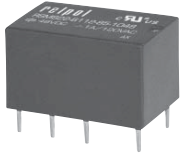
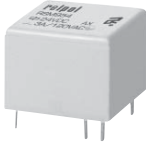






# Subminiature signal relays

10

Type of relay		RSM822	RSM954	RSM957
<p>① The data in bold type pertain to the standard versions of the relays.                      ② For 1 NO; for 1 C/O: 250 V / 380 V                      ③ Contacts AgSnO<sub>2</sub></p>				
Dimensions (L x W x H)	mm	21 x 10,1 x 12,1	15,4 x 10,4 x 11,4	12,6 x 7,8 x 10
<b>Contact data</b>				
Number and type of contacts		2 C/O	1 C/O	1 C/O
Rated / max. switching voltage	V AC	120 / 120	120 / 120	120 / 125
Rated current	25 A 16 A 12 A 8 A 6 A 3 A 1 A	2 A	3 A	2 A
Contact material ①		AgPd/Au 0,2 μm	Ag/Au 0,2 μm	Ag/Au 0,2 μm
<b>Coil data</b>				
Rated voltage	V DC	3 ... 48	3 ... 24	3 ... 24
Rated power consumption	W DC	0,2...0,36	0,36	0,15...0,2
<b>General data</b>				
Electrical life (cycles)		> 10 <sup>5</sup>	> 10 <sup>5</sup>	> 10 <sup>5</sup>
Mechanical life (cycles)		> 10 <sup>7</sup>	> 10 <sup>7</sup>	> 10 <sup>7</sup>
Ambient temperature				
• operating	°C DC	-30...+80	-30...+55	-30...+70
Weight	g	4,8	3,5	2,2
Cover protection category		IP 64	IP 64	IP 64
Recognitions, certifications, directives		 RoHS	 RoHS	 RoHS
Insulation dielectric strength				
• between coil and contacts	V AC	1 000	500	1 000
Contact - coil distance				
• clearance	mm	≥ 1,3	≥ 1,2	≥ 0,6
• creepage	mm	≥ 1,5	≥ 2	≥ 0,6
Operating time	ms	versions: sensitive 8, standard 6	8	5
Release time	ms	4	4	5
Detailed informations		page 27	page 30	page 33

## Subminiature signal relays

RSM822 .....	27
RSM954 .....	30
RSM957 .....	33




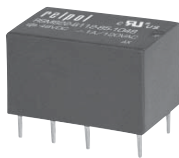
Subminiature relays are applied in e.g. telecommunication devices, office equipment, alarm systems, measurement devices, medical monitoring devices, AV devices, control sensors.


Their major features which provide for their applications in electronic circuits as interface-control units are:

- miniature dimensions,
- high switching capacity,
- high resistance of the Cover to difficult operating conditions,
- wide range of control voltages.

Space-saving of the electronic plates, low power consumption of the control circuits, a few applicable mounting technologies are only few of the advantages offered by the aforementioned features.

The relays are recognized and certified by:  **UL** c **UL** <sup>US</sup>  
They meet the requirements of RoHS Directive.



- Subminiature monostable relays for switching low loads • **DC coils** - **standard and sensitive of up to 48 V DC**, low coil power 0,20 W (sensitive version) or 0,36 W (standard version) • Mounting on printed circuit boards • Operation possible at high temperature and in chemical environment • Sealed, for wave soldering and cleaning • Applications: for telephone equipment, household equipment, office equipment, AV devices, control devices - remote control devices
- Recognitions, certifications, directives: RoHS, 

## Contact data

Number and type of contacts		2 C/O
Contact material		<b>AgPd/Au 0,2 μm</b>
Rated / max. switching voltage	AC	120 V / 120 V
Min. switching voltage		1 V
Rated load	AC1	1 A / 120 V AC
	DC1	2 A / 24 V DC
Min. switching current		1 mA
Rated current		2 A
Max. breaking capacity	AC1	120 VA
Min. breaking capacity		1 mW
Contact resistance		≤ 100 mΩ

## Coil data

Rated voltage	DC	3 ... 24 V sensitive version	48 V standard version
Must release voltage		DC: ≥ 0,1 U <sub>n</sub>	
Operating range of supply voltage		see Table 1	
Rated power consumption	DC	0,20 W sensitive version	0,36 W standard version

