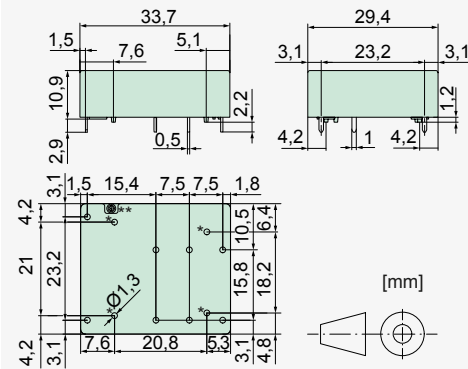




### Relay Key Data

- PCB relay with forcibly guided contacts
- Protective separation between coil and contacts (> 5,5mm) and contacts side by side (> 5,5mm)
- IEC 61810-3 Type A
- Double and reinforced insulation between the contacts
- SMD placement under relay possible
- Contact mounting SIF212 2 NO / 1 NC
- Small overall height: Only 10,9 mm
- Nominal coil power 0,60 W
- Holding coil power 0,18 W
- Coils for railway applications according to EN 50 155 on request

### Dimensions



\* do not drill with SMD assembly under the relay

\*\* Open breathing hole

### Contact Data

|                                   |                                   |
|-----------------------------------|-----------------------------------|
| Contact material                  | AgCuNi + 0,2 µm Au                |
| Type of contact                   | Single contact with notched crown |
| Rated switching capacity          | 250 VAC 10 A AC1 2500 VA          |
| Electr. Life AC1(360 S / h)       | approx. 100 000                   |
| Inrush current max.               | 30 A for 20 ms                    |
| Switching voltage range           | 5 to 250 VDC / VAC                |
| Switching current range*          | 3 mA to 10 A                      |
| Switching capacity range*         | 40 mW to 2500 W(VA)               |
| Contact resistance (as delivered) | ≤100 mΩ / 6 V / 100 mA            |

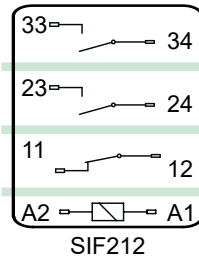
\*Guided values

### Standard Coils for Direct Current

(other voltages on request)

| Nominal voltage VDC | Min. pick-up voltage VDC at 20 °C | Drop-out voltage VDC at 20 °C | Nominal current in mA at 20 °C | Resistance in Ohm at 20 °C |
|---------------------|-----------------------------------|-------------------------------|--------------------------------|----------------------------|
| 5                   | ≤3,5                              | ≥0,5                          | 120,0                          | 41,6 ± 10%                 |
| 12                  | ≤8,4                              | ≥1,2                          | 50,0                           | 240,0 ± 10%                |
| 18                  | ≤12,6                             | ≥1,8                          | 33,3                           | 540,0 ± 10%                |
| 20                  | ≤14,0                             | ≥2,0                          | 30,0                           | 665,0 ± 10%                |
| 24                  | ≤16,8                             | ≥2,4                          | 25,0                           | 960,0 ± 10%                |
| 48                  | ≤33,6                             | ≥4,8                          | 12,5                           | 3840,0 ± 10%               |
| 60                  | ≤42,0                             | ≥6,0                          | 10,0                           | 6000,0 ± 13%               |
| 110                 | ≤77,0                             | ≥11,0                         | 5,4                            | 20165,0 ± 15%              |

### Circuit Diagram (relay top view)



### Insulation Data

|                                     |                        |
|-------------------------------------|------------------------|
| - Double or reinforced insulation   | at 250 VAC             |
| - Air and creepage distance         | >5,5 mm                |
| - Test voltage                      | 4000 V / 50 Hz / 1 min |
| Test voltage contact open           | 1500 V / 50 Hz / 1 min |
| Creepage resistance                 | CTI 175                |
| Pollution degree                    | 2                      |
| Overvoltage category                | III                    |
| Insulation resistance at Up 500 VDC | >100 MΩ                |

