated Current (mA) ±15% (at 20°C)				Coil Resistance (ohms)±10% (at 20°C)	Operating Characteristics ²			Power Consumption			
		Without LED ¹		With LED ¹			Pickup Voltage	Dropout Voltage	Maximum Allowable Voltage ³				
		50Hz	60Hz	50Hz	60Hz								
AC	Blade & PCB Models	24V	A24	43.9	37.5	47.5	41.1	80% max	30% min	140%	0.9VA (60Hz)		
		120V	A120	8.8	7.5	8.7	7.4						
		240V	A240	4.3	3.7	4.3	3.7						
	Bifurcated Models	12V	A12	87.3	75.0	91.1	78.8					62.5	
		24V	A24	43.9	37.5	47.5	41.1						243
		120V	A120	8.8	7.5	8.7	7.4						
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 Characteristics ²			Power Consumption
		Without LED ¹		With LED ¹			Pickup Voltage	Dropout Voltage	Maximum Allowable Voltage ³	
		50Hz	60Hz	50Hz	60Hz					
DC	Blade Models	12V	D12	44.2	48.0	271	70% max	10% min	170%	0.53W
		24V	D24	22.1	25.7	1,080				
		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				
		Bifurcated Models	5V	D5	106	110				
	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					

- 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 <i>cosφ=0.3 L/R=7ms</i>								
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				
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			
PCB Models	1 pole	Standard Type	NO	3000VA	1875VA	250V AC	12A	7.5A	12A	AC250V	DC5V			
			NC	3000VA	1875VA	250V AC	12A	7.5A				6A	DC125V	100mA
			NO	360W	180W	30V DC	12A	6A						
		High Capacity Type	NO	4000VA	2000VA	250V AC	16A	8A	16A	AC250V	DC5V			
			NC	4000VA	2000VA	250V AC	16A	8A				8A	DC125V	100mA
			NO	480W	240W	30V DC	16A	8A						
	2 poles	NO	NO	2000VA	1000VA	250V AC	8A	4A	8A	AC250V	DC5V			
			NC	2000VA	1000VA	250V AC	8A	4A				4A	DC125V	10mA
		NC	NO	120W	60W	30V DC	4A	2A	4A	AC250V	DC5V			
			NC	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		