## Insulation according to PN-EN 60664-1

Dielectric strength		1 000 V AC	type of insulation: basic
• between coil and contacts		500 V AC	type of clearance: micro-disconnection
• contact clearance			
Contact - coil distance		≥ 1,3 mm	
• clearance		≥ 1,5 mm	
• creepage			

## General data

Operating / release time (typical values)		8 ms / 4 ms sensitive version	6 ms / 4 ms standard version
Electrical life			
• resistive AC1	1 800 cycles/hour	> 10 <sup>5</sup>	1 A, 120 V AC
Mechanical life	18 000 cycles/hour	> 10 <sup>7</sup>	
Dimensions (L x W x H)		21 x 10,1 x 12,1 mm	
Weight		4,8 g	
Ambient temperature	• operating	-30...+80 °C	
Cover protection category		IP 64	PN-EN 60529
Shock resistance		10 g	
Vibration resistance		1,5 mm DA (constant amplitude)	10...55 Hz
Solder bath temperature		max. 235 °C	
Soldering time		max. 3,5 s	

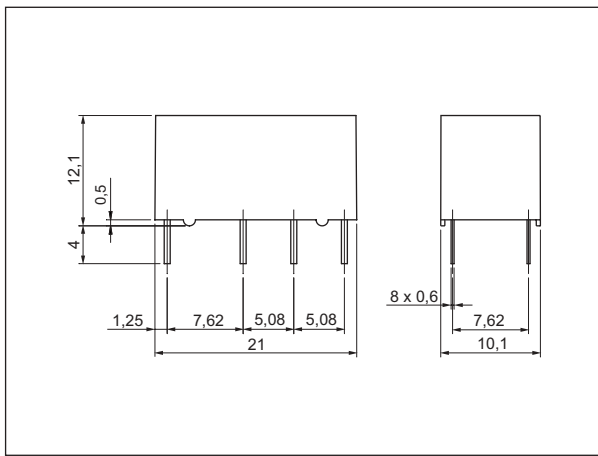
The data in bold type pertain to the standard versions of the relays.

Coil data - DC voltage version

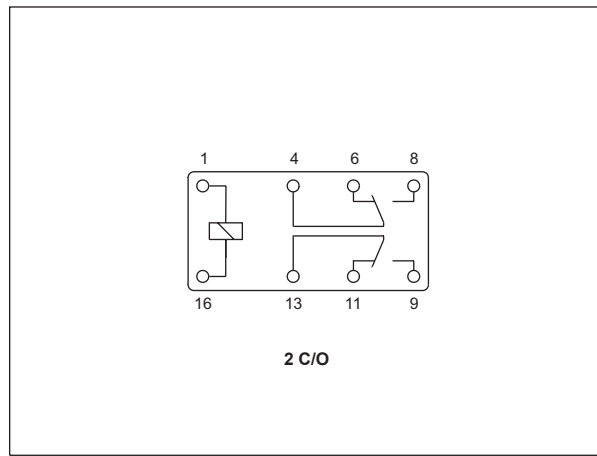
Table 1

Coil code		Rated voltage V DC	Coil resistance ± 10% at 20°C Ω	Coil operating range at 20°C V DC		Power consumption mW
standard version	sensitive version			min.	max.	
-	S003	3	45	2,25	4,5	200
-	S005	5	125	3,75	7,5	200
-	S006	6	180	4,50	9,0	200
-	S009	9	405	6,75	13,5	200
-	S012	12	720	9,00	18,0	200
-	S024	24	2 880	18,00	36,0	200
1048	-	48	6 400	36,00	72,0	360

Dimensions

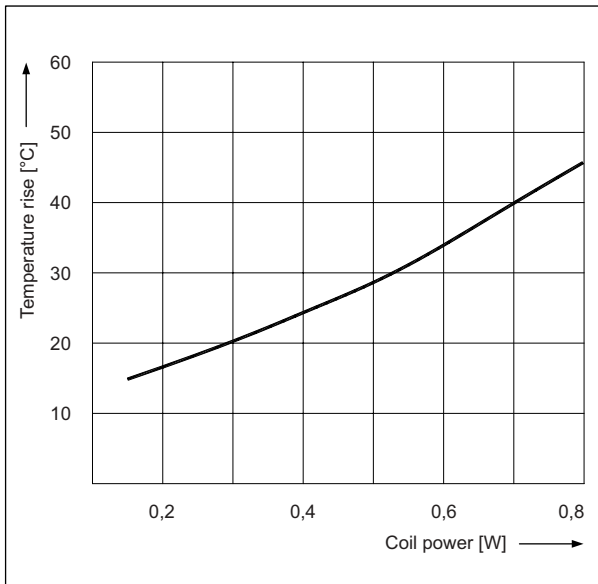


Connection diagram (pin side view)



