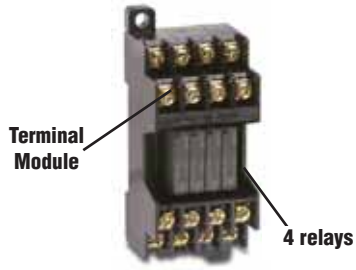


RS Series Electromechanical Relay Selection Guide



RS4N-DE



RB105-DE



TY3



RZ4N

RS Series Card Relay Selection Guide			
Part Number	Price	Description	Dimensions and Wiring Diagrams
RS4N-DE	<--->	Card relay (4 relays included; 4 commons), mounted in socket, 24VDC coil, SPST, 5A rating. TY3 included; (can only be wired one way for proper operation of LEDs)	Figure 3
RS6N-DE	<--->	Card relay (6 relays included; 2 commons; 3 relays per common), mounted in socket, 24VDC coil, SPST, 5A rating. TY3 included.	Figure 4
RB105-DE	<--->	Spare relays (package of 10) for the RS series Relays. 24V DC coil, SPST, 5A rating.	Figure 1
TY3	<--->	Relay remover for RS series relays. Package of 10.	-
RZ4N	<--->	Terminal guard for RS series relays. Package of 10.	Figure 2

RS Series Relay Specifications



RS6N-DE

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.

RS6N-DE <--->
RS4N-DE <--->

Features:

- Compact size of 34 mm wide by 69 mm 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 35 mm DIN rail
- The RS4N module includes two standard accessory jumper plates, which are convenient for common wiring of terminals

RS4N-DE and RS6N-DE Series Card Relay Specifications Table

Contact		1 NO / SPST			
Contact Resistance		30mΩ or less (before use)			
Contact Material		Silver alloy (gold-plated)			
Min. Operating Voltage and Current		0.1VDC, 1mA			
Rated Thermal Current		5A			
Max. Make/Break Current (Resistive Load)		250VAC, 5A 30VDC, 5A			
Operating Time		10ms or less at rated voltage			
Release Time		10ms or less at rated voltage			
Insulation Resistance		100MΩ (at 500VDC megger)			
Dielectric Strength	Between Contact and Coil	2000VAC 1 minute			
	Between Contacts of Same Pole	750VAC 1 minute			
	Between Contacts of Different Pole	2000VAC 1 minute			
	Between Coils of Different Pole	500VAC 1 minute			
Vibration	Malfunction Durability	10 to 55Hz, 1mm double amplitude			
	Mechanical Durability	10 to 55Hz, 1.5mm double amplitude			
Shock	Malfunction Durability	100m/s ²			
	Mechanical Durability	1000m/s ²			
Life Expectancy	Mechanical	20 million operations			
	Electrical	Voltage	Make Current (A)	Break Current (A)	Operations
		220VAC (inductive load)	2 (cos θ = 0.7)	2 (cos θ = 0.3 - 0.4)	100,000
		220VAC (resistive load)	3 (cos θ = 1.0)	3 (cos θ = 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		
Ambient Temperature		-25 to +55° C (no icing)			

Electromechanical Relay RB105-DE Specifications



RB105-DE

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

RB105-DE <--->

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 Card Relay Specification Table

RB105-DE Card Relay Specification Table		
Operating Time	10ms or less at rated voltage	
Release Time	5ms or less at rated voltage	
Insulation Resistance	100M Ω (at 500VDC megger)	
Dielectric Strength	750VAC 1 minute between open contacts 2000VAC 1 minute between contact and coil	
Impulse	4,500V or more 1.2 x 50 μ s between contact and coil	
Electrical Life Expectancy	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	
Mechanical Life Expectancy	20 million operations	
Ambient Temperature	-40° C to +70° C (no icing)	
Thermal Current	5A	
Make and Break Current (Resistive Load)	250VAC, 5A 30VDC, 5A	
Operating Coil	Rated voltage	24VDC
	Pick-up voltage	70% of rated coil voltage
	Drop-out voltage	5% of rated coil voltage
	Power consumption	200mW
	Coil resistance	2880 Ω

RS Series Relay Remover and Protective Cover

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.

TY3 <--->



Optional protective cover, RZ4N

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

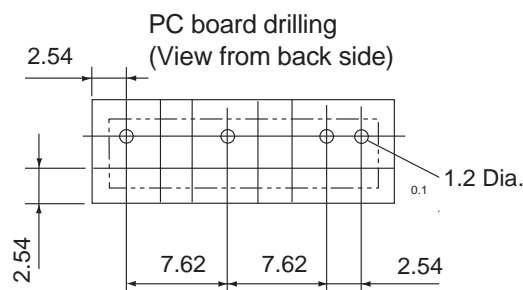
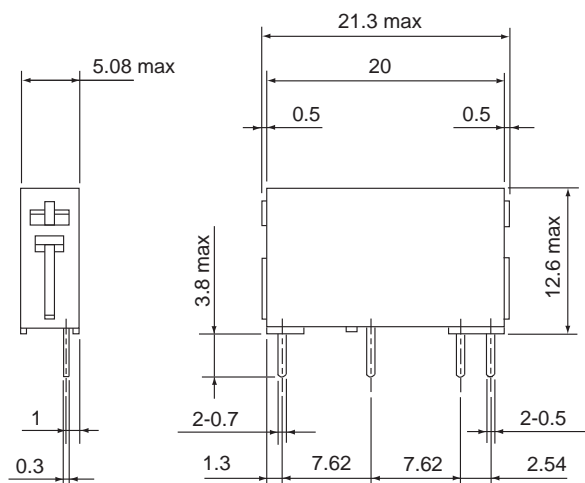
RZ4N <--->



