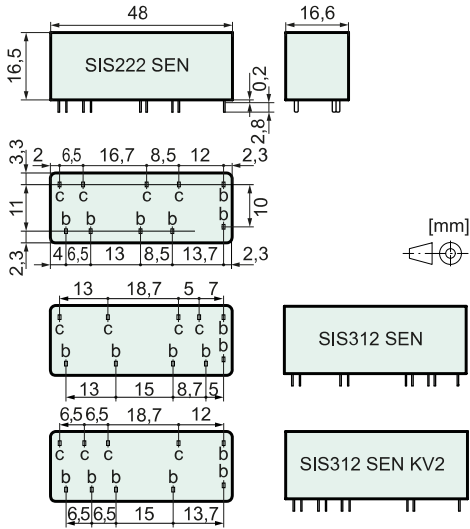


### Features

- Relay with forcibly guided contacts according to IEC 61810-3
- Application type A
- Protective separation (see insulation data)
- Suitable for print mounting
- Low nominal and holding power
- Contact assignment
- SIS222 SEN: 2 NO + 2 NC, SIS312 SEN: 3 NO + 1 NC, SIS312 SEN KV2: 3 NO + 1 NC

### Dimensions

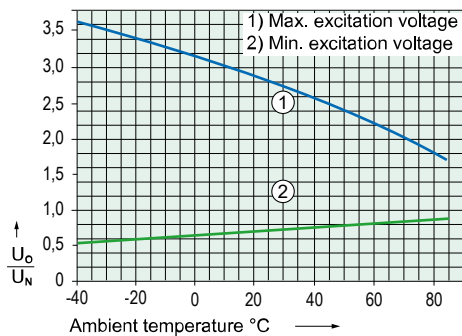


Pin dimension b	1,0 x 0,3 mm
Pin dimension c	1,0 x 0,4 mm
Recommended drilling on PCB	Ø 1,3 mm

### Coil data at 20 °C

Nominal power (typ.)	0,33 W
Holding power (typ.)	0,08 W
Coil limit temperature	120 °C

Nominal voltage (VDC)	Min. Pick-up voltage (VDC)	Min. Drop-out voltage (VDC)	Nominal current (mA)	Resistance (Ohm)
3,0	2,3	0,3	111	27 (1 ± 10 %)
5,0	3,8	0,5	67	75 (1 ± 10 %)
12,0	9,0	1,2	28	430 (1 ± 10 %)
18,0	13,3	1,8	19	970 (1 ± 10 %)
24,0	18,0	2,4	14	1730 (1 ± 10 %)
48,0	35,5	4,8	7	6980 (1 ± 10 %)
60,0	45,0	6,0	6	10800 (1 ± 10 %)



#### Test conditions:

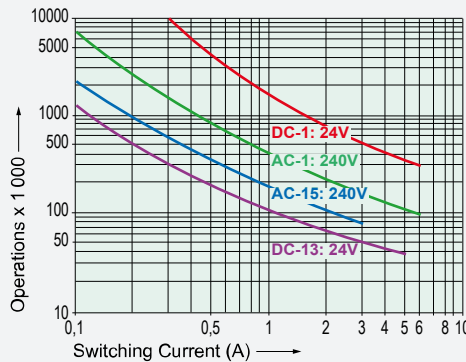
- Graph 1: Contact current 4 A MAX
- Graph 2: without previous operation
- Free-standing relay on PCB
- Duty cycle 100%

### Contact data

Contact material	AgCuNi + 0,2, ..., 0,4 µm Au
Type of contact	Single contact with notched crown
Rated switching power	1500 VA
250 V / 6 A / AC-1 (max.)	
Electr. life time (0,1 Hz, rel. duty cycle 10%)	90000
Inrush current	30 A for 20 ms
Switching voltage range	5, ..., 250 V DC / AC
Switching current range*	3 mA, ..., 6 A
Switching power range*	40 mW, ..., 1500 W (VA)
Contact resistance as new (max.)	100 mΩ
Short circuit resistance of contacts**	1000 A
with pre-fuse	SCPD 6 A gG / gL (fuse)