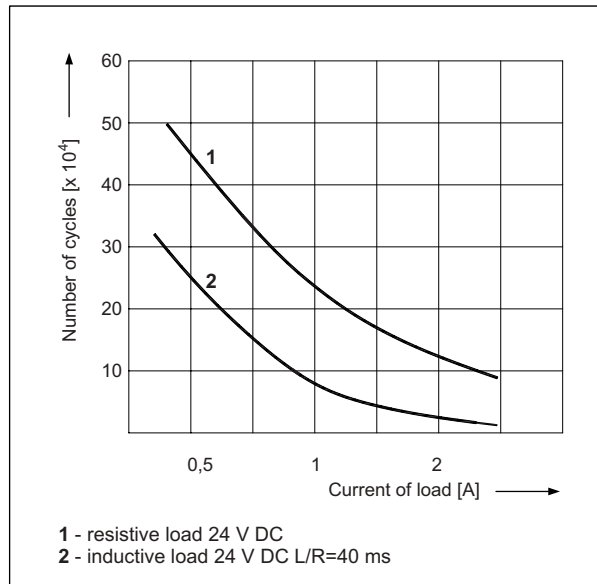
Coil temperature rise

Fig. 1

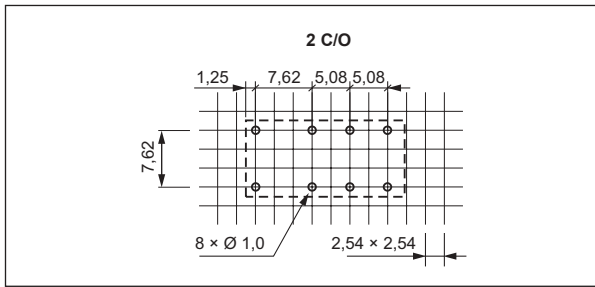


Electrical life

Fig. 2



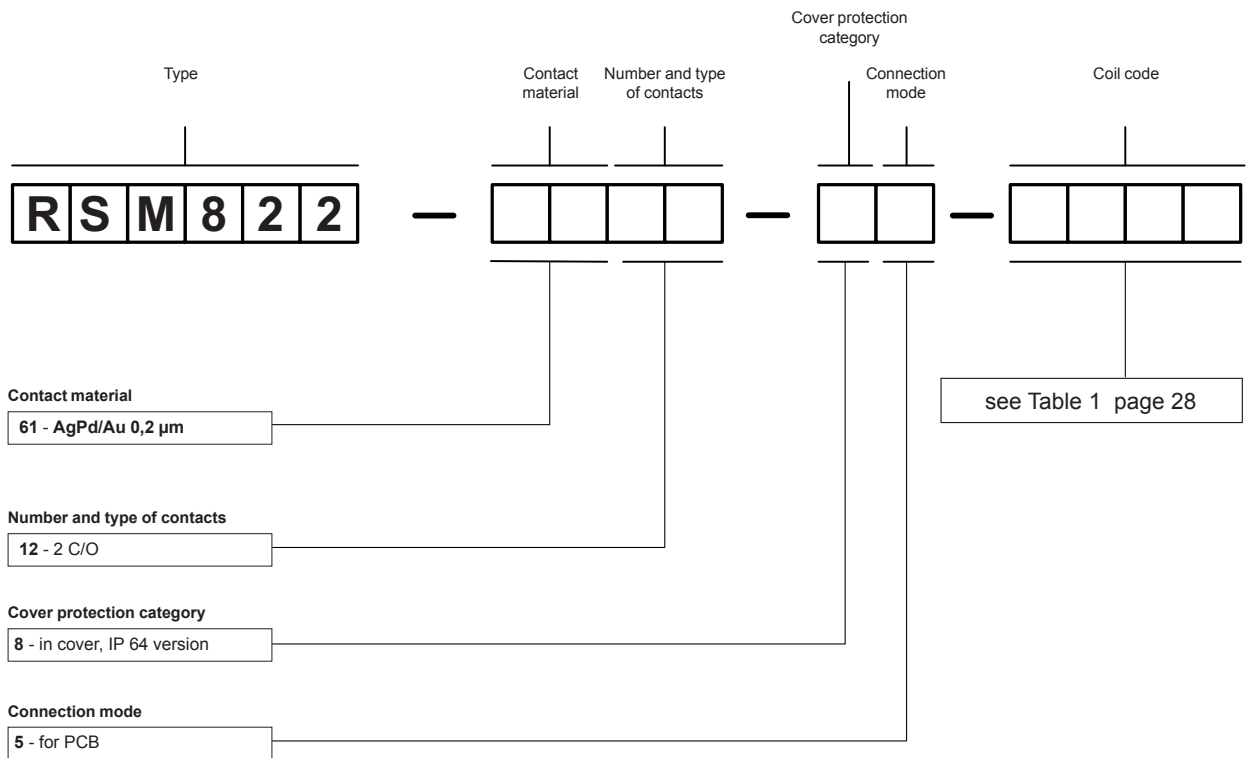
### Pinout (solder side view)



