SIR 10 Series

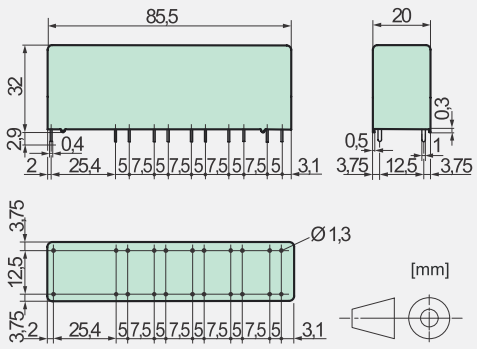
Relay Key Data

- PCB Relay with forcibly guided contacts
- Protective separation between coil/control contacts and output contacts (>8 mm) and output contacts in one row (>8 mm) as well as protective separation between left and right contact side (>10 mm)
- EN50205 type A
- Contact mounting:

SIR282	2 NO / 8 NC	SIR372	3 NO / 7 NC
SIR462	4 NO / 6 NC	SIR552	5 NO / 5 NC
SIR642	6 NO / 4 NC	SIR732	7 NO / 3 NC
SIR822	8 NO / 2 NC	SIR912	9 NO / 1 NC

- Nominal coil power 1,3 W
- Holding coil power 0,39 W
- For railway application (EN50155) on request

Dimensions



Contacts Data

Contact material	$AgSnO_2$ + 0,2 µm Au
Type of contact	Crest contact
Rated switching capacity	250 VAC 10 A AC1 2500 VA
Electr. life AC 1(360 cycles / h)	approx.100000
Inrush current max.	25 A for 20 ms
Switching voltage range	5 to 250 VDC / VAC
Switching current range*	10 mA to 10 A
Switching capacity range*	60 mW to 2500 W(VA)
Contact resistance (as delivered)	≤100 mΩ / 6 V / 100 mA

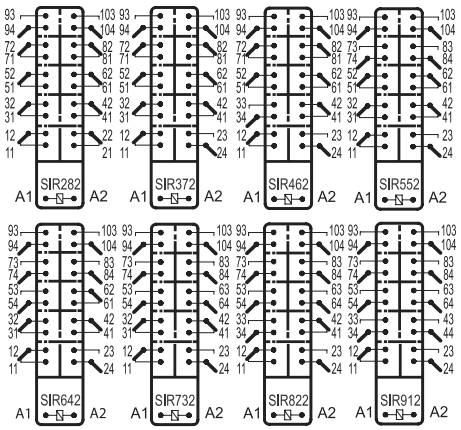
*Guided values

Standard coils for direct current

(other voltages on request)

Nominal voltage VDC	Min. pick-up voltage at 20 °C	Drop-out voltage at 20 °C	Nominal current in mA	Resistance in Ohm at 20 °C
6	4,2	≥0,6	218,0	27,5 ± 10%
12	8,4	≥1,2	109,0	110 ± 10%
18	12,6	≥1,8	72,0	250 ± 10%
24	16,8	≥2,4	54,5	440 ± 10%
48	33,6	≥4,8	27,2	1760 ± 10%
60	42,0	≥6,0	11,8	2750 ± 10%
110	77,0	≥11,0	6,8	9250 ± 13%
220	154,0	≥22,0	5,9	37000 ± 15%

Circuit Diagram (view on relay upper side)



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
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** (all 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 > 6g
Vibration resistance	NO > 8g
(10-200 Hz)	NC > 2,5g
Resistance to short circuiting contacts	1000 A SCPD 10 A gG / gL (pre-fuse)
Ambient temperature	-40°C to +70°C
Thermal Resistance	40 K / W
Temperature limit for coil	125°C
Weight	ca. 60 g
Mounting position	any
Type of protection	RT II
Solder bath temperature	270°C / 5 s

**without spark suppression

Tests, Regulations

Approvals

UL File E188953	Sec. 3
Insulation class IEC 60664-1	250 VAC
Fire protection requirements	UL 94 / V0

Options, Accessories

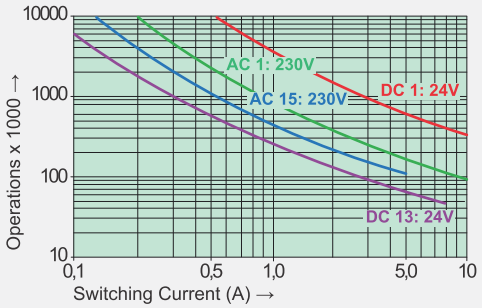
none available

Product Key

SIR 7 3 2 24VDC

- 24VDC — Coil voltage
- 2 — Soldering tags
- 3 — Number of NC contacts
- 7 — Number of NO contacts
- SIR — Type designation

Contact Lifetime NO-Contacts

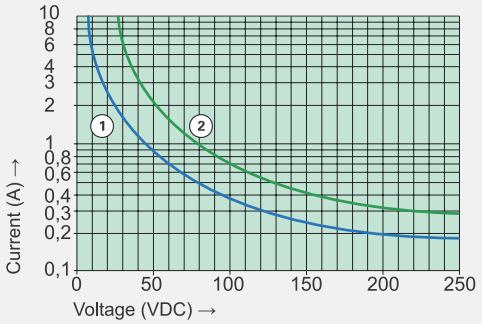


Max. switching characteristics (DIN EN 60947-5-1, Tab. C2):

AC 15:	230 V / 5 A
DC 13:	24 V / 7,5 A / 0,1 Hz
UL 508:	C600 / R300

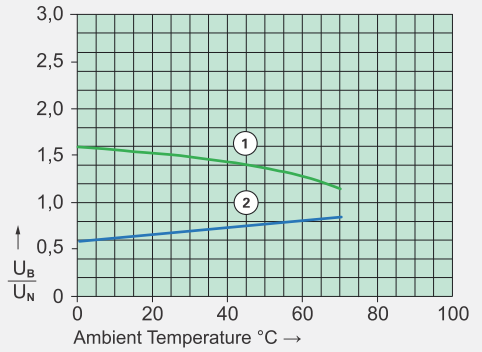
Maximal contact load at AC 1 with 230 V:
2 contacts with 10 A each
3 contacts with 8,4 A each
4 contacts with 7,3 A each
5 contacts with 6,5 A each
6 contacts with 6 A each
8 contacts with 5 A each
9 contacts with 4,2 A each

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: ≤6 A
2) Min. excitation voltage (guaranteed values) without previous operation

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

ELESTA GmbH, Heuteilstrasse 18, Fon: +41 (0)81 303 54 00
CH - 7310 Bad Ragaz, Switzerland Fax: +41 (0)81 303 54 01