

SIP 6 Series

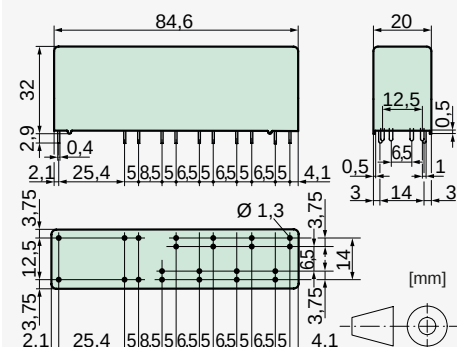


Relay Key Data

- PCB relay with forcibly guided contacts
- Protective separation between the coil/control and output contacts (>8 mm) as well as output contacts one behind the other (>10 mm)
- IEC 61810-3 Type A
- Contact mounting:

SIP512	control contacts	1 NO / 1 NC
	output contacts	4 NO
SIP422	control contacts	2 NC
	output contacts	4 NO
- High switching capacity
- Nominal coil power 1,3 W
- Holding coil power 0,39 W
- Coil for railway application according EN 50155 on request

Dimensions



Control contact data

Contact material	AgSnO ₂ + 0,2 µm Au
Rated switching capacity	250 VAC 6 A AC1 1500 VA
Electr. Life AC1(360 S / h)	approx. 100 000
Inrush current max.	15 A for 20 ms
Switching voltage range	5 to 250 VDC / VAC
Switching current range*	5 mA to 6 A
Switching capacity range*	60 mW to 1500 W(VA)
Contact resistance (as delivered)	≤100 mΩ / 6 V / 100 mA

Output contact data

Contact material	AgSnO ₂
Rated switching capacity	250 VAC (440 VAC) 16 A AC1 4000 VA
Electr. Life AC1(360 S / h)	approx. 250,000
Inrush current max.	60 A for 20 ms
Switching voltage range	5 to 250 VDC (480 VAC)
Switching current range*	10 mA to 16 A
Switching capacity range*	120 mW to 4000 W(VA)
Contact resistance (as delivered)	≤100 mΩ / 6 V / 100 mA

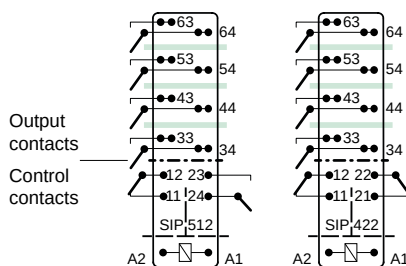
*Guided values

Standard Coils for Direct Current

(other voltages on request)

Nominal voltage VDC	Min. pick-up voltage VDC at 20 °C	Drop-out voltage VDC at 20 °C	Nominal current in mA at 20 °C	Resistance in Ohm at 20 °C
6	4,2	≥0,6	218,0	27,5 ± 10%
12	8,4	≥1,2	109,0	110,0 ± 10%
18	12,6	≥1,8	72,0	248,0 ± 10%
24	16,8	≥2,4	54,5	440,0 ± 10%
48	33,6	≥4,8	27,2	1760,0 ± 10%
60	42,0	≥6,0	21,8	2750,0 ± 10%
110	77,0	≥11,0	11,8	9250,0 ± 13%
220	154,0	≥22,0	5,9	37000,0 ± 15%

Circuit Diagram (relay top view)



Insulation Data

- Basic insulation	at 250 VAC
- Air and creepage distance	>4 mm
- Test voltage	2500 V / 50 Hz / 1 min
- Double or reinforced insulation	at 250 VAC
- Air and creepage distance	>8 mm
- Test voltage	4000 V / 50 Hz / 1 min
- Double or reinforced insulation	at 250 VAC
- Air and creepage distance	>10 mm
- Test voltage	5000 V / 50 Hz / 1 min
Test voltage contact open	1500 V / 50 Hz / 1 min
Creepage resistance	CTI 250
Pollution degree	2
Overvoltage category	III
Insulation resistance at Up 500 VDC	>100 MΩ

