

# RJ Series Slim Power Relay Plug-in Terminal (bifurcated contacts)

## Ratings

Voltage	UL Ratings				CSA Ratings						VDE Ratings	
	Resistive		General Use		Resistive		Inductive		General Use		Resistive	
	NO	NC	NO	NC	NO	NC	NO	NC	NO	NC	NO	NC
250V AC	—	—	1A	1A	—	—	—	—	1A	1A	1A	1A
30V DC	1A	1A	—	—	1A	1A	1A	1A	—	—	1A	1A

## Coil Ratings

Rated Voltage (V)	Coil Voltage Code	Without LED Indicator			With LED Indicator			Operating Characteristics (against rated values at 20°C)			Power Consumption	
		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)	Pickup Voltage (initial value)	Dropout Voltage (initial value)	Maximum Continuous Applied Voltage (Note)		
		50Hz	60Hz		50Hz	60Hz						
AC 50/60 Hz	12V	A12	87.3	75.0	62.5	91.1	78.8	62.5	80% maximum	30% minimum	140%	Approx. 1.1VA (50Hz) 0.9 to 1.2VA (60Hz)
	24V	A24	43.9	37.5	243	47.5	41.1	243				
	110V	A110	9.6	8.2	5,270	9.5	8.1	5,270				
	115V	A115	9.1	7.8	6,030	9.0	7.7	6,030				
	120V	A120	8.8	7.5	6,400	8.7	7.4	6,400				
	220V	A220	4.8	4.1	21,530	4.8	4.1	21,530				
	230V	A230	4.6	3.9	24,100	4.6	3.9	24,100				
240V	A240	4.3	3.7	25,570	4.3	3.7	25,570					
DC	5V	D5	106		47.2	110		47.2	70% maximum	10% minimum	170%	Approx. 0.53 to 0.64W
	6V	D6	88.3		67.9	92.2		67.9				
	12V	D12	44.2		271	48.0		271				
	24V	D24	22.1		1,080	25.7		1,080				
	48V	D48	11.0		4,340	10.7		4,340				
100-110V	D100	5.3-5.8		18,870	5.2-5.7		18,870			160%		

Note: Maximum continuous applied voltage is the maximum voltage that can be applied to relay coils.

## Specifications

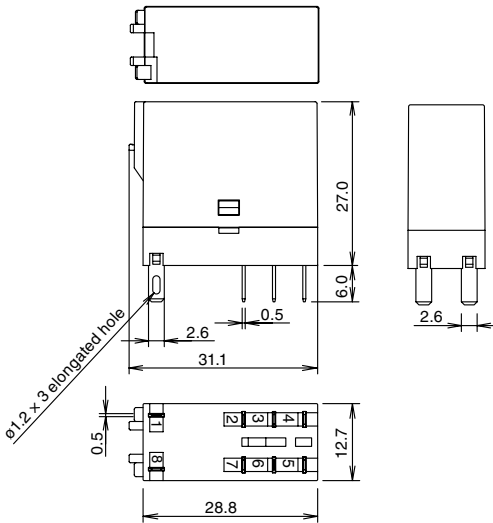
Relay	RJ22S	
Number of Poles	2-pole	
Contact Configuration	DPDT (bifurcated contacts)	
Contact Material	AgNi (gold clad)	
Degree of Protection	IP40	
Contact Resistance (initial value)	50 mΩ maximum (measured using 5V DC, 1A voltage drop method)	
Operating Time (at 20°C)	15 ms maximum (at the rated coil voltage, excluding contact bounce time) With diode or RC: 20 ms maximum	
Release Time (at 20°C)	10 ms maximum (at the rated coil voltage, excluding contact bounce time) With diode or RC: 20 ms maximum	
Impulse Withstand Voltage	10,000V AC (between contact and coil)	
Insulation Resistance	100 MΩ minimum (500V DC megger)	
Dielectric Strength	Between contact and coil	5,000V AC, 1 minute
	Between contacts of the same pole	1,000V AC, 1 minute
	Between contacts of the different poles	3,000V 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 <sup>2</sup> , NC contact: 100 m/s <sup>2</sup>
	Damage Limits	1,000 m/s <sup>2</sup>
Electrical Life	AC load: 100,000 operations minimum (operating frequency 1,800 per hour) DC load: 200,000 operations minimum (operating frequency 1,800 per hour)	
Mechanical Life	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 (100% rated voltage)	-40 to +70°C (no freezing)	
Operating Humidity	5 to 85%RH (no condensation)	
Storage Temperature	-40 to +85°C (no freezing)	
Storage Humidity	5 to 85%RH (no condensation)	
Weight (approx.)	19g	

