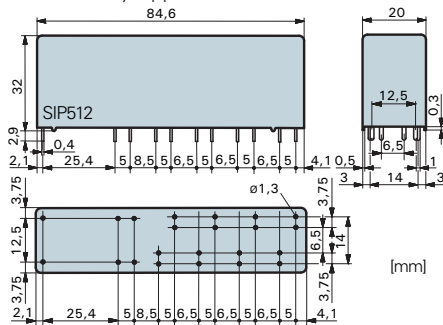




## Relay data

- PCB relay with forcibly guided contacts
- Protective separation between coil/control contacts and output contacts (> 8mm) and output contacts in one row (> 8mm).
- EN 50205, type A
- Contact mounting:
 

SIP512	Control contacts	1NO/1NC
	Output contacts	4NO
SIP422	Control contacts	2NC
	Output contacts	4NO
- Small external dimensions
- Mean coil power 1.3W
- Holding power 0.39W
- For Railway Applications: EN 50155



### Control contacts

Contact material	AgSnO <sub>2</sub> +0.2µm Au
Rated switching capacity	250VAC 6A AC1 1'500VA
Electr. life AC1 (360 cycles/h)	approx. 100'000
Inrush current max.	15A for 20ms
Switching voltage range	5 to 250 VDC/VAC
Switching current range*	5mA to 6A
Switching capacity range* 0.06VA(W)	to 1'500VA
Contact resistance (as delivered)	≤100mΩ/28V/100mA

### Output contacts

Contact material	AgSnO <sub>2</sub>
Rated switching capacity	250VAC (440VAC) 16A AC1 4'000VA
Electr. life AC1 (360 cycles/h)	approx. 250'000
Inrush current max.	60A for 20ms
Switching voltage range	5 to 480 VDC/VAC
Switching current range*	10mA to 16A
Switching capacity range* 0.12VA(W)	to 4'000VA
Contact resistance (as delivered)	≤ 100mΩ/28V/100mA

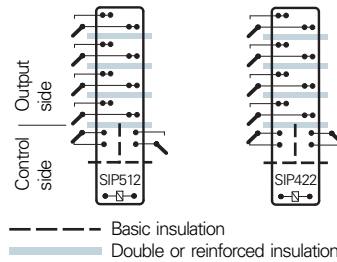
\* Guide values

### Standard coils for direct current (other voltages on request)

Nominal voltage VDC	Min. pick-up voltage at 20°C	Drop-out voltage at 20 °C	Nominal current in mA	Resistance in Ohm at 20 °C	Tolerance in %
6	4,2	≥ 0,6	218	27,5	± 10
12	8,4	≥ 1,2	109	110	± 10
18	12,6	≥ 1,8	72,5	248	± 10
24	16,8	≥ 2,4	54,5	440	± 10
48	33,6	≥ 4,8	27,2	1'760	± 10
60	42,0	≥ 6,0	11,8	2'750	± 10
110	77,0	≥ 11,0	6,8	9'250	± 13
220	154,0	≥ 22,0	5,9	37'000	± 15

## General data

### Circuit diagram (view on relay upper side)



Mechanical life	> 10 x 10 <sup>6</sup> operations
Switching frequency, mechanical	15Hz
Response time	typically 18ms
Drop-out time**	typically 5ms
Bounce time of NO contact	typically 8ms
Bounce time of NC contact	typically 12ms
Shock resistance	16ms NO contact > 10g NC contact 8g
Vibration resistance	NO contact > 10g 10-200Hz NC contact 5g
Test voltage coil/control contacts	2'500Veff 1min
Test voltage coil-control contacts/output contacts	5'000Veff 1min
Test voltage output contacts as against each other	4'000Veff 1min
Test voltage contact open	1'500Veff 1min
Insulation resistance	10 <sup>11</sup> Ω
Creepage resistance	CTI 250
Weight	approx. 60g
Mounting position	any
Ambient temperature	-40°C to +70°C
Type of protection	RT II
Solder bath temperature	270°C/5s
Thermal resistance	40K/W
Temperature limit for coil	125°C
Pollution degree	2
Overvoltage category	III
Resistance to short circuiting control contacts	1'000A SCPD 6A gG (pre-fuse)
Resistance to short circuiting output contacts	1'000A SCPD 16A gG (pre-fuse)

\*\* without spark suppression

### Insulation terms

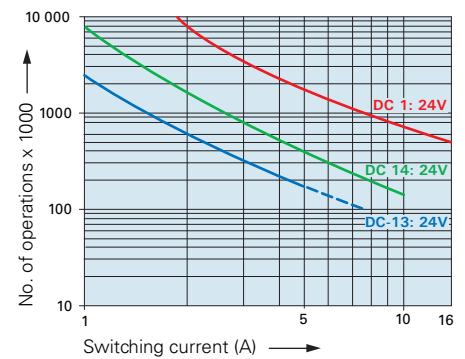
Coil to control contacts:	Basic insulation
Coil/control contacts to output contacts:	Double or reinforced insulation > 8mm
All output contacts in one row:	Double or reinforced insulation > 8mm

### Tests, regulations

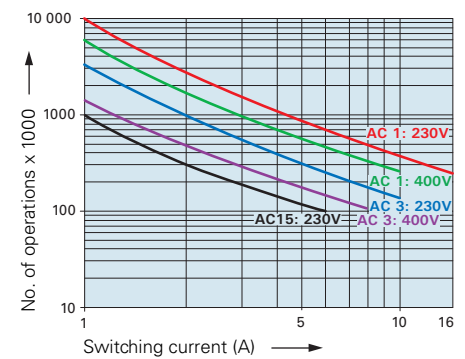
Approvals	SEV, UL, cUL, TÜV
UL File E188953	Sec. 4
Insulation class IEC 60664-1	250VAC
Protection class II	VDE 0106
Fire protection requirements	UL 94 / V0

## Diagrams

### Contact lifetime (output contacts)

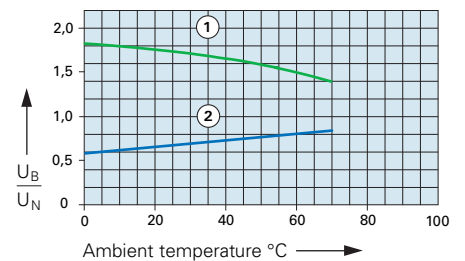


### Contact lifetime (output contacts)



- UL 508: A600/R150  
 Maximal contact load at AC 1 with 230V:  
 2 contacts each with 16A  
 3 contacts each with 12A  
 4 contacts each with 10A

### Excitation voltage range



- 1) Max. excitation voltage with contact load:  
Control contacts ≤2A, output contacts ≤5A
- 2) Min. excitation voltage (guaranteed values) without previous operation

No heat accumulation due to intrinsic heating of other components.  
 Continuous duty 100%.

### Ordering example

