

# Relays RS Series Specifications

## Overview

RS series relays are compact, space-saving relay terminal modules containing four or six card relays with one normally open contact each. These relay-and-terminal modules are ideal for interfacing electronic control devices (such as PLCs or photoelectric sensors) with output devices.

## Features

- Compact size of 34mm wide by 69mm long, including screw terminals
- Input terminals are located in the upper part and output terminals in the lower part of the module to separate them from each other, making wiring easy
- RB105 plug-in relays and TP04 sockets make maintenance easy
- Built-in coil surge-suppression diodes and operation indicator LEDs simplify circuit design and maintenance
- The module is easily-mounted on a 35mm DIN rail
- The RS4N module includes two standard accessory jumper plates, which are convenient for common wiring of terminals



**RS6N-DE**

Relays RS Series			
Part Number	Price	Drawing Link	Description
<b>RS4N-DE</b>	\$41.00	<a href="#">PDF</a>	Fuji Electric card relay, in-socket mount, finger-safe, 24 VDC coil voltage, 4PST, (4) N.O., 5A contact rating, screw terminal(s). (4) relays, TY3 relay remover and (2) jumpers included.
<b>RS6N-DE</b>	\$54.00	<a href="#">PDF</a>	Fuji Electric card relay, in-socket mount, finger-safe, 24 VDC coil voltage, 6PST, (6) N.O., 5A contact rating, screw terminal(s). (6) relays and TY3 relay remover included.

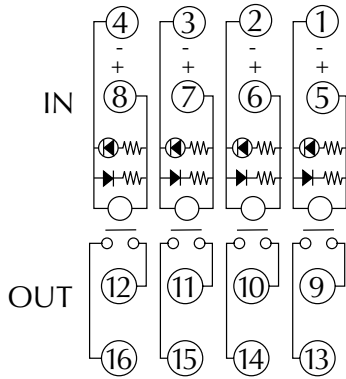
Relays RS Series Specifications					
<b>Contact</b>		1 N.O. / SPST			
<b>Contact Resistance</b>		30mΩ or less (before use)			
<b>Contact Material</b>		Silver alloy (gold-plated)			
<b>Min. Operating Voltage and Current</b>		0.1 VDC, 1mA			
<b>Rated Thermal Current</b>		5A			
<b>Max. Make/Break Current (Resistive Load)</b>		250VAC, 5A 30VDC, 5A 120VDC, 0.5 A			
<b>Max. Make/Break Current (Pilot Duty)</b>		120VAC, 1A 30VDC, 2A 120VDC, 0.2 A			
<b>Operating Time</b>		10ms or less at rated voltage			
<b>Release Time</b>		10ms or less at rated voltage			
<b>Insulation Resistance</b>		100MΩ (at 500VDC megger)			
<b>Dielectric Strength</b>	<b>Between Contact and Coil</b>	2000VAC 1 minute			
	<b>Between Contacts of Same Pole</b>	750VAC 1 minute			
	<b>Between Contacts of Different Pole</b>	2000VAC 1 minute			
	<b>Between Coils of Different Pole</b>	500VAC 1 minute			
<b>Vibration</b>	<b>Malfunction Durability</b>	10 to 55Hz, 1mm double amplitude			
	<b>Mechanical Durability</b>	10 to 55Hz, 1.5mm double amplitude			
<b>Shock</b>	<b>Malfunction Durability</b>	100m/s <sup>2</sup>			
	<b>Mechanical Durability</b>	1000m/s <sup>2</sup>			
<b>Life Expectancy</b>	<b>Mechanical</b>	20 million operations			
	<b>Electrical</b>	<b>Voltage</b>	<b>Make Current (A)</b>	<b>Break Current (A)</b>	<b>Operations</b>
		220VAC (inductive load)	2 (cos $\phi$ = 0.7)	2 (cos $\phi$ = 0.3 - 0.4)	100,000
		220VAC (resistive load)	3 (cos $\phi$ = 1.0)	3 (cos $\phi$ = 1.0)	130,000
		24VDC (inductive load)	1 (T = 15ms)	1 (T = 15ms)	150,000
24VDC (resistive load)	5 (T = 1ms or less)	5 (T = 1ms or less)	100,000		
<b>Terminal Wire Capacity</b>		Max wire gauge 14AWG			
<b>Ambient Temperature</b>		-25 to + 55°C (no icing)			
<b>Terminal Torque Specification</b>		0.8 - 0.9 N·m			

# Relays RS Series Wiring Diagrams

## Wiring Diagrams

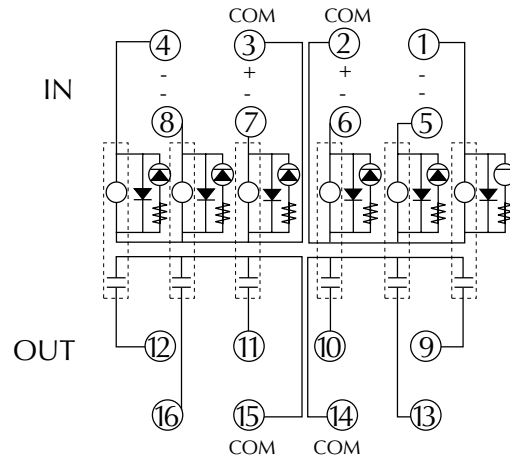
### RS4N-DE

#### Internal Wiring



### RS6N-DE

#### Internal Wiring



# Electromechanical Relay RB105-DE Specifications

## Overview

These relays are for replacement in [RS4N-DE](#) and [RS6N-DE](#) relay modules (5mm). Bifurcated contacts ensure high contact reliability, allowing use in low-level circuits.

