

SRF Subminiature Signal Relay



Key Features

- SPCO configuration
- Standard PC layout
- Sealed and flux-tight construction
- Class B insulation as standard
- UL approved
- RoHS compliant



Options & Ordering Codes

SRF

Series

Subminiature Signal Relay

SRF

S

Coil Power

200mW

360mW

450mW

S

L

1C

Contact Arrangement

1 Form C

1C

T

Contact Material

AgNi

AgNi + Au plate

AgSnO₂

AgSnO₂ + Au plate

N1

T

T1

-

T

Sealing Type

F

S

Flux-tight

Sealed

-

S

RoHS Compliant

-

L

Insulation Class

Class B

F

Class F

-

F

Coil Voltage

12VDC

Contact Data

Contact Arrangement	1C
Contact Resistance	100mΩ max. (at 0.1A 30mVDC)
Contact Material	AgSnO ₂ , AgNi
Contact Rating (Res. load)	3A 30VDC 1A 125VAC
Max. Switching Current	8A (30VDC)
Max. Switching Voltage	250VAC / 220VDC
Max. Switching Power	250VA / 90W
Min. Applicable Load	5V 1mA
Mechanical Endurance	1 x 10 ⁷ ops
Electrical Endurance	1 x 10 ⁵ ops (AgNi, 85°C, 1s on 9s off 30A 30VDC) 1 x 10 ⁵ ops (AgNi, Room Temperature, 1s on 9s off 5A 125VAC)

Note: Min. applicable load is a reference value. Please perform the confirmation test with the actual load before production since the reference value may change according to switching frequencies, environmental conditions and expected contact resistance and reliability.

Coil

Coil Power	Standard Type: 200mW S Type: 360mW L Type: 450mW
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Characteristics

Insulation Resistance	1000MΩ (at 500VDC)
Dielectric Strength	Between Coil & Contacts: 1100VAC 1min Between Open Contacts: 750VAC 1min
Operate Time (at nomi. voltage)	5ms max.
Release Time (at nomi. voltage)	5ms max.
Ambient Temperature	-40°C to 85°C
Humidity	5% to 85% RH
Vibration Resistance	Functional: 10Hz to 55Hz 1.5mm DA Destructive: 10Hz to 55Hz 3.3mm DA
Shock Resistance	Functional: 98m/s ² Destructive: 980m/s ²
Surge Withstand Voltage	Between Open Contacts (10/160 μs): 1000V (FCC part 68) Between Coil & Contacts (2/10 μs): 1500V (Telecordia)
Termination	PCB (DIP)
Unit Weight	Approx. 4g
Construction	Plastic Sealed, Flux Proofed

Note: 1) The data shown above are initial values
2) UL insulation system: Class F

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Coil Data at 23°C

Nominal Voltage VDC	Pick-up Voltage VDC Max.	Drop-out Voltage VDC Min.	Max. Voltage VDC	Coil Resistance x (1 ± 10%) Ω		
				Std	S	L
2.4	≤ 1.80	≥ 0.24	3.12	28.8	19.2	12.8
3	≤ 2.25	≥ 0.3	3.90	45.0	25.0	20
4.5	≤ 3.38	≥ 0.45	5.85	101.3	67.5	45
5	≤ 3.75	≥ 0.5	6.50	120	70.0	56
6	≤ 4.5	≥ 0.6	6.63	180	100	80
9	≤ 6.75	≥ 0.9	11.7	400	220	180
12	≤ 9.00	≥ 1.2	15.6	700	400	320
18	≤ 13.5	≥ 1.8	23.4	1620	1080	720
24	≤ 18.0	≥ 2.4	31.2	2800	1600	1280

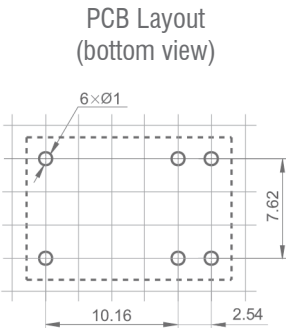
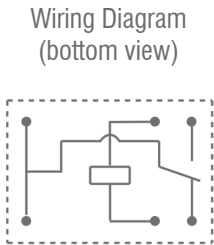
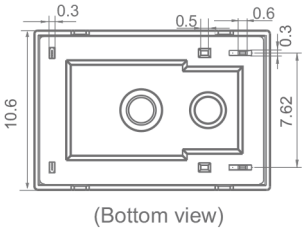
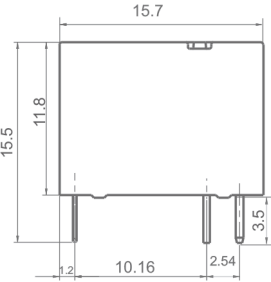
Note: 1) Maximum voltage refers to the maximum voltage which relay coil could endure in a short period of time.

Safety Approval Ratings

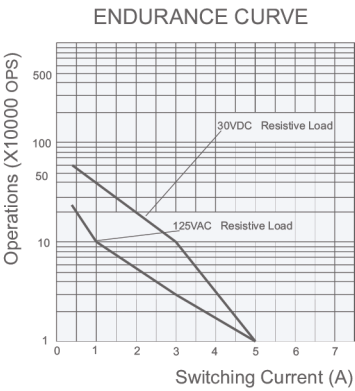
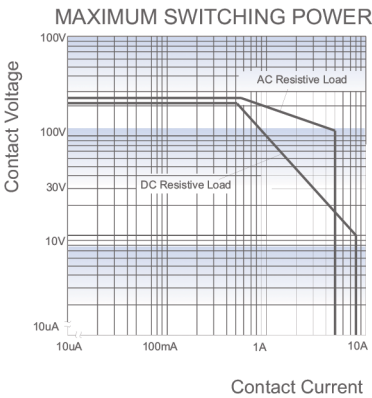
UL/cUL	AgNi	5A 125VAC 1A 125VAC, 85°C 3A 30VDC, 85°C
	AgSnO ₂	1A 125VAC, 85°C 3A 30VDC, 85°C TV-1 125VAC

Note: 1) All values unspecified are at room temperature

Outline Dimensions, Wiring Diagrams & PCB Layout (mm)



Characteristic Curves



Test conditions:
AgNi, Resistive load, 85°C, 1s on 9s off.