

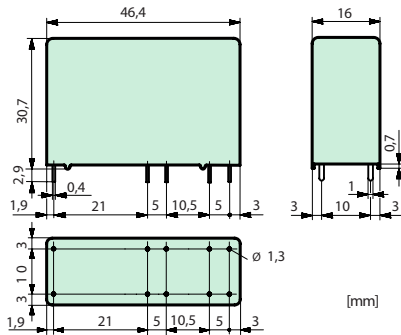
SIR 4 Power Series

Relay Key Data

- PCB Relay with forcibly guided Contacts
- Protective separation between Coil / Control Contacts (>10mm), as well as protective separation between the Output Contacts themselves (>8mm)
- EN50205 Type A
- Contact Mounting:

SIR312 P	Control Contacts	1NO / 1NC
	Output Contacts	2NO
SIR222 P	Control Contacts	2NO
	Output Contacts	2NC
- Inrush Current 60A / Continuous Current 12A
- Mean Coil Power 0.75 W
- Holding Power 0.23 W
- For Railway Application (EN50155) on request

Dimensions



Control Contact Data

Contact Material	AgSnO ₂ +0.2µm Au
Rated Switching Capacity	250VAC 6AAC1 1'500VA
Electr. life AC1(360 cycles/h)	approx.100'000
Inrush Current max.	15A for 20ms
Switching Voltage Range	5 to 250 VDC/VAC
Switching Current Range*	5mA to 6A
Switching Capacity Range*	60mW to 1'500W(VA)
Contact resistance (as delivered)	≤100mΩ/6V/100mA

Output Contact Data

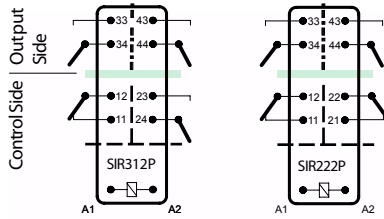
Contact Material	AgSnO ₂
Rated Switching Capacity	250VAC (440VAC) 12AAC1 3'000VA
Electr. life AC1(360 cycles/h)	ca.250'000
Inrush Current max.	60A for 20ms
Switching Voltage Range	5 to 250VDC (480VAC)
Switching Current Range*	10mA to 12A
Switching Capacity Range*	120mW to 3'000W(VA)
Contact resistance (as delivered)	≤100mΩ/6V/100mA

*Guided 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
5	≤3.5	≥0.5	151.0	33 ± 10%
12	≤8.4	≥1.2	63.1	190 ± 10%
18	≤12.6	≥1.8	41.6	432 ± 10%
20	≤14.0	≥2.0	37.7	530 ± 10%
24	≤16.8	≥2.4	31.5	760 ± 10%
48	≤33.6	≥4.8	15.7	3'050 ± 10%
60	≤42.0	≥6.0	12.5	4'800 ± 13%
110	≤77.0	≥11.0	6.8	16'000 ± 15%

Circuit Diagram (Topview)



Insulation Data

-----	at 250VAC	- Basic Insulation >4mm
		- Air and Creepage Distance >8mm
		- Test Voltage 2'500V/50Hz/1min
		- Double or Reinforced Insulation
-----	at 250VAC	- Air and Creepage Distance >8mm
		- Test Voltage 4'000V/50Hz/1min
		- Double or Reinforced Insulation
-----	at 250VAC	- Air and Creepage Distance >10mm
		- Test Voltage 5'000V/50Hz/1min
		- Double or Reinforced Insulation
Test Voltage (contact open)	1'500V/50Hz/1min	
Creepage Resistance	CTI 250	
Pollution Degree	2	
Overvoltage Category	III	
Insulation Resistance at Up 500VDC	>100 MΩ	

Weitere Daten

Mechanical life	>10x10 ⁶ operations
Switching frequency, mechanical	15Hz
Response Time (all NO closed)	typ. 15ms
Drop-Out Time** (all NC closed)	typ. 4ms
Bounce Time of NO Contacts	typ. 6ms
Bounce Time of NC Contacts	typ. 12ms
Shock Resistance 16ms	NO > 17g NC > 7g
Vibration Resistance (10-200Hz)	NO > 10g NC > 4.5g
Resistance to short circuiting control contacts	1'000A SCPD 6A gG/gL (pre-fuse)
Resistance to short circuiting output contacts	1'000A SCPD 16A gG/gL (pre-fuse)
Ambient Temperature	-40°C to +70°C
Thermal Resistance	55 K/W
Temperature Limit for Coil	120°C
Weight	approx. 32g
Mounting Position	any
Type of Protection	RT II
Solder bath temperature	270°C/5s

Tests, Regulation Approvals

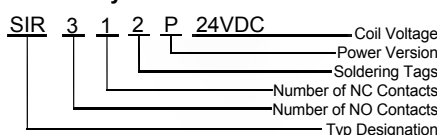


UL File E188953	Sec. 3
Insulation class (IEC 60664-1)	250VAC
Protection Class II	VDE 0106
Fire protection requirements	UL 94 / V0

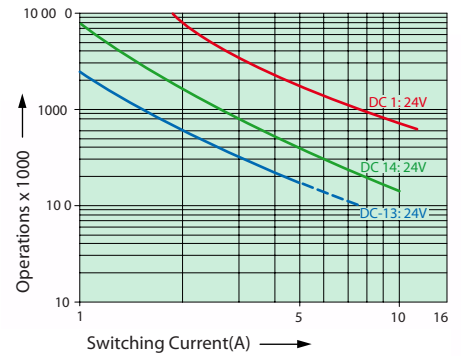
Options, Accessories

PCB Socket see Page 29

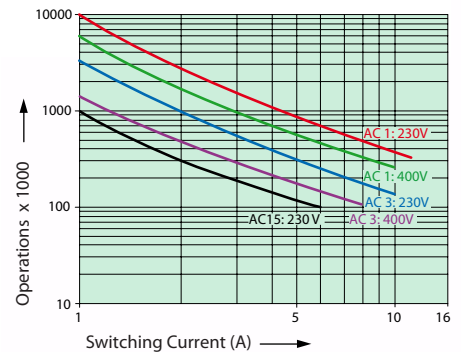
Product Key



Contact Lifetime (Output Contacts) DC

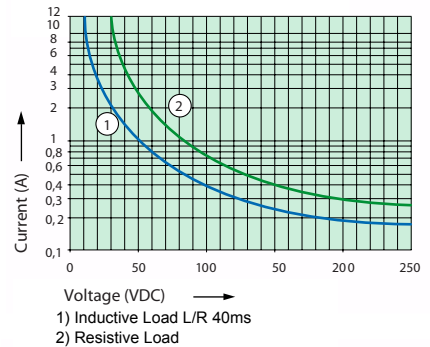


Contact Lifetime (Output Contacts) AC

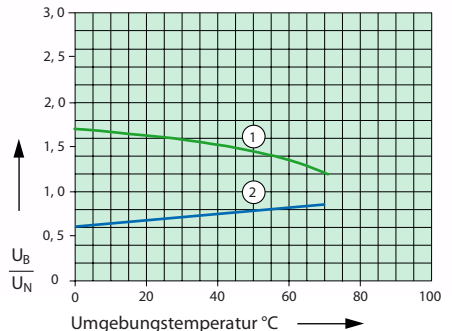


Maximal Contact Load at AC 1 with 230V :
2 Contacts with 12A each

Load Limit Curve with direct Current



Excitation Voltage Range



- 1) Max. excitaton voltage with Contact load: Control Contacts ≤ 2A, Output Contacts ≤ 10A
- 2) Min. excitation voltage (guaranteed Values) without previous operations.