

# RSM822N

## subminiature - signal relays



- Signal monostable relays for switching low loads
- DC coils - standard and sensitive of up to 48 V DC, low coil power 0,20 W (sensitive coil) or 0,30 W (standard coil) • For PCB
- Sealed, for wave soldering and cleaning • Double bifurcated contact
- Applications: for telecommunication devices, office equipment, alarm systems, measuring instruments, medical monitoring devices, AV devices, control sensors
- Conforms to FCC Part 68 - 1500 V - lightning surge
- Recognitions, certifications, directives: RoHS, 

### Contact data

Number and type of contacts		2 CO	
Contact material		<b>AgNi/Au flash gold plating</b>	
Rated / max. switching voltage	AC	125 V / 250 V	
Min. switching voltage		10 mV <b>①</b>	
Rated load	AC1	0,6 A / 125 V AC	
	DC1	3 A / 2 A (NO/NC) / 30 V DC	
Min. switching current		1 mA <b>①</b>	
Rated current		0,6 A / 125 V AC 2 A / 30 V DC	
Max. breaking capacity	AC1	125 VA	
Contact resistance		≤ 100 mΩ	
<b>Coil data</b>			
Rated voltage	DC	3, 5, 6, 9, 12, 24 V	sensitive coil
		48 V	standard coil
Must release voltage		DC: ≥ 0,1 U <sub>n</sub>	
Operating range of supply voltage		see Tables 1, 2	
Rated power consumption	DC	0,20 W sensitive coil	0,30 W standard coil
<b>Insulation according to EN 60664-1</b>			
Insulation resistance		> 1 000 MΩ	500 V DC, 60 s
Dielectric strength			
• between coil and contacts		1 000 V AC	type of insulation: basic (1500 V AC; 1,2 / 50 μs)
• contact clearance		1 000 V AC	type of clearance: micro-disconnection (1500 V AC; 1,2 / 50 μs)
• pole - pole		1 000 V AC	type of insulation: basic (1500 V AC; 1,2 / 50 μs)
Contact - coil distance			
• clearance		≥ 1,3 mm	
• creepage		≥ 1,5 mm	
<b>General data</b>			
Operating / release time (typical values)		4,5 ms / 1,5 ms	
Electrical life (number of cycles)			
• resistive AC1	1 800 cycles/hour	10 <sup>5</sup>	0,6 A, 125 V AC
• resistive DC1	1 800 cycles/hour	10 <sup>5</sup>	2 A, 30 V DC
Mechanical life	18 000 cycles/hour	10 <sup>8</sup>	
Dimensions (L x W x H)		20,5 x 10,2 x 12,5 mm	
Weight		4,5 g	
Ambient temperature			
(non-condensation and/or icing)	• operating	-40...+90 °C sensitive coil	-40...+80 °C standard coil
Cover protection category		IP 67	EN 60529
Environmental protection		RTIII	EN 61810-1
Shock resistance		10 g	
Vibration resistance		1,5 mm DA (constant amplitude)	10...55 Hz
Solder bath temperature		max. 260 °C	
Soldering time		max. 5 s	

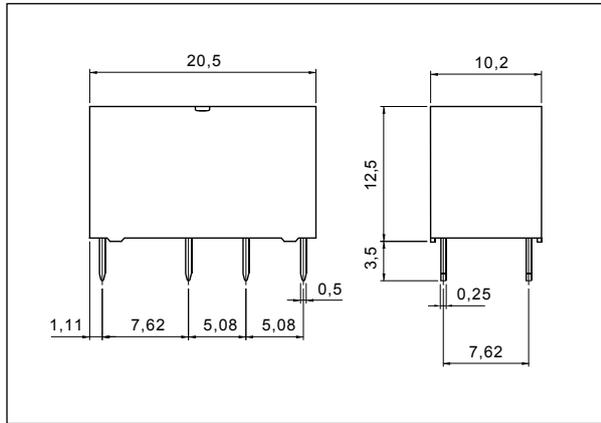
The data in bold type relate to the standard versions of the relays.

**①** Reference value, relays previously tested and used at the resistance load of more than 10 mA / 6 V DC or at the peak AC voltage are not recommended for later switching of low level signals.