Dimensions

mm

Figure 1 RB105-DE



Internal wiring diagram

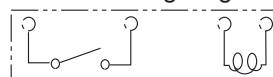
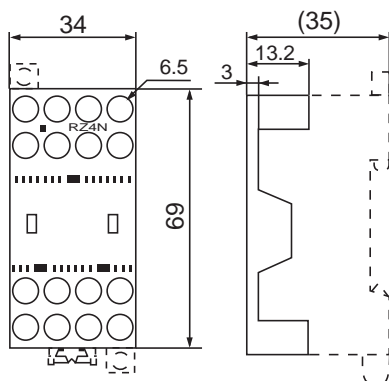


Figure 2 RZ4N (Terminal guard for RS Series)

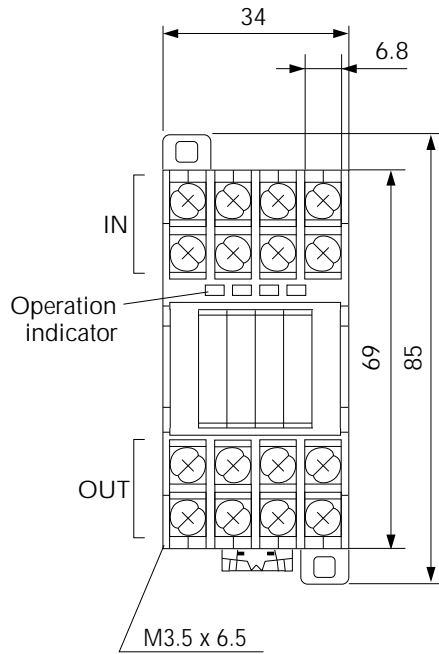


RS Series Relay Dimensions and Wiring Diagrams

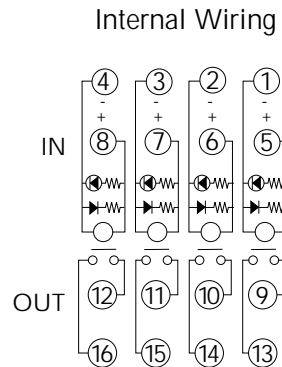
Dimensions

mm

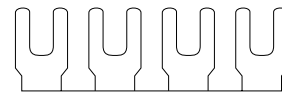
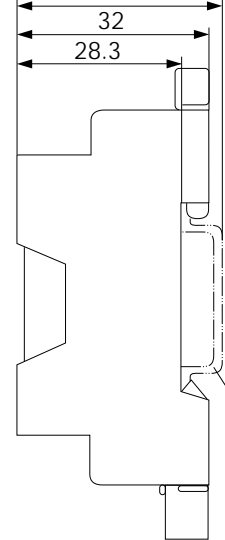
Figure 3 RS4N-DE



**Wiring diagram
RS4N-DE**

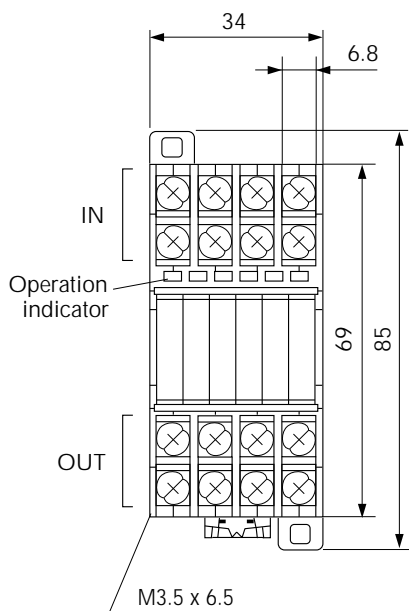


43.5 (Rail height 15)
36 (Rail height 7.5)

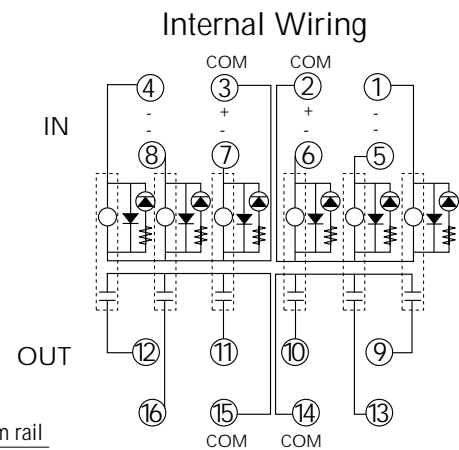


Jumper - included only with
RS4N-DE

Figure 4 RS6N-DE



**Wiring diagram
RS6N-DE**



43.5 (Rail height 15)
36 (Rail height 7.5)

