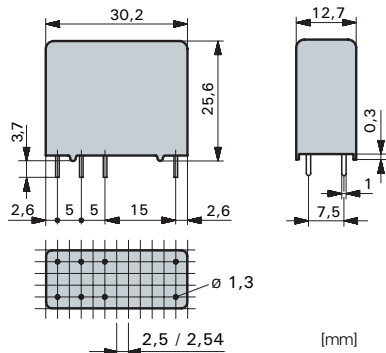




## Relay data

- PCB relay with forcibly guided contacts
- Protective separation between coil and contacts (leakage and creepage distances > 14mm); protective separation diagonally between left and right contact side (leakage and creeping distances > 5.5mm)
- EN 50205, type B
- 2 CO contacts
- Mean coil power 1 W
- Holding power 0.31 W



Contact material	AgCuNi
Type of contact	Single contact
Rated switching capacity	250VAC 6A AC1 1'500VA
Electr. life AC1 (360 cycles/h)	approx. 100'000
Inrush current max.	15A for 20ms
Switching voltage range	50 to 250 VDC/VAC
Switching current range*	20mA to 6A
Switching current range**	10mA to 6A
Switching capacity range*	0.12VA(W) to 1'500VA
Switching capacity range**	0.06VA(W) to 1'500VA
Contact resistance (as delivered)	≤ 100mΩ / 28V / 100mA

\* Guide values

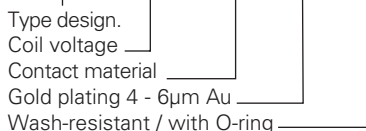
\*\* Values for AgCuNi + 4-6 μm Au

### 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	27,5	± 10
6	4,5	≥ 0,6	166,6	36	± 10
12	9,0	≥ 1,2	85,7	140	± 10
18	13,5	≥ 1,8	66,6	270	± 10
24	18,0	≥ 2,4	33,3	720	± 10
48	36,0	≥ 4,8	20,8	2'300	± 10
60	45,0	≥ 6,0	13,6	4'400	± 13
110	82,5	≥ 11,0	11,0	10'000	± 15

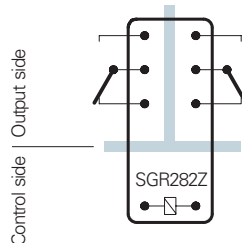
### Ordering example

**SGR282Z 24VDC AgCuNi Au6 ZGR08**



## General data

### Circuit diagram (view on relay upper side)



Double or reinforced insulation

Mechanical life	> 50 x 10 <sup>6</sup> operations
Switching frequency, mechanical	20Hz
Response time	typically 12ms
Drop-out time***	typically 5ms
Bounce time of NO contact	typically 4ms
Bounce time of NC contact	typically 8ms
Vibration resistance	10-55Hz, AK 10g, RK 1.5g
Test voltage coil/contacts	5'000Veff 1min
Test voltage	
contact set/contact set	4'000Veff 1min
Test voltage contact open	1'500Veff 1min
Insulation resistance	10 <sup>11</sup> Ω
Creepage resistance	CTI 550
Weight	approx. 20g
Mounting position	any
Ambient temperature	-40°C to +70°C
Type of protection	RT II / RT III optionally
Solder bath temperature	270°C/5s
Thermal resistance	50K/W
Temperature limit for coil	120°C

\*\*\* without spark suppression

### Insulation terms

Coil/contacts: Double or reinforced insulation > 14mm  
 Left to right contact side:  
 Double or reinforced insulation > 5.5mm

### Tests, regulations

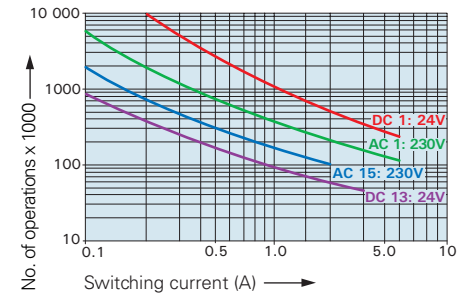
Approvals	SEV, UL, cUL, TÜV
Insulation class IEC 60664-1	250VAC
Protection class II	VDE 0106
Fire protection requirements	UL 94 / V1

### Options, accessories

Contact material	SGR282Z..VDC AgCuNi +4 - 6μm Au
PCB socket, DIN rail socket	see page 27
Wash-resistant with O-Ring	
Sealed RT III	on request

## Diagrams

### Contact lifetime for AgCuNi



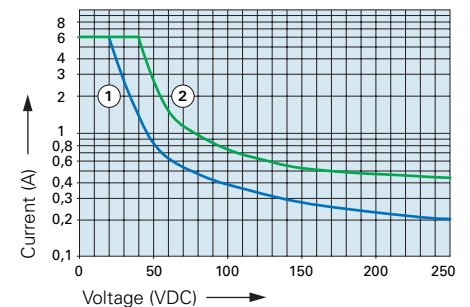
Max. switching characteristics (acc. to DIN EN 60947-5-1 table C2):  
 AC 15: 230V/3A, DC13: 24V/4A  
 UL 508: C300

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

### Gold contacts with 4-6μm layer thickness

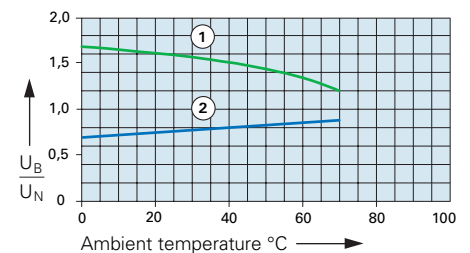
When high voltages and currents are switched, the layer of gold is destroyed already after a few switching operations. Once the gold layer is damaged due to the switching of high loads, such a contact must not be used any more for signal and control current circuits. Safe contact making is then only possible at high loads with the formation of sparks.

### 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%.