## Features

- Narrow, miniature size and light weight reduces space on the DIN rail
- UL, CSA, CE, and TUV approved
- Low power consumption
- Can be operated with a non-polarity magnet
- Flux-tight construction



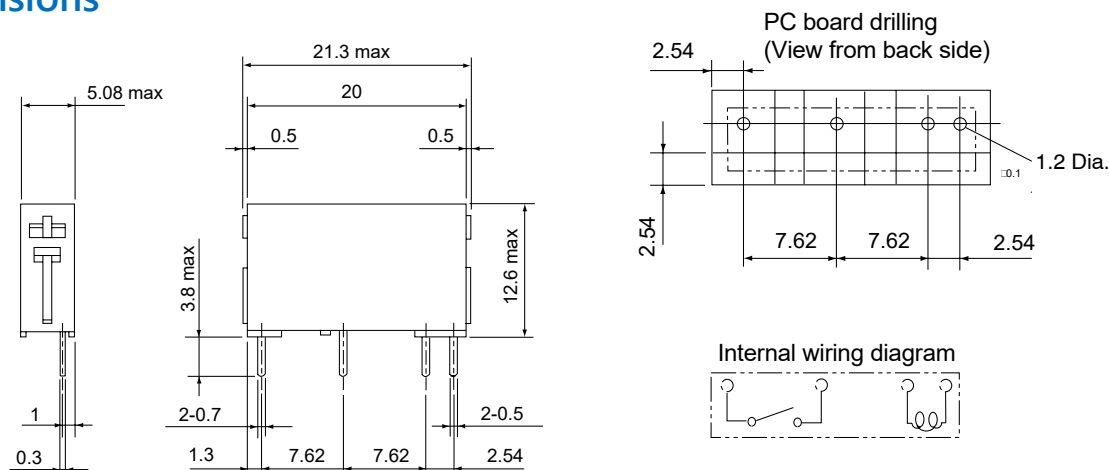
**RB105-DE**

RB105-DE		
Part Number	Price	Description
<b>RB105-DE</b>	\$37.50	Fuji Electric card relay, socket mount, encapsulated, 24 VDC coil voltage, SPST, (1) N.O., 5A contact rating, 4-pin. Package of 10..

RB105-DE Card Relay Specifications Table		
<b>Operating Time</b>	10ms or less at rated voltage	
<b>Release Time</b>	10ms or less at rated voltage	
<b>Insulation Resistance</b>	100MΩ (at 500VDC megger)	
<b>Dielectric Strength</b>	750VAC 1 minute between open contacts 2000VAC 1 minute between contact and coil	
<b>Impulse</b>	4,500V or more 1.2 x 50μs between contact and coil	
<b>Electrical Life Expectancy</b>	AC: 100,000 operations at 220VAC 2A, inductive load 130,000 operations at 220VAC 3A, resistive load  DC: 150,000 operations at 24VDC 1A, inductive load 100,000 operations at 24VDC 5A, resistive load	
<b>Mechanical Life Expectancy</b>	20 million operations	
<b>Ambient Temperature</b>	-25 to 55° C (no icing)	
<b>Thermal Current</b>	5A	
<b>Make and Break Current (Resistive Load)</b>	250VAC, 5A 30VDC, 5A	
<b>Operating Coil</b>	<b>Rated voltage</b>	24VDC
	<b>Pick-up voltage</b>	70% of rated coil voltage
	<b>Drop-out voltage</b>	5% of rated coil voltage
	<b>Power consumption</b>	200mW
	<b>Coil resistance</b>	2880Ω
<b>Maximum Wire Size</b>	14 AWG (2.5 mm <sup>2</sup> )	

## Dimensions

mm



# Relay Remover and Protective Cover RS Series

## Relay remover, **TY3**

To remove a relay from the terminal module, use the TY3 relay remover. **RS4N-DE** and **RS6N-DE** modules include a TY3 relay remover. Pull the relay in a direction perpendicular to the terminal module surface. Incorrectly removing or mounting a relay may damage the relay pins and pin jacks of the module.



## Optional protective cover, **RZ4N**

A protective cover fits over the **RS4N-DE** or **RS6N-DE** module and protects the terminals.



Accessories RS Series Relays		
Part Number	Price	Description
<b>TY3</b>	\$11.00	Fuji Electric relay remover, package of 10. For use with RS series relays.
<b>RZ4N</b>	\$21.50	Fuji Electric terminal guard, package of 10. For use with RS series relays.

## Dimensions

mm

### RZ4N