\* Reference values \*\* Prospective short-circuit current

### Electrical life (NO contacts)



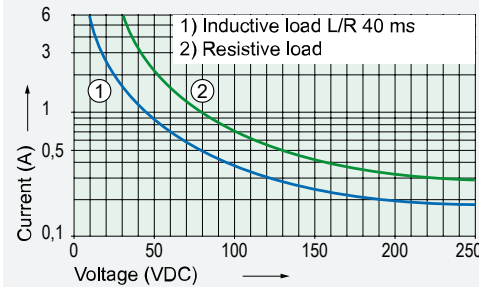
### Switching capacity (IEC 61810-1)

AC-1:	240 V / 6 A MAX
AC-15:	240 V / 3 A MAX
DC-1:	24 V / 6 A MAX
DC-13:	24 V / 5 A / 0,1 Hz MAX

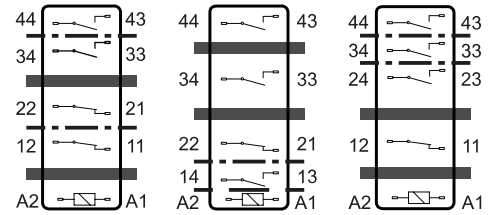
### Switching capacity (UL 508)

B300, R300	
Continuous current per contact at load of:	
1 or 2 contacts	6 A MAX
3 contacts	4 A MAX

### Contact load limit curve (DC)



### Circuit diagram (top view)



SIS222 SEN      SIS312 SEN      SIS312 SEN KV2

### Insulation data

Rated insulation voltage (IEC 60664-1)	250 VAC
Basic insulation	4 mm
- Air and creepage distance (min.)	4 mm
- Test voltage	2500 V <sub>rms</sub> / 1 min
Double or reinforced insulation	5,5 mm
- Air and creepage distance (min.)	5,5 mm
- Test voltage	4000 V <sub>rms</sub> / 1 min
Double or reinforced insulation	8 mm
- Air and creepage distance (min.)	8 mm
- Test voltage	4000 V <sub>rms</sub> / 1 min
Open contact: Test voltage*	1500 V <sub>rms</sub> / 1 min
Creepage resistance	CTI 175
Pollution degree	2
Overvoltage category	III
Insulation resistance (min.)	100 MΩ
- Test voltage	500 VDC

\* Initial value

### Mechanical data

Mechanical lifetime (min.)	10 x 10 <sup>6</sup> operations
Switching frequency (max.)	15 Hz
Response time (NO closed) (typ.)	20 ms
Drop-out time (NC closed) (typ.)*	4 ms
Bounce time (typ.)	NO: 2 ms / NC: 15 ms
Shock resistance (16 ms) (min.)	NO: 10g / NC: 10g
Vibration resistance (10-200 Hz) (min.)	NO: 10g / NC: 4g
Weight	approx. 30 g
Mounting position	any
Mounting distance (min.)	1 mm

\* without coil wiring

### Other Data

Ambient temperature	-40 °C, ..., +85 °C
Thermal resistance	45 K / W
Protection class	RT III
Solder bath temperature	270 °C / 5 s
Test method (heating)	A (group assembly)
Approvals	cULus, TÜV
Flammability class	UL 94 V-0
UL File	E188953 Sec. 5

### Options, Accessories

Other pin lengths	possible
Other coil designs	possible
Coils accord. to EN 50155 (railway applications)	possible

### Product key

SIS	3	1	2	24VDC	SEN	XX
SIS	Type designation					
3	Number of contacts NO					
1	Number of contacts NC					
2	Connection technology					
24VDC	Nominal coil voltage					
SEN	sensitive coil					
XX	Options					