

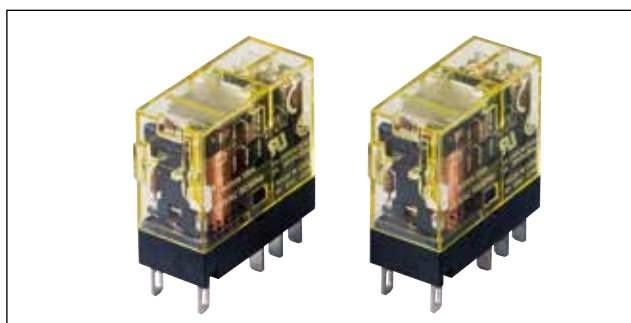
RJ Series Slim Power Relay Plug-in Terminal (bifurcated contacts)

High contact reliability with bifurcated contacts (minimum applicable load: 1V DC, 100μA)

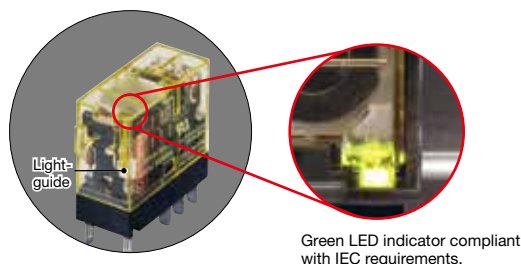
- The smallest width for 2-pole/bifurcated contacts relay (based on IDEC research as of July 2017)
- Non-polarized green LED indicator available (except for simple type)
- IDEC's unique light-guide structure enables an RJ relay to be identified by the illuminating LED.
- Diode, reverse polarity diode, and RC circuits are available.
- Peak inverse voltage is 1000V.
- UL recognized, CSA certified, VDE approved, EN compliant.

Applicable Standards

Applicable Standards	Mark	File No. or Organization
UL508		UL Recognized File No. E55996
CSA C22.2 No.14		CSA File No. LR35144
EN61810-1		VDE No. 40015055
		EU Low Voltage Directive



• IDEC's unique light-guide structure



Relays

Bifurcated Contacts

Style	2-pole (bifurcated contacts DPDT)	
	Part No.	Coil Voltage Code
Standard (with LED indicator)	RJ22S-CL-*	A12, A24, A110, A115, A120, A220, A230, A240, D5, D6, D12, D24, D48, D100
Simple (without LED indicator)	RJ22S-C-*	
With diode (with LED indicator)	RJ22S-CLD-*	
With diode (without LED indicator)	RJ22S-CD-*	
With diode Reverse polarity (with LED indicator)	RJ22S-CLD1-*	
With diode Reverse polarity (without LED indicator)	RJ22S-CD1-*	
With RC circuit (with LED indicator)	RJ22S-CLR-*	A12, A24, A110, A115, A120, A220, A230, A240
With RC circuit (without LED indicator)	RJ22S-CR-*	

Coil Voltage Code

Code	Voltage
A12	12V AC
A24	24V AC
A110	110V AC
A115	115V AC
A120	120V AC
A220	220V AC
A230	230V AC
A240	240V AC
D5	5V DC
D6	6V DC
D12	12V DC
D24	24V DC
D48	48V DC
D100	100-110V DC

Contact Ratings

Allowable Contact Power		Rated Load			Allowable Switching Current	Allowable Switching Voltage	Minimum Applicable Load (Note)
Resistive Load	Inductive Load	Voltage	Resistive Load	Inductive Load $\cos\phi=0.4$ L/R=7ms			
250VA AC 30W DC	100VA AC 15W DC	250V AC	1A	0.4A	1A	250V AC 125V DC	1V DC 100μA (reference value)
		30V DC	1A	0.5A			

Note: Measured at operating frequency of 120 operations per minute.
Failure rate level P, 1/10,000,000 (reference value) (JIS C5003)

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 allowable 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 allowable voltage is the maximum voltage that can be applied to relay coils.

