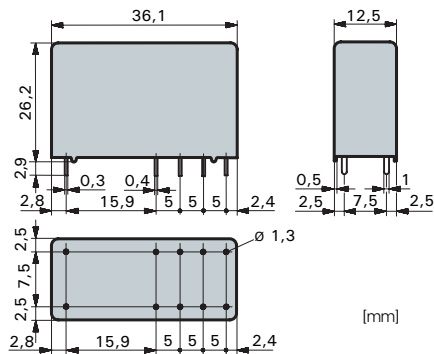




Relay data

- PCB relay with forcibly guided contacts
- Protective separation between coil and contacts (leakage and creepage distances > 14mm); protective separation between left and right contact side (leakage and creeping distances > 5.5mm)
- EN 50205, type A
- Contact mounting:
SIM312 3NO/1NC
SIM222 2NO/2NC
- Small external dimensions
- Mean coil power 1W
- Holding power 0.23W



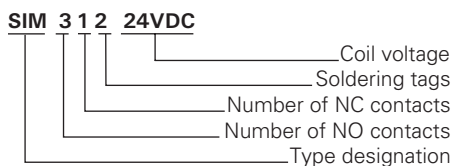
| | |
|-----------------------------------|------------------------------|
| Contact material | AgSnO ₂ +0,2µm Au |
| Type of contact | Crest contact |
| Rated switching capacity | 250VAC 8A AC1 2'000VA |
| Electr. life AC1 (360 cycles/h) | approx. 100'000 |
| Inrush current max. | 20A for 20ms |
| Switching voltage range | 5 to 250 VDC/VAC |
| Switching current range* | 10mA to 8A |
| Switching capacity range* | 0,06VA(W) to 2'000VA |
| Contact resistance (as delivered) | <100mΩ/28 V/100mA |

* Guide values

Standard coils for direct current (other voltages on request)

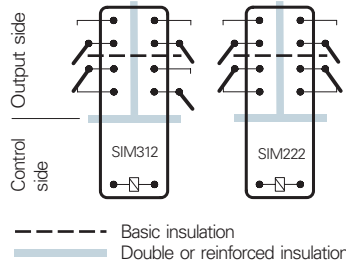
| Nominal voltage VDC | Min. pick-up voltage at 20°C | Drop-out voltage at 20 °C | Nominal current in mA | Resistance in Ohm at 20 °C | Tolerance in % |
|---------------------|------------------------------|---------------------------|-----------------------|----------------------------|----------------|
| 5 | 3,75 | ≥ 0,5 | 181,8 | 275 | ± 10 |
| 6 | 4,5 | ≥ 0,6 | 166,0 | 36 | ± 10 |
| 12 | 9,0 | ≥ 1,2 | 85,7 | 140 | ± 10 |
| 21 | 15,75 | ≥ 2,1 | 46,6 | 450 | ± 10 |
| 24 | 18,0 | ≥ 2,4 | 40,0 | 600 | ± 10 |
| 48 | 36,0 | ≥ 4,8 | 20,8 | 2'300 | ± 10 |
| 60 | 45,0 | ≥ 6,0 | 16,6 | 3'600 | ± 13 |
| 110 | 82,5 | ≥ 11,0 | 9,6 | 12'000 | ± 15 |

Ordering example



General data

Circuit diagram (view on relay upper side)



| | |
|--|-----------------------------------|
| Mechanical life | > 10 x 10 ⁶ operations |
| Switching frequency, mechanical | 15Hz |
| Response time | typically 8ms |
| Drop-out time** | typically 4ms |
| Bounce time of NO contact | typically 6ms |
| Bounce time of NC contact | typically 12ms |
| Shock resistance | 16ms NO contact > 10g |
| Vibration resistance | 10-200Hz NO contact > 10g |
| Test voltage coil/contacts | 5'000Veff 1min |
| Test voltage left to right contact sides | 4'000Veff 1min |
| Test voltage contacts as one after the other | 2'500Veff 1min |
| Test voltage contact open | 1'500Veff 1min |
| Insulation resistance | 10 ¹¹ Ω |
| Creepage resistance | CTI 250 |
| Weight | approx. 25g |
| Mounting position | any |
| Ambient temperature | -40°C to +70°C |
| Type of protection | RT II |
| Solder bath temperature | 270 °C/5s |
| Thermal resistance | 50K/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/contacts:
Double or reinforced insulation > 14mm
Left to right contact side:
Double or reinforced insulation > 5.5mm
Contacts in one row: Basic insulation

Tests, regulations

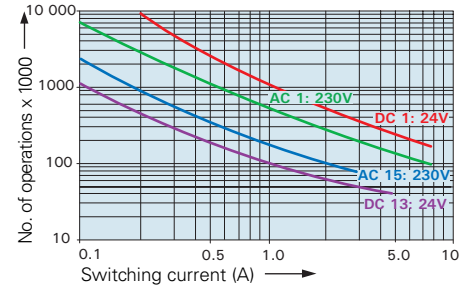
| | |
|------------------------------|-------------------|
| Approvals | SEV, UL, cUL, TÜV |
| Insulation class IEC 60664-1 | 250VAC |
| Protection class II | VDE 0106 |
| Fire protection requirements | UL 94 / V0 |

Options, accessories

PCB socket, DIN rail socket see page 28

Diagrams

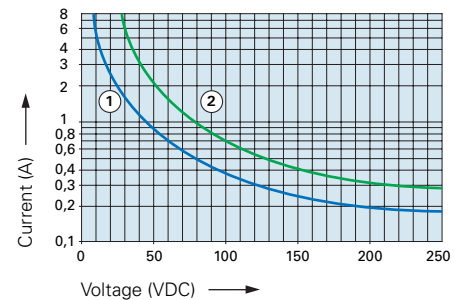
Contact lifetime for NO contact



Max. switching characteristics (determined acc. to DIN EN 60947-5-1 table C2):
AC 15: 230V/3A
DC 13: 24V/4A
DC 13: 24V/6A/0,1Hz
UL 508: C150/R300

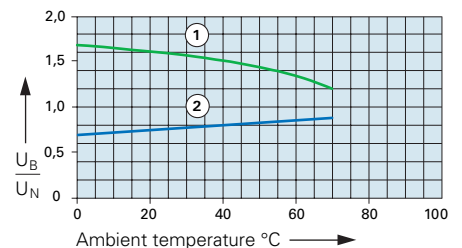
Maximal contact load at AC 1 with 230V:
2 contacts each with 8A
3 contacts each with 6A

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%.