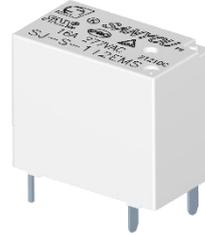


Features:

- Low coil power consumption.
- Micro-miniature relay, standard PCB terminals.
- Compliant with IEC60335-1 & CTI250V
- IEC60079-15 compliant product is available.
- Suitable for high inrush current version(TV-8)

Safety certificate:

- Home appliances: air conditioner, heater, etc.
- Vending machine.
- Office equipment: computer, fax machine, etc.
- Electric controlled window, car antenna, door lock, etc.



Approvals

UL、c-UL (File No.): E190598
 TUV (File No.): R50142420
 CQC (File No.): CQC02001002114, CQC09002030583, CQC11002064518, CQC22002367720

Contact Data

| | |
|-------------------------------|--------------------------------|
| Contact arrangement | 1form A(NO) |
| Rated voltage | 277VAC |
| Contact resistance | 100mΩ Max.(at 1A 6VDC) |
| Max.switching voltage | 277VAC |
| Rated current | 16A |
| Min. recommended contact load | 1A, 6VDC |
| Breaking capacity max. | 4432VA |
| Contact material | AgSnO ₂ |
| Frequency of operation | 360 ops./h |
| Operate/release time max. | 10ms/5ms |
| Electrical endurance | See electrical endurance graph |

Contact ratings

| Type | Contact | Load | Cycles |
|--------------------------|---------|-------------------------|---------------------|
| IEC 61810 | | | |
| SJ | A(NO) | 16A,277VAC,cos φ=1,85°C | 5X10 ⁴ |
| UL 60947-4-1 | | | |
| SJ | A(NO) | 16A,277VAC,cos φ=1,85°C | 5X10 ⁴ |
| SJ | A(NO) | TV-8, 120 VAC, 40°C | 2.5X10 ⁴ |
| GB/T 21711.1-2023 | | | |
| SJ | A(NO) | 16A,277VAC,85°C | 2X10 ⁴ |
| EN 60730-1 | | | |
| SJ | A(NO) | 16A,277VAC,85°C | 5X10 ⁴ |
| Mechanical endurance | | | ≥1x10 ⁷ |

Coil Data

| | |
|-------------------------------------|------------|
| Coil voltage range: | 5 to 24VDC |
| Operative range, IEC 61810 | 2 |
| Coil insulation system according UL | Class F |

Coil Data (continued)

Coil versions, DC coil

| Rated voltage VDC | Operate voltage VDC | Release voltage VDC | Coil resistance Ω (1±10%) | Rated coil powers mW |
|-------------------|---------------------|---------------------|---------------------------|----------------------|
| 5 | ≤3.75 | ≥0.25 | 62.5 | 400 |
| 6 | ≤4.5 | ≥0.3 | 90 | 400 |
| 9 | ≤6.75 | ≥0.45 | 202.5 | 400 |
| 12 | ≤9 | ≥0.6 | 360 | 400 |
| 18 | ≤13.5 | ≥0.9 | 810 | 400 |
| 24 | ≤18 | ≥1.2 | 1440 | 400 |
| 5 | ≤3.75 | ≥0.25 | 125 | 200 |
| 6 | ≤4.5 | ≥0.3 | 180 | 200 |
| 9 | ≤6.75 | ≥0.45 | 405 | 200 |
| 12 | ≤9 | ≥0.6 | 720 | 200 |
| 18 | ≤13.5 | ≥0.9 | 1620 | 200 |
| 24 | ≤18 | ≥1.2 | 2880 | 200 |

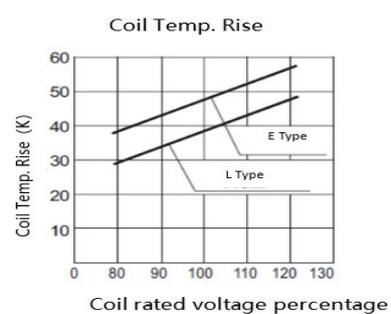
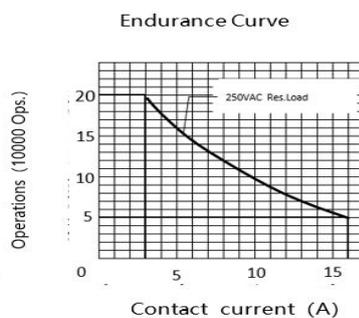
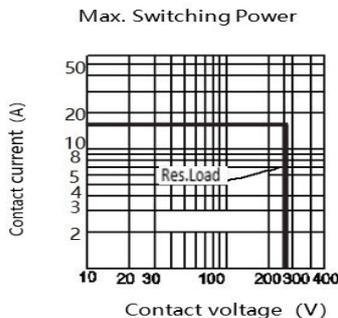
All figures are given for coil without pre-energization, at ambient temperature 20°C

Insulation Data

| | |
|--------------------------------------|-------------------|
| Initial dielectric strength | |
| between open contacts | 1000VAC |
| between contact and coil | 4000VAC |
| Clearance/Creepage | |
| between contact and coil (Clearance) | ≥8.0mm(actual) |
| between contact and coil (Creepage) | ≥8.0mm(actual) |
| Material group of insulation parts | IIIa |
| Tracking index of relay | PTI 175V/PTI 250V |

