

Subminiature Signal Relay

SYS1



Features

- Micro-miniature relay.
- High sensitive:200mW.
- High reliability gilt contact.
- Sealed type construction.

Safety certificate

UL, C-UL File No: E179745

CQC File No: CQC02001002118, CQC16002159530

| Contact Data | | | | |
|-------------------------------------|---|--|--|--|
| Туре | SYS1 | | | |
| Rated load (Resistive load) | 3A 120VAC | | | |
| Max. switching current | 3A | | | |
| Max. switching voltage | 125 VAC | | | |
| Max. switching power | 360 VA | | | |
| Min. switching load | 6V 1A | | | |
| Characteristic Data | | | | |
| Contact material | Silver alloy | | | |
| Initial contact resistance | 100mΩ Max.(at 1A 6VDC) | | | |
| Operate time(at rated coil voltage) | SYS1-D: 8 ms Max. (no diode) | SYS1-L: 10 ms Max. (no diode) | | |
| Release time | 4 ms Max. (No diode) | | | |
| Initial insulation resistance | Min. 1,000MΩ (at 500VDC) | | | |
| Total of distance and | Between open contacts: 500VAC, 50/60Hz for 1min. | | | |
| Initial dielectric strength | Between coil and contact: 750VAC, 50/60Hz for 1min. | | | |
| | Function | 10∽55Hz at double amplitude of 1.5 mm | | |
| Vibration resistance | Destructive | 10∽55Hz at double amplitude of 1.5 mm | | |
| Shock resistance | Function | 10G Min. | | |
| | Destructive | 100G Min. | | |
| | Mechanical endurance(at 10,800ops./h) | 10,000,000 cycles(at room temperature) | | |
| Endurance | Electrical endurance(at 1,800ops./h) | 100,000 cycles(at room temperature) | | |
| Ambient temperature | -40°C ~ +70°C (no condensation) | | | |
| Unit weight | Approx. 3.7g | | | |

| Coil Data (a | t 20°C) | | | | | |
|-----------------------------|-------------------------------------|-------------------------------|---------------------------|---------------------------|---------------------------|-------------------------------|
| Nominal voltage (VDC) | Nominal operating current ± 10%(mA) | coil resistance ±10%(Ω) | Max. allowable voltage | Operate voltage (Max.) | Release voltage (Min.) | Nominal operating power |
| 3 | 120 | 25 | | | | |
| 5 | 72 | 69 | | | | Approx. 0.36W |
| 6 | 60 | 100 | 130% of | | | |
| 9 | 40 | 225 | | | | |
| 12 | 30 | 400 | | | | |
| 24 | 15 | 1,600 | | | 5% of nominal voltage | |
| 3 | 66.67 | 45 | | | | Approx. 0.20W |
| 5 | 40 | 125 | | | | |
| 6 | 33.33 | 180 | | 75% of nominal voltage | | |
| 9 | 22.22 | 405 | nominal voltage | | | |
| 12 | 16.67 | 720 | J | | | |
| 24 | 8.33 | 2,880 | | | | |
| 3 | 150 | 20 | | | | |
| 5 | 90 | 56 | | | | |
| 6 | 75 | 80 | | | | Approx. |
| 9 | 50 | 180 | | | | 0.45W |
| 12 | 37.5 | 320 | | | | |
| 24 | 18.75 | 1,280 | | | | |

The data shown above are initial values. Do not apply maximum allowable voltage on coil for more than 10 minutes to avoid overheating of the coil.

| Safety Certificate Ratings (More details of approved ratings, please refer to the safety certificates) | | | | | |
|--|----------------------------------|------------------------------------|--|--|--|
| Certificates | cQc | UL/CUL | | | |
| File No. | CQC02001002118 CQC16002159530 | E179745 | | | |
| Approved Ratings | 1A 125VAC | 3A 120VAC 3A 24VDC 1A 120VAC | | | |

⁽¹⁾ All values unspecified are acquired at room temperature

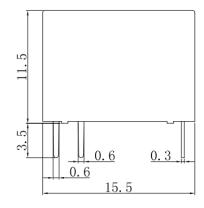
⁽²⁾ Only typical ratings are listed above and the endurance differ in each load. Other specific load information are available upon request.

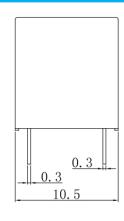
⁽³⁾ For sealed type testing, please open the ventilation hole in the case before test.

| Ordering Information | | | | | | | |
|----------------------|----|----|----|---|----|-----|---|
| Nomenclature | | | | | | | |
| SYS1 | -S | -1 | 12 | D | -F | -XX | |
| | | | | | | | Special Parameter: Nil-Standard type , Letters or Numbers , Special requirements |
| | | | | | | | Insulation System: Nil - Standard, B - Class B, F - Class F |
| | | | | | | | Coil Power: D-0.36W, L-0.20W, Nil-0.45W |
| | | | | | | | Coil Voltage (VDC): 03, 05, 06, 09, 12, 24 |
| | | | | | | | Number of Poles : 1-1 Pole |
| | | | | | | | Protective construction : S- Flux-proof SH-Sealed type washable |
| | | | | | | | Type: SYS1 |

- (1) Flux-proof relays can not be used in the environment with pollutants like H₂S, SO₂,NO₂, dust, etc.
- (2) Water cleaning or surface process is not suggested after the flux-proof relays are assembled on PCB.
- (3) Customized special suffix is available after being evaluated by Sanyou.

Outline dimension, wiring diagram, PCB layout (unit: mm)





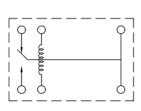
In case of no tolerance shown on outline dimension

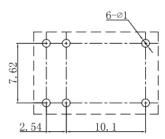
If dimension < 1 mm, tolerance : ± 0.2 mm If dimension 1~5mm, tolerance : ± 0.3 mm If dimension > 5mm, tolerance : ± 0.4 mm

Note:

1. The dimension of pin is the size before tinning

2.Tolerance of PCB layout: ±0.1 mm





Wiring Diagram bottom view

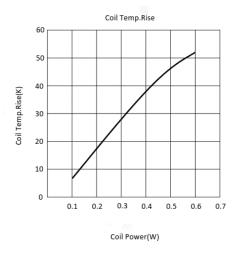
P. C. B. Layout (bottow view)

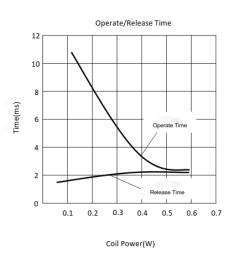
Typical Applications

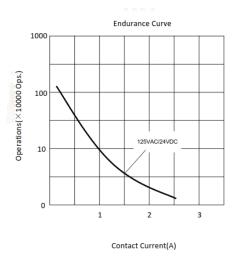
- Telecommunication equipment
- Home appliances

- Office equipment
- Audio equipment,etc.

Characteristic Curves







Disclaimer: The specification is for reference only. Specifications are subject to change without prior notice.

We could not evaluate all the performance and all the parameters for every possible applications. Thus the users should in a right position to choose suitable product for their own application. For sealed relays, after installation and cleaning, please open the ventilation hole in the case before use. If there is any query, please contact Sanyou for technical services. However it is the user's responsibility to determine which product should be used.