### Mounting

Relays **RSM822** are designed for direct PCB mounting.

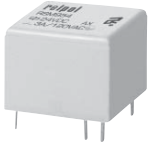
### Ordering codes




Example of ordering code:

**RSM822-6112-85-S005**

relay **RSM822**, contact material AgPd/Au 0,2 µm, with two changeover contacts, in cover IP 64, for PCB, sensitive voltage version 5 V DC



- Subminiature, monostable relays
- Small dimensions
- **DC coils of up to 24 V DC**, low coil power 0,36 W
- Sealed, for wave soldering and cleaning
- Applications: for telecommunication devices, office equipment, industrial control, etc.
- Recognitions, certifications, directives: RoHS, 

## Contact data

Number and type of contacts		1 C/O
Contact material		<b>Ag/Au 0,2 μm</b>
Rated / max. switching voltage	AC	120 V / 120 V
Min. switching voltage		5 V
Rated load	AC1	3 A / 120 V AC
	DC1	3 A / 24 V DC
Min. switching current		10 mA
Rated current		3 A
Max. breaking capacity	AC1	360 VA
Min. breaking capacity		50 mW
Contact resistance		≤ 100 mΩ

## Coil data

Rated voltage	DC	3 ... 24 V
Must release voltage		DC: ≥ 0,05 U <sub>n</sub>
Operating range of supply voltage		see Table 1
Rated power consumption	DC	0,36 W

## Insulation according to PN-EN 60664-1

Dielectric strength		
• between coil and contacts		500 V AC type of insulation: basic
• contact clearance		500 V AC type of clearance: micro-disconnection
Contact - coil distance		
• clearance		≥ 1,2 mm
• creepage		≥ 2 mm

## General data

Operating / release time (typical values)		8 ms / 4 ms
Electrical life		
• resistive AC1	1 800 cycles/hour	> 10 <sup>5</sup> 3 A, 120 V AC
• resistive DC1	1 800 cycles/hour	> 10 <sup>5</sup> 3 A, 24 V DC
Mechanical life	18 000 cycles/hour	> 10 <sup>7</sup>
Dimensions (L x W x H)		15,4 x 10,4 x 11,4 mm
Weight		3,5 g
Ambient temperature	• operating	-25...+55 °C
Cover protection category		IP 64 PN-EN 60529
Shock resistance		10 g
Vibration resistance		1,5 mm DA (constant amplitude) 10...55 Hz
Solder bath temperature		max. 235 °C
Soldering time		max. 3,5 s

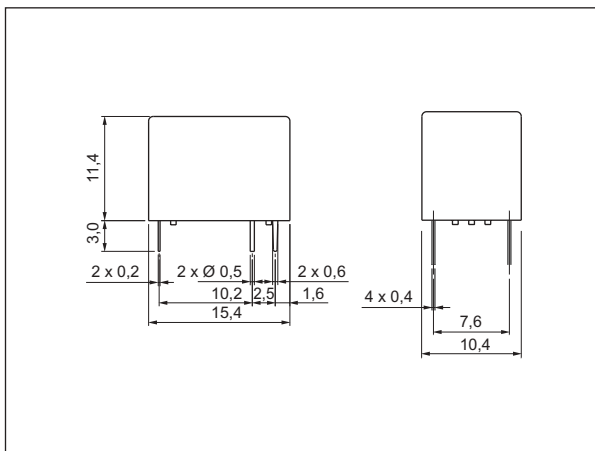
The data in bold type pertain to the standard versions of the relays.