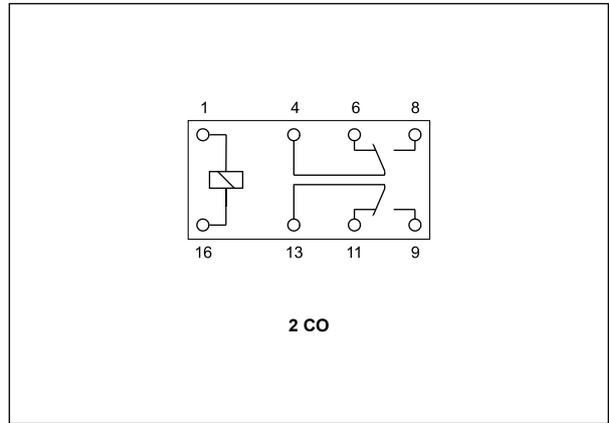
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## Dimensions

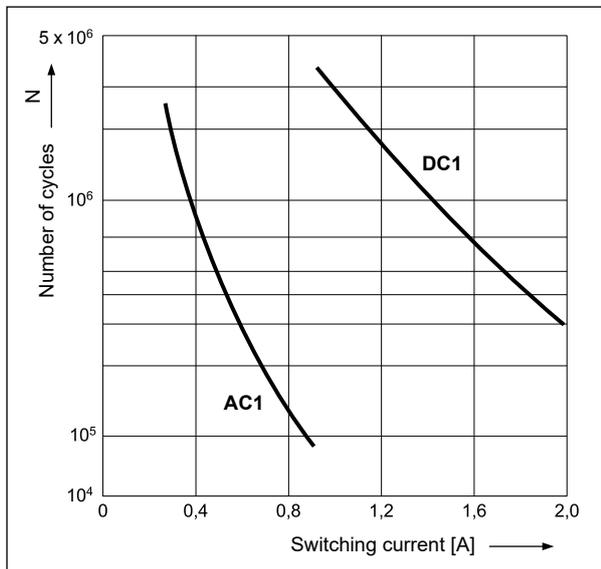


## Connection diagram (pin side view)



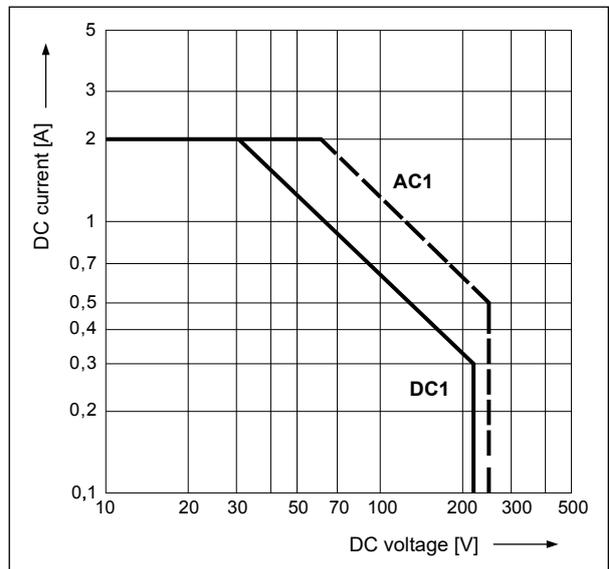
## Electrical life at AC resistive current. Switching frequency: 1 800 cycles/hour

Fig. 1

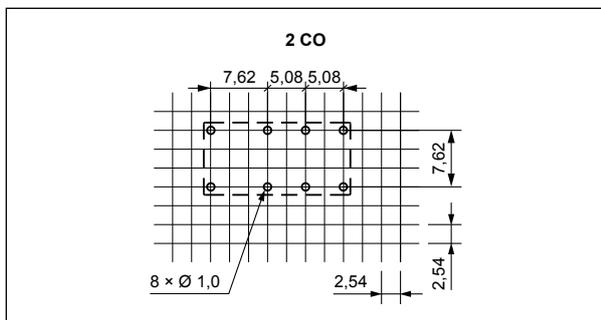


## Max. DC resistive load breaking capacity

Fig. 2



## Pinout (solder side view)



## Mounting

Relays **RSM822N** are designed for direct PCB mounting.

