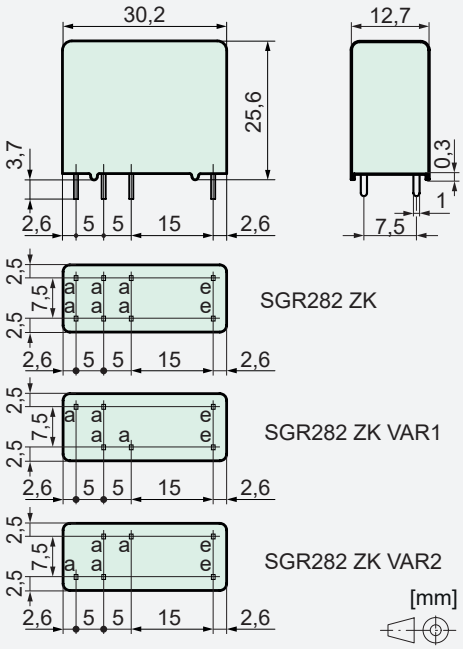
Relays
SGR282 ZK series

Features

- Relay with forcibly guided contacts according to IEC 61810-3, application type B and application type A (for VAR1 and VAR2)
- Suitable for print mounting
- Protective separation (see insulation data)
- Contact mounting:
  SGR282 ZK 2 CO
  SGR282 ZK VAR1 1 NO + 1 NC
  SGR282 ZK VAR2 1 NO + 1 NC
- Nominal coil power: typ. 0,70 W
- Coil holding power: typ. 0,21 W

Dimensions



Pin dimension a	1,0 x 0,3 mm
Pin dimension e	1,0 x 0,2 mm
Recommended drilling on PCB	Ø 1,3 mm

Contact data

Contact material	AgCuNi + 0,2 ... 0,4 µm Au
Contact type	notched crown contact
Nominal switching capacity AC-1	2 000 VA (250 VAC / 8 A)
Electrical life AC-1 (0,1 Hz, 10% duty cycle)	approx. 100 000
Inrush current max.	15 A for 20 ms
Switching voltage range	5 ... 250 VDC/VAC
Switching current range*	4 mA ... 8 A
Switching power range*	50 mW ... 2 000 W(VA)
Contact resistance as new	≤100 mΩ / 28 V / 100 mA

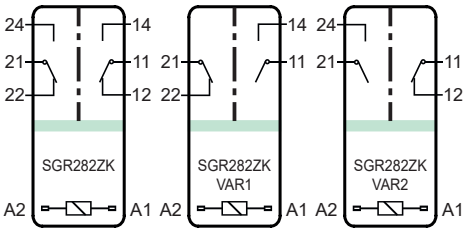
*guidelines

Coil data at 20 °C

Nominal voltage (VDC)	Pick-up voltage (VDC)	Drop-out voltage (VDC)	Nominal current (mA)	Resistance (Ohm)
6	≤4,2	≥0,6	117	51 ± 10%
12	≤8,4	≥1,2	59	205 ± 10%
18	≤12,6	≥1,8	39	462 ± 10%
24	≤16,8	≥2,4	29	822 ± 10%
48	≤33,6	≥4,8	15	3290 ± 10%
60	≤42,0	≥6,0	12	5140 ± 13%
110	≤77,0	≥11,0	6	17280 ± 15%

other voltage values on request

Circuit diagram (top view)



Insulation data

Double or reinforced insulation	at 250 VAC
Air and creepage distance	>5,5 mm
Test voltage	4000 V_{rms} / 1 min
Double or reinforced insulation	at 250 VAC
Air and creepage distance	>14 mm
Test voltage	5000 V_{rms} / 1 min
Test voltage: open contact	1500 V_{rms} / 1 min
Creepage resistance	CTI 550
Pollution degree	2
Overvoltage category	III
Insulation resistance at Up 500 VDC	>100 MΩ

Additional data

Mechanical lifetime	> 10x10⁶ 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. 4 ms
Bounce time NO	typ. 8 ms
Shock 16 ms	NO > 10 g / NC > 2,5 g
Vibration resistance (10-55 Hz)	NO > 10 g / NC > 1,5 g
Short curcuit resistance NO with pre-fuse	1 000 A SCPD 10 A gG / gL
Short curcuit resistance NC with pre-fuse	1 000 A SCPD 6 A gG / gL
Ambient temperature	-40 °C ... +70 °C
Thermal resistance	50 K/W
Coil limit temperature	120 °C
Weight	approx. 20 g
Mounting position	any
Mounting distance	recommendation >5 mm
Test method	A / group assembly
Protection class	RT II
Solder bath temperature	270 °C / 5 s

*without coil wiring

Tests, regulations, standards

Approvals	cULus, TÜV
UL File	E188953 Sec. 1
Insulation group according to IEC 60664-1	250 VAC
Fire protection conditions	UL 94 / V-1
Standards	IEC 61810-1, IEC 61810-3, UL 508

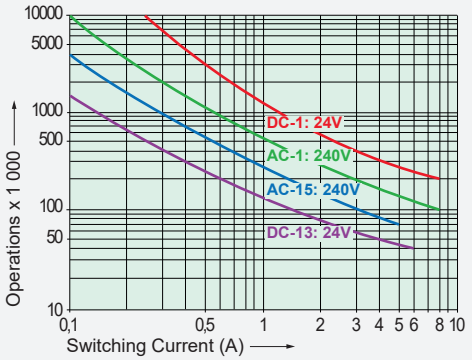
Options, Accessories

Mounting rail socket
SRD-SGR2, SRD-SGR2A KV2, SRD-SGR2A KV2 PIK
PCB socket SRP-SGR2

Product key

SGR282ZK	VAR1	24VDC
Type designation	Contact variant NO/NC	Nominal coil voltage

Contact life for NO contact



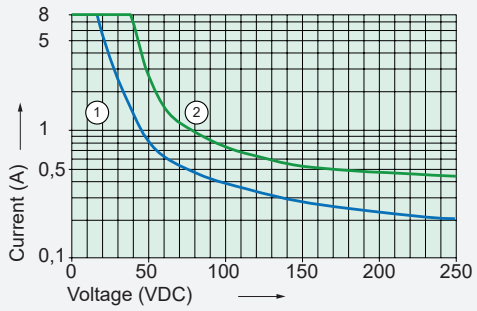
Max. switching capacity (IEC 61810-1, UL 508)

AC-1:	240 V / 8 A	C300
AC-15:	240 V / 5 A	
DC-1:	24 V / 8 A	
DC-13:	24 V / 6 A	

Maximum continuous current per contact at load of:

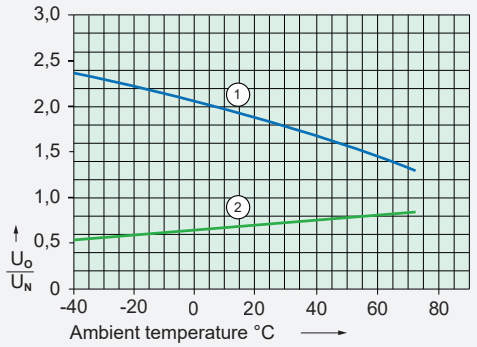
1 contact	8 A
2 contacts	8 A

Contact load limit curve (DC)



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

Coil excitation voltage range



1) Max. excitation voltage with contact current ≤ 4 A
2) Min. excitation voltage without previous operation
- test conditions:
  - Free-standing relay on PCB
  - Duty cycle 100%

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