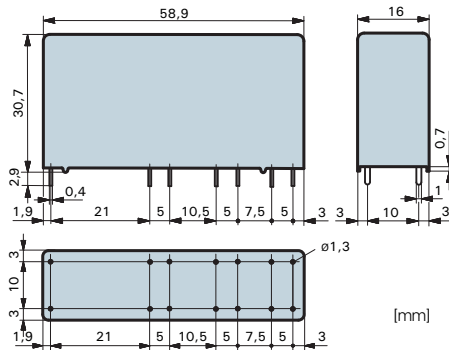




Relay data

- PCB relay with forcibly guided contacts
- Protective separation between coil/control contacts and output contacts (> 10mm) as well as protective separation between the output contacts themselves (> 8mm)
- EN 50205, type A
- Contact mounting:
SIR332 3NO/3NC
SIR422 4NO/2NC
SIR512 5NO/1NC
- Small external dimensions
- Mean coil power 0.50W
- Holding power 0.18W
- For Railway Applications: EN 50155



Contact material	AgSnO ₂ +0.2µm Au
Type of contact	Crest contact
Rated switching capacity	250VAC 10A AC1 2'500VA
Electr. life AC1 (360 cycles/h)	approx. 100'000
Inrush current max.	25A for 20ms
Switching voltage range	5 to 250 VDC/VAC
Switching current range*	10mA to 10A
Switching capacity range*	0.06VA(W) to 2'500VA
Contact resistance (as delivered)	≤100mΩ/28 V/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 %
5	3,75	≥ 0,5	100,0	50	± 10
6	4,5	≥ 0,6	83,3	72	± 10
9	6,75	≥ 0,9	56,2	160	± 10
12	9,0	≥ 1,2	41,6	288	± 10
18	13,5	≥ 1,8	27,7	648	± 10
24	18,0	≥ 2,4	20,8	1'150	± 10
48	36,0	≥ 3,6	10,4	4'600	± 13
60	45,0	≥ 4,5	8,3	7'200	± 15

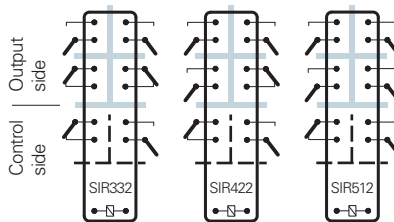
Ordering example

SIR 4 2 2 24VDC SEN

- Sensitive coil
- Coil voltage
- Soldering tags
- Number of NC contacts
- Number of NO contacts
- Type designation

General data

Circuit diagram (view on relay upper side)



--- Basic insulation
— Double or reinforced insulation

Mechanical life	> 10 x 10 ⁶ operations
Switching frequency, mechanical	15Hz
Response time	typically 18ms
Drop-out time**	typically 5ms
Bounce time of NO contact	typically 6ms
Bounce time of NC contact	typically 12ms
Shock resistance	16ms NO contact > 10g NC contact 6g
Vibration resistance	10-200Hz NO contact > 5g NC contact 2g
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 ¹¹ Ω
Creepage resistance	CTI 250
Weight	approx. 35g
Mounting position	any
Ambient temperature	-40°C to +70°C
Type of protection	RT II
Solder bath temperature	270 °C/5s
Thermal resistance	55K/W
Temperature limit for coil	120°C
Pollution degree	2
Overvoltage category	III
Resistance to short circuiting	1'000A SCPD 10A gG (pre-fuse)

** without spark suppression

Insulation terms

Coil to control contacts: Basic insulation
Coil/control contacts to output contacts: Double or reinforced insulation > 10mm
Output contacts as against each other: Double or reinforced insulation > 8mm

Tests, regulations

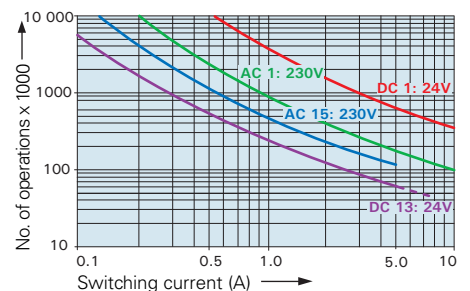
Approvals	SEV, UL, cUL, TÜV
UL File E188953	Sec. 3
Insulation class IEC 60664-1	250VAC
Protection class II	VDE 0106
Fire protection requirements	UL 94 / V0

Options, accessories

PCB socket see page 31

Diagrams

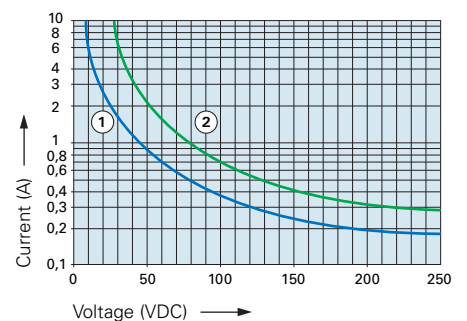
Contact lifetime



Max. switching characteristics (determined acc. to DIN EN 60947-5-1 table C2):
AC 15: 230V/5A
DC 13: 24V/7.5A/0.1 Hz
UL 508: C600/R300

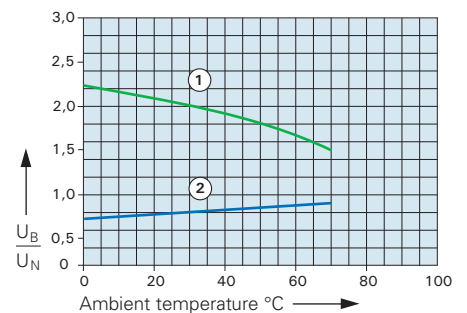
Maximal contact load at AC 1 with 230V:
2 contacts each with 10A
3 contacts each with 8.4A
4 contacts each with 7.3A
5 contacts each with 6A

Load limit curve with direct current



- 1) Inductive load, L/R 40 ms
- 2) Resistive load

Excitation voltage range



- 1) Max. excitation voltage with contact load ≤ 2A
- 2) Min. excitation voltage (guaranteed values) without previous operation

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