**Coil data - DC voltage version**

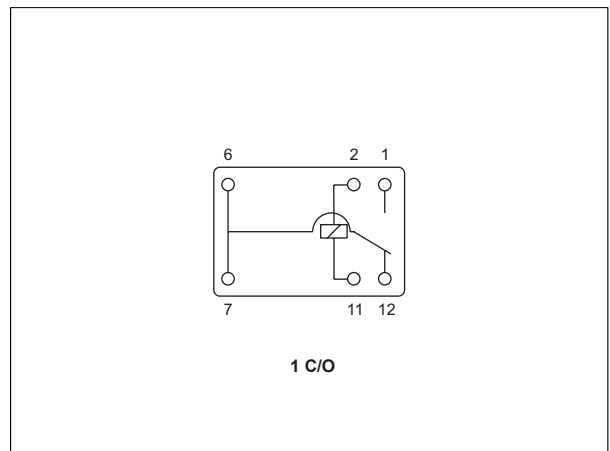
Table 1

Coil code	Rated voltage V DC	Coil resistance ± 10% at 20°C Ω	Coil operating range at 20°C V DC		Power consumption mW
			min.	max.	
1003	3	25	2,25	3,9	360
1005	5	69	3,75	6,5	360
1006	6	100	4,50	7,8	360
1009	9	225	6,75	11,7	360
1012	12	400	9,00	15,6	360
1024	24	1 600	18,00	31,2	360