### Additional Data

|                                 |                                  |
|---------------------------------|----------------------------------|
| Mechanical endurance            | >10 x 10 <sup>6</sup> operations |
| Switching frequency, mechanical | 15 Hz                            |
| Response time (all NO closed)   | typically 12 ms                  |
| Drop-out time (NC closed)       | typically 5 ms                   |
| Bounce time of NO contact       | typically 1,5 ms                 |
| Bounce time of NC contact       | typically 15 ms                  |
| Shock resistance 16 ms          | NO > 15g<br>NC > 6g              |

|                                  |                     |
|----------------------------------|---------------------|
| Vibration resistance (10-200 Hz) | NO > 10g<br>NC > 2g |
|----------------------------------|---------------------|

Resistance to short circuiting contacts NO

1000 A SCPD 10 A gG / gL (pre-fuse)

Resistance to short circuiting contacts NC

1000 A SCPD 6 A gG / gL (pre-fuse)

Ambient temperature -40°C to +70°C

Thermal Resistance 60 K / W

Temperature limit for coil 120°C

Weight approx. 18 g

Mounting position any

Mounting distance rec. >5 mm

Test method A / group assembly

Type of protection RT II

Solder bath temperature 270°C / 5 s

\*\*without spark suppression

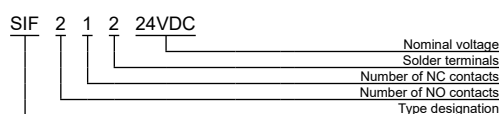
### Tests, Regulations, Standards

|                                    |            |
|------------------------------------|------------|
| Approvals                          |            |
| UL File E188953                    | Sec. 6     |
| Insulation class IEC 60664-1       | 250 VAC    |
| Fire protection requirements       | UL 94 / V0 |
| Standards IEC 61810-1, IEC 61810-3 |            |

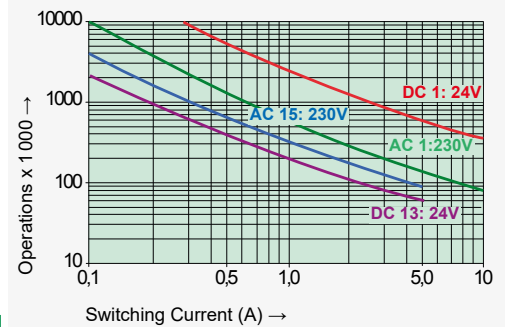
### Options, Accessories

none available

### Product Key



### Contact Lifetime for NO Contacts



Maximal switching characteristics (EN60947-5-1)

AC 1: 250 V / 10 A

AC 15: 230 V / 5 A

DC 1: 24 V / 10 A

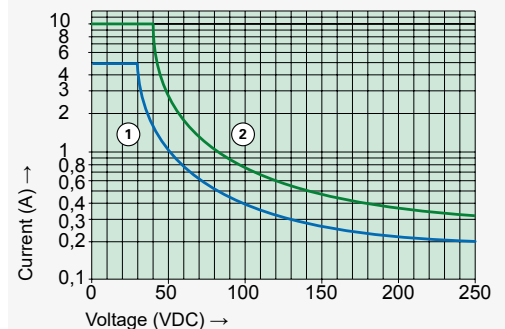
DC 13: 24 V / 5 A / 0,1 Hz

UL 508: B300 / R300

Maximal contact load at AC 1 with 230 V:

2 contacts with 8 A each

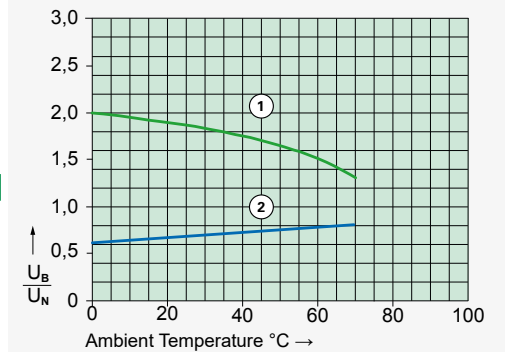
### Load Limit Curve with Direct Current



1) Inductive load L/R 40 ms

2) Resistive load

### Excitation Voltage Range



1) Max. excitation voltage with contact load: ≤6 A

2) Min. excitation voltage (guaranteed values) without previous operation

Single relay on print, no heat accumulation due to surrounding components with self-heating, duty cycle 100%.