Additional Data

Mechanical endurance	>10 x 10 ⁶ operations
Switching frequency, mechanical	15 Hz
Response time (all NO closed)	typically 18 ms
Drop-out time** (NC closed)	typically 5 ms
Bounce time of NO contact	typically 8 ms
Bounce time of NC contact	typically 12 ms
Shock resistance 16 ms	NO > 10g NC > 8g
Vibration resistance	10-200 Hz 10-49 Hz 50-200 Hz
	NO > 10g NC > 5g NC > 3,5g

Resistance to short circuiting control contacts	1000 A SCPD 6 A gG / gL (pre-fuse)
Resistance to short circuiting output contacts	1000 A SCPD 16 A gG / gL (pre-fuse)
Ambient temperature	-40°C to +70°C
Thermal Resistance	40 K / W
Temperature limit for coil	125°C
Weight	approx. 60 g
Mounting position	any
Mounting distance	rec. >5 mm
Test method	A / group assembly
Type of protection	RT II
Solder bath temperature	270°C / 5 s
**without spark suppression	

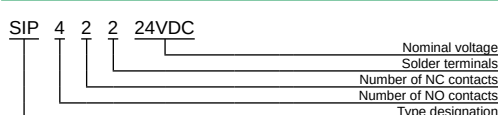
Tests, Regulations, Standards

Approvals	cULus
UL File E188953	Sec. 4
Insulation class IEC 60664-1	250 VAC
Fire protection requirements	UL 94 / V0
Standards IEC 61810-1, IEC 61810-3	

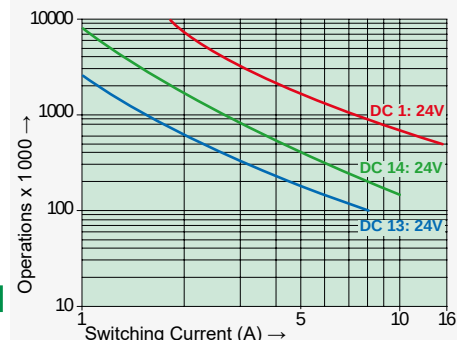
Options, Accessories

none available

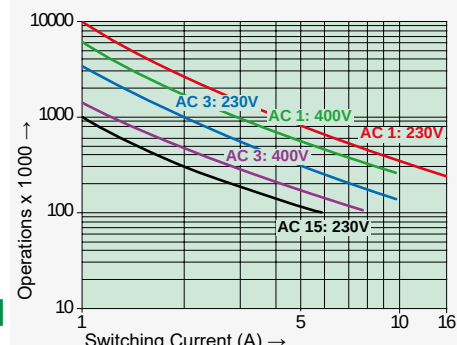
Product Key



Contact life output contacts DC

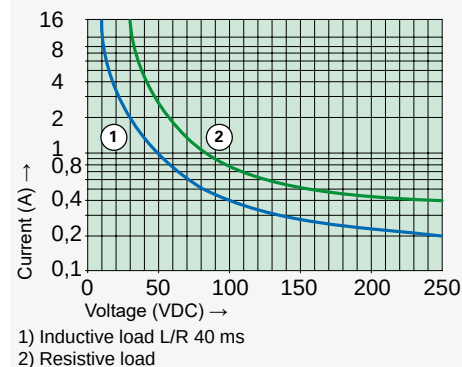


Contact life output contacts AC

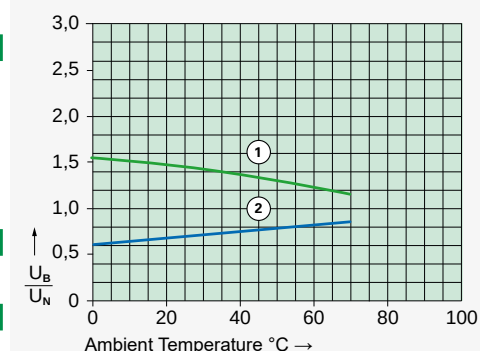


UL508: A600 / R150
Maximal contact load at AC 1 with 230 V:
2 contacts with 16 A each
3 contacts with 12 A each
4 contacts with 10 A each

Load Limit Curve with Direct Current



Excitation Voltage Range



1) Max. excitation voltage with contact load:
Control contacts ≤4 A, Output Control contacts ≤12 A
2) Min. excitation voltage (guaranteed values) without previous operation