**Dimensions**

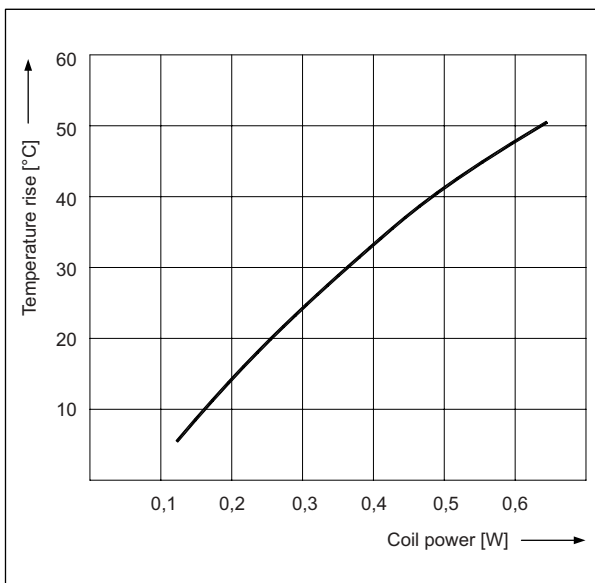


**Connection diagram (pin side view)**



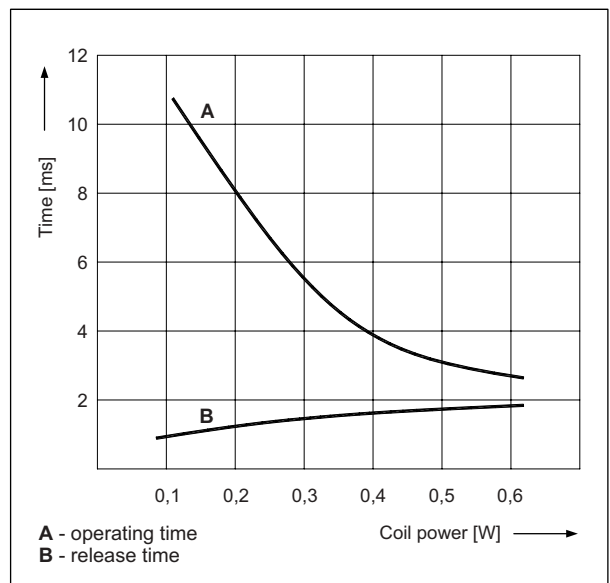
**Coil temperature rise**

Fig. 1

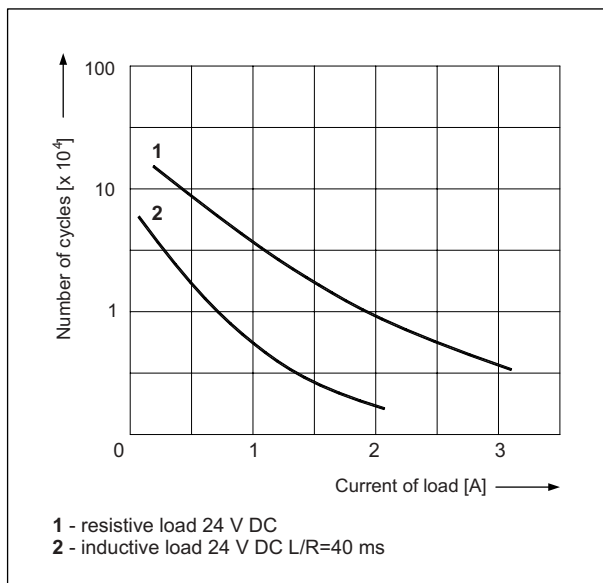


**Operating / release time**

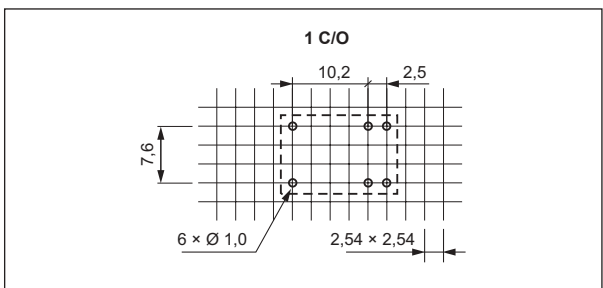
Fig. 2



## Electrical life Fig. 3



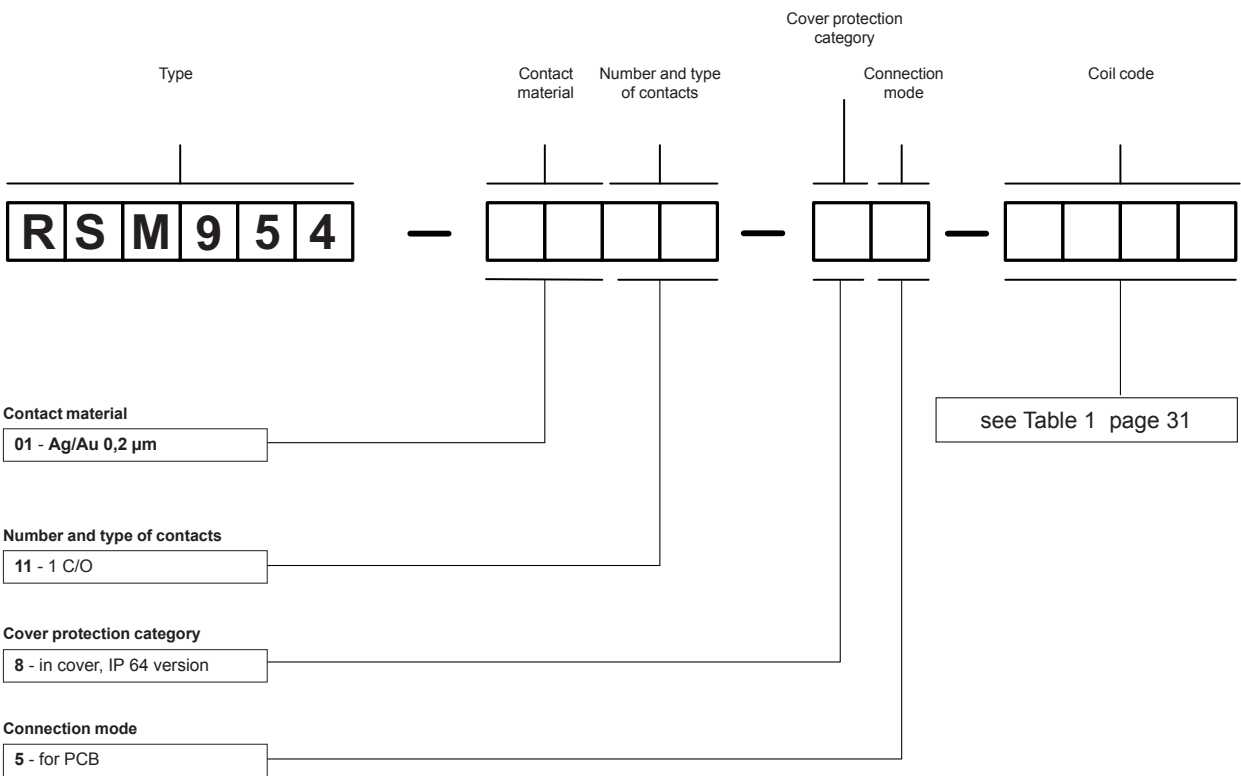
## Pinout (solder side view)



## Mounting

Relays **RSM954** are designed for direct PCB mounting.

