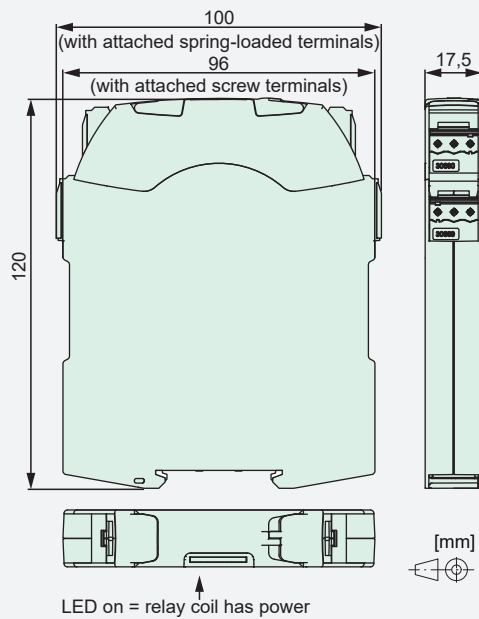




## Features

- Relay module with 3-pole relay with forcibly guided contacts according to IEC 61810-3, application type A
- For mounting on 35 mm mounting rail
- Protective separation (see insulation data)
- Contact mounting: SMF218/219 2 NO + 1 NC
- Switching current max. 10 A
- Switching voltage: 250 V AC/DC
- Power consumption: 0,7 ... 1,15 W
- Overvoltage protection
- With spring terminals (SMF219)
- With screw terminals (SMF218)
- Applications: Access control, interfaces, elevators, escalators, transportation, robots, machine tools and railway applications

## Dimensions



## Contact data

Contact material	AgCuNi + 0,2 ... 0,4 µm Au
Type of contact	Single contact with notched crown
Nominal switching capacity AC-1	2500 VA (250 VAC / 10 A)
Electrical life AC-1 (0,1 Hz, 10% duty cycle)	approx. 100 000
Inrush current max.	30 A for 20 ms
Switching voltage range	5 ... 250 VDC/VAC
Switching current range*	3 mA ... 10 A
Switching power range*	40 mW ... 2500 W(VA)
Contact resistance as new	≤100 mΩ / 6 V / 100 mA

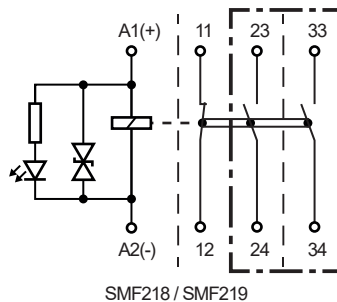
\*guidelines

## Module data excitation side at 20 °C

Nominal voltage (VDC)	Nominal current (mA)	Pick-up voltage relay coil (VDC)	Drop-out voltage relay coil (VDC)
12	60	≤8,4	≥1,2
24	47	≤16,8	≥2,4
48	20	≤33,6	≥4,8
110	10	≤77,0	≥11,0

other voltage values on request

## Circuit diagram



## Insulation data

Basic insulation	at 250 VAC
Air and creepage distance	>2,5 mm
Test voltage	2500 V <sub>rms</sub> / 1 min
Double or reinforced insulation	at 250 VAC
Air and creepage distance	>5,5 mm
Test voltage	4000 V <sub>rms</sub> / 1 min
Test voltage: open contact	1500 V <sub>rms</sub> / 1 min
Pollution degree	2
Overvoltage category	III

## Additional data

Mechanical lifetime	>10 x 10 <sup>6</sup> operations
Switching frequency mechanical	max. 15 Hz
Response time (NO closed)	typ. 12 ms
Drop-out time* (NC closed)	typ. 5 ms
Bounce time NO	typ. 1,5 ms
Bounce time NC	typ. 15 ms
Shock resistance 16 ms	NO > 14g / NC > 4g
Vibration resistance (10-200 Hz)	NO > 6g / NC > 4g
Short circuit resistance contacts NO	1000 A
with pre-fuse	SCPD 10 A gG / gL
Short circuit resistance contacts NC	1000 A
with pre-fuse	SCPD 6 A gG / gL
Ambient temperature	-40°C ... +55°C
Thermal resistance	60 K/W
Weight	approx. 110 g
Mounting position	any
Protection class	IP20

## Connection data Screw terminal:

- Cross sections for wire:	0,2 - 2,5 mm <sup>2</sup> / AWG 24 - 12
- Cross sections for braid:	0,2 - 2,5 mm <sup>2</sup> / AWG 24 - 12
- Tightening torque:	0,6 Nm
Connection data spring terminal:	
- Cross sections for wire:	0,2 - 2,0 mm <sup>2</sup> / AWG 24 - 14
- Cross sections for braid:	0,2 - 2,5 mm <sup>2</sup> / AWG 24 - 12

\*without coil wiring

## Tests, regulations, standards

Approvals	cULus
UL File	E188953
Standards	EN 50178, IEC 61810-1, IEC 61810-3, UL 508

## Options, Accessories

none available

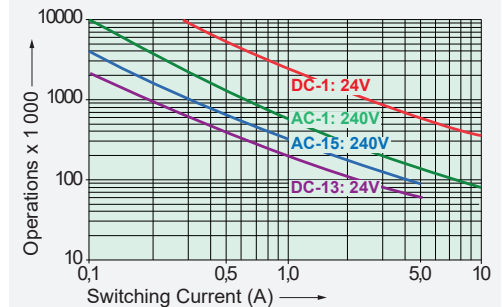
## Mounting instructions

Mounting on 35 mm mounting rail (IEC 60715)

## Product key

Type designation	SMF	2	1	8	24VDC
Number of NO contacts		2	1	8	
Number of NC contacts			1		
Connection type:					
8=screw terminal,					
9=spring terminal					
Nominal voltage					24VDC

## Contact life for NO contact



Max. switching capacity (IEC 61810-1 / UL 508)

AC-1: 240 V / 10 A

AC-15: 240 V / 5 A

DC-1: 24 V / 10 A

DC-13: 24 V / 5 A

B300

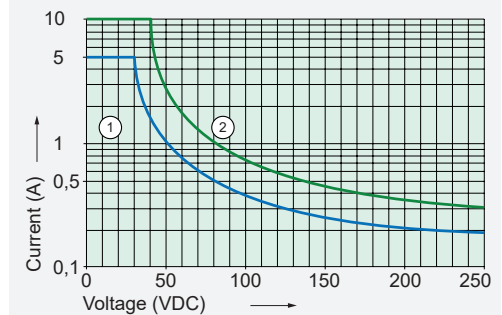
R300

Maximum continuous current per contact at load of:

1 contact 10 A

2 contacts 8 A

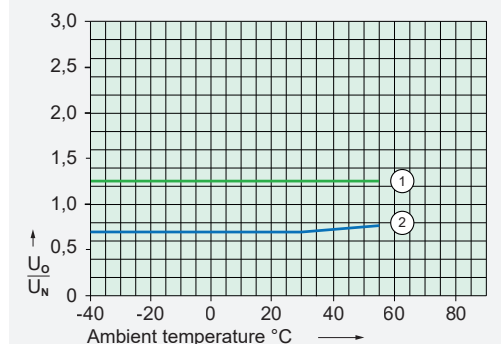
## Contact load limit curve (DC)



1) Inductive load L/R 40 ms

2) Resistive load

## Operating voltage range



1) Max. excitation voltage with contact current ≤ 6 A

2) Min. excitation voltage without previous operation

- test conditions:

- Duty cycle 100%