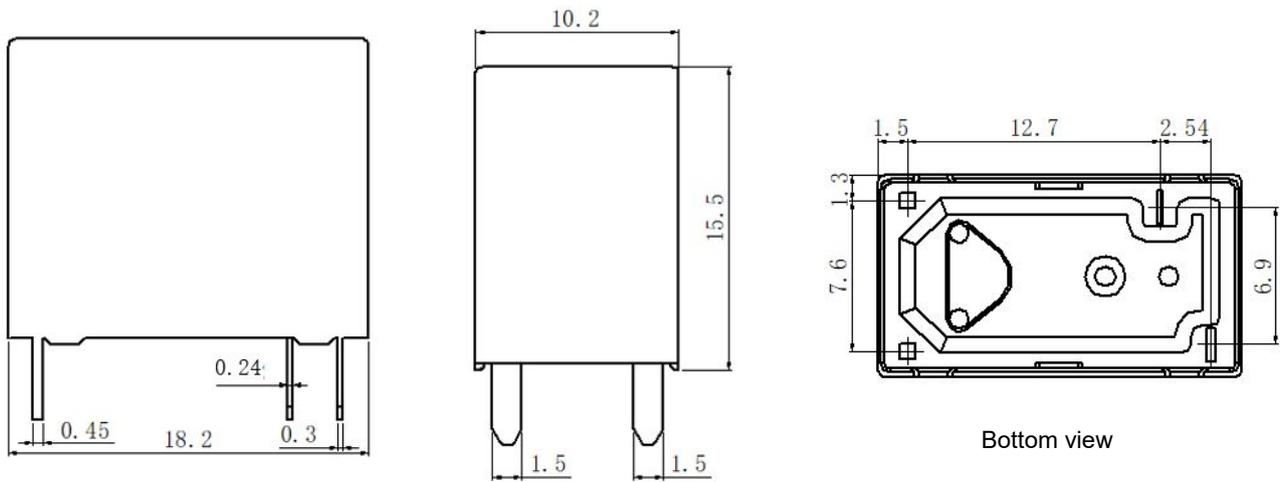
Other Data

| | |
|---|------------------------------|
| Material compliance: EU RoHS/ELV, China RoHS, REACH | |
| Ambient temperature | -40°C to +85°C |
| Category of environmental protection | |
| IEC 61810 | RTII - flux proof |
| | RTIII - Sealed type washable |
| Weight | Approx. 5.7g |
| Resistance to soldering heat THT (IEC 60068-2-20) | 260°C/5s |
| Packaging/unit | tube, tray |

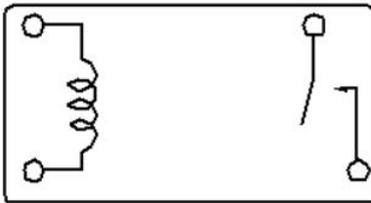


Note:
 (1) Test conditions: room temperature, flux-proof product, resistive load, 1s on, 9s off.
 (2) The above curves are for reference only, and the final result is subject to the experiment.

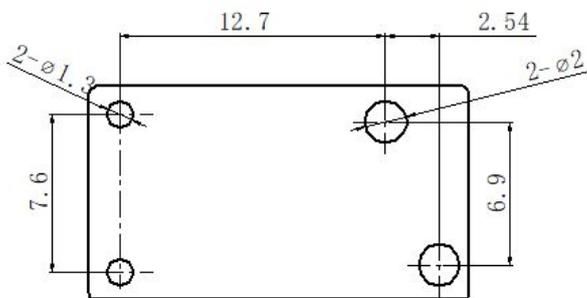
Dimensions



Wiring Diagrams (bottom view)



PCB Layouts (bottom view)



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.

Product code structure

| SJ | -S | -1 | 12 | E | M | S | -F | -XX | |
|----|----|----|----|---|---|---|----|-----|---|
| | | | | | | | | | Special Parameter: Nil-Standard, Letter or number-Special requirement |
| | | | | | | | | | SC-High inrush current version |
| | | | | | | | | | Insulation System: Nil-Standard type, B- B-Class B, F-Class F |
| | | | | | | | | | Contact Material: Nil-AgSnO ₂ |
| | | | | | | | | | Contact capacity: S-16A |
| | | | | | | | | | Contact Arrangement: M-Form A |
| | | | | | | | | | Coil Power: L-0.2W, E-0.4W |
| | | | | | | | | | Rated Coil voltage(VDC): 05,06,09,12,18,24 |
| | | | | | | | | | Number of poles : 1-1Pole |
| | | | | | | | | | Protective Construction: S-Flux proofed, SH-Sealed type washable |
| | | | | | | | | | Type: SJ |

- (1) Flux-proofed 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-proofed relays are assembled on PCB.
- (3) Special requirements of customers (XX) shall be evaluated by our company and marked by characteristic symbols.
- (4) Ex suffix stands for product compliant with "IEC60079-15, Clause 22.5 sealed device", which is only available for "SH-Sealed type washable" Products.
- (5) (SC) Suitable for high inrush current version (TV-8)

Examples of ordering codes

SJ-S-112EMS relay SJ, Flux-proof, rated DC voltage 12V, coil power 0.4W, 1NO, and contact material AgSnO₂.

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.