## Ordering codes



Example of ordering code: **RSM954-0111-85-1005** relay **RSM954**, contact material Ag/Au 0,2  $\mu$ m, with one changeover contact, in cover IP 64, for PCB, voltage version 5 V DC





- Subminiature, monostable relays
- Very small dimensions
- **DC coils - sensitive of up to 24 V DC**, low coil power 0,15...0,20 W
- Sealed, for wave soldering and cleaning
- Applications: for telecommunication devices, office equipment, industrial control, etc.
- Recognitions, certifications, directives: RoHS,

### Contact data

Number and type of contacts		1 C/O
Contact material		<b>Ag/Au 0,2 μm</b>
Rated / max. switching voltage	AC	120 V / 125 V
Min. switching voltage		5 V
Rated load	AC1	2 A / 120 V AC
	DC1	2 A / 24 V DC
Min. switching current		10 mA
Rated current		2 A
Max. breaking capacity	AC1	240 VA
Min. breaking capacity		50 mW
Contact resistance		≤ 100 mΩ

### Coil data

Rated voltage	DC	3 ... 24 V
Must release voltage		DC: ≥ 0,05 U <sub>n</sub>
Operating range of supply voltage		see Table 1
Rated power consumption	DC	0,15...0,20 W

### Insulation according to PN-EN 60664-1

Dielectric strength		
• between coil and contacts	1 000 V AC	type of insulation: basic
• contact clearance	400 V AC	type of clearance: micro-disconnection
Contact - coil distance		
• clearance	≥ 0,6 mm	
• creepage	≥ 0,6 mm	

### General data

Operating / release time (typical values)		5 ms / 5 ms
Electrical life		
• resistive AC1	1 800 cycles/hour	> 10 <sup>5</sup> 2 A, 120 V AC
• resistive DC1	1 800 cycles/hour	> 10 <sup>5</sup> 2 A, 24 V DC
Mechanical life	18 000 cycles/hour	> 10 <sup>7</sup>
Dimensions (L x W x H)		12,6 x 7,8 x 10 mm
Weight		2,2 g
Ambient temperature	• operating	-30...+70 °C
Cover protection category		IP 64 PN-EN 60529
Shock resistance		10 g
Vibration resistance		1,5 mm DA (constant amplitude) 10...55 Hz
Solder bath temperature		max. 235 °C
Soldering time		max. 3,5 s

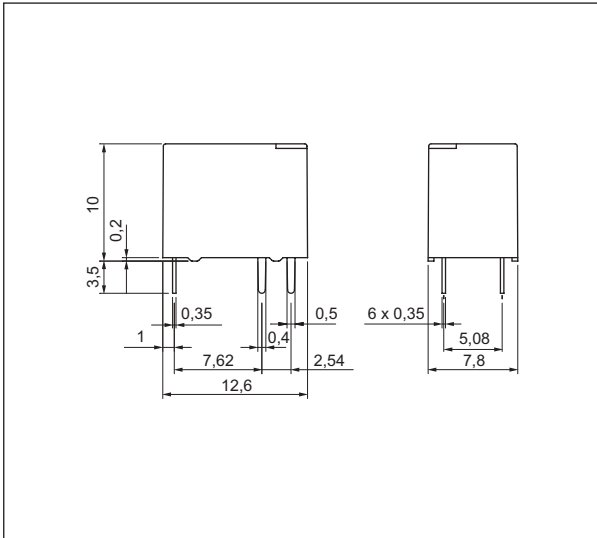
The data in bold type pertain to the standard versions of the relays.