## Applicable Sockets

Style	Part No.	Ordering Part No.	Package Quantity
Standard Screw Terminal	SJ2S-05B	SJ2S-05B	1
Finger-safe Screw Terminal	SJ2S-07L	SJ2S-07L	1
PC Board Terminal	SJ2S-61	SJ2S-61PN10	10
	SJ2S-61	SJ2S-61PN50	50

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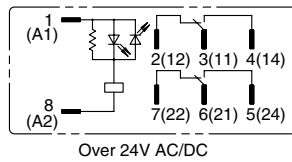
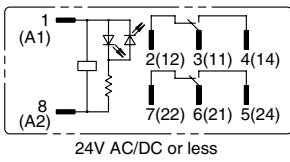
## Dimensions



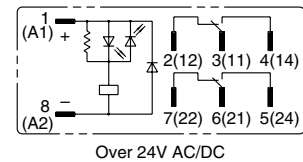
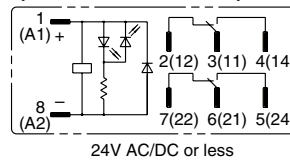
All dimensions in mm.

## Internal Connection (bottom view)

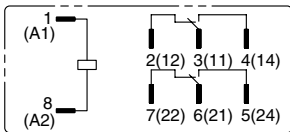
### RJ22S-CL-\* Standard (with LED indicator)



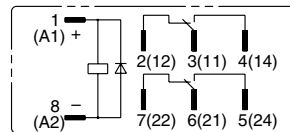
### RJ22S-CLD1-\* With diode/reverse polarity (with LED indicator)



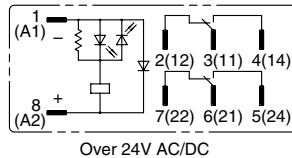
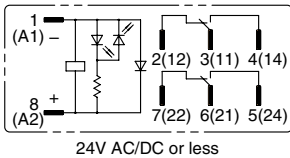
### RJ22S-C-\* Simple



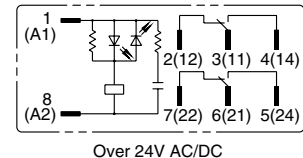
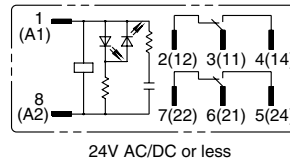
### RJ22S-CD1-\* With diode/reverse polarity



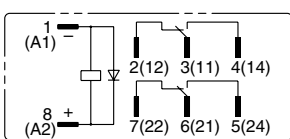
### RJ22S-CLD-\* With diode (with LED indicator)



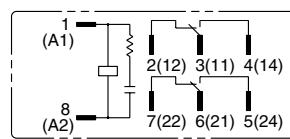
### RJ22S-CLR-\* With RC (with LED indicator)



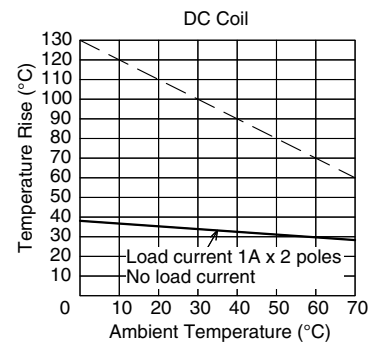
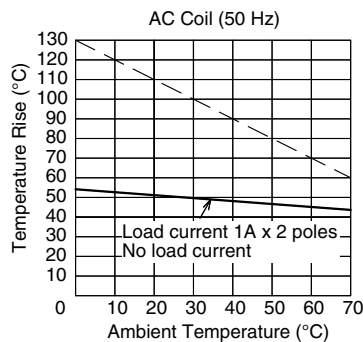
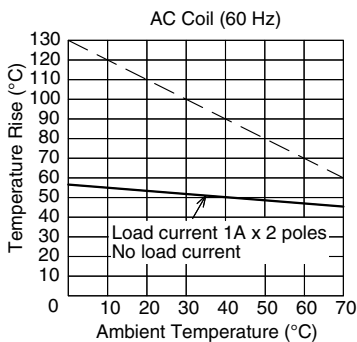
### RJ22S-CD-\* With diode



### RJ22S-CR-\* With RC



## Operating Temperature and Coil Temperature Rise



- The slanted dashed line indicates the allowable temperature rise for the coil at different ambient temperatures.
- The above temperature rise curves show the characteristics when 100% of the rated coil voltage is applied.