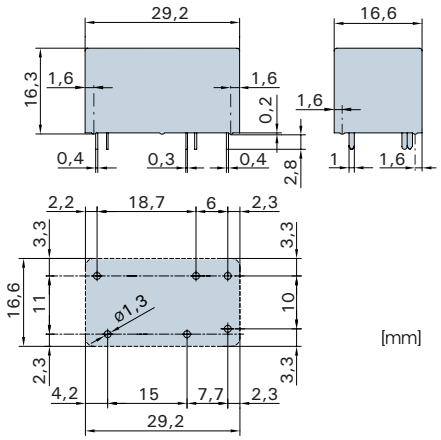
ELESTA relays

Safety without compromise

SIS 2 Contacts

Relay data

- PCB relay with forcibly guided contacts
- Protective separation between control and load circuit (leakage and creepage distances > 10mm)
- EN 50205, type A
- Double and reinforced insulation between the contacts
- Contact mounting: SIS112 1NO/1NC
- Small external dimensions
- Mean coil power 0,27W



Contact material	AgCuNi+0,2-0,4µm Au
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.	30A for 20ms
Switching voltage range	5 to 440VDC/VAC
Switching current range*	5mA to 6A
Switching capacity range* 60mW to 1'500W (VA)	
Contact resistance (as delivered)	≤ 100mΩ

* Guide values

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	≤ 3,5	≥ 0,5	54,9	91	± 10
6	≤ 4,2	≥ 0,6	46,1	130	± 10
9	≤ 6,3	≥ 0,9	30,5	295	± 10
12	≤ 8,4	≥ 1,2	23,0	520	± 10
18	≤ 12,6	≥ 1,8	15,2	1'180	± 10
24	≤ 16,8	≥ 2,4	11,4	2'100	± 10
48	≤ 33,6	≥ 4,8	5,7	8'350	± 13
60	≤ 42,0	≥ 6,0	4,5	13'100	± 15

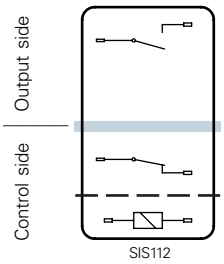
Ordering example

SIS 1 1 2 24VDC S ZGR009

- ZGR009 — Wash-resistant, RT III
- S — Special design
- 24VDC — Coil voltage
- 2 — Soldering tags
- 1 — Number of NC contacts
- 1 — Number of NO contacts
- SIS — Type designation

General data

Circuit diagram (view on relay upper side)



Mechanical life	> 10 x 10^6 operations
Switching frequency, mechanical	15Hz
Response time (NO closed)	typically 10ms
Drop-out time** (NC closed)	typically 3ms
Bounce time of NO contact	typically 2ms
Bounce time of NC contact	typically 15ms
Shock resistance 16ms	NO contact 30g NC contact 10g
Vibration resistance 10-200Hz	NO contact 20g NC contact 5g
Test voltage coil/control contact	2'500Veff 1min
Test voltage coil- control contact/output contact	5'000Veff 1min
Test voltage contact open	1'500Veff 1min
Insulation resistance at Up 500V	10^9 Ω
Creeping resistance	CTI 175
Weight	approx. 18g
Mounting position	any
Ambient temperature	-40°C to +70°C
Type of protection	RT III
Solder bath temperature	270°C/5s
Thermal resistance	55K/W
Temperature limit for coil	120°C
Pollution degree	3
Overvoltage category	III
Resistance to short circuiting	1'000A SCPD 6A gG (pre-fuse)

** without spark suppression

Insulation terms

Coil to control contact: Basic insulation

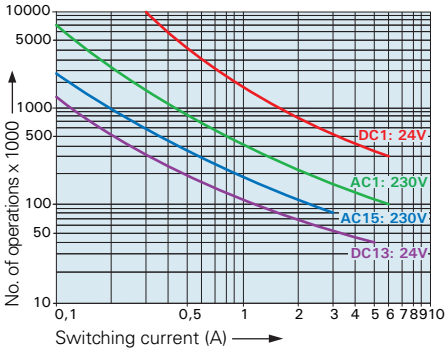
Coil/control contact to output contact: Double or reinforced insulation > 10mm

Tests, regulations

Approvals	SEV, UL, cUL, TÜV
Insulation class	VDE 0110 / group C 250VAC
Protection class II	VDE 0106
Fire protection requirements	UL 94 / V0

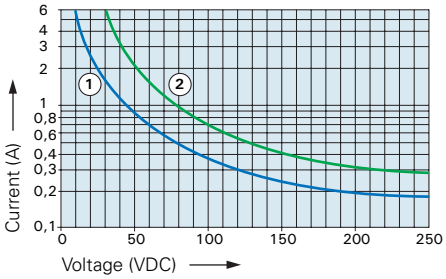
Diagrammes

Contact lifetime



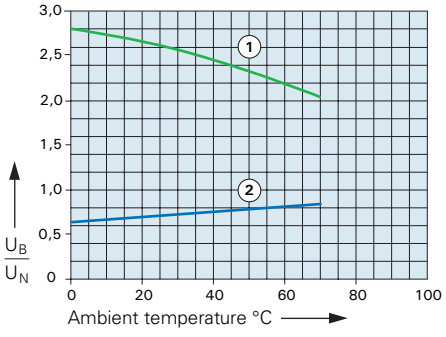
Max. switching characteristics (determined acc. to DIN EN 60947-4-1 / EN 60947-5-1):
AC 1: 250V/6A
AC 15: 230V/3A
DC 1: 24V/6A
DC 13: 24V/5A/0,1 Hz
UL 508: B300 / R300

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%.

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