### Coil data - DC voltage version

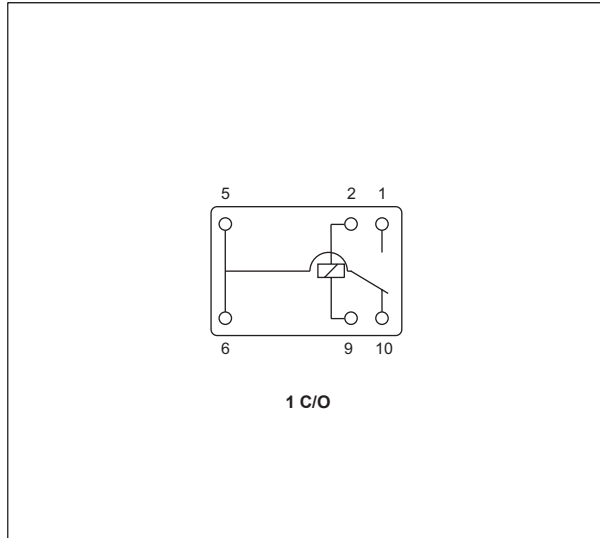
Table 1

Coil code	Rated voltage V DC	Coil resistance ± 10% at 20°C Ω	Coil operating range at 20°C V DC		Power consumption mW
			min.	max.	
S003	3	60	2,4	3,9	150
S005	5	167	4,0	6,5	150
S006	6	240	4,8	7,8	150
S009	9	540	7,2	11,7	150
S012	12	960	9,6	15,6	150
S024	24	2 880	18,0	31,2	200

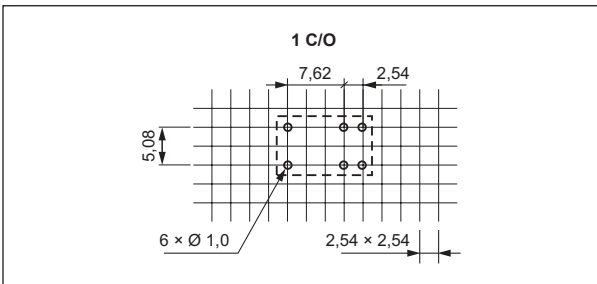
### Dimensions



### Connection diagram (pin side view)



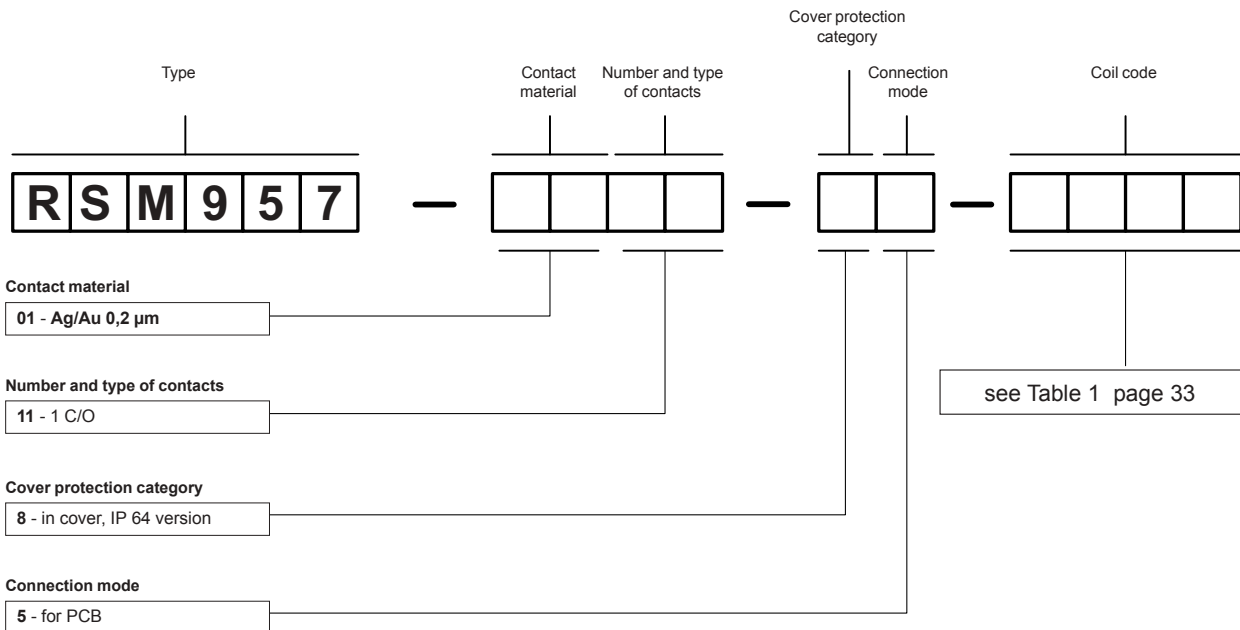
### Pinout (solder side view)



### Mounting

Relays **RSM957** are designed for direct PCB mounting.

### Ordering codes



Example of ordering code:

**RSM957-0111-85-S005**

relay **RSM957**, contact material Ag/Au 0,2 µm, with one changeover contact, in cover IP 64, for PCB, sensitive voltage version 5 V DC