Specifications

Model	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 ² , NC contact: 100 m/s ²
	Damage Limits	1,000 m/s ²
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 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

Relays

RJ

RU

RY

RM

RH

RR

RV8H

RF1V

RF2

Sockets

SJ

DF

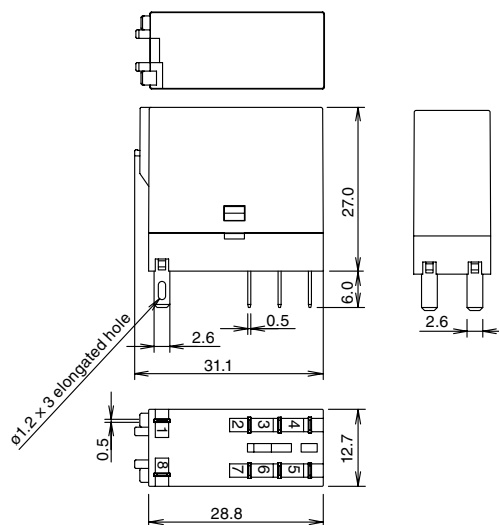
SU

SF1V

Relay Sockets

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

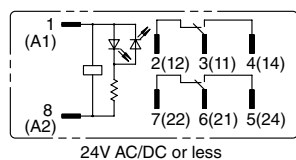
Dimensions



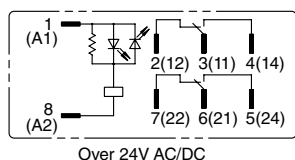
All dimensions in mm.

Internal Connection (bottom view)

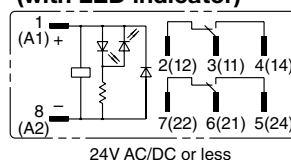
RJ22S-CL-* Standard (with LED indicator)



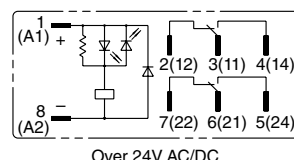
Over 24V AC/DC



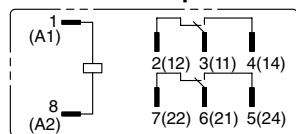
RJ22S-CLD1-* With diode/reverse polarity (with LED indicator)



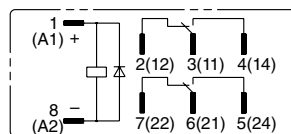
Over 24V AC/DC



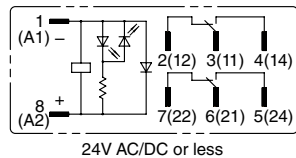
RJ22S-C-* Simple



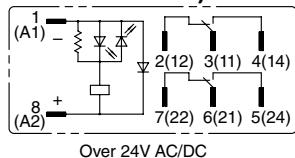
RJ22S-CD1-* With diode/reverse polarity



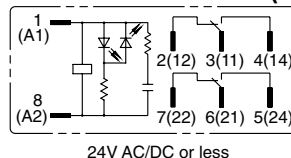
RJ22S-CLD-* With diode (with LED indicator)



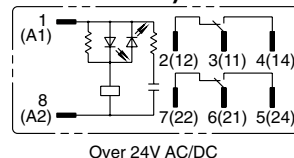
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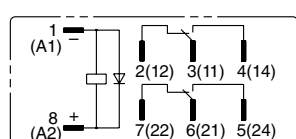
RJ22S-CLR-* With RC (with LED indicator)



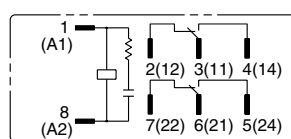
Over 24V AC/DC



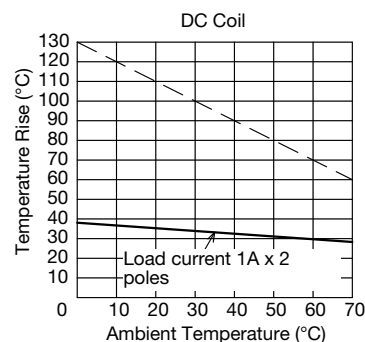
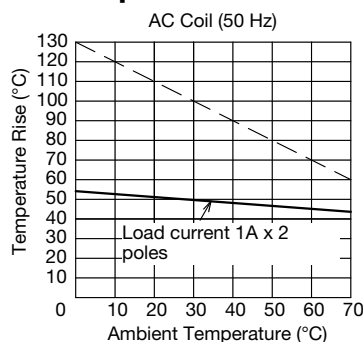
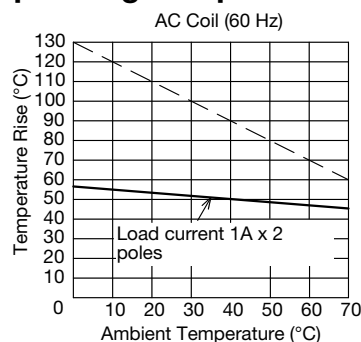
RJ22S-CD-* With diode



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.