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**Coil data - DC voltage version, sensitive**

Table 1

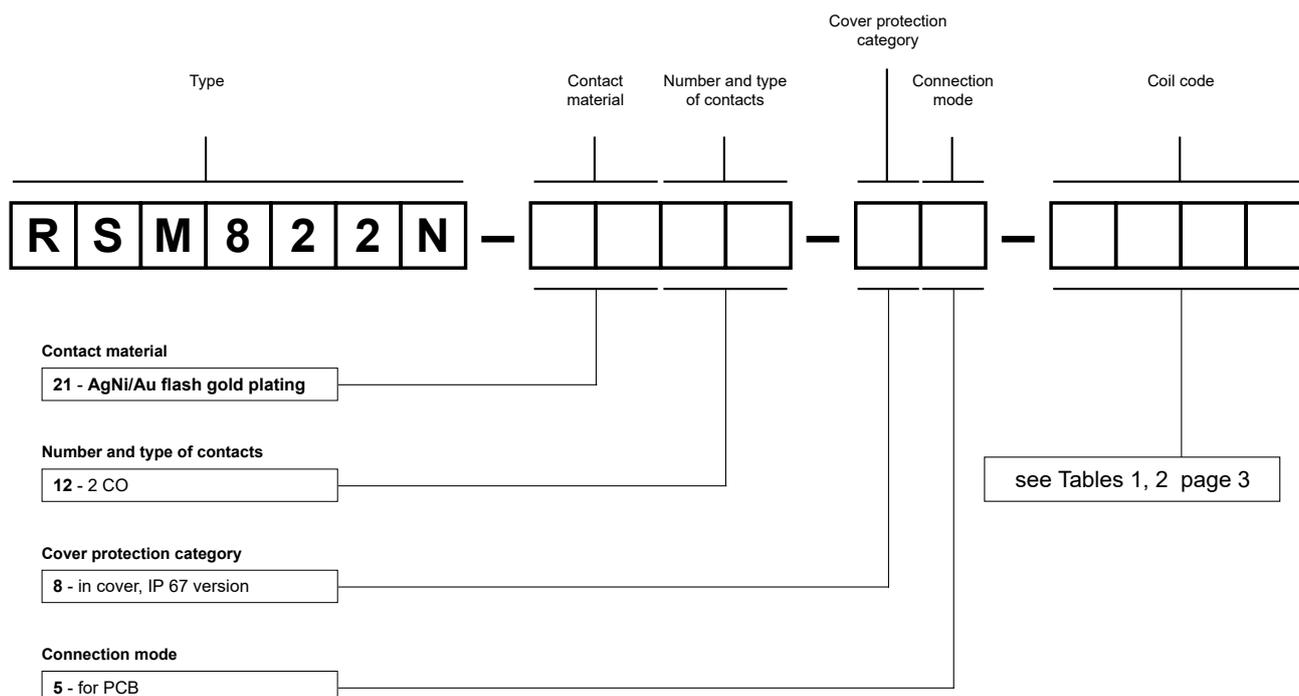
Coil code	Rated voltage V DC	Coil resistance at 20 °C Ω	Acceptable resistance	Coil operating range V DC	
				min. (at 20 °C)	max. (at 20 °C)
S003	3	45	± 10%	2,1	6,5
S005	5	125	± 10%	3,5	10,8
S006	6	180	± 10%	4,2	13,0
S009	9	405	± 10%	6,3	19,5
S012	12	720	± 10%	8,4	26,5
S024	24	2 880	± 10%	16,8	52,9

**Coil data - DC voltage version, standard**

Table 2

Coil code	Rated voltage V DC	Coil resistance at 20 °C Ω	Acceptable resistance	Coil operating range V DC	
				min. (at 20 °C)	max. (at 20 °C)
1048	48	7 680	± 10%	33,6	84,9

## Ordering codes



Examples of ordering codes:

**RSM822N-2112-85-S005**

relay **RSM822N**, for PCB, two changeover contacts, contact material AgNi/Au flash gold plating, sensitive coil voltage 5 V DC, in cover IP 67

**RSM822N-2112-85-1048**

relay **RSM822N**, for PCB, two changeover contacts, contact material AgNi/Au flash gold plating, standard coil voltage 48 V DC, in cover IP 67

### PRECAUTIONS:

1. Ensure that the parameters of the product described in its specification provide a safety margin for the appropriate operation of the device or system and never use the product in circumstances which exceed the parameters of the product. 2. Never touch any live parts of the device. 3. Ensure that the product has been connected correctly. An incorrect connection may cause malfunction, excessive heating or risk of fire. 4. In case of any risk of any serious material loss or death or injuries of humans or animals, the devices or systems shall be designed so to equip them with double safety system to guarantee their reliable operation.