SGR 282 Z Series

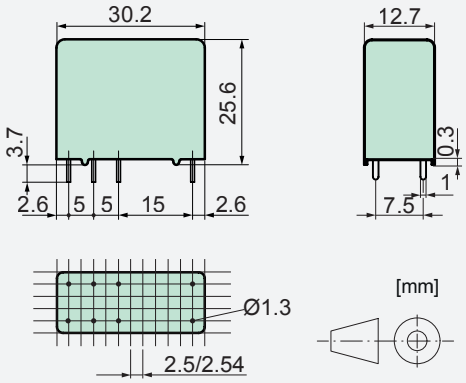
will be replaced by SGR282ZK



Relay Key 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 creepage distances >5.5mm)
- EN50205 type B
- 2 CO contacts
- Mean coil power 1W
- Holding coil power 0.31W

Dimensions



Contact Data

Contact material	AgCuNi
Type of contact	Single contact
Rated switching capacity	250VAC 6A AC1 2'000VA
Electr. life AC 1(360 cycles/h)	approx.100'000
Inrush current max.	15A for 20ms
Switching voltage range	5 to 250 VDC/VAC
Switching current range*	20mA to 6A
Switching current range**	10mA to 6A
Switching capacity range*	120mW to 1'500W(VA)
Switching capacity range**	60mW to 1'500W(VA)
Contact resistance (as delivered)	≤100mΩ/28V/100mA

*Guided values

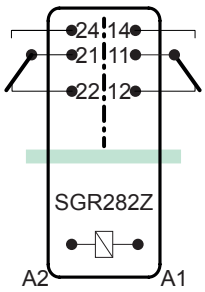
**Values for AgCuNi+4-6µm Au

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
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%

Circuit Diagram (view on relay upper side)



Insulation Data

- Double or reinforced insulation	at 250VAC
- Air and creepage distance	>5.5mm
- Test voltage	4'000V/50Hz/1min
- Double or reinforced insulation	at 250VAC
- Air and creepage distance	>14mm
- Test voltage	5'000V/50Hz/1min
Test voltage contact open	1'500V/50Hz/1min
Creepage resistance	CTI 550
Pollution degree	2
Overvoltage category	III
Insulation resistance at Up 500VDC	>100MΩ

Additional Data

Mechanical endurance	>50x10^6 operations
Switching frequency, mechanical	15Hz
Response time (all NO closed)	typically 12ms
Drop-out time** (all NC closed)	typically 5ms
Bounce time of NO contact	typically 4ms
Bounce time of NC contact	typically 8ms
Shock resistance 16ms	NO > 10g NC > 2.5g
Vibration resistance (10-55Hz)	NO > 10g NC > 1g
Resistance to short circuiting contacts	1'000A SCPD 6A gG/gL (pre-fuse)
Ambient temperature	-40°C to +70°C
Thermal resistance	50K/W
Temperature limit for coil	120°C
Weight	ca. 20g
Mounting position	any
Type of protection	RT II
Solder bath temperature	270°C/5s

**without spark suppression

Tests, Regulations

Approvals

UL File E188953	Sec. 1
Insulation class IEC 60664-1	250VAC
Protection class II	VDE 0106
Fire protection requirements	UL 94 / V1

Options, Accessories

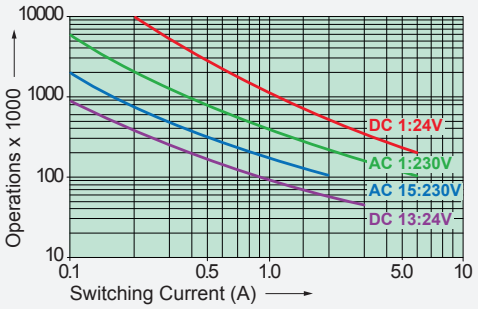
PCB socket, DIN rail socket	see page 30
Sealed RT III	on request
Dust resistant with O-Ring	
Contact material with 4-6µm Au	

Product Key

SGR282Z 24VDC AU6 08

- 08 — O-ring dust resistant
- AU6 — Gold plating 4-6µm
- 24VDC — Coil voltage
- SGR282Z — Type designation

Contact Lifetime for NO Contacts



Maximal switching characteristics (DIN EN60947-5-1, Tab. C2)

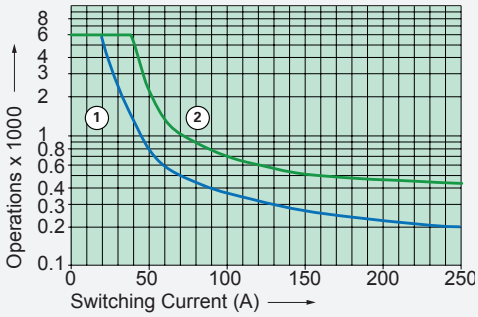
AC 15:	230V / 3A
DC 13:	24V / 4A
UL 508:	C300

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

Gold contacts with 4-6µm layer thickness

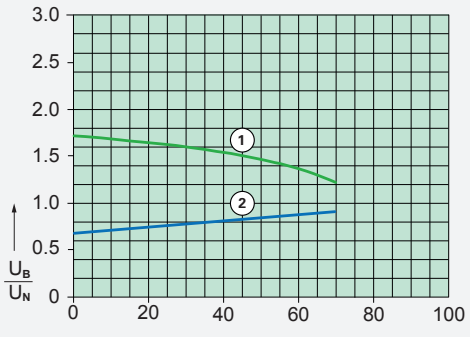
When switching high voltages and currents the layer of gold is already destroyed after a few switching operations. Once the gold layer is damaged due to the switching of high loads, this contact must not be used anymore for signal and control current circuits.
Then safe contact making is only possible at high loads with the formation of sparks.

Load Limit Curve with Direct Current



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

Excitation Voltage Range



1) Max. excitation voltage with contact load: ≤4A
2) Min. excitation voltage (guaranteed values) without previous operation

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

Not for new designs

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